User's
Manual

ProSafe-RS
ProSafe-RS Lite

# ProSafe-RS
# Explosion Protection

IM 32Q01J30-31E

YOKOGAWA
Yokogawa Electric Corporation

IM 32Q01J30-31E
20th Edition

# Introduction

This instruction manual describes precautions for safe use of ATEX/UKEX compliant ProSafe-RS/ProSafe-RS Lite explosion protection products. Furthermore, appendix 2 and appendix 3 of this instruction manual contain the following, respectively;

- EU declaration of conformity and attestation of conformity
- UK declaration of conformity and attestation of conformity

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# ProSafe-RS
# Explosion Protection

IM 32Q01J30-31E 20th Edition

# CONTENTS

# 1. Safety specifications

**The following items are described in this section.**

- **For safe use**
- **For safe use—S2BN4D**
- **For safe use—S2BN5D**
- **For safe use—N-IO field enclosure**

# 1.1 For safe use

**For the safety of the operators as well as the devices and the whole system, all the devices must be installed in accordance with the safety rules described in this instruction manual.**

**However, if the devices are not installed according to the safety rules, YOKOGAWA does not guarantee the system safety. Please read the following items carefully.**

## ■ Model and item

Model ProSafe-RS/ProSafe-RS Lite Safety Instrumented System

**SEE ALSO** For more information about ProSafe-RS/ProSafe-RS Lite devices, refer to:

Appendix 2. “EU declaration of conformity and attestation of conformity”

Appendix 3. “UK declaration of conformity and attestation of conformity”

## ■ Applicable standards

This document is based on the following standards:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markings

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Symbol ’X’ denotes the specific conditions of use. Refer to ■ Specific conditions of use.

## ■ Specific conditions of use

- The equipment shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.
- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP54 in accordance with EN IEC 60079-0.
- Transient protection that is set at a level not exceeding 119 V d.c. shall be provided at the supply terminals to the equipment.

**SEE ALSO** For information about ambient temperature ranges of standard-compliant devices, refer to:

Appendix 1. “Ambient temperature range of standard-compliant devices”

## Warnings

WARNING - WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT,

- DO NOT OPEN THE CABINET WHILE THE EQUIPMENT ARE ENERGIZED
- DO NOT REMOVE OR REPLACE THE FUSE WHEN ENERGIZED
- DO NOT SEPARATE THE CONNECTIONS WHEN ENERGIZED

## Installation

- The equipment shall be installed and used within their ratings.
- All equipment and wiring in hazardous areas shall be installed in accordance with EN 60079-14 and related local electrical codes and the installation shall also comply with the appropriate requirements for non-hazardous areas.
- Instructions provided in GS (General specifications), TI (Technical Information of Installation Guidance) and/or IM (User's Manuals) shall be observed.
- The installation shall be carried out only by qualified personnel whose training has included instruction on the type of protection and installation practices, relevant rules and regulations and general principles of area classification.
- The degree of protection not less than IP54 shall be maintained at cable entries into the cabinet.
- It must be observed during the installation that the venting slots of the equipment are not blocked off by cable parts, fixing accessories etc.
- Screws of terminals for field wiring connections shall be tightened with specified torque values.
- On completion of the installation and prior to first use, initial inspection of the equipment and installation shall be carried out in accordance with EN 60079-17.
- Abide by the following guidance so as to ensure the safety and performance.
    - Make sure that all the empty slots in the cabinet should be properly covered with attached caps.
    - Make sure that all the cables are rigidly fixed in the cabinet.
- Field wiring for Ethernet communication and Vnet/IP network must be in accordance with IEEE 802.3 so as to avoid overvoltage exceeding 119V.
- In case of connecting Base Plate for Barrier, installation must be in accordance with its instructions.
- The models which were included in the previous EU Declaration of Conformity with marking "nA" can be installed into the system, if the same model and suffix codes are listed in the tables of Appendix 1.

## Maintenance and repair

- Inspections and maintenance of the equipment and installations shall be carried out only by qualified personnel and in accordance with EN 60079-17.
- Repair, overhaul, reclamation of the equipment shall be carried out only by qualified personnel and in accordance with EN 60079-19.
- Repairs of the equipment shall be carried out only by trained, experienced, skilled, knowledgeable and/or supervised personnel, or by the service engineers authorized by YOKOGAWA. Otherwise, the type of protection may be invalidated.
- Modifications shall not be made to the equipment which is operated in hazardous areas.
- Use only the following batteries specified by YOKOGAWA for processor modules:
  S9185FA for SCP451 and SCP461
  S9450FE for S2CP471 and L1CP471
- Use only the following FANs specified by YOKOGAWA for AIP602:
  A1159EM or A1213EM

# 1.2 For safe use—S2BN4D

**To ensure intrinsic safety performance, you must observe the following:**

- **Use the base plates for barrier (Model:S2BN4D) and intrinsic safety barriers in the correct combination.**
- **Install the devices according to the instructions of the intrinsic safety barriers.**

**For the safety of the operators as well as the devices and the whole system, base plates for barriers must be installed in accordance with the safety rules described in this instruction manual.**

**However, if the base plates for barriers are not installed according to the safety rules, YOKOGAWA does not guarantee the system safety. Please read the following items carefully.**

## ■ Model and item

The base plate for barrier (Model:S2BN4D) of ProSafe-RS Safety Instrumented System

## ■ Applicable standards

This document is based on the following standards:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Markings

Baseefa15ATEX0240X


II 3 G Ex ec IIC T4 Gc

Symbol 'X' denotes the specific conditions of use. Refer to ■ Specific conditions of use.

## ■ Specific conditions of use

All the devices must be installed in the hazardous area in accordance with the marking shown on each device. When the equipment consists of several devices, ensure that the equipment consists only of the devices which can be used in the same hazardous environment.

- The equipment must be installed in an area of not more than Pollution Degree 2 as defined in EN 60664-1, and in an enclosure that provides a degree of protection of at least IP54 and meets the relevant requirements of EN IEC 60079-0 and EN IEC 60079-7.
- All connections to the equipment must not be inserted or removed unless either the area in which the equipment is installed is known to be non-hazardous, or the circuit to which it is connected has been de-energised.
- The I/O modules fitted to the backplane do not form part of the certification and must be separately appropriately certified.
- Provision shall be made (whether part of the certified I/O modules fitted to the backplane or externally fitted) to provide transient protection on the supply terminals to be set at a level not exceeding 140% of the peak rated voltage value of 85V.

**SEE ALSO** For information about ambient temperature range of standard-compliant devices, refer to:
Appendix 1. “Ambient temperature range of standard-compliant devices”

For more information about the transient protection, refer to:
ProSafe-RS/ProSafe-RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

Precautions of installation for S2BN4D are same as those for ProSafe-RS devices.

**SEE ALSO** For information about installation, refer to:

"■ Installation" in 1.1 "For safe use."

## ■ Maintenance and repair

Precautions of maintenance and repair for S2BN4D are same as those for ProSafe-RS devices.

**SEE ALSO** For information about maintenance and repair, refer to:

"■ Maintenance and repair" in 1.1 "For safe use."

# 1.3 For safe use—S2BN5D

**To ensure intrinsic safety performance, you must observe the following:**

- **Use the base plates for barrier (Model:S2BN5D) and intrinsic safety barriers in the correct combination.**
- **Install the devices according to the instructions of the intrinsic safety barriers.**

**For the safety of the operators as well as the devices and the whole system, base plates for barriers must be installed in accordance with the safety rules described in this instruction manual.**

**However, if the base plates for barriers are not installed according to the safety rules, YOKOGAWA does not guarantee the system safety. Please read the following items carefully.**

## ■ Model and item

The base plate for barrier (Model:S2BN5D) of ProSafe-RS Safety Instrumented System

## ■ Applicable standards

This document is based on the following standards:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Markings

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Symbol 'X' denotes the specific conditions of use. Refer to ■Specific conditions of use.

## ■ Specific conditions of use

All the devices must be installed in the hazardous area in accordance with the marking shown on each device. When the equipment consists of several devices, ensure that the equipment consists only of the devices which can be used in the same hazardous environment.

### ● Specific conditions of use (intrinsic safety “i”)

Although there are no specific usage conditions for the base plates for barrier, the certificate of the intrinsic safety barriers that are to be connected to the base plates for barrier should be checked.

### Specific conditions of use (Ex "ec")

- The equipment shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.
- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP54 in accordance with EN IEC 60079-7 and EN IEC 60079-0.
- Transient protection shall be provided at the terminals of System Power Supply. Transient protection shall be set at level not exceeding 140 % of the peak rated voltage value.

**SEE ALSO** For information about ambient temperature range of standard-compliant devices, refer to:

Appendix 1. “Ambient temperature range of standard-compliant devices”

For more information about the transient protection, refer to:

ProSafe-RS/ProSafe-RS Lite Explosion Protection (TI 32S01J30-01E)

## Installation

- Commissioning and installation must be carried out by specially trained and qualified personnel only.
- Depending on the level of protection, the intrinsically safe circuits of the devices (light blue identification on the device) can be located in the hazardous area. It is especially important to ensure that the intrinsically safe circuits are safely separated from all non-intrinsically safe circuits.

  The installation of the intrinsically safe circuits is to be conducted in accordance with the relevant installation regulations.
- The respective peak values of the field device and the associated device with regard to explosion protection should be considered when connecting intrinsically safe field devices with the intrinsically safe circuits of H-System devices (demonstration of intrinsic safety). EN 60079-14 must be observed (where appropriate). If available, also the product certification control drawing must be observed.
- The EC-Type Examination Certificates or standard certificates/approvals should be observed. It is especially important to observe the "special conditions" if these are included in the certificates.

**SEE ALSO** For more information about installation, refer to:

“■ Installation” in 1.1 “For safe use.”

## Maintenance and repair

The transfer characteristics of the devices remain stable over long periods of time. This eliminates the need for regular adjustment. Maintenance is not required.

**SEE ALSO** For more information about maintenance and repair, refer to:

“■ Maintenance and repair” in 1.1 “For safe use.”

# 1.4 For safe use—N-IO field enclosure

**For the safety of the operators as well as the devices and the whole system, all the devices for N-IO field enclosure must be installed in accordance with the safety rules described in this instruction manual.**

**However, if the devices for N-IO filed enclosure are not installed according to the safety rules, YOKOGAWA does not guarantee the system safety. Please read the following items carefully.**

## ■ Model and item

N-IO field enclosure (Model : S2ZN70D) and related devices (Model : S2ZN60D, and S2CB60) of ProSafe-RS Safety Instrumented System

## ■ Applicable standards

This document is based on the following standards:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markings

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

Symbol 'X' denotes the specific conditions of use. Refer to ■Specific conditions of use.

## ■ Installation specifications

- Ambient temperature
  S2ZN70D: -40 degree C to 55 degree C
  S2ZN60D: -40 degree C to 55 degree C (*1)
  S2CB60: -40 degree C to 55 degree C

  *1: This ambient temperature applies to S2CB60 with S2ZN60D installed.

- Power supply
  100 to 120 V AC +10 %/-10 %
  220 to 240 V AC +10 %/-10 %

## ■ Specific conditions of use

- S2ZN60D shall be installed in S2CB60.
- For the ambient temperature requirements, refer to the instructions because they are not labeled on the equipment.
- The devices in the enclosure shall be used in an environment of not more than pollution degree 2 as defined in EN 60664-1.

## Warnings

DO NOT OPEN THE ENCLOSURE WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.

## Installation

- The equipment shall be installed and used within their ratings.
- All equipment and wiring in hazardous areas shall be installed in accordance with EN 60079-14 and related local electrical codes and the installation shall also comply with the appropriate requirements for non-hazardous areas.
- Instructions provided in GS (General specifications), TI (Technical Information of Installation Guidance) and/or IM (User's Manuals) shall be observed.
- The installation shall be carried out only by qualified personnel whose training has included instruction on the type of protection and installation practices, relevant rules and regulations and general principles of area classification.
- Screws of terminals for field wiring connections shall be tightened with specified torque values.
- On completion of the installation and prior to first use, initial inspection of the equipment and installation shall be carried out in accordance with EN 60079-17.
- Abide by the following guidance so as to ensure the safety and performance.
    - Make sure that all the empty slots in the enclosure should be properly covered with attached caps.
- Thoroughly read and understand the information in the User's Manuals before using the Roxtec's sealing module and cable glands.
- Do not remove the plate for cable gland and plate for sealing module from the enclosure.
- Do not submerge the enclosure in water.
- You can purchase hole seals with their part number (B1036HZ, B1037HZ) and attach them to the product, you can also purchase a product with hole seals (/SEAL). In both cases, our assessment of product conformity with ATEX Directive is for S2ZN70D as a whole including the hole seals. The hole seals come with ATEX certificate provided by the manufacturer when you purchase them with their part number.

## Maintenance and repair

- Inspections and maintenance of the equipment and installations shall be carried out only by qualified personnel and in accordance with EN 60079-17.
- Repair, overhaul, reclamation of the equipment shall be carried out only by qualified personnel and in accordance with EN IEC 60079-19.
- Repairs of the equipment shall be carried out only by trained, experienced, skilled, knowledgeable and/or supervised personnel, or by the service engineers authorized by YOKOGAWA. Otherwise, the type of protection may be invalidated.
- Modifications shall not be made to the equipment which is operated in hazardous areas.

# 2. Sikkerhedsspecifikationer

**De følgende punkter er beskrevet i dette afsnit.**

- **For sikker anvendelse**
- **For sikker anvendelse—S2BN4D**
- **For sikker anvendelse—S2BN5D**
- **For sikker anvendelse — N-IO-feltkabinet**

# 2.1 For sikker anvendelse

**For operatørpersonalets såvel som for apparaternes og hele systemets sikkerhed skal apparaterne installeres i overensstemmelse med de sikkerhedsregler, der er beskrevet I denne vejledning.**

**Hvis apparaterne imidlertid ikke installeres i overensstemmelse med sikkerhedsreglerne, garanterer YOKOGAWA ikke for systemets sikkerhed. Læs venligst følgende punkter grundigt.**

## ■ Model og artikel

Model ProSafe-RS/ProSafe-RS Lite sikkerhedsinstrumenteret system

**SE OGSÅ** For mere information om ProSafe-RS/ProSafe-RS Lite-enheder henvises til:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Anvendelige standarder

Denne vejledning er baseret på de følgende standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markeringer

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Symbol 'X' angiver de specifikke anvendelsesforhold. Der henvises til ■Specifikke anvendelses-forhold.

## ■ Specifikke anvendelseforhold

- Apparatet må kun anvendes i et område med forureningsgrad 2 eller mindre, som defineret i EN 60664-1.
- Apparatet skal være installeret i et aflukket område, der yder en beskyttelsesgrad på ikke mindre end IP54 i overensstemmelse med EN IEC 60079-0.
- Der skal være transientbeskyttelse, som er sat på et niveau, som ikke overstiger 119 V d. c. ved forsyningsterminalen til apparatet.

**SE OGSÅ** For oplysninger om omgivende temperaturområder for standardkompatible enheder henvises til:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Advarsler

ADVARSEL - NÅR I EKSPLOSIV ATMOSFÆRE

- ÅBN IKKE KABINETTET NÅR APPARATET STRØMFØRES
- SIKRINGEN MÅ IKKE FJERNES ELLER UDSKIFTES MENS DEN STRØMFØRES.
- LEDNINGSFØRING MÅ IKKE ADSKILLES UNDER STRØMFØRING

## Installation

- Apparatet bør installeres og anvendes indenfor klassificeringen.
- Alle apparater og al ledningsføring i farlige områder skal installeres i overensstemmelse med EN 60079-14 og relaterede lokale bestemmelser ledningsføring. Installeringen skal desuden også overholde de relaterede krav for ikke-farlige områder.
- Instruktionerne i GS (Generelle specifikationer), TI (Teknisk information i Installationsvejledningen) og/eller IM (Brugervejledning) skal overholdes.
- Installeringen bør af kun udføres professionelle teknikere som er uddannet i bekyttelses- og installeringsprocedurer, relevante bestemmelser og regulationer og de generelle principper om områdeklassifikation.
- Kabelindgangene på kabinetter skal udføres i overensstemmelse med IP54 eller højere beskyttelsesniveau.
- Sørg for under installeringen at ventilationsåbningerne i apparatet ikke blokeres af kabeldele, monteringsapparat osv.
- Skruerne til montering af ledningsføringen skal strammes med det specificerede spændingsmoment.
- Når installeringen er fuldendt og før den første anvendelse, bør der foretages inspektion af apparatet og installationen i overensstemmelse med EN 60079-17.
- Overhold de følgende instruktioner for at opnå sikkerhed og god ydelse.
  - Sørg for at alle de tomme pladser i kabinettet er ordentligt dækket med de medfølgende hætter.
  - Sørg for at alle kabler er fast monteret i kabinettet.
- Elinstallation på stedet for ethernet-kommunikation og Vnet/IP-netværk skal udføres i overensstemmelse med IEEE 802.3, så der undgås overspænding, som overstiger 119V.
- Hvis grundpladen til barrieren tilsluttes, skal installationen være i overensstemmelse med dens kontroltegning.
- De modeller, der var inkluderet i den tidligere EU-overensstemmelseserklæring med mærket ”nA”, kan installeres i systemet, hvis den samme model og de samme suffiks-koder er angivet i tabellerne i bilag 1.

## Vedligeholdelse og reparation

- Inspektion og vedligeholdelse af apparatet og installationerne skal udføres af kvalificeret personale og i følge bestemmelserne i EN 60079-17.
- Reparation, eftersyn og forbedringer af apparatet må kun udføres af kvalificeret personale og i overensstemmelse med EN 60079-19.
- Reparation af apparater må kun udføres af specielt uddannet, erfarent, faglært, vidende og/eller superviseret personale, eller af de serviceingeniører, der er autoriseret af YOKOGAWA. Hvis ikke, bliver beskyttelsen ugyldig.
- Der må ikke foretages ændringer på apparater, der anvendes i farlige områder.
- Brug kun følgende batterier, angivet af YOKOGAWA til processormoduler:
  S9185FA til SCP451 og SCP461
  S9450FE til S2CP471 og L1CP471
- Brug kun følgende FAN'er, der er angivet af YOKOGAWA til AIP602:
  A1159EM eller A1213EM

# 2.2 For sikker anvendelse—S2BN4D

**For at sikre den indre sikkerhedsydelse skal du være opmærksom på det følgende:**

- **Brug grundpladerne til barrieren (Model:S2BN4D) og de indre sikkerhedsbarrierer i den rigtige kombination.**
- **Installer udstyret i overensstemmelse med instruktionerne for de indre sikkerheds-barrierer.**

**Af hensyn til sikkerheden for operatørerne såvel som udstyret og det samlede system, skal grundplader til barrierer installeres i overensstemmelse med de sikkerhedsregler, som er beskrevet i denne instruktionsvejledning.**

**Men hvis grundpladerne til barrierer ikke installeres i overensstemmelse med sikkerheds-reglerne, kan YOKOGAWA ikke garantere for systemsikkerheden. Læs venligst de følgende punkter omhyggeligt.**

## ■ Model og artikel

Grundpladen til barriere (Model:S2BN4D) på ProSafe-RS sikkerheds instrumentssystem

## ■ Anvendelige standarder

Denne vejledning er baseret på de følgende standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Markeringer

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Symbol 'X' angiver de specifikke anvendelsesforhold. Der henvises til ■Specifikke anvendelses-forhold.

## ■ Specifikke anvendelseforhold

Alle enheder skal installeres i det farlige område i overensstemmelse med markeringen vist på hver enkelt enhed. Når udstyret består af flere enheder, skal det sikres, at udstyret kun består af enheder, som kan anvendes i det samme farlige område.

- Apparatet skal installeres på et område med ikke mere end beskyttelsesgrad 2 som defineret i EN 60664-1, og i et aflukket område som yder en beskyttelsesgrad på mindst IP54 og lever op til de relevante krav i EN IEC 60079-0 og EN IEC 60079-7.
- Alle tilslutninger til apparatet må hverken sættes i eller fjernes fra apparatet medmindre det område, som apparatet er installeret i, vides at være ufarligt, eller det kredsløb, det er tilsluttet til, er afbrudt fra strømmen.
- I/O-modulerne monteret på backplanet udgør ikke nogen del af certificeringen og skal særskilt certificeres på passende vis.
- Der skal sørges for (uanset om det er en del af de certificerede I/O-moduler monteret på backplanet eller eksternt monteret) at transientbeskyttelsen af forsyningsterminalerne er indstillet på et niveau, som ikke overstiger 140 % af maksimumværdien for den normerede spænding på 85 V.

**SE OGSÅ** For oplysninger om omgivende temperaturområder for standardkompatible enheder henvises til:

Appendix 1. "Ambient temperature range of standard-compliant devices"

For mere information om transientbeskyttelse skal du se:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

Forholdsregler for installation for S2BN4D er de samme som for ProSafe-RS-enheder.

**SE OGSÅ** For oplysninger om installation henvises til:

“■ Installation” i 2.1 “For sikker anvendelse.”

## ■ Vedligeholdelse og reparation

Forholdsregler for vedligeholdelse og reparation af S2BN4D er de samme som for ProSafe-RS-enheder.

**SE OGSÅ** For information om vedligeholdelse og reparation henvises til:

”■ Vedligeholdelse og reparation” i 2.1 “For sikker anvendelse.”

# 2.3 For sikker anvendelse—S2BN5D

**For at sikre den indre sikkerhedsydelse skal du være opmærksom på det følgende:**

- **Brug grundpladerne til barrieren (Model:S2BN5D) og de indre sikkerhedsbarrierer i den rigtige kombination.**
- **Installer udstyret i overensstemmelse med instruktionerne for de indre sikkerheds-barrierer.**

**Af hensyn til sikkerheden for operatørerne såvel som udstyret og det samlede system, skal grundplader til barrierer installeres i overensstemmelse med de sikkerhedsregler, som er beskrevet i denne instruktionsvejledning.**

**Men hvis grundpladerne til barrierer ikke installeres i overensstemmelse med sikkerheds-reglerne, kan YOKOGAWA ikke garantere for systemsikkerheden. Læs venligst de følgende punkter omhyggeligt.**

## ■ Model og artikel

Grundpladen til barriere (Model:S2BN5D) på ProSafe-RS sikkerheds instrumentssystem

## ■ Anvendelige standarder

Denne vejledning er baseret på de følgende standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Markeringer

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Symbol 'X' angiver de specifikke anvendelsesforhold. Der henvises til ■Specifikke anvendelses-forhold.

## Specifikke anvendelseforhold

Alle enheder skal installeres i det farlige område i overensstemmelse med markeringen vist på hver enkelt enhed. Når udstyret består af flere enheder, skal det sikres, at udstyret kun består af enheder, som kan anvendes i det samme farlige område.

### Specifikke anvendelseforhold (indre sikkerhed “i”)

Selvom der ikke er nogen specifikke anvendelsesforhold for grundpladerne til barrieren, bør attesten for de indre sikkerhedsbarrierer, som skal tilsluttes til grundpladerne til barriere, kontrolleres.

### Specifikke anvendelseforhold (Ex “ec”)

- Apparatet må kun anvendes i et område med forureningsgrad 2 eller mindre, som defineret i EN 60664-1.
- Apparatet skal være installeret i et aflukket område, der yder en beskyttelsesgrad på ikke mindre end IP54 i overensstemmelse med EN IEC 60079-7 og EN IEC 60079-0.
- Der skal være transientbeskyttelse på systemstrømforsyningens terminaler. Transientbeskyttelsen skal være indstillet på et niveau, som ikke overstiger 140 % af værdien for mærkespidsspændingen.

**SE OGSÅ** For oplysninger om omgivende temperaturområder for standardkompatible enheder henvises til:

Appendix 1. "Ambient temperature range of standard-compliant devices"

For mere information om transientbeskyttelse skal du se:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

- Idriftsættelse og installation må kun udføres af særligt uddannet og kvalificeret personale.
- Afhængigt af niveauet af beskyttelsen kan udstyrets indre sikre kredsløb (lyseblå identifikation på udstyret) placeres i det farlige område. Det er især vigtigt for at sikre, at det indre sikre kredsløb er sikkert adskilt fra alle ikke-indre sikre kredsløb.

  Installationen af de indre sikre kredsløb skal udføres i overensstemmelse med de gældende installationsbestemmelser.
- De respektive spidsværdier for feltudstyret og det associerede udstyr med hensyn til eksplosionsbeskyttelse bør overvejes, når der tilsluttes indre sikkert feltudstyr med indre sikre kredsløb af H-System-udstyr (demonstration af indre sikkerhed). EN 60079-14 skal overholdes (hvor passende). Hvis til rådighed, skal produktets certificeringskontroltegning endvidere overholdes.
- EF-typeafprøvningsattesterne eller standardattesterne/godkendelserne skal overholdes. Det er især vigtigt at overholde de ”særlige forhold”, hvis de er indeholdt i attesterne.

**SE OGSÅ** For oplysninger om installation henvises til:

“■ Installation” i 2.1 “For sikker anvendelse.”

## ■ Vedligeholdelse og reparation

Overførselsegenskaberne for udstyr forbliver stabil over lange tidsperioder. Dette eliminerer behovet for regelmæssig justering. Der behøves ingen vedligeholdelse.

**SE OGSÅ** For information om vedligeholdelse og reparation henvises til:

”■ Vedligeholdelse og reparation” i 2.1 “For sikker anvendelse.”

# 2.4 For sikker anvendelse — N-IO-feltkabinet

**For operatørpersonalets såvel som for apparaternes og hele systemets sikkerhed skal apparaterne for N-IO-feltkabinettet installeres i overensstemmelse med de sikkerhedsregler, der er beskrevet I denne vejledning.**

**Hvis apparaterne for N-IO-feltkabinettet imidlertid ikke installeres i overensstemmelse med sikkerhedsreglerne, garanterer YOKOGAWA ikke for systemets sikkerhed. Læs venligst følgende punkter grundigt.**

## ■ Model og artikel

N-IO-feltkabinet (model: S2ZN70D) og tilhørende enheder (model: S2ZN60D og S2CB60) på ProSafe-RS sikkerheds instrumentssystem

## ■ Anvendelige standarder

Denne vejledning er baseret på de følgende standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markeringer

S2ZN70D, S2ZN60D

Ex II 3 G Ex ec nC IIC T4 Gc X

S2CB60

Ex II 3 G Ex ec IIC T4 Gc X

Symbol 'X' angiver de specifikke anvendelsesforhold. Der henvises til ■Specifikke anvendelsesforhold.

## ■ Installationsspecifikationer

- Omgivende temperatur
  S2ZN70D: -40 grader C til 55 grader C
  S2ZN60D: -40 grader C til 55 grader C (*1)
  S2CB60: -40 grader C til 55 grader C

  *1: Denne omgivende temperatur gælder for S2CB60 med S2ZN60D installeret.

- Strømforsyning
  100 til 120 V vekselstrøm +10 %/-10 %
  220 til 240 V vekselstrøm +10 %/-10 %

## ■ Specifikke anvendelseforhold

- S2ZN60D skal installeres i S2CB60.
- For krav til den omgivende temperatur, se instruktionerne, idet udstyret ikke er mærket op med disse krav.
- Enhederne i kabinettet skal anvendes i et miljø med højst forureningsgrad 2 som defineret i EN 60664-1.

## Advarsler

ÅBN IKKE KABINETTET PÅ STEDER MED EKSPLOSIV ATMOSFÆRE.

## Installation

- Apparatet bør installeres og anvendes indenfor klassificeringen.
- Alle apparater og al ledningsføring i farlige områder skal installeres i overensstemmelse med EN 60079-14 og relaterede lokale bestemmelser ledningsføring. Installeringen skal desuden også overholde de relaterede krav for ikke-farlige områder.
- Instruktionerne i GS (Generelle specifikationer), TI (Teknisk information i Installationsvejledningen) og/eller IM (Brugervejledning) skal overholdes.
- Installeringen bør af kun udføres professionelle teknikere som er uddannet i bekyttelses- og installeringsprocedurer, relevante bestemmelser og regulationer og de generelle principper om områdeklassifikation.
- Skruerne til montering af ledningsføringen skal strammes med det specificerede spændingsmoment.
- Når installeringen er fuldendt og før den første anvendelse, bør der foretages inspektion af apparatet og installationen i overensstemmelse med EN 60079-17.
- Overhold de følgende instruktioner for at opnå sikkerhed og god ydelse.
  - Sørg for at alle de tomme pladser i kabinettet er ordentligt dækket med de medfølgende hætter.
- Læs og forstå omhyggeligt oplysningerne i brugervejledningerne, før du anvender Roxtecs tætningsmodul og kabelforskruninger.
- Fjern ikke pladen til kabelforskruningen og pladen til tætningsmodulet fra kabinettet.
- Nedsænk ikke kabinettet i vand.
- Du kan købe hulforseglingerne med deres varenummer (B1036HZ, B1037HZ) og montere dem på produktet, ligesom du også kan købe et produkt med hulforseglinger (/SEAL). I begge tilfælde er vores vurdering af produktoverensstemmelse med ATEX-direktivet for S2ZN70D som helhed, inklusive hulforseglingerne. Hulforseglingerne leveres med ATEX-certifikat fra producenten, når du køber dem med deres varenummer.

## Vedligeholdelse og reparation

- Inspektion og vedligeholdelse af apparatet og installationerne skal udføres af kvalificeret personale og i følge bestemmelserne i EN 60079-17.
- Reparation, eftersyn og forbedringer af apparatet må kun udføres af kvalificeret personale og i overensstemmelse med EN IEC 60079-19.
- Reparation af apparater må kun udføres af specielt uddannet, erfarent, faglært, vidende og/eller superviseret personale, eller af de serviceingeniører, der er autoriseret af YOKOGAWA. Hvis ikke, bliver beskyttelsen ugyldig.
- Der må ikke foretages ændringer på apparater, der anvendes i farlige områder.

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# 3. Veiligheidsspecificaties

**De volgende items worden in dit gedeelte beschreven.**

- **Voor veilig gebruik**
- **Voor veilig gebruikS—S2BN4D**
- **Voor veilig gebruik—S2BN5D**
- **Voor veilig gebruik—N-IO veldbehuizing**

# 3.1 Voor veilig gebruik

**Voor de veiligheid van het bedieningspersoneel, de apparaten en het hele systeem moeten alle apparaten worden geïnstalleerd volgens veiligheidsregels die worden beschreven in deze handleiding.**

**Worden de apparaten niet geïnstalleerd volgens de veiligheidsregels, dan staat YOKOGAWA niet in voor de veiligheid van het systeem. Lees de volgende punten zorgvuldig door.**

## ■ Model en item

Model ProSafe-RS/ProSafe-RS Lite geïnstrumenteerd veiligheidssysteem

ZIE OOK Voor meer informatie over ProSafe-RS/ProSafe-RS Lite-apparaten, raadpleeg:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Van toepassing zijnde standaarden

Dit document is op de volgende standaarden gebaseerd:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markeringen

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Symbool ‘X’ staat voor de specifieke gebruiksvoorwaarden. Raadpleeg ■Specifieke gebruiksvoorwaarden.

## ■ Specifieke gebruiksvoorwaarden

- De apparatuur mag uitsluitend worden gebruikt op een locaties met maximaal vervuilingsgraad 2, zoals gedefinieerd in EN 60664-1.
- De apparatuur moet worden geïnstalleerd in een behuizing die minimaal een bescherming biedt van IP54 in overeenstemming met EN IEC 60079-0.
- Beveiliging tegen stroompieken op een niveau dat 119 V gelijkstroom niet overschrijdt moet worden voorzien aan de stroomtoevoeraansluiting van de apparatuur.

ZIE OOK Voor informatie over omgevingstemperatuurbereiken van standaard conforme apparaten, raadpleeg:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Waarschuwingen

WAARSCHUWING – IN GEVAL VAN EEN POTENTIELE EXPLOSIEVE OMGEVING

- OPEN DE KAST NIET TERWIJL DE APPARATUUR IS BEKRACHTIGD
- VERWIJDER OF VERVANG DE ZEKERING NIET WANNEER BEKRACHTIGD
- ONTKOPPEL VERBINDINGEN NIET WANNEER BEKRACHTIGD

## Installatie

- De apparatuur moet worden geïnstalleerd volgens en gebruikt binnen de specificaties.
- Alle apparatuur en bedrading in gevaarlijke ruimtes moeten worden geïnstalleerd volgens EN 60079-14 en verwante lokale elektracodes en de installatie moet daarbij vodoen aan de van toepassing zijnde vereisten voor niet-gevarenzones.
- De aanwijzingen die worden gegeven in GS (Algemene specificaties), TI (Technische informatie voor de installatie-instructies) en/of IM (Handleidingen) moeten worden opgevolgd.
- De installatie van de apparaten moet worden uitgevoerd door gekwalificeerd personeel die de juiste training heeft gehad over het soort bescherming en diverse installatietoepassingen, relevante regels, reglementen en algemene principes van gebiedsclassificaties.
- De graad van bescherming mag niet lager zijn dan IP54 bij de kabelinvoer in de kast.
- Bij het installeren moet worden verzekerd dat de ventilatie-openingen van de apparatuur niet door kabelonderdelen, het bevestigen van onderdelen, etc. worden afgedekt.
- Schroeven van aansluitingen voor het ter plekke bedraden moeten met de gespecificeerde aantrekkoppels worden vastgezet.
- Na het voltooien van het installeren en voor ingebruikname, moet de apparatuur en installatie worden geïnspecteerd in overeenstemming met EN 60079-17.
- Volg de volgende richtlijnen voor een veilige en goede werking op.
  - Zorg dat alle lege sleuven in de kast goed zijn afgedekt met bevestigde afdekkappen.
  - Zorg dat alle kabels stevig zijn bevestigd in de kast.
- De ter plaatse uitgevoerde bedrading voor Ethernet-communicatie en Vnet/IP-netwerken moet voldoen aan IEEE 802.3 om een te hoge spanning van meer dan 119 V te voorkomen.
- Als er een basisplaat voor de barrière wordt aangesloten, moet de installatie worden uitgevoerd in overeenstemming met de installatietekening daarvan.
- De modellen opgenomen in de vorige EU conformiteitsverklaring met de markering ”nA” kunnen in het systeem worden geïnstalleerd, indien hetzelfde model en suffix-codes zijn opgenomen in de tabellen van Appendix 1.

## Onderhoud en reparatie

- Inspectie en onderhoud van de apparatuur en installatie moet uitsluitend door gekwalificeerd personeel en in overeenstemming met EN 60079-17 worden uitgevoerd.
- Reparatie, revisie, en terugroeping van de apparatuur wordt uitsluitend uitgevoerd door gekwalificeerd personeel en in overeenstemming met EN 60079-19.
- Reparatie van de apparatuur wordt uitsluitend uitgevoerd door personeel dat de vereiste training, ervaring, techniek en kennis heeft en/of onder leiding staat van erkend personeel, of door onderhoudsmonteurs die door YOKOGAWA zijn geautoriseerd. De beschermingsonderdelen worden anders mogelijk aangetast of uitgeschakeld.
- Apparatuur die in gevaarlijke gebieden wordt gebruikt mag niet worden gemodificeerd.
- Gebruik alleen de volgende door YOKOGAWA opgegeven batterijen voor processormodules:
  S9185FA voor SCP451 en SCP461
  S9450FE voor S2CP471 en L1CP471
- Gebruik alleen de door YOKOGAWA opgegeven VENTILATORS voor AIP602:
  A1159EM of A1213EM

# 3.2 Voor veilig gebruik—S2BN4D

**Om verzekerd te kunnen zijn van intrinsiek veilige prestaties, moet u het volgende in acht nemen:**

- **Gebruik de basisplaten voor de barrière (Model:S2BN4D) en intrinsiek veilige barrières in de juiste combinatie.**
- **Installeer de apparatuur volgens de instructies voor de intrinsiek veilige barrières.**

**Voor de veiligheid van het bedienend personeel, de apparatuur en het hele systeem, moeten basisplaten voor barrières worden geïnstalleerd overeenkomstig de veiligheidsregels zoals die worden beschreven in deze handleiding.**

**Als de basisplaten voor barrières echter niet worden geïnstalleerd volgens de veiligheidsregels, dan staat YOKOGAWA niet in voor de veiligheid van het systeem. Lees de volgende punten zorgvuldig door.**

## ■ Model en item

De basisplaat voor barrière (Model: S2BN4D) van het ProSafe-RS systeem met veiligheidsinstrumenten

## ■ Van toepassing zijnde normen

Dit document is op de volgende standaarden gebaseerd:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Markeringen

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Symbool ‘X’ staat voor de specifieke gebruiksvoorwaarden. Raadpleeg ■Specifieke gebruiksvoorwaarden.

## ■ Specifieke gebruiksvoorwaarden

Alle apparatuur moet op de gevaarlijke locatie worden geïnstalleerd in overeenstemming met de markeringen op elk van de apparaten. Wanneer de apparatuur bestaat uit verschillende apparaten, moet u ervoor zorgen dat de apparatuur uitsluitend bestaat uit apparaten die op de gevaarlijke locatie in kwestie kunnen worden gebruikt.

- De apparatuur moet worden geïnstalleerd op een locatie met maximaal vervuilingsgraad 2 zoals gedefinieerd in EN 60664-1, en in een beheuizing die minimaal een bescherming biedt van IP54 en die voldoet aan de relevante eisen van EN IEC 60079-0 en EN IEC 60079-7.
- Er mag niets op de apparatuur worden aangesloten of ervan worden losgekoppeld als niet eerst de locatie waarin de apparatuur is geïnstalleerd is gecontroleerd en niet-gevaarlijk is bevonden, of als niet eerst de stroomvoorziening van de schakeling waartoe de apparatuur behoort is uitgeschakeld.
- De I/O-modules die zijn bevestigd aan de achterzijde maken geen geen deel uit van de certificatie en moeten apart en op de juiste wijze worden gecertificeerd.
- Er moet een voorziening worden getroffen (als onderdeel van de gecertificeerde I/O-modules bevestigd aan de achterzijde, of extern) voor een beveiliging tegen stroompieken aan de stroomtoevoeraansluitingen op een niveau dat niet hoger mag zijn dan 140% van het nominale piekvoltage van 85V.

**ZIE OOK** Voor informatie over omgevingstemperatuurbereiken van standaard conforme apparaten, raadpleeg:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Raadpleeg voor meer informatie over beveiliging tegen stroompieken:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installatie

De voorzorgsmaatregelen voor installatie van S2BN4D zijn dezelfde als die voor ProSafe-RS-apparaten.

**ZIE OOK** Voor informatie over installatie, raadpleeg:

“■ Installatie” in 3.1 “Voor veilig gebruik.”

## ■ Onderhoud en reparatie

De voorzorgsmaatregelen voor onderhoud en reparatie van S2BN4D zijn dezelfde als die voor ProSafe-RS-apparaten.

**ZIE OOK** Voor informatie over onderhoud en reparatie, raadpleeg:

“■ Onderhoud en reparatie” in 3.1 “Voor veilig gebruik.”

# 3.3 Voor veilig gebruik—S2BN5D

**Om verzekerd te kunnen zijn van intrinsiek veilige prestaties, moet u het volgende in acht nemen:**

- **Gebruik de basisplaten voor de barrière (Model:S2BN5D) en intrinsiek veilige barrières in de juiste combinatie.**
- **Installeer de apparatuur volgens de instructies voor de intrinsiek veilige barrières.**

**Voor de veiligheid van het bedienend personeel, de apparatuur en het hele systeem, moeten basisplaten voor barrières worden geïnstalleerd overeenkomstig de veiligheidsregels zoals die worden beschreven in deze handleiding.**

**Als de basisplaten voor barrières echter niet worden geïnstalleerd volgens de veiligheidsregels, dan staat YOKOGAWA niet in voor de veiligheid van het systeem. Lees de volgende punten zorgvuldig door.**

## ■ Model en item

De basisplaat voor barrière (Model: S2BN5D) van het ProSafe-RS systeem met veiligheidsinstrumenten

## ■ Van toepassing zijnde normen

Dit document is op de volgende standaarden gebaseerd:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Markeringen

FIDI 21 ATEX 0071X

II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

II (1) D [Ex ia Da] IIIC

I (M1) [Ex ia Ma] I

Symbool ‘X’ staat voor de specifieke gebruiksvoorwaarden. Raadpleeg ■Specifieke gebruiksvoorwaarden.

## Specifieke gebruiksvoorwaarden

Alle apparatuur moet op de gevaarlijke locatie worden geïnstalleerd in overeenstemming met de markeringen op elk van de apparaten. Wanneer de apparatuur bestaat uit verschillende apparaten, moet u ervoor zorgen dat de apparatuur uitsluitend bestaat uit apparaten die op de gevaarlijke locatie in kwestie kunnen worden gebruikt.

### Specifieke gebruiksvoorwaarden (intrinsieke veiligheid “i”)

Alhoewel er geen specifieke gebruiksvoorwaarden gelden voor de basisplaten voor barrières, moet wel het certificaat van de intrinsiek veilige barrières die zullen worden verbonden met de basisplaten voor de barrières worden gecontroleerd.

### Specifieke gebruiksvoorwaarden (Ex “ec”)

- De apparatuur mag uitsluitend worden gebruikt op een locatie met maximaal vervuilingsgraad 2, zoals gedefinieerd in EN 60664-1.
- De apparatuur moet worden geïnstalleerd in een behuizing die minimaal een bescherming biedt van IP54 in overeenstemming met EN IEC 60079-7 en EN IEC 60079-0.
- Bescherming tegen spanningspieken (transiënten) moet worden geboden aan de aansluitingen van de systeemstroomvoorziening. Bescherming tegen spanningspieken (transiënten) moet worden ingesteld op een niveau van maximaal 140 % van de opgegeven piekspanningswaarde.

**ZIE OOK** Voor informatie over omgevingstemperatuurbereiken van standaard conforme apparaten, raadpleeg:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Raadpleeg voor meer informatie over beveiliging tegen stroompieken:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installatie

- Ingebruikstelling en installatie mogen uitsluiten worden uitgevoerd door speciaal daartoe opgeleid en bevoegd personeel.
- Afhankelijk van het niveau van beveiliging, kunnen de intrinsiek veilige circuits van de apparatuur (lichtblauwe identificatie op de apparatuur) worden geplaatst in een gevaarlijke omgeving. Het is in het bijzonder belangrijk om ervoor te zorgen dat de intrinsiek veilige circuits op een veilige manier zijn gescheiden van alle niet-intrinsiek veilige circuits.

  De installatie van de intrinsiek veilige circuits moet worden uitgevoerd in overeenstemming met de daarvoor geldende regelgeving.
- De respectieve piekwaarden van de veldapparatuur en de gekoppelde apparatuur met betrekking tot beveiliging tegen ontploffingsgevaar moeten in aanmerking worden genomen wanneer intrinsiek veilige veldapparatuur wordt verbonden met de intrinsiek veilige circuits van H-systeemapparatuur (demonstratie van intrinsieke veiligheid). EN 60079-14 moet in acht worden genomen (waar van toepassing). Indien beschikbaar, moet ook de productcertificatie-besturingstekening in acht worden genomen.
- De certificaten van EG-typeonderzoek of normcertificaten/goedkeuringen moeten in acht worden genomen. Het is in het bijzonder van belang om eventuele “”speciale voorwaarden”” in acht te nemen die opgenomen kunnen zijn in de certificaten.

**ZIE OOK** Voor informatie over installatie, raadpleeg:

“■ Installatie” in 3.1 “Voor veilig gebruik.”

## ■ Onderhoud en reparatie

De overdrachtseigenschappen van de apparatuur blijven stabiel, zelfs over langere tijd. Dit betekent dat ze niet regelmatig opnieuw hoeven te worden afgesteld. Er is geen onderhoud nodig.

**ZIE OOK** Voor informatie over onderhoud en reparatie, raadpleeg:

“■ Onderhoud en reparatie” in 3.1 “Voor veilig gebruik.”

# 3.4 Voor veilig gebruik—N-IO veldbehuizing

**Voor de veiligheid van het bedieningspersoneel, de apparaten en het hele systeem moeten alle apparaten voor N-IO veldbehuizing worden geïnstalleerd volgens veiligheidsregels die worden beschreven in deze handleiding.**

**Worden de apparaten voor N-IO veldbehuizing niet geïnstalleerd volgens de veiligheidsregels, dan staat YOKOGAWA niet in voor de veiligheid van het systeem. Lees de volgende punten zorgvuldig door.**

## ■ Model en item

N-IO veldbehuizing (Model:S2ZN70D) en gerelateerde apparaten (Model:S2ZN60D en S2CB60) van ProSafe-RS systeem met veiligheidsinstrumenten

## ■ Van toepassing zijnde standaarden

Dit document is op de volgende standaarden gebaseerd:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markeringen

S2ZN70D, S2ZN60D

Ex II 3 G Ex ec nC IIC T4 Gc X

S2CB60

Ex II 3 G Ex ec IIC T4 Gc X

Symbool ‘X’ staat voor de specifieke gebruiksvoorwaarden. Raadpleeg ■Specifieke gebruiksvoorwaarden.

## ■ Specificaties voor installatie

- Omgevingstemperatuur
  - S2ZN70D: -40 graden C tot 55 graden C
  - S2ZN60D: -40 graden C tot 55 graden C (*1)
  - S2CB60: -40 graden C tot 55 graden C

  *1: Deze omgevingstemperatuur is van toepassing op S2CB60 met S2ZN60D geïnstalleerd.
- Stroomtoevoer
  - 100 tot 120 V AC +10%/-10%
  - 220 tot 240 V AC +10%/-10%

## ■ Specifieke gebruiksvoorwaarden

- S2ZN60D moet worden geïnstalleerd in S2CB60.
- Voor de omgevingstemperatuurvereisten, raadpleeg de instructies omdat deze niet op de apparatuur zijn gelabeld.
- De apparaten in de behuizing moeten worden gebruikt in een omgeving met maximaal vervuilingsgraad 2 zoals gedefinieerd in EN 60664-1.

## Waarschuwingen

OPEN DE BEHUIZING NIET WANNEER ER EEN EXPLOSIEVE ATMOSFEER AANWEZIG IS.

## Installatie

- De apparatuur moet worden geïnstalleerd volgens en gebruikt binnen de specificaties.
- Alle apparatuur en bedrading in gevaarlijke ruimtes moeten worden geïnstalleerd volgens EN 60079-14 en verwante lokale elektracodes en de installatie moet daarbij vodoen aan de van toepassing zijnde vereisten voor niet-gevarenzones.
- De aanwijzingen die worden gegeven in GS (Algemene specificaties), TI (Technische informatie voor de installatie-instructies) en/of IM (Handleidingen) moeten worden opgevolgd.
- De installatie van de apparaten moet worden uitgevoerd door gekwalificeerd personeel die de juiste training heeft gehad over het soort bescherming en diverse installatietoepassingen, relevante regels, reglementen en algemene principes van gebiedsclassificaties.
- Schroeven van aansluitingen voor het ter plekke bedraden moeten met de gespecificeerde aantrekkoppels worden vastgezet.
- Na het voltooien van het installeren en voor ingebruikname, moet de apparatuur en installatie worden geïnspecteerd in overeenstemming met EN 60079-17.
- Volg de volgende richtlijnen voor een veilige en goede werking op.
  - Zorg dat alle lege sleuven in de behuizing goed zijn afgedekt met bevestigde afdekkappen.
- Lees de informatie in de gebruikershandleidingen grondig door en zorg dat u deze begrijpt voordat u de Roxtec afdichtingsmodule en kabelwartels gebruikt.
- Verwijder de plaat voor de kabelwartel en de plaat voor de afdichtingsmodule niet uit de behuizing.
- Dompel de behuizing niet onder in water.
- U kunt gatafdichtingen kopen met hun onderdeelnummer (B1036HZ, B1037HZ) en ze aan het product bevestigen; u kunt ook een product kopen met gatafdichtingen (/SEAL). In beide gevallen is onze beoordeling van productconformiteit met de ATEX-richtlijn voor S2ZN70D als geheel, inclusief de gatafdichtingen. De gatafdichtingen worden geleverd met een ATEX-certificaat dat door de fabrikant wordt verstrekt wanneer u ze koopt met hun onderdeelnummer.

## Onderhoud en reparatie

- Inspectie en onderhoud van de apparatuur en installatie moet uitsluitend door gekwalificeerd personeel en in overeenstemming met EN 60079-17 worden uitgevoerd.
- Reparatie, revisie, en terugroeping van de apparatuur wordt uitsluitend uitgevoerd door gekwalificeerd personeel en in overeenstemming met EN IEC 60079-19.
- Reparatie van de apparatuur wordt uitsluitend uitgevoerd door personeel dat de vereiste training, ervaring, techniek en kennis heeft en/of onder leiding staat van erkend personeel, of door onderhoudsmonteurs die door YOKOGAWA zijn geautoriseerd. De beschermingsonderdelen worden anders mogelijk aangetast of uitgeschakeld.
- Apparatuur die in gevaarlijke gebieden wordt gebruikt mag niet worden gemodificeerd.

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# 4. Turvatiedot

**Seuraavat kohdat on kuvattu tässä osassa.**

- **Turvallista käyttöä varten**
- **Turvallista käyttöä varten—S2BN4D**
- **Turvallista käyttöä varten—S2BN5D**
- **Turvallista käyttöä varten—N-IO-kenttäkotelo**

# 4.1 Turvallista käyttöä varten

**Sekä käyttäjien että laitteiden ja järjestelmän turvallisuuden takaamiseksi kaikkien laitteiden asennuksessa on noudatettava seuraavia turvallisuusohjeita.**

**Jos turvallisuusohjeita ei noudateta laitteita asennettaessa, YOKOGAWA ei takaa järjestelmän turvallisuutta. Tutustu huolellisesti seuraaviin ohjeisiin.**

## ■ Malli ja tuote

Malli ProSafe-RS/ProSafe-RS Lite -turvamittausjärjestelmä

LISÄTIE TOJA Lisätiedot ProSafe-RS/ProSafe-RS Lite -laitteista, katso:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Sovellettavat standardit

Tämä asiakirja perustuu seuraaviin standardeihin:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Merkinnät

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Symboli “X” tarkoittaa erityiskäyttöoloja. Katso ■Erityiskäyttöolot.

## ■ Erityiskäyttöolot

- Laitetta tulee käyttää vain alueella, jonka saasteluokka on enintään 2 standardin EN 60664-1 mukaisesti.
- Laite tulee asentaa koteloon, joka antaa vähintään IP54 tason suojauksen standardin EN IEC 60079-0 mukaisesti.
- Transienttisuojaus, joka on säädetty tasolle, joka ei ylitä 119 V d. c. on säädettävä laitteen virtaliitäntään.

LISÄTIE TOJA Tiedot vakiomuotoisesti yhteensopivien laitteiden ympäristölämpötilan vaihteluvälistä,katso:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Varoitukset

VAROITUS - RÄJÄHTYSHERKÄN ATMOSFÄÄRIN VALLITESSA

- ÄLÄ AVAA KOTELOA LAITTEIDEN OLLESSA KYTKETTYNÄ
- SULAKETTA EI SAA POISTA A EIKÄ VAIHTAA VIRRAN OLLESSA KYTKETTYNÄ
- ÄLÄ IRROITA LIITÄNTÖJÄ VIRRAN OLLESSA KYTKETTYNÄ

## Asennus

- Laitteet tulee asentaa ja käyttää niiden luokitusten rajoissa.
- Vaarallisissa tiloissa olevat laitteet ja kytkennät on asennettava standardin EN 60079-14 ja siihen liittyvien paikallisten sähkömääräysten mukaisesti, ja asennuksen on noudatettava vaarattomille tiloille tarkoitettuja asianmukaisia vaatimuksia.
- Dokumentaation kuten GS (yleiset tekniset tiedot), TI (tekniset asennusohjeet) ja IM (käyttöohjeet) antamia ohjeita on noudatettava.
- Asennuksen saa tehdä vain koulutuksen ja pätevyyden omaava henkilökunta, jonka koulutukseen on sisällytetty suojaus- ja asennuskäytäntöön, asiaa koskeviin sääntöihin ja määräyksiin sekä alueluokituksen yleisperiaatteisiin liittyvät ohjeistukset.
- Vähintään suojausluokka IP54 on säilytettävä kaapelin läpivienneissä kotelon sisään.
- Asennuksen aikana on huolehdittava, etteivät kaapelin osat tai kiinnitysvarusteet tuki laitteiden ilmanvaihtoaukkoja.
- Kenttäkaapelien kytkentään tarkoitettujen terminaalien ruuvit on kiristettävämääritellyillä vääntöarvoilla.
- Asennuksen päätyttyä ja ennen ensimmäistä käyttöä on suoritettava laitteiden alkutarkastus ja asennus standardin EN 60079-17 mukaisesti.
- Noudata seuraavia ohjeita turvallisuuden ja suorituskyvyn varmistamiseksi.
  - Varmista, että käyttämättömät laitekaapin aukot on peitetty huolellisesti.
  - Varmista, että kaapelit on kiinnitetty tukevasti laitekaappiin.
- Kenttäjohdotuksen Ethernet-tiedonsiirrolle ja Vnet/IP -verkolle on oltava standardin IEEE 802.3 mukainen, jotta vältetään 119V yliyksen aiheuttama ylijännite.
- Jos pohjalevy liitetään esteeseen, asennuksen on oltava sen ohjauspiirustuksen mukainen.
- Edelliseen EU-vaatimustenmukaisuusvakuutukseen sisälletyt mallit, joissa on merkintä ”nA”, voidaan asentaa järjestelmään, mikäli sama malli ja päätekoodi on luetteloitu Liite 1:n taulukoissa.

## Huolto ja korjaukset

- Laitteen tarkastukset ja huollon sekä asennukset saa tehdä vain koulutuksen ja pätevyyden omaava henkilökunta ja standardin EN 60079–17 mukaisesti.
- Laitteen korjauksen, kunnostamisen ja käyttöönoton saa tehdä vain koulutuksen ja pätevyyden omaava henkilökunta standardin EN 60079–19 mukaisesti.
- Laitteen korjaukset saa tehdä vain koulutettu, kokenut, ammattitaitoinen, asiantunteva ja/tai valvottu henkilökunta, tai YOKOGAWAN valtuuttama huoltoinsinööri. Muuten suojaustyyppi voi mitätöityä.
- Vaarallisissa tiloissa toimiviin laitteisiin ei saa tehdä muutoksia.
- Käytä vain seuraavia, YOKOGAWAn prosessorimoduuleille määrittelemiä akkuja:
  S9185FA-akku SCP451:lle ja SCP461:lle
  S9450FE-akku S2CP471:lle ja L1CP471:lle
- Käytä AIP602:ssa vain seuraavia, YOKOGAWAn määrittelemiä TUULETTIMIA:
  A1159EM tai A1213EM

# 4.2 Turvallista käyttöä varten—S2BN4D

**Luonnostaan vaarattomien rakenteen varmistamiseksi on noudatettava seuraavia ohjeita.**

- **Käytä estepohjalevyjä (Malli:S2BN4D) ja luonnostaan vaarattoman rakenteen esteitä yhdistellen ne oikealla tavalla.**
- **Asenna laitteet luonnostaan vaarattoman rakenteen esteiden ohjeissa kuvatulla tavalla.**

**Käyttäjien, laitteiden ja koko järjestelmän turvallisuutta varten esteiden pohjalevyt on asennettava tässä käyttöohjeessa kuvattujen turvaohjeiden mukaisesti.**

**Jos esteiden turvalevyjä ei asenneta turvaohjeiden mukaisesti, YOKOGAWA ei takaa järjestelmän turvallisuutta. Pyydämme lukemaan seuraavat kohdat huolellisesti.**

## ■ Malli ja tuote

ProSafe-RS turvallisuuslaitejärjestelmä esteen pohjalevy (Malli:S2BN4D)

## ■ Sovellettavat standardit

Tämä asiakirja perustuu seuraaviin standardeihin:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Merkinnät

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Symboli “X” tarkoittaa erityiskäyttöoloja. Katso ■Erityiskäyttöolot.

## ■ Erityiskäyttöolot

Vaarallisella alueella kaikki laitteet on asennettava jokaisen laitteen osoittaman merkinnän mukaisesti. Kun kalusto koostuu useista laitteista, varmista että kalusto koostuu vain laitteista, joita voidaan käyttää samassa vaarallisessa ympäristössä.

- Laite on asennettava alueelle, jonka saasteluokka on enintään 2 niin kuin on mainittu standardissa EN 60664-1, ja se on pantava koteloon, joka antaa vähintään IP54 tason suojauksen ja vastaa standardien EN IEC 60079-0 ja EN IEC 60079-7 vaatimuksia.
- Mitään laitteeseen tulevia liitäntöjä ei saa kytkeä eikä irrottaa ellei laitteen asennuspaikan tiedetä olevan vaaraton tai piiri, johon se liitetään, on kytketty pois virrasta.
- Takatasoon kiinnitetyt I/O-modulit eivät ole osa sertifikaattia ja niiden sertifikaatti on erikseen tarkistettava.
- On varauduttava siihen, (joko takatasoon kiinnitettyjen sertifikoitujen I/O-modulien osa tai ulkoisesti kiinnitetty), että virtaliitäntöjen transienttisuojaus säädetään tasolle, joka ei ylitä 140 % 85 V:n nimellistä huippujännitearvoa.

**LISÄTIE TOJA** Tiedot vakiomuotoisesti yhteensopivien laitteiden ympäristölämpötilan vaihteluvälistä,katso:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Katso lisätietoja transienttisuojauksesta

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Asennus

Sekä S2BN4D:n että ProSafe-RS-laitteiden asennuksessa on noudatettava samoja varotoimia.

**LISÄTIE TOJA** Tiedot asennuksesta, katso:

”■ Asennus” kohdassa 4.1 ”Turvallista käyttöä varten”

## ■ Huolto ja korjaukset

Sekä S2BN4D:n että ProSafe-RS-laitteiden kunnossapidossa ja korjauksissa on noudatettava samoja varotoimia.

**LISÄTIE TOJA** Tiedot kunnossapidosta ja korjauksista, katso:

”■ Kunnossapito ja korjaukset” kohdassa 4.1 ”Turvallista käyttöä varten”

# 4.3 Turvallista käyttöä varten—S2BN5D

**Luonnostaan vaarattomien rakenteen varmistamiseksi on noudatettava seuraavia ohjeita.**

- **Käytä estepohjalevyjä (Malli:S2BN5D) ja luonnostaan vaarattoman rakenteen esteitä yhdistellen ne oikealla tavalla.**
- **Asenna laitteet luonnostaan vaarattoman rakenteen esteiden ohjeissa kuvatulla tavalla.**

**Käyttäjien, laitteiden ja koko järjestelmän turvallisuutta varten esteiden pohjalevyt on asennettava tässä käyttöohjeessa kuvattujen turvaohjeiden mukaisesti.**

**Jos esteiden turvalevyjä ei asenneta turvaohjeiden mukaisesti, YOKOGAWA ei takaa järjestelmän turvallisuutta. Pyydämme lukemaan seuraavat kohdat huolellisesti.**

## ■ Malli ja tuote

ProSafe-RS turvallisuuslaitejärjestelmä esteen pohjalevy (Malli:S2BN5D)

## ■ Sovellettavat standardit

Tämä asiakirja perustuu seuraaviin standardeihin:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Merkinnät

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Symboli “X” tarkoittaa erityiskäyttöoloja. Katso ■Erityiskäyttöolot.

## ■ Erityiskäyttöolot

Vaarallisella alueella kaikki laitteet on asennettava jokaisen laitteen osoittaman merkinnän mukaisesti. Kun kalusto koostuu useista laitteista, varmista että kalusto koostuu vain laitteista, joita voidaan käyttää samassa vaarallisessa ympäristössä.

### ● Erityiskäyttöolosuhteet (luonnostaan vaarattomat laitteet “i”)

Vaikka mitään erityiskäyttöolosuhteita ei ole määritetty esteen pohjalevyille, esteen pohjalevyihin liitettävät luonnostaan vaarattoman laitteen pohjalevyjen sertifikaatti on tarkistettava.

### ● Erityiskäyttöolosuhteet (Ex “ec”)

- Laitetta tulee käyttää vain paikassa, jossa ei ylitetä saasteluokkaa 2 (EN 60664-1:n määrittely).
- Laite tulee asentaa suljettuun tilaan, joka antaa ainakin IP54 asteen suojan EN IEC 60079-7 ja EN IEC 60079-0 määritelmän mukaisesti.
- Järjestelmän virtalähteessä täytyy olla transienttisuoja. Transienttisuoja on säädettävä tasolle, joka ei ylitä 140 % huipun nimellistä jännitearvoa.

**LISÄTIE TOJA** Tiedot vakiomuotoisesti yhteensopivien laitteiden ympäristölämpötilan vaihteluvälistä,katso:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Katso lisätietoja transienttisuojauksesta

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Asennus

- Käytön ja asennuksen saa suorittaa ainoastaan erityisen koulutuksen saanut asiantuntija.
- Suojaluokasta riippuen laitteiden luonnostaan vaarattomat piirit (vaaleansininen tunnus laitteissa) voidaan sijoittaa vaarallisiin tiloihin. On kuitenkin erityisen tärkeää varmistaa, että luonnostaan vaarattomat piirit on turvallisesti erotettu piireistä, jotka eivät ole luonnostaan vaarattomia.

  Luonnostaan vaarattomien piirien asennus tulee tapahtua asianmukaisten asennusohjeiden mukaisesti.
- Kun liitetään luonnostaan vaarattomia kenttälaitteita H-järjestelmän laitteiden luonnostaan vaarattomaan piiriin (luonnostaan vaarattoman tilan näyttö), on otettava huomioon kenttälaitteen ja liittyvän laitteen räjähdyssuojaan liittyvät huippuarvot.
  Standardia EN 60079-14 on noudatettava (asiaan liittyen). Jos käytettävissä, myös tuotesertifikaatin ohjauspiirustuksia on noudatettava.
- EC-tyypin tarkistussertifikaattia tai standardeja sertifikaatteja/hyväksyntöjä on noudatettava. On erittäin tärkeää noudattaa ”erityisoloja”, jos niitä on sisällytetty sertifikaatteihin.

**LISÄTIE TOJA** Tiedot asennuksesta, katso:

”■ Asennus” kohdassa 4.1 ”Turvallista käyttöä varten”

## ■ Huolto ja korjaukset

Laitteiden siirto-ominaisuudet pysyvät pitkään vakaina. Tästä syystä säännöllinen säätö ei ole tarpeen. Huoltoa ei tarvita.

LISÄTIE TOJA Tiedot kunnossapidosta ja korjauksista, katso:

”■ Huolto ja korjaukset” kohdassa 4.1 ”Turvallista käyttöä varten”

# 4.4 Turvallista käyttöä varten—N-IO-kenttäkotelo

**Sekä käyttäjien että laitteiden ja järjestelmän turvallisuuden takaamiseksi kaikkien N-IO-kenttäkotelolaitteiden asennuksessa on noudatettava seuraavia turvallisuusohjeita.**

**Jos turvallisuusohjeita ei noudateta N-IO-kenttäkotelolaitteita asennettaessa, YOKOGAWA ei takaa järjestelmän turvallisuutta. Tutustu huolellisesti seuraaviin ohjeisiin.**

## ■ Malli ja tuote

ProSafe-RS-turvallisuuslaitejärjestelmän N-IO-kenttäkotelo (malli S2ZN70D) ja siihen liittyvät laitteet (mallit S2ZN60D ja S2CB60)

## ■ Sovellettavat standardit

Tämä asiakirja perustuu seuraaviin standardeihin:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Merkinnät

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

Symboli “X” tarkoittaa erityiskäyttöoloja. Katso ■Erityiskäyttöolot.

## ■ Asennustiedot

- Ympäristön lämpötila
  S2ZN70D: -40 astetta C° - 55 astetta C°
  S2ZN60D: -40 astetta C° - 55 astetta C° (*1)
  S2CB60: -40 astetta C° - 55 astetta C°

  *1: tämä ympäristön lämpötila koskee S2CB60-koteloa, johon S2ZN60D on asennettu.

- Virtalähde
  100–120 V AC +10 %/-10 %
  220–240 V AC +10 %/-10 %

## ■ Erityiskäyttöolot

- S2ZN60D on asennettava S2CB60-koteloon.
- Katso ympäristön lämpötilavaatimukset ohjeista, sillä niitä ei ole merkitty laitteistoon.
- Kotelossa olevia laitteita on käytettävä ympäristössä, jonka pilaantumisaste on enintään 2, kuten standardissa EN 60664-1 on määritelty.

## ■ Varoitukset

ÄLÄ AVAA KOTELOA RÄJÄHDYSVAARALLISESSA YMPÄRISTÖSSÄ.

## Asennus

- Laitteet tulee asentaa ja käyttää niiden luokitusten rajoissa.
- Vaarallisissa tiloissa olevat laitteet ja kytkennät on asennettava standardin EN 60079-14 ja siihen liittyvien paikallisten sähkömääräysten mukaisesti, ja asennuksen on noudatettava vaarattomille tiloille tarkoitettuja asianmukaisia vaatimuksia.
- Dokumentaation kuten GS (yleiset tekniset tiedot), TI (tekniset asennusohjeet) ja IM (käyttöohjeet) antamia ohjeita on noudatettava.
- Asennuksen saa tehdä vain koulutuksen ja pätevyyden omaava henkilökunta, jonka koulutukseen on sisällytetty suojaus- ja asennuskäytäntöön, asiaa koskeviin sääntöihin ja määräyksiin sekä alueluokituksen yleisperiaatteisiin liittyvät ohjeistukset.
- Kenttäkaapelien kytkentään tarkoitettujen terminaalien ruuvit on kiristettävämääritellyillä vääntöarvoilla.
- Asennuksen päätyttyä ja ennen ensimmäistä käyttöä on suoritettava laitteiden alkutarkastus ja asennus standardin EN 60079-17 mukaisesti.
- Noudata seuraavia ohjeita turvallisuuden ja suorituskyvyn varmistamiseksi.
  - Varmista, että kotelon käyttämättömät aukot on peitetty huolellisesti.
- Perehdy huolellisesti käyttöoppaan tietoihin ennen kuin käytät Roxtecin tiivistemoduulia ja kaapeliläpivientiä.
- Älä poista kaapeliläpiviennin ja tiivistemoduulin levyjä kotelosta.
- Älä upota koteloa veteen.
- Aukkotiivisteet voi ostaa osanumeroiden perusteella (B1036HZ, B1037HZ), ja ne ovat kiinnitettävissä tuotteeseen. Voit myös ostaa tuotteen, jossa on aukkotiivisteet (/SEAL). Molemmissa tapauksissa arviomme tuotteen ATEX-direktiivin mukaisuudesta koskee koko S2ZN70D:tä aukkotiivisteet mukaan lukien. Aukkotiivisteiden mukana tulee valmistajan toimittama ATEX-sertifikaatti, kun ne ostetaan osanumeroiden perusteella.

## Huolto ja korjaukset

- Laitteen tarkastukset ja huollon sekä asennukset saa tehdä vain koulutuksen ja pätevyyden omaava henkilökunta ja standardin EN 60079–17 mukaisesti.
- Laitteen korjauksen, kunnostamisen ja käyttöönoton saa tehdä vain koulutuksen ja pätevyyden omaava henkilökunta standardin EN IEC 60079–19 mukaisesti.
- Laitteen korjaukset saa tehdä vain koulutettu, kokenut, ammattitaitoinen, asiantunteva ja/tai valvottu henkilökunta tai YOKOGAWAN valtuuttama huoltoinsinööri. Muuten suojaustyyppi voi mitätöityä.
- Vaarallisissa tiloissa toimiviin laitteisiin ei saa tehdä muutoksia.

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# 5. Spécifications de sécurité

**Les éléments suivants sont décrits dans cette section.**

- **Pour une utilisation en toute sécurité**
- **Pour une utilisation en toute sécurité—S2BN4D**
- **Pour une utilisation en toute sécurité—S2BN5D**
- **Pour une utilisation en toute sécurité—L'armoire sur site N-IO**

# 5.1 Pour une utilisation en toute sécurité

**Pour la sécurité des opérateurs ainsi que celle des dispositifs et de l'ensemble du système, tous les dispositifs doivent être installés conformément aux règles de sécurité décrites dans ce manuel d'instructions.**

**Toutefois, s'ils ne sont pas installés conformément aux règles de sécurité, YOKOGAWA ne peut garantir la sécurité du système. Veuillez lire attentivement les instructions suivantes.**

## ■ Modèle et article

Modèle ProSafe-RS/ProSafe-RS Lite système de sécurité instrumenté

**VOIR EGALEMENT** Pour de plus amples informations sur les dispositifs ProSafe-RS/ProSafe-RS Lite, veuillez vous référer à :

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Normes applicables

Ce document est basé sur les normes suivantes :

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Marques

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Le symbole « X » désigne les conditions spécifiques pour l'utilisation. Reportez-vous à la section ■Conditions spécifiques pour l'utilisation.

## ■ Conditions spécifiques pour l'utilisation

- Les appareils doivent uniquement être situés dans une zone ne présentant pas un niveau de pollution supérieur à 2, comme défini dans EN 60664-1.
- Les appareils doivent être installés dans une armoire offrant un niveau de protection d'au moins IP54, conformément à EN IEC 60079-0.
- Une protection transitoire réglée à un niveau ne dépassant pas 119 V c. c. doit être fournie aux appareils au niveau des bornes d'alimentation électrique.

**VOIR EGALEMENT** Pour de plus amples informations sur les plages de températures ambiantes des dispositifs conformes aux normes, veuillez vous référer à :

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Avertissements

AVERTISSEMENT - EN PRESENCE D'UNE ATMOSPHERE EXPLOSIVE

- NE PAS OUVRIR L'ARMOIRE PENDANT QUE LES APPAREILS SONT EN MARCHE
- NE PAS RETIRER OU REMPLACER LE FUSIBLE LORSQUE LES APPAREILS SONT EN MARCHE
- NE PAS SEPARER LES CONNEXIONS LORSQUE LES APPAREILS SONT EN MARCHE

## Installation

- Les appareils doivent être installés et utilisés conformément à leurs spécifications.
- Tous les appareils et le câblage situés dans des zones dangereuses doivent être installés conformément à EN 60079-14 et aux codes électriques locaux pertinents et l'installation doit être également conforme aux exigences appropriées pour les zones non dangereuses.
- Les instructions fournies dans GS (Spécifications générales), TI (Informations techniques du Guide d'installation) et/ou IM (Manuel de l'utilisateur) doivent être observées.
- L'installation ne doit être effectuée que par du personnel qualifié ayant reçu la formation adéquate concernant le type de protection et les pratiques d'installation, les règles et les réglementations pertinentes et les principes généraux correspondants à ce type d'environnement.
- Un degré de protection d'au moins IP54 doit être maintenu aux entrées des câbles dans l'armoire.
- Veillez pendant l'installation à ce que les fentes d'aération des appareil ne soient pas bloquées par des parties de câble, des accessoires de fixation, etc.
- Les vis de borne des connexions de câblage de terrain doivent être serrées aux valeurs des couples de serrage spécifiées.
- Lorsque l'installation est terminée et avant la première utilisation, une inspection initiale des appareil et de leur installation doit être effectuée conformément à EN 60079-17.
- Respectez les conseils suivants de manière à assurer sécurité et performance.
  - Veillez à ce que toutes les emplacements libres de l'armoire soient correctement obstruées par les capuchons livrés.
  - Veillez à ce que tous les câbles soient fixés de manière rigide dans l'armoire.
- Le câblage de terrain pour les communications Ethernet et le réseau Vnet/IP doit être réalisé en conformité à IEEE 802.3 pour éviter une surtension supérieure à 119 V.
- En ce qui concerne la connexion d'une plaque de base pour barrière, l'installation doit être conforme à son dessin de contrôle.
- Les modèles qui étaient inclus dans la précédente déclaration de conformité de l'UE avec le marquage « nA » peuvent être installés dans le système, si les mêmes modèles et codes de suffixe sont répertoriés dans les tableaux de l'Annexe 1.

## Entretien et réparations

- L’inspection et l’entretien des appareils et de leur installation ne doivent être effectués que par du personnel qualifié conformément à EN 60079-17.
- Les réparations, la révision, les réclamations concernant les appareils ne doivent être effectuées que par du personnel qualifié conformément à EN 60079-19.
- Les réparations des appareils ne doivent être effectuées que par du personnel et/ou sous la supervision de personnel ayant la formation, l’expérience, les compétences, la connaissance ou par des techniciens de maintenance autorisés par YOKOGAWA. Sinon, le type de protection peut être invalidé.
- Aucune modification ne sera apportée aux appareils mis en service dans des zones dangereuses.
- N’utilisez que les batteries suivantes, spécifiées par YOKOGAWA, pour les modules processeurs :
  S9185FA pour SCP451 et SCP461
  S9450FE pour S2CP471 et L1CP471
- Utilisez uniquement les VENTILATEURS suivants spécifiés par YOKOGAWA pour l’AIP602 :
  A1159EM ou A1213EM

# 5.2 Pour une utilisation en toute sécurité—S2BN4D

**Pour assurer des performances intrinsèquement sûres, vous devez observer ce qui suit :**

- **Utilisez les plaques de base pour barrière (Modèle:S2BN4D) et des barrières intrinsèquement sûres dans la combinaison correcte.**
- **Installez les dispositifs selon les instructions des barrières intrinsèquement sûres.**

**Pour la sécurité des opérateurs ainsi que celle des dispositifs et de l'ensemble du système, toutes les plaques de base pour barrières doivent être installées conformément aux consignes de sécurité décrites dans ce manuel d'instructions.**

**Toutefois, si elles ne sont pas installées conformément aux consignes de sécurité, YOKOGAWA ne peut garantir la sécurité du système. Veuillez lire attentivement les instructions suivantes.**

## ■ Modèle et article

La plaque de base pour barrière (Modèle:S2BN4D) du système de sécurité actif ProSafe-RS

## ■ Normes applicables

Ce document est basé sur les normes suivantes :

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Marques

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Le symbole « X » désigne les conditions spécifiques pour l'utilisation. Reportez-vous à la section ■Conditions spécifiques pour l'utilisation.

## ■ Conditions spécifiques pour l'utilisation

Tous les dispositifs doivent être installés dans la zone dangereuse conformément au marquage indiqué sur chaque appareil. Lorsque l'équipement se compose de plusieurs dispositifs, s'assurer que l'équipement ne se compose que de dispositifs utilisables dans le même environnement dangereux.

- Les appareils doivent donc être situés dans des zones ne présentant pas un niveau de pollution supérieur à 2, comme défini dans EN 60664-1, et dans une armoire offrant un niveau de protection d'au moins IP54, conformément à EN IEC 60079-0 et EN IEC 60079-7.
- Toutes les connexions aux appareils ne doivent pas être réalisées ou retirées sauf si la zone dans laquelle les appareils sont installés est sans danger, ou que le circuit auquel ils sont connectés a été désexcité.
- Les modules E/S encastrés dans la structure ne font pas partie de la certification et doivent être certifié distinctement.
- Des dispositions doivent être apportées (en tant qu'encastrement de modules E/S certifiés dans la structure ou encastrement externe) pour assurer le réglage d'une protection transitoire aux bornes d'alimentation électrique d'un niveau ne dépassant pas 140 % de la tension nominale de crête de 85 V.

**VOIR EGALEMENT** Pour de plus amples informations sur les plages de températures ambiantes des dispositifs conformes aux normes, veuillez vous référer à :

Appendix 1. "Ambient temperature range of standard-compliant devices"

Pour plus d'informations sur la protection transitoire, reportez-vous à :

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

Les mesures de précautions pour l'installation du S2BN4D sont les mêmes que pour les dispositifs ProSafe-RS.

**VOIR EGALEMENT** Pour de plus amples informations sur l'installation, veuillez vous référer à :

« ■ Installation » dans 5.1 « Pour une utilisation en toute sécurité. »

## ■ Entretien et réparations

Les mesures de précautions pour l'entretien et la réparation du S2BN4D sont les mêmes que pour les dispositifs ProSafe-RS.

**VOIR EGALEMENT** Pour de plus amples informations sur l'entretien et la réparation, veuillez vous référer à :

« ■ Entretien et réparations » dans 5.1 « Pour une utilisation en toute sécurité. »

# 5.3 Pour une utilisation en toute sécurité—S2BN5D

**Pour assurer des performances intrinsèquement sûres, vous devez observer ce qui suit :**

- **Utilisez les plaques de base pour barrière (Modèle:S2BN5D) et des barrières intrinsèquement sûres dans la combinaison correcte.**
- **Installez les dispositifs selon les instructions des barrières intrinsèquement sûres.**

**Pour la sécurité des opérateurs ainsi que celle des dispositifs et de l'ensemble du système, toutes les plaques de base pour barrières doivent être installées conformément aux consignes de sécurité décrites dans ce manuel d'instructions.**

**Toutefois, si elles ne sont pas installées conformément aux consignes de sécurité, YOKOGAWA ne peut garantir la sécurité du système. Veuillez lire attentivement les instructions suivantes.**

## ■ Modèle et article

La plaque de base pour barrière (Modèle:S2BN5D) du système de sécurité actif ProSafe-RS

## ■ Normes applicables

Ce document est basé sur les normes suivantes :

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Marques

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Le symbole « X » désigne les conditions spécifiques pour l’utilisation. Reportez-vous à la section ■Conditions spécifiques pour l’utilisation.

## Conditions spécifiques pour l'utilisation

Tous les dispositifs doivent être installés dans la zone dangereuse conformément au marquage indiqué sur chaque appareil. Lorsque l'équipement se compose de plusieurs dispositifs, s'assurer que l'équipement ne se compose que de dispositifs utilisables dans le même environnement dangereux.

### Conditions spécifiques pour l'utilisation (intrinsèquement sûre « i »)

Même s'il n'y existe aucune condition d'usage spécifique concernant les plaques de base pour barrière, le certificat des barrières intrinsèquement sûres à connecter aux plaques de base doit être vérifié.

### Conditions spécifiques pour l'utilisation (Ex «ec»)

- Les appareils doivent uniquement être situés dans une zone ne présentant pas un niveau de pollution supérieur à 2, comme défini dans EN 60664-1.
- Les appareils doivent être installés dans un boîtier qui fournit un degré de protection supérieur ou égal à IP54 en conformité avec EN IEC 60079-7 et EN IEC 60079-0.
- Une protection transitoire doit être assurée aux connexions de l'alimentation électrique du système. Elle doit être réglée à un niveau inférieur ou égal à 140 % de la tension nominale de crête.

**VOIR EGALEMENT** Pour de plus amples informations sur les plages de températures ambiantes des dispositifs conformes aux normes, veuillez vous référer à :

Appendix 1. "Ambient temperature range of standard-compliant devices"

Pour plus d'informations sur la protection transitoire, reportez-vous à :

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

- L’implantation et l’installation ne doivent être assurées que par du personnel formé et qualité.
- Selon le niveau de protection, les circuits intrinsèquement sûrs des dispositifs (identification bleu clair sur le dispositif) peuvent être localisés dans la zone dangereuse. Il est particulièrement important de s’assurer que les circuits intrinsèquement sûrs sont séparés en toute sécurité de tous les circuits non intrinsèquement sûrs.

  L’installation de circuits intrinsèquement sûrs doit être réalisée selon les règlementations d’installation en vigueur.
- Les valeurs de crête respectives du dispositif de terrain et du dispositif associé concernant la protection contre une explosion doivent être considérées lors de la connexion de dispositifs de terrain intrinsèquement sûrs avec les circuits intrinsèquement sûrs des dispositifs H-System (démonstration intrinsèquement sûre). La norme EN 60079-14 doit être observée (si applicable). Si disponible, le dessin de contrôle de la certification du produit doit être observé.
- Les certificats d’examen de type CE ou les approbations/certificats standard doivent être observés. Il est particulièrement important d’observer les « conditions spéciales » incluses dans les certificats.

**VOIR EGALEMENT** Pour de plus amples informations sur l’installation, veuillez vous référer à :

« ■ Installation » dans 5.1 « Pour une utilisation en toute sécurité. »

## ■ Entretien et réparations

Les caractéristiques de transfert des dispositifs restent stables pendant de longues périodes. Ceci évite un réglage régulier. L’entretien n’est pas nécessaire.

**VOIR EGALEMENT** Pour de plus amples informations sur l’entretien et la réparation, veuillez vous référer à :

« ■ Entretien et réparations » dans 5.1 « Pour une utilisation en toute sécurité. »

# 5.4 Pour une utilisation en toute sécurité— L'armoire sur site N-IO

**Pour la sécurité des opérateurs ainsi que celle des dispositifs et de l'ensemble du système, tous les dispositifs pour l'armoire sur site N-IO doivent être installés conformément aux règles de sécurité décrites dans ce manuel d'instructions.**

**Toutefois, si les les dispositifs pour l'armoire sur site N-IO ne sont pas installés conformément aux règles de sécurité, YOKOGAWA ne peut garantir la sécurité du système. Veuillez lire attentivement les instructions suivantes.**

## ■ Modèle et article

L'armoire sur site N-IO (Modèle : S2ZN70D) et les appareils associés (Modèle : S2ZN60D et S2CB60) du système de sécurité actif ProSafe-RS

## ■ Normes applicables

Ce document est basé sur les normes suivantes :

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Marques

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

Le symbole « X » désigne les conditions spécifiques pour l'utilisation. Reportez-vous à la section ■Conditions spécifiques pour l'utilisation.

## ■ Spécifications pour l'installation

- Température ambiante — S2ZN70D: de -40 C à 55 C
  S2ZN60D: de -40 C à 55 C (*1)
  S2CB60: de -40 C à 55 C

  *1: Cette température ambiante s'applique à S2CB60 avec S2ZN60D installé.

- Alimentation électrique — 100 à 120 V CA +10 %/-10 %
  220 à 240 V CA +10 %/-10 %

## Conditions spécifiques pour l'utilisation

- S2ZN60D doit être installé dans S2CB60.
- Pour les exigences de température ambiante, reportez-vous aux instructions car elles ne sont pas indiquées sur l'équipement.
- Les appareils dans l'armoire doivent être utilisés dans un environnement dont le degré de pollution n'est pas supérieur à 2, tel que défini dans la norme EN 60664-1.

## Avertissements

NE PAS OUVRIR L'ARMOIRE EN PRÉSENCE D'UNE ATMOSPHÈRE EXPLOSIVE.

## Installation

- Les appareils doivent être installés et utilisés conformément à leurs spécifications.
- Tous les appareils et le câblage situés dans des zones dangereuses doivent être installés conformément à EN 60079-14 et aux codes électriques locaux pertinents et l'installation doit être également conforme aux exigences appropriées pour les zones non dangereuses.
- Les instructions fournies dans GS (Spécifications générales), TI (Informations techniques du Guide d'installation) et/ou IM (Manuel de l'utilisateur) doivent être observées.
- L'installation ne doit être effectuée que par du personnel qualifié ayant reçu la formation adéquate concernant le type de protection et les pratiques d'installation, les règles et les réglementations pertinentes et les principes généraux correspondants à ce type d'environnement.
- Les vis de borne des connexions de câblage de terrain doivent être serrées aux valeurs des couples de serrage spécifiées.
- Lorsque l'installation est terminée et avant la première utilisation, une inspection initiale des appareil et de leur installation doit être effectuée conformément à EN 60079-17.
- Respectez les conseils suivants de manière à assurer sécurité et performance.
  - Veillez à ce que tous les emplacements libres de l'armoire soient correctement obstrués par les capuchons livrés.
- Lire attentivement et comprendre les informations contenues dans les manuels d'utilisation avant d'utiliser le module d'étanchéité et les presse-étoupes de Roxtec.
- Ne pas retirer la plaque du presse-étoupe et la plaque du module d'étanchéité de l'armoire.
- Ne pas plonger l'armoire dans l'eau.
- Vous pouvez acheter des joints d'étanchéité avec leur numéro de pièce (B1036HZ, B1037HZ) et les fixer au produit, vous pouvez également acheter un produit avec des joints d'étanchéité (/SEAL). Dans les deux cas, notre évaluation de la conformité du produit à la directive ATEX concerne généralement S2ZN70D, y compris les joints d'étanchéité. Les joints d'étanchéité sont fournis avec le certificat ATEX fourni par le fabricant lorsque vous les achetez avec leur numéro de référence.

## Entretien et réparations

- L'inspection et l'entretien des appareils et de leur installation ne doivent être effectués que par du personnel qualifié conformément à EN 60079-17.
- Les réparations, la révision, les réclamations concernant les appareils ne doivent être effectuées que par du personnel qualifié conformément à EN IEC 60079-19.
- Les réparations des appareils ne doivent être effectuées que par du personnel et/ou sous la supervision de personnel ayant la formation, l'expérience, les compétences, la connaissance ou par des techniciens de maintenance autorisés par YOKOGAWA. Sinon, le type de protection peut être invalidé.
- Aucune modification ne sera apportée aux appareils mis en service dans des zones dangereuses.

# 6. Sicherheitsspezifikationen

**Die folgenden Gegenstände sind in diesem Abschnitt beschrieben.**

- **Für sichere Verwendung**
- **Für sichere Verwendung—S2BN4D**
- **Für sichere Verwendung—S2BN5D**
- **Für sichere Verwendung—N-IO Schaltschrank für Außenbereiche**

# 6.1 Für sichere Verwendung

**Zur Bedienersicherheit sowie für einen sicheren Betrieb von Einrichtungen und gesamten Anlagen müssen alle Geräte unter Einhaltung der Sicherheitsvorschriften, die in dieser Bedienungsanleitung beschrieben sind, installiert werden.**

**Werden jedoch die Sicherheitsvorschriften bei der Geräteinstallation nicht beachtet, übernimmt YOKOGAWA keine Gewährleistung für einen sicheren Anlagenbetrieb. Lesen Sie bitte daher die nachstehenden Punkte sorgfältig durch.**

## ■ Modell und Gegenstand

Sicherheitsinstrumentiertes System Modell ProSafe-RS/ProSafe-RS Lite

**SIEHE AUCH** Weitere Informationen zu den Geräten ProSafe-RS/ProSafe-RS Lite finden Sie in:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Anwendbare Normen

Dieses Dokument basiert auf den folgenden Normen:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Kennzeichnungen

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Symbol “X” bezeichnet die spezifischen Betriebsbedingungen. Siehe ■Spezifische Betriebsbedingungen.

## ■ Spezifische Betriebsbedingungen

- Die Ausrüstung darf nur in einem Bereich mit einem Verschmutzungsgrad von nicht mehr als 2 verwendet werden, wie in EN 60664-1 definiert.
- Die Ausrüstung muss in einem Gehäuse installiert werden, das einem Schutzgrad von mindes tens IP54 gemäß EN IEC 60079-0 aufweist.
- Transientschutz, der auf einen Pegel von nicht mehr als 119 V Gleichspannung eingestellt ist, muss in den Versorgungsklemmen der Ausrüstung vorhanden sein.

**SIEHE AUCH** Informationen zu den Umgebungstemperaturbereichen der normgerechten Geräte finden Sie in:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Warnungen

WARNUNG - BEI EXPLOSIONSGEFÄHRDETEM BEREICH

- KEINESFALLS DEN SCHRANK ÖFFNEN, WÄHREND DIE STROMVERSORGUNG DES GERÄTS EINGESCHALTET IST
- BEI EINGESCHALTETER STROMVERSORGUNG KEINESFALLS DIE SICHERUNG ENTFERNEN ODER AUSTAUSCHEN
- KEINESFALLS DIE ANSCHLÜSSE ABTRENNEN, WENN DIE STROMVERSORGUNG EINGESCHALTET IST

## Installation

- Installation und Betrieb des Geräts müssen innerhalb der jeweiligen Grenzwerte erfolgen.
- Alle Geräte und die gesamte Verkabelung in explosionsgefährdeten Bereichen sind gemäß Richtlinie EN 60079-14 und entsprechenden Elektroinstallationsvorschriften vor Ort auszuführen und die Installation muss außerdem auch den jeweiligen Anforderungen für nicht-explosionsgefährdete Bereiche genügen.
- Die Anweisungen in GS (Allgemeine Spezifikationen), TI (Technische Informationen zum Installationsablauf) und IM (Bedienungsanleitungen) sind unbedingt zu befolgen.
- Die Installation darf nur von Fachpersonal vorgenommen werden, dessen Ausbildung Anweisungen über Schutzart und Installationspraktiken, relevante Regeln und Bestimmungen sowie allgemeine Grundsätze der Bereichseinstufung umfasst.
- Kabeleinführungen in Schaltschränke müssen mindestens der Schutzart IP54 entsprechen.
- Bei der Installation dürfen die Lüftungsöffnungen des Geräts nicht durch Gegenstände wie Kabelteile oder Befestigungsmaterial blockiert werden.
- Schrauben von Klemmen bei Verkabelungsverbindungen vor Ort sind mit den vorgeschriebenen Momenten anzuziehen.
- Nach erfolgter Installation und vor der Inbetriebnahme ist eine Anfangsinspektion des Geräts und der Installation gemäß EN 60079-17 auszuführen.
- Befolgen Sie die nachstehenden Anweisungen, damit Sicherheit und Leistungsfähigkeit gewährleistet sind.
  - Stellen Sie sicher, dass alle nicht benutzten Schlitze des Schrankgehäuses mit Hilfe der angebrachten Blindstopfen ordnungsgemäß verschlossen sind.
  - Stellen Sie sicher, dass alle Kabel im Schrank fest angeschlossen sind.
- Verkabelungsverbindungen vor Ort für Ethernet-Kommunikation und Vnet/IP Netzwerk müssen IEEE 802.3 entsprechend, um Überspannungen zu vermeiden, die 119 V überschreiten.
- Bei Anschluss der Grundplatte für Barrieren, muss der Einbau entsprechend der Kontrollzeichnung sein.
- Die Modelle, die in der vorherigen EU-Konformitätserklärung mit der Kennzeichnung „nA“ aufgeführt waren, können in das System eingebaut werden, wenn die gleichen Modell- und Suffix-Codes in den Tabellen in Anlage 1 aufgeführt sind.

## Wartung und Reparatur

- Inspektionen und Wartungsarbeiten hinsichtlich Gerät und Installationen dürfen nur von Fachpersonal und gemäß EN 60079-17 ausgeführt werden.
- Reparatur, Überholung und Regenerierung des Geräts dürfen nur von Fachpersonal und gemäß EN 60079-19 ausgeführt werden.
- Reparaturen an Geräten dürfen nur von speziell hierfür ausgebildetem und berechtigtem Fachpersonal oder von Servicetechnikern, die von YOKOGAWA autorisiert wurden, durchgeführt werden. Die Nichtbeachtung dieser Auflage führt zum Verlust der Zulassung für den Betrieb in explosionsgefährdeten Bereichen.
- An Geräten, die in explosionsgefährdeten Bereichen betrieben werden, darf keine Veränderung vorgenommen werden.
- Verwenden Sie nur die folgenden, von YOKOGAWA spezifizierten Batterien für Prozessormodule:
  S9185FA für SCP451 und SCP461
  S9450FE für S2CP471 und L1CP471
- Verwenden Sie nur die folgenden, von YOKOGAWA für den AIP602 spezifizierten VENTILATOREN:
  A1159EM oder A1213EM

# 6.2 Für sichere Verwendung—S2BN4D

**Um eigensichere Leistung zu gewährleisten, müssen Sie folgende Punkte beachten:**

- **Verwenden Sie die Grundplatten als Barriere (Modell:S2BN4D) und eigensicheren Barrieren in der richtigen Kombination.**
- **Installieren Sie die Geräte gemäß den Anweisungen der eigensicheren Barrieren.**

**Für die Sicherheit des Bedienungspersonals sowie der Geräte und des gesamten Systems müssen die Grundplatten für Barrieren entsprechend den in dieser Bedienungsanleitung beschriebenen Sicherheitsvorschriften installiert werden.**

**Wenn die Grundplatten für Barrieren nicht entsprechend den Sicherheitsregeln installiert werden, kann YOKOGAWA nicht die Systemsicherheit garantieren. Bitte lesen Sie die folgenden Punkte gründlich.**

## ■ Modell und Gegenstand

Die Grundplatte für Barrieren (Modell:S2BN4D) des Sicherheits-Instrumentensystems ProSafe-RS

## ■ Anwendbare Normen

Dieses Dokument basiert auf den folgenden Normen:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Kennzeichnungen

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Symbol “X” bezeichnet die spezifischen Betriebsbedingungen. Siehe ■Spezifische Betriebsbedingungen.

## ■ Spezifische Betriebsbedingungen

In explosionsgefährdeten Bereich müssen alle Geräte gemäß der auf jedem Gerät gezeigten Markierung installiert werden. Wenn die Ausrüstung aus mehreren Geräten besteht, muss sichergestellt werden, dass die Ausrüstung nur aus Geräten besteht, die in der gleichen gefährlichen Umgebung eingesetzt werden können.

- Die Ausrüstung muss in einem Bereich mit einem Verschmutzungsgrad von nicht mehr als 2 wie in EN 60664-1 definiert und in einem Gehäuse, das einen Schutzgrad von mindestens IP54 installiert werden, das mindestens die Anforderungen gemäß EN IEC 60079-0 und EN IEC 60079-7 erfüllt.
- Alle Verbindungen zu der Ausrüstung dürfen nicht eingesteckt oder entfernt werden, wenn der Bereich, in dem die Ausrüstung installiert ist, nicht als ungefährlich bekannt ist, oder der Schaltkreis, an dem die Verbindung hergestellt wird, deaktiviert wurde.
- Die Eingabe/Ausgabe-Module an der Rückseite stellen keinen Teil der Zertifizierung dar nd müssen separat sachgemäß zertifiziert werden.
- Es müssen Maßnahmen getroffen werden (ob Teile der zertifizierten Eingabe/Ausgabe-Module an der Rückseite oder extern angebracht werden), um Transientschutz an den Versorgungsklemmen in einem Pegel zu bieten, der nicht 140% der Spitzen-Nennspannung von 85 V übersteigt.

**SIEHE AUCH** Informationen zu den Umgebungstemperaturbereichen der normgerechten Geräte finden Sie in:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Weitere Informationen über den Transientschutz siehe:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

Die Vorsichtsmaßnahmen für die Installation von S2BN4D sind die gleichen wie für ProSafe-RS-Geräte.

**SIEHE AUCH** Informationen zur Installation finden Sie unter:

„■ Installation“ in 6.1 „Für sichere Verwendung“.

## ■ Wartung und Reparatur

Die Vorsichtsmaßnahmen für die Wartung und Reparatur des S2BN4D sind die gleichen wie für ProSafe-RS-Geräte.

**SIEHE AUCH** Informationen zu Wartung und Reparatur finden Sie unter:

„■ Wartung und Reparatur“ in 6.1 „Für sichere Verwendung“.

# 6.3 Für sichere Verwendung—S2BN5D

**Um eigensichere Leistung zu gewährleisten, müssen Sie folgende Punkte beachten:**

- **Verwenden Sie die Grundplatten als Barriere (Modell:S2BN5D) und eigensicheren Barrieren in der richtigen Kombination.**
- **Installieren Sie die Geräte gemäß den Anweisungen der eigensicheren Barrieren.**

**Für die Sicherheit des Bedienungspersonals sowie der Geräte und des gesamten Systems müssen die Grundplatten für Barrieren entsprechend den in dieser Bedienungsanleitung beschriebenen Sicherheitsvorschriften installiert werden.**

**Wenn die Grundplatten für Barrieren nicht entsprechend den Sicherheitsregeln installiert werden, kann YOKOGAWA nicht die Systemsicherheit garantieren. Bitte lesen Sie die folgenden Punkte gründlich.**

## ■ Modell und Gegenstand

Die Grundplatte für Barrieren (Modell:S2BN5D) des Sicherheits-Instrumentensystems ProSafe-RS

## ■ Anwendbare Normen

Dieses Dokument basiert auf den folgenden Normen:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Kennzeichnungen

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Symbol “X” bezeichnet die spezifischen Betriebsbedingungen. Siehe ■Spezifische Betriebsbedingungen.

## Spezifische Betriebsbedingungen

In explosionsgefährdeten Bereich müssen alle Geräte gemäß der auf jedem Gerät gezeigten Markierung installiert werden. Wenn die Ausrüstung aus mehreren Geräten besteht, muss sichergestellt werden, dass die Ausrüstung nur aus Geräten besteht, die in der gleichen gefährlichen Umgebung eingesetzt werden können.

### Spezifische Betriebsbedingungen (Eigensicherheit „i“)

Obwohl es keine spezifischen Verwendungsbedingungen für die Grundplatten für Barriere gibt, muss das Zertifikat der eigensicheren Barrieren, die mit den Grundplatten für Barrieren verbunden werden sollen, überprüft werden.

### Spezifische Betriebsbedingungen (Ex „ec“)

- Die Ausrüstung darf nur in einem Bereich mit einem Verschmutzungsgrad von nicht mehr als 2 verwendet werden, wie in EN 60664-1 definiert.
- Die Ausrüstung muss in einem Gehäuse installiert werden, das einem Schutzgrad von mindes tens IP54 gemäß EN IEC 60079-7 und EN IEC 60079-0 aufweist.
- Transientschutz muss in den Klemmen der Systemstromversorgung vorhanden sein. Transientenschutz soll nicht auf einen Pegel von mehr als 140 % der Spitzen-Nennspannung eingestellt werden.

**SIEHE AUCH** Informationen zu den Umgebungstemperaturbereichen der normgerechten Geräte finden Sie in:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Weitere Informationen über den Transientschutz siehe:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

- Inbetriebnahme und Installation dürfen nur von besonders ausgebildetem und qualifiziertem Personal ausgeführt werden.
- Je nach dem Schutzgrad können die eigensicheren Schaltungen der Geräte (hellblaue Identifikation am Gerät) in dem gefährlichen Bereich liegen. Es ist besonders wichtig, sicherzustellen, dass die eigensicheren Schaltungen sicher von allen nicht-eigensicheren Schaltungen getrennt sind.

  Die Installation der eigensicheren Schaltungen muss unter Beachtung der geltenden Installationsvorschriften erfolgen.
- Die jeweiligen Spitzenwerte des Feld-Gerätes und des zugehörigen Gerätes in Bezug auf Explosionsschutz müssen beachtet werden, wenn die eigensicheren Feldgeräte mit den eigensicheren Schaltungen der H-System-Geräte verbunden werden (Demonstration der Eigensicherheit). EN 60079-14 muss beachtet werden (wo erforderlich). Wenn verfügbar, muss die Kontrollzeichnung der Produktzertifikation beachtet werden.
- Die Prüfzertifikate des EC-Typs oder Standardzertifikate/-zulassungen müssen beachtet werden. Es ist besonders wichtig, die „Sonderbedingungen“ zu beachten, wenn solche in den Zertifikaten enthalten sind.

**SIEHE AUCH** Informationen zur Installation finden Sie unter:

„■ Installation“ in 6.1 „Für sichere Verwendung“.

## ■ Wartung und Reparatur

Die Übertragungseigenschaften der Geräte bleiben über lange Zeiträume stabil. Dies beseitigt die Erfordernis regelmäßiger Justage. Wartung ist nicht erforderlich.

**SIEHE AUCH** Informationen zu Wartung und Reparatur finden Sie unter:

„■ Wartung und Reparatur“ in 6.1 „Für sichere Verwendung“.

# 6.4 Für sichere Verwendung—N-IO Schaltschrank für Außenbereiche

**Zur Bedienersicherheit sowie für einen sicheren Betrieb von Einrichtungen und gesamten Anlagen müssen alle Geräte für den N-IO-Schaltschrank für Außenbereiche unter Einhaltung der Sicherheitsvorschriften, die in dieser Bedienungsanleitung beschrieben sind, installiert werden.**

**Werden jedoch die Sicherheitsvorschriften bei der Installation der Geräte für den N-IO-Schaltschrank für Außenbereiche nicht beachtet, übernimmt YOKOGAWA keine Gewährleistung für einen sicheren Anlagenbetrieb. Lesen Sie bitte daher die nachstehenden Punkte sorgfältig durch.**

## ■ Modell und Gegenstand

Der N-IO-Schaltschrank für Außenbereiche (Modell: S2ZN70D) und zugehörige Geräte (Modelle: S2ZN60D und S2CB60) des Sicherheits-Instrumentensystems ProSafe-RS

## ■ Anwendbare Normen

Dieses Dokument basiert auf den folgenden Normen:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Kennzeichnungen

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

Symbol “X” bezeichnet die spezifischen Betriebsbedingungen. Siehe ■Spezifische Betriebsbedingungen.

## ■ Installationsspezifikationen

- Umgebungstemperatur
  - S2ZN70D: -40 Grad C° bis 55 Grad C°
  - S2ZN60D: -40 Grad C° bis 55 Grad C° (*1)
  - S2CB60: -40 Grad C° bis 55 Grad C°

  *1: Diese Umgebungstemperatur gilt für den S2CB60 mit installiertem S2ZN60D.
- Stromversorgung
  - 100 bis 120 V Wechselstrom +10 %/-10 %
  - 220 bis 240 V Wechselstrom +10 %/-10 %

## Spezifische Betriebsbedingungen

- Das S2ZN60D sollte im S2CB60 installiert werden.
- Die Anforderungen an die Umgebungstemperatur finden Sie in der Anleitung, sie sind nicht auf dem Gerät angegeben.
- Die Geräte im Schaltschrank sind in einer Umgebung zu verwenden, deren Verschmutzungsgrad Stufe 2 gemäß EN 60664-1 nicht übersteigt.

## Warnungen

ÖFFNEN SIE DEN SCHRANK NICHT, WENN EINE EXPLOSIVE ATMOSPHÄRE VORHANDEN IST.

## Installation

- Installation und Betrieb des Geräts müssen innerhalb der jeweiligen Grenzwerte erfolgen.
- Alle Geräte und die gesamte Verkabelung in explosionsgefährdeten Bereichen sind gemäß Richtlinie EN 60079-14 und entsprechenden Elektroinstallationsvorschriften vor Ort auszuführen und die Installation muss außerdem auch den jeweiligen Anforderungen für nicht-explosionsgefährdete Bereiche genügen.
- Die Anweisungen in GS (Allgemeine Spezifikationen), TI (Technische Informationen zum Installationsablauf) und IM (Bedienungsanleitungen) sind unbedingt zu befolgen.
- Die Installation darf nur von Fachpersonal vorgenommen werden, dessen Ausbildung Anweisungen über Schutzart und Installationspraktiken, relevante Regeln und Bestimmungen sowie allgemeine Grundsätze der Bereichseinstufung umfasst.
- Schrauben von Klemmen bei Verkabelungsverbindungen vor Ort sind mit den vorgeschriebenen Momenten anzuziehen.
- Nach erfolgter Installation und vor der Inbetriebnahme ist eine Anfangsinspektion des Geräts und der Installation gemäß EN 60079-17 auszuführen.
- Befolgen Sie die nachstehenden Anweisungen, damit Sicherheit und Leistungsfähigkeit gewährleistet sind.
  - Stellen Sie sicher, dass alle nicht benutzten Schlitze des Schranks mit Hilfe der angebrachten Blindstopfen ordnungsgemäß verschlossen sind.
- Lesen und verstehen Sie die Informationen in den Bedienungsanleitungen gründlich, bevor Sie das Roxtec-Abdichtungsmodul und die Kabelmuffen verwenden.
- Entfernen Sie nicht die Platte für die Kabelmuffe und Platte für das Abdichtungsmodul aus dem Schrank.
- Tauchen Sie den Schrank nicht in Wasser.
- Sie können Lochdichtungen mit den Teilenummern (B1036HZ, B1037HZ) erwerben und am Produkt anbringen oder Sie können ein Produkt mit Lochdichtungen (/SEAL) erwerben. In beiden Fällen gilt unsere Beurteilung der Produktkonformität mit der ATEX-Richtlinie für den S2ZN70D als Ganzes einschließlich der Lochdichtungen. Die Lochdichtungen werden mit dem ATEX-Zertifikat geliefert, das vom Hersteller bereitgestellt wird, wenn Sie sie mit ihrer Teilenummer erwerben.

## Wartung und Reparatur

- Inspektionen und Wartungsarbeiten hinsichtlich Gerät und Installationen dürfen nur von Fachpersonal und gemäß EN 60079-17 ausgeführt werden.
- Reparatur, Überholung und Regenerierung des Geräts dürfen nur von Fachpersonal und gemäß EN IEC 60079-19 ausgeführt werden.
- Reparaturen an Geräten dürfen nur von speziell hierfür ausgebildetem und berechtigtem Fachpersonal oder von Servicetechnikern, die von YOKOGAWA autorisiert wurden, durchgeführt werden. Die Nichtbeachtung dieser Auflage führt zum Verlust der Zulassung für den Betrieb in explosionsgefährdeten Bereichen.
- An Geräten, die in explosionsgefährdeten Bereichen betrieben werden, darf keine Veränderung vorgenommen werden.

# 7. Προδιαγραφές ασφαλείας

**Τα ακόλουθα στοιχεία περιγράφονται σ' αυτό το τμήμα.**

- **Για ασφαλή χρήση**
- **Για ασφαλή χρήση—S2BN4D**
- **Για ασφαλή χρήση—S2BN5D**
- **Για ασφαλή χρήση—Περίβλημα πεδίου N-IO**

# 7.1 Για ασφαλή χρήση

**Για την ασφάλεια των χειριστών, καθώς και για την προστασία των συσκευών και ολόκληρου του συστήματος, όλες οι συσκευές θα πρέπει να εγκατασταθούν σύμφωνα με τους κανόνες ασφαλείας που περιγράφονται σε αυτό το εγχειρίδιο οδηγιών.**

**Ωστόσο, εάν οι συσκευές δεν εγκατασταθούν σύμφωνα με τους κανόνες ασφαλείας, η YOKOGAWA δεν εγγυάται την ασφάλεια του συστήματος. Παρακαλούμε διαβάστε προσεκτικά τα παρακάτω σημεία.**

## ■ Μοντέλο και αντικείμενο

Μοντέλο ProSafe-RS/ProSafe-RS Lite Σύστημα με όργανα ασφαλείας

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για περισσότερες πληροφορίες σχετικά με τις συσκευές ProSafe-RS/ProSafe-RS Lite, ανατρέξτε στην ενότητα:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Εφαρμόσιμα πρότυπα

Το παρόν έγγραφο βασίζεται στα ακόλουθα πρότυπα:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Σημάνσεις

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Το σύμβολο “X” υποδηλώνει τις Ειδικές συνθήκες χρήσης. Ανατρέξτε στις ■Ειδικές συνθήκες χρήσης.

## ■ Ειδικές συνθήκες χρήσης

- Ο εξοπλισμός θα πρέπει να χρησιμοποιηθεί μόνο σε περιοχή με βαθμό ρύπανσης όχι μεγαλύτερο από 2, όπως ορίζεται στο πρότυπο EN 60664-1.
- Ο εξοπλισμός θα πρέπει να εγκατασταθεί εντός περιβλήματος που παρέχει βαθμό προστασίας όχι μικρότερο από IP54 σύμφωνα με το πρότυπο EN IEC 60079-0.
- Θα πρέπει να παρέχεται μεταβατική προστασία, η οποία θα είναι ρυθμισμένη σε επίπεδο που να μην υπερβαίνει τα 119 V d. c., από τον ακροδέκτη τροφοδοσίας στον εξοπλισμό.

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για πληροφορίες σχετικά με το εύρος θερμοκρασιών περιβάλλοντος των συσκευών οι οποίες συμμορφώνονται με τα πρότυπα, ανατρέξτε:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Προειδοποιήσεις

ΠΡΟΕΙΔΟΠΟΙΗΣΗ - ΟΤΑΝ ΥΦΙΣΤΑΤΑΙ ΕΚΡΗΚΤΙΚΗ ΑΤΜΟΣΦΑΙΡΑ

- ΜΗΝ ΑΝΟΙΓΕΤΕ ΤΟ ΕΡΜΑΡΙΟ ΕΝΩ Ο ΕΞΟΠΛΙΣΜΟΣ ΕΙΝΑΙ ΕΝΕΡΓΟΠΟΙΗΜΕΝΟΣ
- ΜΗΝ ΑΦΑΙΡΕΙΤΕ Ή ΑΝΤΙΚΑΘΙΣΤΑΤΕ ΤΗΝ ΑΣΦΑΛΕΙΑ ΟΤΑΝ ΕΙΝΑΙ ΕΝΕΡΓΟΠΟΙΗΜΕΝΗ
- ΜΗΝ ΧΩΡΙΖΕΤΕ ΤΙΣ ΣΥΝΔΕΣΕΙΣ ΟΤΑΝ ΕΙΝΑΙ ΕΝΕΡΓΟΠΟΙΗΜΕΝΕΣ

## Εγκατάσταση

- Ο εξοπλισμός θα πρέπει να εγκατασταθεί και χρησιμοποιηθεί εντός της ονομαστικής του ισχύος.
- Όλος ο εξοπλισμός και η καλωδίωση σε επικίνδυνες περιοχές θα πρέπει να εγκατασταθούν σύμφωνα με το πρότυπο EN 60079-14 και με τους σχετικούς τοπικούς ηλεκτρικούς κώδικες και η εγκατάσταση θα πρέπει επίσης να τηρεί τις αναγκαίες απαιτήσεις για τις μη επικίνδυνες περιοχές.
- Θα πρέπει να τηρούνται οι οδηγίες που παρέχονται στις GS (Γενικές προδιαγραφές), TI (Τεχνικές Πληροφορίες Οδηγιών Εγκατάστασης) και/ή IM (Εγχειρίδια Χρήστη).
- Η εγκατάσταση θα πρέπει να εκτελείται αποκλειστικά και μόνο από εξειδικευμένο προσωπικό, του οποίου η εκπαίδευση έχει συμπεριλάβει οδηγίες για τον τύπο προστασίας και πρακτικές εγκατάστασης, σχετικούς κανόνες και κανονισμούς και γενικές αρχές ταξινόμησης περιοχής.
- Ο βαθμός προστασίας όχι μικρότερος από IP54 θα πρέπει να διατηρείται στις εισόδους των καλωδίων στα ερμάρια.
- Θα πρέπει να δοθεί προσοχή ώστε, κατά τη διάρκεια της εγκατάστασης να μην φράσσονται οι σχισμές εξαερισμού του εξοπλισμού από τμήματα των καλωδίων, εξαρτήματα στερέωσης κλπ.
- Οι βίδες των ακροδεκτών για συνδέσεις καλωδίωσης πεδίου θα πρέπει να σφίγγονται με προδιαγεγραμμένες τάσεις σύσφιγξης.
- Μετά το πέρας της εγκατάστασης και πριν από την πρώτη χρήση, θα πρέπει να διεξαχθεί προκαταρκτική επιθεώρηση του εξοπλισμού και της εγκατάστασης σύμφωνα με το πρότυπο EN 60079-17.
- Τηρείτε τις παρακάτω οδηγίες, ώστε να διασφαλίζεται η ασφάλεια και η απόδοση.
  - Βεβαιωθείτε ότι όλες οι κενές σχισμές του ερμαρίου έχουν καλυφθεί σωστά με τα καλύμματα που συνοδεύουν τη συσκευή.
  - Βεβαιωθείτε ότι όλα τα καλώδια έχουν στερεωθεί σταθερά στο ερμάριο.
- Η καλωδίωση πεδίου για επικοινωνία Ethernet και δίκτυο Vnet/IP πρέπει να είναι σύμφωνη με το πρότυπο IEEE 802.3 ώστε η υπέρταση να μην υπερβεί τα 119V.
- Σε περίπτωση σύνδεσης πλάκας βάσης για φραγμό, η εγκατάσταση πρέπει να γίνει σύμφωνα με το σχεδιάγραμμα ελέγχου της.
- Τα μοντέλα που συμπεριλήφθηκαν στην προηγούμενη Δήλωση Συμμόρφωσης ΕΕ με σήμανση “nA” μπορούν να εγκατασταθούν στο σύστημα, εάν το ίδιο μοντέλο και καταλήξεις των κωδικών παρατίθενται στους πίνακες του παραρτήματος 1.

## Συντήρηση και επισκευή

- Επιθεωρήσεις και συντήρηση του εξοπλισμού και εγκαταστάσεις θα πρέπει να διεξάγονται αποκλειστικά και μόνο από εξουσιοδοτημένο προσωπικό και σύμφωνα με το πρότυπο EN 60079-17.
- Επισκευή, επιθεώρηση και επιδιόρθωση, αποκατάσταση του εξοπλισμού θα πρέπει να διεξάγονται αποκλειστικά και μόνο από εξουσιοδοτημένο προσωπικό και σύμφωνα με το πρότυπο EN 60079-19.
- Επιδιορθώσεις του εξοπλισμού θα πρέπει να διεξάγονται αποκλειστικά και μόνο από εκπαιδευμένο, έμπειρο, ειδικευμένο, καταρτισμένο και/ή υπό επιτήρηση προσωπικό ή από εξουσιοδοτημένους μηχανικούς σέρβις της YOKOGAWA. Σε διαφορετική περίπτωση, ο τύπος της προστασίας μπορεί να ακυρωθεί.
- Δεν μπορεί να γίνει καμία αλλαγή σε εξοπλισμό που λειτουργεί σε επικίνδυνες περιοχές.
- Χρησιμοποιήστε μόνο τις ακόλουθες μπαταρίες οι οποίες καθορίζονται από την YOKOGAWA για μονάδες επεξεργαστή:
  S9185FA για SCP451 και SCP461
  S9450FE για S2CP471 και L1CP471
- Χρησιμοποιήστε μόνο τους ακόλουθους ΑΝΕΜΙΣΤΗΡΕΣ οι οποίοι καθορίζονται από την YOKOGAWA για το AIP602:
  A1159EM ή A1213EM

# 7.2 Για ασφαλή χρήση—S2BN4D

**Για να εξασφαλιστεί η σωστή απόδοση της εγγενούς ασφάλειας, πρέπει να τηρείτε τα εξής:**

- **Χρησιμοποιήστε τις πλάκες της βάσης για φραγμό (Μοντέλο:S2BN4D) και τους εγγενείς φραγμούς ασφαλείας με τον σωστό συνδυασμό.**
- **Εγκαταστήστε τις συσκευές σύμφωνα με τις οδηγίες των εγγενών φραγμών ασφαλείας.**

**Για την ασφάλεια των χειριστών αλλά και των συσκευών και ολόκληρου του συστήματος, οι πλάκες βάσης για τους φραγμούς πρέπει να εγκαθίστανται σύμφωνα με τους κανόνες ασφαλείας που περιγράφονται στο παρόν εγχειρίδιο χρήσης.**

**Ωστόσο, εάν οι πλάκες βάσης για τους φραγμούς δεν εγκατασταθούν σύμφωνα με τους κανόνες ασφαλείας, η YOKOGAWA δεν εγγυάται την ασφάλεια του συστήματος. Διαβάστε προσεκτικά τα παρακάτω.**

## ■ Μοντέλο και αντικείμενο

Η πλάκα βάσης για τον φραγμό (Μοντέλο:S2BN4D) του συστήματος οργάνων ασφαλείας ProSafe-RS

## ■ Εφαρμόσιμα πρότυπα

Το παρόν έγγραφο βασίζεται στα ακόλουθα πρότυπα:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Σημάνσεις

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Το σύμβολο “X” υποδηλώνει τις Ειδικές συνθήκες χρήσης. Ανατρέξτε στις ■Ειδικές συνθήκες χρήσης.

## ■ Ειδικές συνθήκες χρήσης

Όλες οι συσκευές πρέπει να εγκαθίστανται στην επικίνδυνη περιοχή σύμφωνα με τις ενδείξεις που υπάρχουν σε κάθε συσκευή. Όταν ο εξοπλισμός αποτελείται από αρκετές συσκευές, βεβαιωθείτε ότι οι συσκευές αυτές μπορούν να χρησιμοποιηθούν στο ίδιο επικίνδυνο περιβάλλον.

- Ο εξοπλισμός πρέπει να εγκατασταθεί μόνο σε περιοχή με βαθμό ρύπανσης όχι μεγαλύτερο από 2, όπως ορίζεται στο πρότυπο EN 60664-1, και εντός περιβλήματος που παρέχει βαθμό προστασίας τουλάχιστον IP54 και πληροί τις σχετικές απαιτήσεις του πρότυπου EN IEC 60079-0 και EN IEC 60079-7.
- Όλες οι συνδέσεις στον εξοπλισμό δεν πρέπει να εισάγονται ή να αφαιρούνται εκτός αν η περιοχή στην οποία είναι εγκατεστημένος ο εξοπλισμός είναι γνωστό ότι δεν είναι επικίνδυνη, ή αν το κύκλωμα στο οποίο είναι συνδεδεμένος ο εξοπλισμός είναι απενεργοποιημένο.
- Οι μονάδες I/O που είναι τοποθετημένες στη βασική πλακέτα δεν αποτελούν μέρος της πιστοποίησης και πρέπει να πιστοποιηθούν καταλλήλως ξεχωριστά.
- Θα υπάρξει μέριμνα (είτε αποτελούν μέρος των πιστοποιημένων μονάδων I/O που είναι τοποθετημένες στη βασική πλακέτα είτε είναι τοποθετημένοι ξεχωριστά) για την παροχή μεταβατικής προστασίας στους ακροδέκτες τροφοδοσίας, η οποία θα οριστεί σε επίπεδο που δεν θα υπερβαίνει το 140% της τιμής της ονομαστικής τάσης κορυφής των 85V.

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για πληροφορίες σχετικά με το εύρος θερμοκρασιών περιβάλλοντος των συσκευών οι οποίες συμμορφώνονται με τα πρότυπα, ανατρέξτε:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Για περισσότερες πληροφορίες σχετικά με τη μεταβατική προστασία, ανατρέξτε στο:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Εγκατάσταση

Οι προφυλάξεις εγκατάστασης για το S2BN4D είναι ίδιες με αυτές για τις συσκευές ProSafe-RS.

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για πληροφορίες σχετικά με την εγκατάσταση, ανατρέξτε στην ενότητα:

“■ Εγκατάσταση” στο 7.1 “Για ασφαλή χρήση.”

## ■ Συντήρηση και επισκευή

Οι προφυλάξεις συντήρησης και επισκευής για το S2BN4D είναι ίδιες με αυτές για τις συσκευές ProSafe-RS.

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για πληροφορίες σχετικά με τη συντήρηση και την επισκευή, ανατρέξτε στην ενότητα:

“■ Συντήρηση και επισκευή” στο 7.1 “Για ασφαλή χρήση.”

# 7.3 Για ασφαλή χρήση—S2BN5D

**Για να εξασφαλιστεί η σωστή απόδοση της εγγενούς ασφάλειας, πρέπει να τηρείτε τα εξής:**

- **Χρησιμοποιήστε τις πλάκες της βάσης για φραγμό (Μοντέλο:S2BN5D) και τους εγγενείς φραγμούς ασφαλείας με τον σωστό συνδυασμό.**
- **Εγκαταστήστε τις συσκευές σύμφωνα με τις οδηγίες των εγγενών φραγμών ασφαλείας.**

**Για την ασφάλεια των χειριστών αλλά και των συσκευών και ολόκληρου του συστήματος, οι πλάκες βάσης για τους φραγμούς πρέπει να εγκαθίστανται σύμφωνα με τους κανόνες ασφαλείας που περιγράφονται στο παρόν εγχειρίδιο χρήσης.**

**Ωστόσο, εάν οι πλάκες βάσης για τους φραγμούς δεν εγκατασταθούν σύμφωνα με τους κανόνες ασφαλείας, η YOKOGAWA δεν εγγυάται την ασφάλεια του συστήματος. Διαβάστε προσεκτικά τα παρακάτω.**

## ■ Μοντέλο και αντικείμενο

Η πλάκα βάσης για τον φραγμό (Μοντέλο:S2BN5D) του συστήματος οργάνων ασφαλείας ProSafe-RS

## ■ Εφαρμόσιμα πρότυπα

Το παρόν έγγραφο βασίζεται στα ακόλουθα πρότυπα:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Σημάνσεις

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Το σύμβολο “X” υποδηλώνει τις Ειδικές συνθήκες χρήσης. Ανατρέξτε στις ■Ειδικές συνθήκες χρήσης.

## Ειδικές συνθήκες χρήσης

Όλες οι συσκευές πρέπει να εγκαθίστανται στην επικίνδυνη περιοχή σύμφωνα με τις ενδείξεις που υπάρχουν σε κάθε συσκευή. Όταν ο εξοπλισμός αποτελείται από αρκετές συσκευές, βεβαιωθείτε ότι οι συσκευές αυτές μπορούν να χρησιμοποιηθούν στο ίδιο επικίνδυνο περιβάλλον.

### Ειδικές συνθήκες χρήση (εγγενής ασφάλεια “i”)

Παρόλο που δεν υπάρχουν ειδικές συνθήκες χρήσης για τις πλάκες βάσης του φραγμού, πρέπει να ελέγχεται το πιστοποιητικό των φραγμών εγγενούς ασφάλειας που πρόκειται να συνδεθούν.

### Ειδικές συνθήκες χρήσης (Ex “ec”)

- Ο εξοπλισμός πρέπει να χρησιμοποιείται μόνο σε περιοχή με βαθμό μόλυνσης έως και 2, όπως ορίζεται στο πρότυπο EN 60664-1.
- Ο εξοπλισμός πρέπει να εγκαθίσταται σε περίβλημα που παρέχει βαθμό προστασίας τουλάχιστον IP54, σύμφωνα με τα πρότυπα EN IEC 60079-7 και EN IEC 60079-0.
- Πρέπει να παρέχεται προστασία από την υπέρταση στους ακροδέκτες του τροφοδοτικού του συστήματος. Η προστασία από την υπέρταση πρέπει να ρυθμιστεί σε επίπεδο που δεν υπερβαίνει το 140% της μέγιστης ονομαστικής τάσης.

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για πληροφορίες σχετικά με το εύρος θερμοκρασιών περιβάλλοντος των συσκευών οι οποίες συμμορφώνονται με τα πρότυπα, ανατρέξτε:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Για περισσότερες πληροφορίες σχετικά με τη μεταβατική προστασία, ανατρέξτε στο:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Εγκατάσταση

- Η θέση σε λειτουργία και η εγκατάσταση πρέπει να εκτελείται μόνο από ειδικά εκπαιδευμένο και καταρτισμένο προσωπικό.
- Ανάλογα με το επίπεδο προστασίας, τα εγγενώς ασφαλή κυκλώματα των συσκευών (ανοιχτή μπλε ένδειξη στη συσκευή) μπορούν να βρίσκονται στην επικίνδυνη περιοχή. Είναι ιδιαίτερα σημαντικό να διασφαλίζεται ότι τα εγγενώς ασφαλή κυκλώματα είναι διαχωρισμένα με ασφάλεια από όλα τα μη εγγενώς ασφαλή κυκλώματα.

  Η εγκατάσταση των εγγενώς ασφαλών κυκλωμάτων πρέπει να πραγματοποιείται σύμφωνα με σχετικούς κανονισμούς.
- Οι αντίστοιχες τιμές κορυφής της συσκευής πεδίου και της σχετιζόμενης συσκευής προστασίας από εκρήξεις πρέπει να λαμβάνονται υπόψη κατά τη σύνδεση των εγγενώς ασφαλών συσκευών πεδίου με τα εγγενώς ασφαλή κυκλώματα των συσκευών H-System (επίδειξη εγγενούς ασφάλειας). Πρέπει να τηρείται το πρότυπο EN 60079-14 (όπου ενδείκνυται). Όπου υπάρχει, πρέπει επίσης να τηρείται το σχεδιάγραμμα ελέγχου πιστοποίησης του προϊόντος.
- Πρέπει να τηρείται το πιστοποιητικό εξέτασης τύπου EC ή τα τυπικά πιστοποιητικά / οι εγκρίσεις. Είναι ιδιαίτερα σημαντικό να τηρούνται οι "ειδικές συνθήκες", εάν αυτές περιλαμβάνονται στα πιστοποιητικά.

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για πληροφορίες σχετικά με την εγκατάσταση, ανατρέξτε στην ενότητα:

“■ Εγκατάσταση” στο 7.1 “Για ασφαλή χρήση.”

## ■ Συντήρηση και επισκευή

Τα χαρακτηριστικά μεταφοράς των συσκευών παραμένουν σταθερά για μεγάλα χρονικά διαστήματα. Αυτό εξαλείφει την ανάγκη για συχνές ρυθμίσεις. Δεν απαιτείται συντήρηση.

**ΔΕΙΤΕ ΕΠΙΣΗΣ** Για πληροφορίες σχετικά με τη συντήρηση και την επισκευή, ανατρέξτε στην ενότητα:

“■ Συντήρηση και επισκευή” στο 7.1 “Για ασφαλή χρήση.”

# 7.4 Για ασφαλή χρήση—Περίβλημα πεδίου N-IO

**Για την ασφάλεια των χειριστών, καθώς και για την προστασία των συσκευών και ολόκληρου του συστήματος, όλες οι συσκευές περιβλήματος πεδίου N-IO θα πρέπει να εγκατασταθούν σύμφωνα με τους κανόνες ασφαλείας που περιγράφονται σε αυτό το εγχειρίδιο οδηγιών.**

**Ωστόσο, εάν οι συσκευές περιβλήματος πεδίου N-IO δεν εγκατασταθούν σύμφωνα με τους κανόνες ασφαλείας, η YOKOGAWA δεν εγγυάται την ασφάλεια του συστήματος. Παρακαλούμε διαβάστε προσεκτικά τα παρακάτω σημεία.**

## ■ Μοντέλο και αντικείμενο

Περίβλημα πεδίου N-IO (Μοντέλο: S2ZN70D) και σχετικές συσκευές (Μοντέλο: S2ZN60D και S2CB60) του συστήματος οργάνων ασφαλείας ProSafe-RS

## ■ Εφαρμόσιμα πρότυπα

Το παρόν έγγραφο βασίζεται στα ακόλουθα πρότυπα:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Σημάνσεις

S2ZN70D, S2ZN60D

Ex II 3 G Ex ec nC IIC T4 Gc X

S2CB60

Ex II 3 G Ex ec IIC T4 Gc X

Το σύμβολο «X» υποδηλώνει τις Ειδικές συνθήκες χρήσης. Ανατρέξτε στις ■Ειδικές συνθήκες χρήσης.

## ■ Προδιαγραφές εγκατάστασης

- Θερμοκρασία Περιβάλλοντος
  S2ZN70D: -40 βαθμοί C έως 55 βαθμοί C
  S2ZN60D: -40 βαθμοί C έως 55 βαθμοί C (*1)
  S2CB60: -40 βαθμοί C έως 55 βαθμοί C

  *1: Αυτή η θερμοκρασία περιβάλλοντος ισχύει για το S2CB60 με εγκατεστημένο το S2ZN60D.

- Τροφοδοσία Ρεύματος
  100 έως 120 V AC +10 %/-10 %
  220 έως 240 V AC +10 %/-10 %

## ■ Ειδικές συνθήκες χρήσης

- Το S2ZN60D θα εγκατασταθεί στο S2CB60.
- Για τις απαιτήσεις θερμοκρασίας περιβάλλοντος, ανατρέξτε στις οδηγίες επειδή δεν φέρουν ετικέτα στον εξοπλισμό.
- Οι συσκευές στο περίβλημα πρέπει να χρησιμοποιούνται σε περιβάλλον όχι μεγαλύτερο από τον βαθμό ρύπανσης 2, όπως ορίζεται στο EN 60664-1.

## Προειδοποιήσεις

ΜΗΝ ΑΝΟΙΓΕΤΕ ΤΟ ΠΕΡΙΒΛΗΜΑ ΣΕ ΠΕΡΙΠΤΩΣΗ ΥΠΑΡΞΗΣ ΕΚΡΗΚΤΙΚΩΝ ΥΛΙΚΩΝ ΣΤΗΝ ΑΤΜΟΣΦΑΙΡΑ.

## Εγκατάσταση

- Ο εξοπλισμός θα πρέπει να εγκατασταθεί και χρησιμοποιηθεί εντός της ονομαστικής του ισχύος.
- Όλος ο εξοπλισμός και η καλωδίωση σε επικίνδυνες περιοχές θα πρέπει να εγκατασταθούν σύμφωνα με το πρότυπο EN 60079-14 και με τους σχετικούς τοπικούς ηλεκτρικούς κώδικες και η εγκατάσταση θα πρέπει επίσης να τηρεί τις αναγκαίες απαιτήσεις για τις μη επικίνδυνες περιοχές.
- Θα πρέπει να τηρούνται οι οδηγίες που παρέχονται στις GS (Γενικές προδιαγραφές), TI (Τεχνικές Πληροφορίες Οδηγιών Εγκατάστασης) και/ή IM (Εγχειρίδια Χρήστη).
- Η εγκατάσταση θα πρέπει να εκτελείται αποκλειστικά και μόνο από εξειδικευμένο προσωπικό, του οποίου η εκπαίδευση έχει συμπεριλάβει οδηγίες για τον τύπο προστασίας και πρακτικές εγκατάστασης, σχετικούς κανόνες και κανονισμούς και γενικές αρχές ταξινόμησης περιοχής.
- Οι βίδες των ακροδεκτών για συνδέσεις καλωδίωσης πεδίου θα πρέπει να σφίγγονται με προδιαγεγραμμένες τάσεις σύσφιγξης.
- Μετά το πέρας της εγκατάστασης και πριν από την πρώτη χρήση, θα πρέπει να διεξαχθεί προκαταρκτική επιθεώρηση του εξοπλισμού και της εγκατάστασης σύμφωνα με το πρότυπο EN 60079-17.
- Τηρείτε τις παρακάτω οδηγίες, ώστε να διασφαλίζεται η ασφάλεια και η απόδοση.
  - Βεβαιωθείτε ότι όλες οι κενές σχισμές του ερμαρίου έχουν καλυφθεί σωστά με τα καλύμματα που συνοδεύουν τη συσκευή.
- Διαβάστε προσεκτικά και κατανοήστε τις πληροφορίες στα Εγχειρίδια χρήσης πριν χρησιμοποιήσετε τη μονάδα στεγανοποίησης του Roxtec και τους αδένες καλωδίων.
- Μην αφαιρείτε την πλάκα για το στυπιοθλίπτη καλωδίων και την πλάκα στεγανοποίησης από το περίβλημα.
- Μην βυθίζετε το περίβλημα σε νερό.
- Μπορείτε να αγοράσετε τσιμούχα με τον αριθμό ανταλλακτικού τους (B1036HZ, B1037HZ) και να τα επισυνάψετε στο προϊόν, μπορείτε επίσης να αγοράσετε ένα προϊόν με τσιμούχα (/SEAL). Και στις δύο περιπτώσεις, η εκτίμησή μας για τη συμμόρφωση του προϊόντος με την Οδηγία ATEX αφορά το S2ZN70D συνολικά, συμπεριλαμβανομένων των τσιμουχών. Οι τσιμούχες οπών συνοδεύονται από πιστοποιητικό ATEX που παρέχεται από τον κατασκευαστή όταν τα αγοράζετε με τον αριθμό ανταλλακτικού τους.

## Συντήρηση και επισκευή

- Επιθεωρήσεις και συντήρηση του εξοπλισμού και εγκαταστάσεις θα πρέπει να διεξάγονται αποκλειστικά και μόνο από εξουσιοδοτημένο προσωπικό και σύμφωνα με το πρότυπο EN 60079-17.
- Επισκευή, επιθεώρηση και επιδιόρθωση, αποκατάσταση του εξοπλισμού θα πρέπει να διεξάγονται αποκλειστικά και μόνο από εξουσιοδοτημένο προσωπικό και σύμφωνα με το πρότυπο EN IEC 60079-19.
- Επιδιορθώσεις του εξοπλισμού θα πρέπει να διεξάγονται αποκλ ιστικά και μόνο από εκπαιδευμένο, έμπειρο, ειδικευμένο, καταρτισμένο και/ή υπό επιτήρηση προσωπικό ή από εξουσιοδοτημένους μηχανικούς σέρβις της YOKOGAWA. Σε διαφορετική περίπτωση, ο τύπος της προστασίας μπορεί να ακυρωθεί.
- Δεν μπορεί να γίνει καμία αλλαγή σε εξοπλισμό που λειτουργεί σε επικίνδυνες περιοχές.

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# 8. Specifiche di sicurezza

**I seguenti argomenti sono discussi in questa sezione.**

- **Per utilizzo sicuro**
- **Per utilizzo sicuro—S2BN4D**
- **Per utilizzo sicuro—S2BN5D**
- **Per utilizzo sicuro—Custodia da campo N-IO**

# 8.1 Per utilizzo sicuro

**Per la sicurezza degli operatori nonché dei dispositivi e dell'intero sistema, tutti i dispositivi devono essere installati in conformità con le norme di sicurezza descritte nel presente manuale di istruzioni.**

**Se i dispositivi non vengono installati in conformità con le norme di sicurezza, YOKOGAWA non garantisce la sicurezza del sistema. Leggere attentamente le seguenti informazioni.**

## ■ Modello e voce

Sistema strumentato di sicurezza modello ProSafe-RS/ProSafe-RS Lite

ARGOMENTI CORRELATI Per ulteriori informazioni sui dispositivi ProSafe-RS/ProSafe-RS Lite, fare riferimento a:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Standard applicabili

Questo documento è basato sui seguenti standard:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Contrassegni

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Simbolo ‘X’ indica la Condizioni specifiche d’uso. Fare riferimento a ■Condizioni specifiche d’uso.

## ■ Condizioni specifiche d’uso

- L’apparecchiatura deve essere utilizzata solo in un’area con grado di inquinamento non superiore a 2, come definito da EN 60664-1.
- L’apparecchiatura deve essere installata in una custodia che fornisca un grado di protezione non inferiore a IP54 nel rispetto di EN IEC 60079-0.
- Al terminale di alimentazione dell’apparecchiatura deve essere fornita una protezione dalle correnti transitorie impostata a un livello non superiore a 119 V c. c.

ARGOMENTI CORRELATI Per informazioni sugli intervalli di temperatura ambientale dei dispositivi conformi agli standard, fare riferimento a:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Avvertenze

AVVERTENZA – QUANDO È PRESENTE UN'ATMOSFERA ESPLOSIVA

- NON APRIRE L'ARMADIO MENTRE LE APPARECCHIATURE SONO SOTTO TENSIONE
- NON RIMUOVERE O SOSTITUIRE IL FUSIBILE QUANDO È SOTTO TENSIONE
- NON SEPARARE I COLLEGAMENTI QUANDO SONO SOTTO TENSIONE

## Installazione

- Le apparecchiature dovranno essere installate e utilizzate entro i loro valori nominali.
- Tutte le apparecchiature e cablaggi elettrici in aree pericolose dovranno essere installate in conformità con le norme EN 60079-14 e relativi codici elettrici locali, ed inoltre l'installazione dovrà soddisfare i requisiti appropriati per aree non pericolose.
- Le istruzioni fornite in GS (Specifiche generali), TI (Informazioni tecniche di guida all'installazione) e IM (Manuale d'uso) dovranno essere osservate.
- L'installazione dovrà essere eseguita solo da personale qualificato il cui addestramento ha incluso le istruzioni sul tipo di protezione e pratiche di installazione, norme e regolamenti relativi e principi generali di classificazione dell'area.
- Il grado di protezione non inferiore a IP54 dovrà essere mantenuto agli ingressi dei cavi nell'armadio.
- Durante l'installazione, accertarsi che le feritoie di ventilazione delle apparecchiature non siano ostruite da parti di cavi, accessori di fissaggio, ecc.
- Le viti dei terminali per i collegamenti dei cablaggi sul campo dovranno essere strette con i valori specificati della coppia di serraggio.
- Al completamento dell'installazione e precedentemente al primo uso, dovrà essere eseguita l'ispezione iniziale delle apparecchiature e dell'installazione in conformità con le norme EN 60079-17.
- Attenersi alle seguenti linee guida al fine di garantire condizioni di sicurezza e prestazioni ottimali.
  - Assicurarsi che tutti gli alloggiamenti rimasti liberi nell'armadio siano adeguatamente protetti dai coperchi inclusi.
  - Assicurarsi che tutti i cavi siano fissati rigidamente nell'armadio.
- Il cablaggio sul campo per la comunicazione Ethernet e la rete Vnet/IP deve essere conforme alla norma IEEE 802.3 per evitare la sovratensione in eccesso di 119 V.
- Nel caso del collegamento alla Piastra di base per barriera, l'installazione deve essere conforme al disegno di controllo.
- I modelli inclusi nella precedente Dichiarazione di Conformità UE con marcatura "nA" possono essere installati nel sistema se gli stessi codici di modello e suffisso sono elencati nelle tabelle dell'Allegato 1.

## Manutenzione e riparazione

- Le ispezioni e la manutenzione delle apparecchiature ed installazioni dovranno essere eseguite solo da personale qualificato, e in conformità con le norme EN 60079-17.
- La riparazione, l'ispezione e il ricupero delle apparecchiature dovranno essere eseguite solo da personale qualificato, e in conformità con le norme EN 60079-19.
- Le riparazioni delle apparecchiature dovranno essere eseguite solo da personale istruito, esperto, qualificato, personale ben informato e/o controllato, o da ingegneri per l'assistenza autorizzati da YOKOGAWA. In caso contrario, il tipo di protezione potrebbe essere invalidato.
- Non dovranno essere eseguite modifiche alle apparecchiature che sono in funzione in aree pericolose.
- Per i moduli del processore, utilizzare esclusivamente le seguenti batterie specificate da YOKOGAWA:
  S9185FA per SCP451 e SCP461
  S9450FE per S2CP471 e L1CP471
- Utilizzare esclusivamente i seguenti FAN specificati da YOKOGAWA per AIP602:
  A1159EM oppure A1213EM

# 8.2 Per utilizzo sicuro—S2BN4D

**Per assicurare le prestazioni a sicurezza intrinseca è necessario osservare quanto segue:**

- **Utilizzare le piastre di base per le barriere (Modello:S2BN4D) e le barriere a sicurezza intrinseca nella combinazione corretta.**
- **Installare i dispositivi in base alle istruzioni delle barriere a sicurezza intrinseca.**

**Per la sicurezza degli operatori oltre che dei dispositivi e dell'intero sistema, le piastre di base per le barriere devono essere installate in base alle regole di sicurezza descritte nel presente manuale d'istruzioni.**

**Tuttavia se le piastre di base per le barriere non sono installate in base alle regole di sicurezza, YOKOGAWA non garantisce la sicurezza del sistema. Leggere le seguenti voci con attenzione.**

## ■ Modello e voce

La piastra di base per la barriera (Modello:S2BN4D) del sistema strumentale di sicurezza ProSafe-RS

## ■ Standard applicabili

Questo documento è basato sui seguenti standard:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Contrassegni

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Simbolo 'X' indica la Condizioni specifiche d'uso. Fare riferimento a ■Condizioni specifiche d'uso.

## ■ Condizioni specifiche d’uso

Tutti i dispositivi devono essere installati nell’area di pericolo nel rispetto dei simboli illustrati su ciascun dispositivo. Quando l’apparecchiatura è costituita da diversi dispositivi, assicurare che sia costituita solo da dispositivi che possono essere utilizzati nello stesso ambiente di pericolo.

- L’apparecchiatura deve essere installata in un’area con grado di inquinamento non superiore a 2, come definito in EN 60664-1, e in una custodia che fornisca un grado di protezione minimo di IP54 e che soddisfi i requisiti relativi delle norme EN IEC 60079-0 e EN IEC 60079-7.
- Tutti i collegamenti alle apparecchiature non devono essere inseriti o rimossi a meno che l’area in cui è installata l’apparecchiatura sia conosciuta per certo come non pericolosa o il circuito a cui è collegata sia stato diseccitato.
- I moduli I/O installati sulla piastra di fondo non costituiscono parte dela certificazione e devono essere certificati appropriatamente separatamente.
- È necessario predisporre (come parte dei moduli I/O certificati installati sulla piastra di fondo o con installazione esterna) una protezione dalle correnti transitorie sui terminali di alimentazione, impostata a un livello non superiore al 140% della tensione nominale di picco di 85 V.

ARGOMENTI CORRELATI

Per informazioni sugli intervalli di temperatura ambientale dei dispositivi conformi agli standard, fare riferimento a:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Per maggiori informazioni sulla protezione dalla correnti transitorie, fare riferimento a:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installazione

Le precauzioni di installazione per S2BN4D sono le stesse dei dispositivi ProSafe-RS.

ARGOMENTI CORRELATI

Per informazioni sull’installazione, fare riferimento a:

“■ Installazione” in 8.1 “Per utilizzo sicuro.”

## ■ Manutenzione e riparazione

Le precauzioni di manutenzione e riparazione per S2BN4D sono le stesse dei dispositivi ProSafe-RS.

ARGOMENTI CORRELATI

Per informazioni sulla manutenzione e la riparazione, fare riferimento a:

“■ Manutenzione e riparazione” in 8.1 “Per utilizzo sicuro.”

# 8.3 Per utilizzo sicuro—S2BN5D

**Per assicurare le prestazioni a sicurezza intrinseca è necessario osservare quanto segue:**

- **Utilizzare le piastre di base per le barriere (Modello:S2BN5D) e le barriere a sicurezza intrinseca nella combinazione corretta.**
- **Installare i dispositivi in base alle istruzioni delle barriere a sicurezza intrinseca.**

**Per la sicurezza degli operatori oltre che dei dispositivi e dell'intero sistema, le piastre di base per le barriere devono essere installate in base alle regole di sicurezza descritte nel presente manuale d'istruzioni.**

**Tuttavia se le piastre di base per le barriere non sono installate in base alle regole di sicurezza, YOKOGAWA non garantisce la sicurezza del sistema. Leggere le seguenti voci con attenzione.**

## ■ Modello e voce

La piastra di  base per la barriera (Modello:S2BN5D) del sistema strumentale di sicurezza ProSafe-RS

## ■ Standard applicabili

Questo documento è basato sui seguenti standard:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Contrassegni

FIDI 21 ATEX 0071X


II 3 (1) G Ex ec [ia Ga] IIC T4 Gc


II (1) D [Ex ia Da] IIIC


I (M1) [Ex ia Ma] I

Simbolo ‘X’ indica la Condizioni specifiche d’uso. Fare riferimento a ■Condizioni specifiche d’uso.

## Condizioni specifiche d’uso

Tutti i dispositivi devono essere installati nell’area di pericolo nel rispetto dei simboli illustrati su ciascun dispositivo. Quando l’apparecchiatura è costituita da diversi dispositivi, assicurare che sia costituita solo da dispositivi che possono essere utilizzati nello stesso ambiente di pericolo.

### Condizioni specifiche d’uso (sicurezza intrinseca “i”)

Sebbene non vi siano condizioni specifiche di utilizzo per le piastre di base per barriere, deve essere controllato il certificato delle barriere a sicurezza intrinseca che devono essere collegate alle piastre di base per barriere.

### Condizioni specifiche d’uso (Ex “ec”)

- L'apparecchiatura deve essere utilizzata solo in una zona con grado di inquinamento non superiore a 2, come definito in EN 60664-1.
- L’apparecchiatura deve essere installata in una custodia che fornisca un grado di protezione non inferiore a IP54 in conformità alle norme EN IEC 60079-7 e EN IEC 60079-0.
- Deve essere fornita una protezione dalle scariche transitorie ai terminali dell’alimentazione del sistema. La protezione dalle scariche transitorie deve essere impostata a un livello non superiore al 140% del valore di tensione nominale di picco.

ARGOMENTI CORRELATI

Per informazioni sugli intervalli di temperatura ambientale dei dispositivi conformi agli standard, fare riferimento a:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Per maggiori informazioni sulla protezione dalla correnti transitorie, fare riferimento a:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installazione

- La messa in servizio e l'installazione devono essere eseguite solo da personale qualificato e specialmente addestrato.
- A seconda del livello di protezione, i circuiti a sicurezza intrinseca dei dispositivi (identificazione azzurra sul dispositivo) possono essere situati in un'area pericolosa. È particolarmente importante assicurare che i circuiti a sicurezza intrinseca siano separati in sicurezza da tutti i circuiti non a sicurezza intrinseca.

  L'installazione di circuiti a sicurezza intrinseca deve essere condotta nel rispetto delle normative di installazione pertinenti.
- Quando si collegano dispositivi di campo a sicurezza intrinseca ai circuiti a sicurezza intrinseca dei dispositivi del sistema H è necessario prendere in considerazione i rispettivi valori di picco del dispositivo di campo e del dispositivo associato relativamente alla protezione da esplosioni (dimostrazione della sicurezza intrinseca). È necessario rispettare EN 60079-14 (ove appropriato). Se disponibile, deve essere osservato il disegno di controllo della certificazione del prodotto.
- I certificati di omologazione CE o i certificati/le approvazioni standard devono essere osservati. È particolarmente importante osservare le "condizioni speciali" se queste sono incluse nei certificati.

ARGOMENTI CORRELATI

Per informazioni sull'installazione, fare riferimento a:

"■ Installazione" in 8.1 "Per utilizzo sicuro."

## ■ Manutenzione e riparazione

Le caratteristiche di trasferimento dei dispositivi rimangono stabili per lunghi periodi di tempo. Questo elimina la necessità di regolazioni periodiche. La manutenzione non è richiesta.

ARGOMENTI CORRELATI

Per informazioni sulla manutenzione e la riparazione, fare riferimento a:

"■ Manutenzione e riparazione" in 8.1 "Per utilizzo sicuro."

# 8.4 Per utilizzo sicuro—Custodia da campo N-IO

**Per la sicurezza degli operatori nonché dei dispositivi e dell'intero sistema, tutti i dispositivi per la custodia da campo N-IO devono essere installati in conformità con le norme di sicurezza descritte nel presente manuale di istruzioni.**

**Se i dispositivi la custodia da campo N-IO non vengono installati in conformità con le norme di sicurezza, YOKOGAWA non garantisce la sicurezza del sistema. Leggere attentamente le seguenti informazioni.**

## ■ Standard applicabili

Questo documento è basato sui seguenti standard:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Modello e voce

Custodia da campo N-IO (Modello:S2ZN70D) e dispositivi correlati (Modelli: S2ZN60D e S2CB60) del sistema strumentale di sicurezza ProSafe-RS

## ■ Contrassegni

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

Simbolo 'X' indica la Condizioni specifiche d'uso. Fare riferimento a ■Condizioni specifiche d'uso.

## ■ Specifiche di installazione

- Temperatura ambientale
  - S2ZN70D: -40 gradi C a 55 gradi C
  - S2ZN60D: -40 gradi C a 55 gradi C (*1)
  - S2CB60: -40 gradi C a 55 gradi C

  *1: Questa temperatura ambiente si applica a S2CB60 con S2ZN60D installato.
- Alimentazione
  - Da 100 a 120 V CA +10%/-10%
  - Da 220 a 240 V CA +10%/-10%

## Condizioni specifiche d’uso

- S2ZN60D deve essere installato in S2CB60.
- Per i requisiti di temperatura ambiente, fare riferimento alle istruzioni, perché non sono riportati nell’etichetta sull’apparecchiatura.
- I dispositivi nella custodia devono essere utilizzati in un ambiente con un inquinamento non superiore al grado 2 come definito in EN 60664-1.

## Avvertenze

NON APRIRE LA CUSTODIA IN PRESENZA DI ATMOSFERA ESPLOSIVA.

## Installazione

- Le apparecchiature dovranno essere installate e utilizzate entro i loro valori nominali.
- Tutte le apparecchiature e cablaggi elettrici in aree pericolose dovranno essere installate in conformità con le norme EN 60079-14 e relativi codici elettrici locali, ed inoltre l’installazione dovrà soddisfare i requisiti appropriati per aree non pericolose.
- Le istruzioni fornite in GS (Specifiche generali), TI (Informazioni tecniche di guida all’installazione) e IM (Manuale d’uso) dovranno essere osservate.
- L’installazione dovrà essere eseguita solo da personale qualificato il cui addestramento ha incluso le istruzioni sul tipo di protezione e pratiche di installazione, norme e regolamenti relativi e principi generali di classificazione dell’area.
- Le viti dei terminali per i collegamenti dei cablaggi sul campo dovranno essere strette con i valori specificati della coppia di serraggio.
- Al completamento dell’installazione e precedentemente al primo uso, dovrà essere eseguita l’ispezione iniziale delle apparecchiature e dell’installazione in conformità con le norme EN 60079-17.
- Attenersi alle seguenti linee guida al fine di garantire condizioni di sicurezza e prestazioni ottimali.
  - Assicurarsi che tutti gli alloggiamenti rimasti liberi nella custodia siano adeguatamente protetti dai coperchi inclusi.
- Leggere attentamente e comprendere le informazioni contenute nei Manuali d’uso prima di utilizzare il modulo di tenuta Roxtec e i pressacavi.
- Non rimuovere la piastra per il pressacavo e la piastra per il modulo di tenuta dall’involucro.
- Non immergere la custodia in acqua.
- è possibile acquistare guarnizioni per fori con il loro numero di parte (B1036HZ, B1037HZ) e fissarle sul prodotto; inoltre è possibile acquistare un prodotto con guarnizioni per fori (/SEAL). In entrambi i casi, la nostra valutazione della conformità del prodotto con la Direttiva ATEX si riferisce a S2ZN70D nel suo complesso, incluse le guarnizioni per fori. Le guarnizioni per fori sono dotate di certificato ATEX, fornito dal produttore al momento dell’acquisto insieme al numero di parte.

## Manutenzione e riparazione

- Le ispezioni e la manutenzione delle apparecchiature ed installazioni dovranno essere eseguite solo da personale qualificato, e in conformità con le norme EN 60079-17.
- La riparazione, l'ispezione e il ricupero delle apparecchiature dovranno essere eseguite solo da personale qualificato, e in conformità con le norme EN IEC 60079-19.
- Le riparazioni delle apparecchiature dovranno essere eseguite solo da personale istruito, esperto, qualificato, personale ben informato e/o controllato, o da ingegneri per l'assistenza autorizzati da YOKOGAWA. In caso contrario, il tipo di protezione potrebbe essere invalidato.
- Non dovranno essere eseguite modifiche alle apparecchiature che sono in funzione in aree pericolose.

# 9. Especificações de segurança

**Os seguintes itens encontram-se descritos nesta secção:**

- **Para utilização segura**
- **Para utilização segura—S2BN4D**
- **Para utilização segura—S2BN5D**
- **Para utilização segura—Caixa de controlo N-IO**

# 9.1 Para utilização segura

**Para segurança dos operadores, dispositivos e do equipamento, tem de instalar todos os dispositivos de acordo com as regras de segurança descritas neste manual de instruções.**

**No entanto, se não instalar os dispositivos de acordo com as regras de segurança, a YOKOGAWA não garante a segurança do sistema. Leia cuidadosamente os itens descritos em seguida.**

## ■ Modelo e item

Sistema instrumentalizado de segurança do modelo ProSafe-RS/ProSafe-RS Lite

**VER TAMBÉM** Para mais informações sobre os dispositivos ProSafe-RS/ProSafe-RS Lite consulte:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Normas aplicáveis

Este documento baseia-se nas seguintes normas:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Marcações

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Símbolo “X” denota as Condições específicas de utilização. Consulte ■Condições específicas de utilização.

## ■ Condições específicas de utilização

- O equipamento deve apenas ser utilizado numa área com uma poluição máxima de nível 2 conforme definido na norma EN 60664-1.
- O equipamento deve ser instalado num recinto que proporcione um nível de proteção mínimo de IP54 de acordo com a norma EN IEC 60079-0.
- A proteção contra transientes num nível que não exceda os 119 VCC deve ser fornecida no terminal da fonte de alimentação para o equipamento.

**VER TAMBÉM** Para mais informações sobre os intervalos de temperatura ambiente de dispositivos compatíveis com a norma, consulte:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Avisos

AVISO – QUANDO HÁ PRESENÇA DE ATMOSFERA EXPLOSIVA

- NÃO ABRA O ARMÁRIO ENQUANTO O EQUIPAMENTO ESTIVER ENERGIZADO
- NÃO REMOVA NEM SUBSTITUA O FUSÍVEL QUANDO ENERGIZADO
- NÃO SEPARE AS CONEXÕES QUANDO ENERGIZADO

## Instalação

- Os equipamentos deverão ser instalados e utilizados dentro das suas classificações.
- Todos os equipamentos e cablagens em zonas perigosas deverão ser instalados de acordo com a norma EN 60079-14 e os códigos eléctricos locais associados, e a instalação também deverá satisfazer os requisitos apropriados para zonas não perigosas.
- As instruções dadas em GS (Especificações Gerais), TI (Informações Técnicas da Instalação) e/ou IM (Manuais do Utilizador) também deverão ser observadas.
- A instalação deverá ser realizada apenas por pessoal qualificado, que tenha conhecimento sobre o tipo de protecção e práticas de instalação, regras e regulamentos relevantes, e princípios gerais da classificação da área.
- O grau de protecção não inferior a IP54 deverá ser mantido nas entradas dos cabos para o armário.
- Durante a instalação, deve-se tomar cuidado para não bloquear as aberturas de ventilação do equipamento por cabos, acessórios de fixação etc.
- Os parafusos dos terminais para as conexões de campo deverão ser apertados com os valores de binário especificados.
- Ao concluir a instalação e antes da primeira utilização, deve-se realizar a inspecção inicial do equipamento e da instalação de acordo com a norma EN 60079-17.
- Siga as seguintes instruções para garantir a segurança e rendimento.
  - Certifique-se de que todos os orifícios vazios existentes no armário estão cobertos com tampas.
  - Certifique-se de que todos os cabos estão correctamente fixos no armário.
- A cablagem para a comunicação Ethernet e rede Vnet/IP deve estar de acordo com a norma IEEE 802.3 para evitar a sobretensão de ultrapassar os 119 V.
- Em caso de ligação da placa de base para barreiras, a instalação deve estar de acordo com o respetivo desenho de controlo.
- Os modelos que foram incluídos na anterior Declaração de Conformidade da UE com a marcação ”nA” podem ser instalados no sistema, caso os mesmos códigos de modelo e sufixo se encontrem listados nas tabelas do Anexo 1.

## Manutenção e reparação

- As inspecções e manutenção do equipamento e da instalação deverão ser realizadas apenas por pessoal qualificado, de acordo com a norma EN 60079-17.
- A reparação, revisão e recuperação do equipamento deverão ser realizadas apenas por pessoal qualificado, de acordo com a norma EN 60079-19.
- As reparações do equipamento deverão ser realizadas apenas por pessoal treinado, experiente, qualificado, conhecedor do assunto e/ou supervisionado, ou por engenheiros de serviço autorizados pela YOKOGAWA. Caso contrário, o tipo de protecção pode ser invalidado.
- Nenhuma modificação pode ser realizada em equipamentos que são operados em zonas perigosas.
- Use apenas as seguintes baterias especificadas pela YOKOGAWA para os módulos de processador:
  S9185FA para SCP451 e SCP461
  S9450FE para S2CP471 e L1CP471
- Use apenas as seguintes VENTOINHAS especificadas pela YOKOGAWA para o AIP602:
  A1159EM ou A1213EM

# 9.2 Para utilização segura—S2BN4D

**Para garantir um desempenho de segurança intrinsecamente segura, deve respeitar o seguinte:**

- **Utilize as placas base para barreira (Modelo:S2BN4D) e barreiras intrinsecamente seguras na combinação correta.**
- **Instale os dispositivos de acordo com as instruções das barreiras intrinsecamente seguras.**

**Para a segurança dos operadores, assim como os dispositivos e todo o sistema, devem ser instaladas placas base para barreiras de acordo com as regras de segurança descritas neste manual de instruções.**

**Contudo, se as placas base para barreiras não forem instaladas de acordo com as normas de segurança, a YOKOGAWA não garante a segurança do sistema. Leia atentamente os seguintes pontos.**

## ■ Modelo e item

A placa de base para barreiras (Modelo: S2BN4D) do sistema instrumentado de segurança ProSafe-RS

## ■ Normas aplicáveis

Este documento tem por base as seguintes normas:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Marcas

Baseefa15ATEX0240X


II 3 G Ex ec IIC T4 Gc

Símbolo “X” denota as Condições específicas de utilização. Consulte ■Condições específicas de utilização.

## ■ Condições específicas de utilização

Todos os dispositivos devem ser instalados na área de risco de acordo com as marcas apresentadas em cada dispositivo. Quando o equipamento é constituído por vários dispositivos, garanta que o equipamento é composto apenas pelos dispositivos que podem ser utilizados no mesmo ambiente perigoso.

- O equipamento deve ser instalado numa área com uma poluição máxima de nível 2 conforme definido na norma EN 60664-1 e num recinto que proporcione um nível de proteção mínimo de IP54 e cumpre com os respetivos requisitos das normas EN IEC 60079-0 e EN IEC 60079-7.
- Todas as ligações para o equipamento não devem ser introduzidas ou retiradas, a menos que a área onde o equipamento está instalado é considerado não perigoso ou o circuito para o qual está ligado foi desativado.
- Os módulos de E/S instalados no barramento de dados não fazem parte da certificação e deve ser adequadamente certificados em separado.
- Deve ser efetuada uma provisão (seja parte dos módulos de E/S certificados instalados no barramento de dados ou instalados externamente) para fornecer uma proteção contra transientes nos terminais da fonte de alimentação num nível que não exceda 140% do valor máximo da tensão nominal de 85 V.

**VER TAMBÉM** Para mais informações sobre os intervalos de temperatura ambiente de dispositivos compatíveis com a norma, consulte:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Para mais informações sobre a proteção contra transientes, consultar a:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Instalação

As precauções de instalação para o S2BN4D são idênticas às dos dispositivos ProSafe-RS.

**VER TAMBÉM** Para mais informações sobre a instalação, consulte:

“■ Instalação” em 9.1 “Para utilização segura.”

## ■ Manutenção e reparação

As precauções de manutenção e reparação para o S2BN4D são idênticas às dos dispositivos ProSafe-RS.

**VER TAMBÉM** Para informações sobre a manutenção e reparação, consulte:

“■Manutenção e reparação” em 9.1 “Para utilização segura.”

# 9.3 Para utilização segura—S2BN5D

**Para garantir um desempenho de segurança intrinsecamente segura, deve respeitar o seguinte:**

- **Utilize as placas base para barreira (Modelo:S2BN5D) e barreiras intrinsecamente seguras na combinação correta.**
- **Instale os dispositivos de acordo com as instruções das barreiras intrinsecamente seguras.**

**Para a segurança dos operadores, assim como os dispositivos e todo o sistema, devem ser instaladas placas base para barreiras de acordo com as regras de segurança descritas neste manual de instruções.**

**Contudo, se as placas base para barreiras não forem instaladas de acordo com as normas de segurança, a YOKOGAWA não garante a segurança do sistema. Leia atentamente os seguintes pontos.**

## ■ Modelo e item

A placa de base para barreiras (Modelo: S2BN5D) do sistema instrumentado de segurança ProSafe-RS

## ■ Normas aplicáveis

Este documento tem por base as seguintes normas:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Marcas

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Símbolo “X” denota as Condições específicas de utilização. Consulte ■Condições específicas de utilização.

## Condições específicas de utilização

Todos os dispositivos devem ser instalados na área de risco de acordo com as marcas apresentadas em cada dispositivo. Quando o equipamento é constituído por vários dispositivos, garanta que o equipamento é composto apenas pelos dispositivos que podem ser utilizados no mesmo ambiente perigoso.

### Condições específicas de utilização (intrinsecamente seguras “i”)

Embora não existam condições de utilização específicas para as placas base para barreiras, o certificado de barreiras intrinsecamente seguras a ligar às placas base para barreiras devem ser verificadas.

### Condições específicas de utilização (Ex “ec”)

- O equipamento deve ser utilizado apenas numa área até ao nível de poluição 2, como definido na norma EN 60664-1.
- O equipamento deve ser instalado num recinto que proporcione um nível de proteção mínimo de IP54 de acordo com as normas EN IEC 60079-7 e EN IEC 60079-0.
- Deve ser proporcionada proteção contra transientes nos terminais da fonte de alimentação do sistema. A proteção contra transientes deve ser definida num nível máximo de 140% do valor máximo da tensão nominal.

**VER TAMBÉM** Para mais informações sobre os intervalos de temperatura ambiente de dispositivos compatíveis com a norma, consulte:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Para mais informações sobre a proteção contra transientes, consultar a:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Instalação

- O comissionamento e instalação devem ser efetuados apenas por pessoal especialmente treinado e qualificado.
- Dependendo do nível de proteção, os circuitos intrinsecamente seguros dos dispositivos (luz azul de identificação no dispositivo) podem ser localizados na área perigosa. É especialmente importante garantir que os circuitos intrinsecamente seguros estão separados com segurança de todos os circuitos não intrinsecamente seguros.

  A instalação dos circuitos intrinsecamente seguros deve ser realizada de acordo com os regulamentos de instalação relevantes.
- Os respetivos valores de pico do dispositivo de campo e dispositivo associado relativamente à proteção contra explosões devem ser considerados ao ligar dispositivos de campo intrinsecamente seguros com os circuitos intrinsecamente seguros de dispositivos Sistema H (demonstração de segurança intrínseca). A norma EN 60079-14 deve ser respeitada (quando apropriado). Se disponível, também deve ser respeitado o esquema de controlo de certificação do produto.
- Os Certificados de Verificação Tipo EC ou certificados padrão/aprovações devem ser respeitados. É especialmente importante respeitar as "condições especiais" se estiverem incluídas nos certificados.

**VER TAMBÉM** Para mais informações sobre a instalação, consulte:

"■ Instalação em 9.1 "Para utilização segura."

## ■ Manutenção e reparação

As características de transferência dos dispositivos permanecem estáveis durante longos períodos de tempo. Isso elimina a necessidade de ajuste regular. Não é necessária manutenção.

**VER TAMBÉM** Para informações sobre a manutenção e reparação, consulte:

"■ Manutenção e reparação" em 9.1 "Para utilização segura."

# 9.4 Para utilização segura—Caixa de controlo N-IO

**Para segurança dos operadores, dispositivos e do equipamento, tem de instalar todos os dispositivos para a caixa de controlo N-IO de acordo com as regras de segurança descritas neste manual de instruções.**

**No entanto, se não instalar os dispositivos para a caixa de controlo N-IO de acordo com as regras de segurança, a YOKOGAWA não garante a segurança do sistema. Leia cuidadosamente os itens descritos em seguida.**

## ■ Modelo e item

A caixa de controlo N-IO (modelo: S2ZN70D) e dispositivos relacionados (modelo: S2ZN60D e S2CB60) do sistema instrumentado de segurança ProSafe-RS

## ■ Normas aplicáveis

Este documento baseia-se nas seguintes normas:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Marcações

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

Símbolo “X” denota as Condições específicas de utilização. Consulte ■Condições específicas de utilização.

## ■ Especificações para instalação

- Temperatura ambiente
  - S2ZN70D: -40 ºC a 55 ºC
  - S2ZN60D: -40 ºC a 55 ºC (*1)
  - S2CB60: -40 ºC a 55 ºC

  *1: esta temperatura ambiente aplica-se ao S2CB60 com o S2ZN60D instalado.
- Fornecimento de energia
  - 100 a 120 V CA +10%/-10%
  - 220 a 240 V CA +10%/-10%

## Condições específicas de utilização

- O S2ZN60D deve ser instalado no S2CB60.
- Para os requisitos de temperatura ambiente, consulte as instruções, dado não estão rotuladas no equipamento.
- Os dispositivos na caixa devem ser utilizados num ambiente cujo grau de poluição não seja superior a 2, conforme definido na norma EN 60664-1.

## Avisos

NÃO ABRA A CAIXA QUANDO EXISTIR UMA ATMOSFERA EXPLOSIVA.

## Instalação

- Os equipamentos deverão ser instalados e utilizados dentro das suas classificações.
- Todos os equipamentos e cablagens em zonas perigosas deverão ser instalados de acordo com a norma EN 60079-14 e os códigos eléctricos locais associados, e a instalação também deverá satisfazer os requisitos apropriados para zonas não perigosas.
- As instruções dadas em GS (Especificações Gerais), TI (Informações Técnicas da Instalação) e/ou IM (Manuais do Utilizador) também deverão ser observadas.
- A instalação deverá ser realizada apenas por pessoal qualificado, que tenha conhecimento sobre o tipo de protecção e práticas de instalação, regras e regulamentos relevantes, e princípios gerais da classificação da área.
- Os parafusos dos terminais para as conexões de campo deverão ser apertados com os valores de binário especificados.
- Ao concluir a instalação e antes da primeira utilização, deve-se realizar a inspecção inicial do equipamento e da instalação de acordo com a norma EN 60079-17.
- Siga as seguintes instruções para garantir a segurança e rendimento.
  - Certifique-se de que todos os orifícios vazios existentes na caixa estão cobertos com tampas.
- Leia e compreenda cuidadosamente a informação contida nos Manuais do Utilizador antes de utilizar o módulo de vedação da Roxtec e os conectores de cabos.
- Não remova a placa para conectores de cabos nem a placa para o módulo de vedação da caixa.
- Não submerja a caixa em água.
- Pode adquirir vedantes de orifícios através do seu número de peça (B1036HZ, B1037HZ) e montá-los no produto, e pode também adquirir um produto com vedantes de orifícios (/SEAL). Em ambos os casos, a nossa avaliação da conformidade com a diretiva ATEX é para o S2ZN70D como um todo, incluindo os vedantes de orifícios. Os vedantes de orifícios vêm com o certificado ATEX fornecido pelo fabricante quando os adquire através do seu número de peça.

## Manutenção e reparação

- As inspecções e manutenção do equipamento e da instalação deverão ser realizadas apenas por pessoal qualificado, de acordo com a norma EN 60079-17.
- A reparação, revisão e recuperação do equipamento deverão ser realizadas apenas por pessoal qualificado, de acordo com a norma EN IEC 60079-19.
- As reparações do equipamento deverão ser realizadas apenas por pessoal treinado, experiente, qualificado, conhecedor do assunto e/ou supervisionado, ou por engenheiros de serviço autorizados pela YOKOGAWA. Caso contrário, o tipo de protecção pode ser invalidado.
- Nenhuma modificação pode ser realizada em equipamentos que são operados em zonas perigosas.

# 10. Especificaciones de seguridad

**En esta sección se describen los siguientes elementos.**

- **Para un uso seguro**
- **Para un uso seguro—S2BN4D**
- **Para un uso seguro—S2BN5D**
- **Para un uso seguro—Carcasa de campo N-IO**

# 10.1 Para un uso seguro

**Para preservar la seguridad de los operadores, de los dispositivos y de todo el sistema, todos los dispositivos deberán instalarse de acuerdo con las normas de seguridad descritas en este manual de instrucciones.**

**No obstante, si los aparatos no están instalados de acuerdo a estas normas de seguridad, YOKOGAWA no garantiza la seguridad del sistema. Lea atentamente las indicaciones siguientes.**

## ■ Modelo y elemento

Sistema instrumentado de seguridad modelo ProSafe-RS/ProSafe-RS Lite

INFORMACION ADICIONAL

Para obtener más información sobre los dispositivos ProSafe-RS/ProSafe-RS Lite, consulte:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Normas aplicables

Este documento se basa en las normas siguientes:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Marcas

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

El símbolo ‘X’ denota las condiciones específicas de uso. Consulte ■Condiciones específicas de uso.

## ■ Condiciones específica de uso

- El equipo solamente deberá utilizarse en un área con un grado de contaminación no superior a 2, como se define en EN 60664-1.
- El equipo deberá instalarse en un recinto que proporcione un grado de protección no inferior a IP54 según la norma EN IEC 60079-0.
- En los terminales de suministro de alimentación del equipo deberá proporcionarse una protección contra transitorios que esté establecida a un nivel que no sobrepase 119 V CC.

INFORMACION ADICIONAL

Para obtener información sobre los rangos de temperatura ambiente de dispositivos que cumplen con la normativa, consulte:

Appendix 1. "Ambient temperature range of standard-compliant devices"

## Advertencias

ADVERTENCIA - CUANDO ESTÁ PRESENTE UNA ATMÓSFERA EXPLOSIVA

- NO ABRA LA CAJA MIENTRAS LA ALIMENTACIÓN DEL EQUIPO ESTÉ CONECTADA
- NO QUITE NI REEMPLACE EL FUSIBLE CUANDO LA ALIMENTACIÓN ESTÉ CONECTADA
- NO SEPARE LAS CONEXIONES CUANDO LA ALIMENTACIÓN ESTÉ CONECTADA

## Instalación

- El equipo deberá instalar y utilizarse dentro de su régimen de trabajo.
- Todos los equipos y el cableado en áreas peligrosas deberán instalarse de acuerdo con la norma EN 60079-14 y los códigos locales eléctricos relacionados con la instalación y también deberán cumplir con los requisitos adecuados para áreas no peligrosas.
- Habrá que seguir las instrucciones ofrecidas en GS (Especificaciones generales), TI (Información técnica de la guía de instalación) IM (Manual del usuario).
- La instalación deberá realizarla únicamente personal cualificado cuya formación haya incluido instrucciones sobre el tipo de prácticas de protección y montaje, normas y reglamentos pertinentes y los principios generales de clasificación de áreas.
- El grado de protección no inferior a IP54 deberá mantenerse en las entradas de los cables a la caja.
- Durante la instalación habrá que observar que las ranuras de ventilación del equipo no estén bloqueadas por partes de cables, accesorios de anclaje, etc.
- Los tornillos de terminales para conexiones de cableado en el sitio deberán apretarse con valores de torsión especificados.
- Al finalizar la instalación y antes de utilizar por primera vez el equipo, habrá que realizar la inspección inicial del mismo de acuerdo con EN 60079-17.
- Siga la orientación siguiente a fin de garantizar la seguridad y el rendimiento.
  - Compruebe que todas las ranuras vacías de la caja están convenientemente cubiertas con las tapas suministradas.
  - Compruebe que todos los cables están bien fijos en la caja.
- El cableado en el sitio para comunicación Ethernet y red Vnet/IP deberá estar de acuerdo con IEEE 802.3 a fin de que la sobretensión exceda 119 V.
- En caso de conectar placa base para barrera, la instalación deberá estar de acuerdo con su dibujo de control.
- Los modelos que se incluían en la Declaración de conformidad de la EU anterior con marcado ”nA” se pueden instalar en el sistema, si los mismos códigos de modelo y sufijo figuran en las tablas del Apéndice 1.

## Mantenimiento y reparación

- Las inspecciones y el mantenimiento de los equipos y las instalaciones deberá realizarlos únicamente personal cualificado y de acuerdo con la norma EN 60079-17.
- La reparación, la revisión, y la restauración deberá realizarlas únicamente personal cualificado y de acuerdo con la norma EN 60079-19.
- Las reparaciones del equipo deberá realizarlas únicamente personal formado, experimentado, cualificado, con conocimientos y /o supervisado por ingenieros de servicio autorizados por YOKOGAWA. De lo contrario, el tipo de protección puede ser invalidado.
- No deberán realizarse modificaciones en equipos que sean operados en áreas peligrosas.
- Utilice solo las siguientes baterías especificadas por YOKOGAWA para los módulos del procesador:
  S9185FA para SCP451 y SCP461
  S9450FE para S2CP471 y L1CP471
- Utilice solo los siguientes ventiladores especificados por YOKOGAWA para AIP602:
  A1159EM o A1213EM

# 10.2 Para un uso seguro—S2BN4D

**Para garantizar un rendimiento intrínseco de seguridad, debe observar lo siguiente:**

- **Utilice las placas de base para barrera (Modelo:S2BN4D) y las barreras de seguridad intrínseca en la combinación correcta.**
- **Instale los dispositivos de acuerdo con las instrucciones de las barreras de seguridad intrínseca.**

**Para la seguridad de los operadores, así como los dispositivos y todo el sistema, placas de base para las barreras se deben instalar de acuerdo con las reglas de seguridad descritas en este manual de instrucciones.**

**Sin embargo, si las placas de base para las barreras no se instalan de acuerdo con las normas de seguridad, YOKOGAWA no garantiza la seguridad del sistema. Lea cuidadosamente los puntos siguientes.**

## ■ Modelo y elemento

La placa base para barrera (Modelo: S2BN4D) del sistema instrumentado de seguridad ProSafe-RS

## ■ Normas aplicables

Este documento se basa en las normas siguientes:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Marcas

Baseefa15ATEX0240X


II 3 G Ex ec IIC T4 Gc

El símbolo ‘X’ denota las condiciones específicas de uso. Consulte ■Condiciones específicas de uso.

## ■ Condiciones específicas de uso

Todos los dispositivos deberán instalarse en la zona de riesgo de acuerdo con la marca que se muestra en cada dispositivo. Cuando el equipo conste de varios dispositivos, asegúrese de que el equipo se componga únicamente de los dispositivos que puedan utilizarse en el mismo entorno peligroso.

- El equipo deberá instalarse en un área con un grado de contaminación no superior a 2, como se define en EN 60664-1, en un recinto que proporcione un grado de protección de por lo menos IP54 y que cumpla los requisitos pertinentes de las normas EN IEC 60079-0 y EN IEC 60079-7.
- No deberá realizarse ninguna conexión ni desconexión al/del equipo a menos que la zona en la que esté instalado el equipo se conozca como no peligrosa, o el circuito al que esté conectado se haya desenergizado.
- Los módulos de entrada/salida instalados en la placa madre no forman parte de la certificación y deberán estar adecuadamente certificados por separado.
- Deberán tomarse medidas (ya sea parte de los módulos de entrada/salida certificados instalados en la placa madre o montados externamente) para proporcionar una protección contra transitorios en los terminales de suministro de alimentación que se fijará a un nivel que no exceda el 140% del valor pico de tensión nominal de 85 V.

INFORMACION ADICIONAL

Para obtener información sobre los rangos de temperatura ambiente de dispositivos que cumplen con la normativa, consulte:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Para más información sobre la protección contra transitorios, consulte:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Instalación

Las precauciones de instalación para S2BN4D son las mismas que para los dispositivos ProSafe-RS.

INFORMACION ADICIONAL

Para obtener información sobre la instalación, consulte:

“■ Instalación” en 10.1 “Para un uso seguro”.

## ■ Mantenimiento y reparación

Las precauciones de mantenimiento y reparación para S2BN4D son las mismas que para los dispositivos ProSafe-RS.

INFORMACION ADICIONAL

Para obtener información sobre el mantenimiento y la reparación, consulte:

“■ Mantenimiento y reparación” en 10.1 “Para un uso seguro”.

# 10.3 Para un uso seguro—S2BN5D

**Para garantizar un rendimiento intrínseco de seguridad, debe observar lo siguiente:**

- **Utilice las placas de base para barrera (Modelo:S2BN5D) y las barreras de seguridad intrínseca en la combinación correcta.**
- **Instale los dispositivos de acuerdo con las instrucciones de las barreras de seguridad intrínseca.**

**Para la seguridad de los operadores, así como los dispositivos y todo el sistema, placas de base para las barreras se deben instalar de acuerdo con las reglas de seguridad descritas en este manual de instrucciones.**

**Sin embargo, si las placas de base para las barreras no se instalan de acuerdo con las normas de seguridad, YOKOGAWA no garantiza la seguridad del sistema. Lea cuidadosamente los puntos siguientes.**

## ■ Modelo y elemento

La placa base para barrera (Modelo: S2BN5D) del sistema instrumentado de seguridad ProSafe-RS

## ■ Normas aplicables

Este documento se basa en las normas siguientes:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Marcas

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

El símbolo ‘X’ denota las condiciones específicas de uso. Consulte ■Condiciones específicas de uso.

## Condiciones específicas de uso

Todos los dispositivos deberán instalarse en la zona de riesgo de acuerdo con la marca que se muestra en cada dispositivo. Cuando el equipo conste de varios dispositivos, asegúrese de que el equipo se componga únicamente de los dispositivos que puedan utilizarse en el mismo entorno peligroso.

### Condiciones específicas de uso (seguridad intrínseca “i”)

Aunque no existen condiciones de uso específicas para las placas base de barrera, deberá comprobarse el certificado de las barreras de seguridad intrínseca que deben ser conectadas a las placas de base para la barrera.

### Condiciones específicas de uso (Ex “ec”)

- El equipo solo deberá utilizarse en un área de no más de grado de contaminación 2, tal como se define en la norma EN 60664-1.
- El equipo deberá instalarse en un recinto que proporcione un grado de protección no inferior a IP54 según las normas EN IEC 60079-7 y EN IEC 60079-0.
- En los terminales del sistema de alimentación deberá proporcionarse protección contra transitorios. La protección contra transitorios deberá establecerse a un nivel que no sobrepase el 140% del valor de tensión de pico nominal.

INFORMACION ADICIONAL

Para obtener información sobre los rangos de temperatura ambiente de dispositivos que cumplen con la normativa, consulte:

Appendix 1. "Ambient temperature range of standard-compliant devices"

Para más información sobre la protección contra transitorios, consulte:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Instalación

- La puesta en servicio y la instalación deberán realizarlas únicamente personal especialmente capacitado y cualificado.
- Dependiendo del nivel de protección, los circuitos de seguridad intrínseca de los dispositivos de identificación (identificación de color azul claro en el dispositivo) pueden estar ubicados en la zona de peligro. Es especialmente importante asegurarse de que los circuitos de seguridad intrínseca estén separados de forma segura de todos los que no sean de seguridad intrínseca.

  La instalación de los circuitos de seguridad intrínseca deberá llevarse a cabo de acuerdo con las especificaciones de montaje correspondientes.
- Deberán considerarse los valores máximos respectivos del dispositivo de campo y el dispositivo asociado por lo que respecta a la protección contra explosiones cuando se conecten dispositivos de campo de seguridad intrínseca con los circuitos de seguridad intrínseca de dispositivos de Sistema H (demostración de la seguridad intrínseca). Deberá observarse EN 60079-14 (cuando proceda). Si está disponible, también deberá observarse el dibujo de control de certificación de productos.
- Deberán observarse los certificados de examen de tipo CE o certificados/aprobaciones estándar. Es especialmente importante observar las “condiciones especiales”, si estas están incluidas en los certificados.

INFORMACION ADICIONAL Para obtener información sobre la instalación, consulte:

“■ Instalación” en 10.1 “Para un uso seguro”.

## ■ Mantenimiento y reparación

Las características de transferencia de los dispositivos permanecen estables durante largos períodos de tiempo. Esto elimina la necesidad de un ajuste regular. No se requiere mantenimiento.

INFORMACION ADICIONAL Para obtener información sobre el mantenimiento y la reparación, consulte:

“■ Mantenimiento y reparación” en 10.1 “Para un uso seguro”.

# 10.4 Para un uso seguro—Carcasa de campo N-IO

**Para preservar la seguridad de los operadores, de los dispositivos y de todo el sistema, todos los dispositivos de la carcasa de campo N-IO deberán instalarse de acuerdo con las normas de seguridad descritas en este manual de instrucciones.**

**No obstante, si los dispositivos de la carcasa de campo N-IO no están instalados de acuerdo a estas normas de seguridad, YOKOGAWA no garantiza la seguridad del sistema. Lea atentamente las indicaciones siguientes.**

## ■ Modelo y elemento

La carcasa de campo N-IO (modelo: S2ZN70D) y los dispositivos relacionados (modelo: S2ZN60D y S2CB60) del sistema instrumentado de seguridad ProSafe-RS

## ■ Normas aplicables

Este documento se basa en las normas siguientes:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Marcas

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

El símbolo ‘X’ denota las condiciones específicas de uso. Consulte ■Condiciones específicas de uso.

## ■ Especificaciones de instalación

- Temperatura ambiente
  - S2ZN70D: -40 grados C° a 55 grados C°
  - S2ZN60D: -40 grados C° a 55 grados C° (*1)
  - S2CB60: -40 grados C° a 55 grados C°

  *1: Esta temperatura ambiente se aplica a S2CB60 con S2ZN60D instalado.
- Fuente de alimentación
  - De 100 a 120 V de CA +10 %/-10 %
  - De 220 a 240 V de CA +10 %/-10 %

## ■ Condiciones específica de uso

- S2ZN60D debe instalarse en S2CB60.
- Para los requisitos de temperatura ambiente, consulte las instrucciones, puesto que no están etiquetadas en el equipo.
- Los dispositivos en la carcasa deben utilizarse en un entorno con un grado de contaminación no superior a 2, tal y como se define en EN 60664-1.

## Advertencias

NO ABRA LA CARCASA CUANDO HAYA UNA ATMÓSFERA EXPLOSIVA.

## Instalación

- El equipo deberá instalar y utilizarse dentro de su régimen de trabajo.
- Todos los equipos y el cableado en áreas peligrosas deberán instalarse de acuerdo con la norma EN 60079-14 y los códigos locales eléctricos relacionados con la instalación y también deberán cumplir con los requisitos adecuados para áreas no peligrosas.
- Habrá que seguir las instrucciones ofrecidas en GS (Especificaciones generales), TI (Información técnica de la guía de instalación) IM (Manual del usuario).
- La instalación deberá realizarla únicamente personal cualificado cuya formación haya incluido instrucciones sobre el tipo de prácticas de protección y montaje, normas y reglamentos pertinentes y los principios generales de clasificación de áreas.
- Los tornillos de terminales para conexiones de cableado en el sitio deberán apretarse con valores de torsión especificados.
- Al finalizar la instalación y antes de utilizar por primera vez el equipo, habrá que realizar la inspección inicial del mismo de acuerdo con EN 60079-17.
- Siga la orientación siguiente a fin de garantizar la seguridad y el rendimiento.
  - Compruebe que todas las ranuras vacías de la carcasa están convenientemente cubiertas con las tapas suministradas.
- Antes de utilizar el módulo de sellado y los prensaestopas de Roxtec, lea detenidamente y comprenda la información contenida en los Manuales del usuario.
- No retire la placa del prensaestopas ni la placa del módulo de sellado de la carcasa.
- No sumerja la carcasa en agua.
- Puede adquirir sellos para orificios con su número de pieza (B1036HZ, B1037HZ) y colocarlos en el producto, también puede adquirir un producto con sellos para orificios (/SEAL). En ambos casos, nuestra evaluación de la conformidad del producto con la Directiva ATEX es para S2ZN70D en su totalidad, incluyendo los sellos para orificios. Los sellos para orificios vienen con el certificado ATEX proporcionado por el fabricante cuando los adquiere con su número de pieza.

## Mantenimiento y reparación

- Las inspecciones y el mantenimiento de los equipos y las instalaciones deberá realizarlos únicamente personal cualificado y de acuerdo con la norma EN 60079-17.
- La reparación, la revisión, y la restauración deberá realizarlas únicamente personal cualificado y de acuerdo con la norma EN IEC 60079-19.
- Las reparaciones del equipo deberá realizarlas únicamente personal formado, experimentado, cualificado, con conocimientos y /o supervisado por ingenieros de servicio autorizados por YOKOGAWA. De lo contrario, el tipo de protección puede ser invalidado.
- No deberán realizarse modificaciones en equipos que sean operados en áreas peligrosas.

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# 11. Säkerhetsspecifikationer

**Följande punkter beskrivs i detta avsnitt.**

- **För säker användning**
- **För säker användning—S2BN4D**
- **För säker användning—S2BN5D**
- **För säker användning—N-IO-fältskåp**

# 11.1 För säker användning

**För operatörernas säkerhet liksom för enheternas och hela systemets säkerhet, måste alla enheter installeras i enlighet med de säkerhetsföreskrifter som beskrivs i denna instruktionsbok.**

**YOKOGAWA garanterar dock inte systemets säkerhet, om enheterna inte installeras enligt säkerhetsföreskrifterna. Läs följande punkter noggrant.**

## ■ Modell och punkt

Modell ProSafe-RS/ProSafe-RS Lite Säkerhetsinstrumenterat system

**SE ÄVEN** För ytterligare information om ProSafe-RS/ProSafe-RS Lite-enheter, se:

Appendix 2. "EU declaration of conformity and attestation of conformity"

Appendix 3. "UK declaration of conformity and attestation of conformity"

## ■ Gällande standarder

Detta dokument är baserat på följande standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 + A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markeringar

Ex II 3 G Ex ec IIC T4 Gc X

Ex II 3 G Ex ec nC IIC T4 Gc X

S2ZN4D, S2ZN5D

Ex II 3 G Ex ec IIC T4 Gc X

Symbolen ”X” betecknar speciella villkor för användning. Se ■Speciella villkor för användning.

## ■ Speciella villkor för användning

- Utrustningen får endast användas i ett område med högst föroreningsgrad 2, enligt definitionen i EN 60664-1.
- Utrustningen skall installeras i ett utrymme som ger en skyddsgrad på minst IP54 i enlighet med EN IEC 60079-0.
- Transientskydd fastställt på en nivå som inte överstiger 119 V DC skall finnas vid matarterminalen till utrustningen.

**SE ÄVEN** För information om intervall för omgivningstemperatur för standardkompatibla enheter, se:

Appendix 1. ”Ambient temperature range of standard-compliant devices”

## Varningar

VARNING – NÄR EN EXPLOSIV ATMOSFÄR FINNS

- ÖPPNA INTE SKÅPET MEDAN UTRUSTNINGEN ÄR STRÖMMATAD
- TA INTE BORT ELLER BYT EN SÄKRING NÄR DEN ÄR STRÖMMATAD
- KOPPLA INTE BORT ANSLUTNINGARNA NÄR DE ÄR STRÖMMATADE

## Installation

- Utrustningarna ska installeras och användas enligt deras klassificeringar.
- All utrustning och kabeldragning i farliga området ska installeras i enlighet med EN 60079-14 och relaterade lokala elektriska bestämmelser och installationen ska även följa tillämpliga krav för icke farliga områden.
- Instruktioner i GS (Allmänna specifikationer), TI (Teknisk information och installationsanvisningar) och/eller IM (Bruksanvisningarna) ska följas.
- Installationen får endast utföras av kvalificerad personal vars träning inkluderar instruktioner på den typ av skydd och installeringsförfarande, relevanta regler och bestämmelser och allmänna principer för områdesklassificering.
- En skyddsnivå på minst IP54 ska upprätthållas på kabelingångarna till skåpet.
- Under installation måste det kontrolleras att ventilationsöppningar på utrustningen inte blockeras av kablar, fästanordningar m.m.
- Terminalskruvarna för fältkabelanslutningar ska dras åt med angivna vridmomentvärden.
- Efter installation och före första användning, utför installationskontroll av utrustningen och inställning i enlighet med EN 60079-17.
- Följ följande anvisningar för att säkerställa säkerhet och prestanda.
  - Se till att alla tomma platser i skåpet är ordentligt täckta med lock.
  - Se till att alla kablar sitter fast ordentligt i skåpet.
- Fältkabel för Ethernet-kommunication och Vnet/IP-nätverk måste vara i enlighet med IEEE 802.3 för att undvika överspänning som överstiger 119V.
- Ifall en Basplatta för barriär ska anslutas, måste installationen vara i enlighet med dess kontrollritning.
- De modeller som den förra EU-försäkran om överensstämmelse med märkningen ”nA” omfattade kan installeras i systemet om samma modell och suffixkoder återfinns i tabellerna i Bilaga 1.

## Underhåll och reparationer

- Inspektioner och underhåll av utrustningen och installationer får endast utföras av kvalificerad personal och i enlighet med EN 60079-17.
- Reparation, översyn, reklamation av utrustningen får endast utföras av kvalificerad personal och i enlighet med EN 60079-19.
- Reparationer av utrustningen får endast utföras av tränade, erfarna, skickliga, kunniga och/eller övervakad personal eller av servicetekniker som auktoriserats av YOKOGAWA. Annars kan typen av skydd ogiltigförklaras.
- Modifikationer får inte göras på utrustning som ska användas på farliga områden.
- Använd endast följande batterier specificerade av YOKOGAWA för processormoduler:
  S9185FA till SCP451 och SCP461
  S9450FE till S2CP471 och L1CP471
- Använd endast följande fläktar specificerade av YOKOGAWA till AIP602:
  A1159EM eller A1213EM

# 11.2 För säker användning—S2BN4D

**För att garantera prestanda gällande egensäkerhet, måste du iaktta följande:**

- **Använd basplattorna för barriär (Model:S2BN4D) och egensäkra barriärer i rätt kombination.**
- **Installera enheterna i enlighet med instruktionerna för de egensäkra barriärerna.**

**För operatörernas säkerhet liksom för enheternas och hela systemets säkerhet, måste basplattorna för barriär installeras i enlighet med de säkerhetsföreskrifter som beskrivs i denna instruktionsbok.**

**Om basplattorna för barriär inte skulle installeras i enlighet med säkerhetsföreskrifterna, garanterar YOKOGAWA inte systemets säkerhet. Läs följande punkter noggrant.**

## ■ Modell och punkt

Basplattan för barriär (Model:S2BN4D) för ProSafe-RS säkerhetsinstrumenterade system

## ■ Gällande standarder

Detta dokument är baserat på följande standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

## ■ Markeringar

Baseefa15ATEX0240X

 II 3 G Ex ec IIC T4 Gc

Symbolen ”X” betecknar speciella villkor för användning. Se ■Speciella villkor för användning.

## ■ Speciella villkor för användning

Alla enheter måste installeras i det farliga området i enlighet med märkningen som finns på varje enhet. När utrustningen består av flera enheter, se till att utrustningen består endast av enheter som kan användas i samma farliga område.

- Utrustningen måste installeras i ett område med högst föroreningsgrad 2 enligt definitionen i EN 60664-1, och i ett utrymme som ger en skyddsgrad på minst IP54 och uppfyller gällande kraven i EN IEC 60079-0 och EN IEC 60079-7.
- Inga anslutningar till utrustningen får kopplas in eller kopplas från såvida inte antingen området där utrustningen installeras är känt som ofarligt eller kretsen till vilken den är ansluten är strömlös.
- I/O-moduler monterade på bakplanet är inte en del av certifieringen och måste vara separat korrekt certifierade.
- Åtgärder skall vidtas (vare sig det gäller del av certifierade I/O-moduler monterade på bakplanet eller externt monterade) för att ge ett transientskydd på matarterminalerna som skall fastställas på en nivå som inte överstiger 140 % av värdet på högsta märkspänningen 85 V.

**SE ÄVEN** För information om intervall för omgivningstemperatur för standardkompatibla enheter, se:

Appendix 1. "Ambient temperature range of standard-compliant devices"

För mer information om transientskyddet, se:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

Försiktighetsåtgärder vid installation av S2BN4D är samma som de för ProSafe-RS-enheter.

**SE ÄVEN** För information om installation, se:

”■ Installation” i 11.1 ”För säker användning”

## ■ Underhåll och reparationer

Försiktighetsåtgärder vid underhåll och reparation av S2BN4D är samma som de för ProSafe-RS-enheter.

**SE ÄVEN** För information om underhåll och reparation, se:

”■ Underhåll och reparationer” i 11.1 ”För säker användning”

# 11.3 För säker användning—S2BN5D

**För att garantera prestanda gällande egensäkerhet, måste du iaktta följande:**

- **Använd basplattorna för barriär (Model:S2BN5D) och egensäkra barriärer i rätt kombination.**
- **Installera enheterna i enlighet med instruktionerna för de egensäkra barriärerna.**

**För operatörernas säkerhet liksom för enheternas och hela systemets säkerhet, måste basplattorna för barriär installeras i enlighet med de säkerhetsföreskrifter som beskrivs i denna instruktionsbok.**

**Om basplattorna för barriär inte skulle installeras i enlighet med säkerhetsföreskrifterna, garanterar YOKOGAWA inte systemets säkerhet. Läs följande punkter noggrant.**

## ■ Modell och punkt

Basplattan för barriär (Model:S2BN5D) för ProSafe-RS säkerhetsinstrumenterade system

## ■ Gällande standarder

Detta dokument är baserat på följande standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015 +A1:2018

EN 60079-11:2012

## ■ Markeringar

FIDI 21 ATEX 0071X

 II 3 (1) G Ex ec [ia Ga] IIC T4 Gc

 II (1) D [Ex ia Da] IIIC

 I (M1) [Ex ia Ma] I

Symbolen ”X” betecknar speciella villkor för användning. Se ■Speciella villkor för användning.

## Speciella villkor för användning

Alla enheter måste installeras i det farliga området i enlighet med märkningen som finns på varje enhet. När utrustningen består av flera enheter, se till att utrustningen består endast av enheter som kan användas i samma farliga område.

### Särskilda villkor för användning (egensäkerhet ”i”)

Även om det inte finns några särskilda villkor för användning gällande basplattorna för barriär, rekommenderar vi att du läser certifikatet för de egensäkra barriärerna som ska anslutas till basplattorna.

### Särskilda villkor för användning (Ex ”ec”)

- Utrustningen får endast användas i ett område med högst föroreningsgrad 2, enligt definitionen i EN 60664-1.
- Utrustningen skall installeras i ett utrymme som ger en skyddsgrad på minst IP54 i enlighet med EN IEC 60079-7 och EN IEC 60079-0.
- Transientskydd skall finnas vid terminalerna på systemets strömförsörjning. Transientskydd skall fastställas på nivå som inte överstiger 140 % av värdet på högsta märkspänning.

**SE ÄVEN** För information om intervall för omgivningstemperatur för standardkompatibla enheter, se:

Appendix 1. "Ambient temperature range of standard-compliant devices"

För mer information om transientskyddet, se:

ProSafe-RS/ProSafe RS Lite Explosion Protection (TI 32S01J30-01E)

## ■ Installation

- Igångsättning och installation får endast utföras av specialutbildad och behörig personal.
- Beroende på skyddsnivån, kan enheter med egensäkra kretsar (ljusblå identifiering på enheten) placeras i riskområde. Det är särskilt viktigt att se till de egensäkra kretsarna är säkert separerade från alla icke-egensäkra kretsar.

  Installationen av egensäkra kretsar ska utföras i enlighet med gällande installationsföreskrifter.
- Respektive toppvärden för fältenheten och den tillhörande enheten med avseende på explosionsskydd ska övervägas när du ansluter egensäkra fältenheter med de egensäkra kretsarna i H-systemenheter (demonstration av egensäkerhet). EN 60079-14 måste följas (i förekommande fall). Produktcertifieringens kontrollritning måste också följas om sådan finnes.
- EG-typ provning certifikaten eller standardcertifikat/godkännanden måste följas. Det är särskilt viktigt att iaktta “särskilda villkor” om sådana är inkluderade i certifikaten.

**SE ÄVEN** För information om installation, se:

”■ Installation” i 11.1 ”För säker användning”

## ■ Underhåll och reparationer

Överföring Egenskaperna hos enheterna förblir stabila över långa tidsperioder. Detta eliminerar behovet av regelbunden justering. Underhåll krävs inte.

**SE ÄVEN** För information om underhåll och reparation, se:

”■ Underhåll och reparationer” i 11.1 ”För säker användning”

# 11.4 För säker användning—N-IO-fältskåp

**För operatörernas säkerhet liksom för enheternas och hela systemets säkerhet, måste alla enheter för N-IO-fältskåpet installeras i enlighet med de säkerhetsföreskrifter som beskrivs i denna instruktionsbok.**

**YOKOGAWA garanterar dock inte systemets säkerhet, om enheterna för N-IO-fältskåpet inte installeras enligt säkerhetsföreskrifterna. Läs följande punkter noggrant.**

## ■ Modell och punkt

N-IO-fältskåp (modell: S2ZN70D) och relaterade enheter (modell: S2ZN60D och S2CB60) för ProSafe-RS säkerhetsinstrumenterade system

## ■ Gällande standarder

Detta dokument är baserat på följande standarder:

EN IEC 60079-0:2018

EN IEC 60079-7:2015+A1:2018

EN 60079-15:2010

EN IEC 60079-15:2019

## ■ Markeringar

S2ZN70D, S2ZN60D

 II 3 G Ex ec nC IIC T4 Gc X

S2CB60

 II 3 G Ex ec IIC T4 Gc X

Symbolen ”X” betecknar speciella villkor för användning. Se ■Speciella villkor för användning.

## ■ Specifikationer installering

- Omgivande temperatur
  S2ZN70D: -40 grader C° till 55 grader C°
  S2ZN60D: -40 grader C° till 55 grader C° (*1)
  S2CB60: -40 grader C° till 55 grader C°

  *1: Denna omgivningstemperatur gäller S2CB60 med monterad S2ZN60D.

- Strömförsörjning
  100 till 120 V växelström ±10 %
  220 till 240 V växelström ±10 %

## ■ Speciella villkor för användning

- S2ZN60D måste installeras i S2CB60.
- För krav på omgivningstemperatur, se de separata anvisningarna, eftersom de inte är märkta på utrustningen.
- Enheterna i skåpet måste finnas i en miljö som inte överskrider föroreningsgrad 2 enligt definitionen i EN 60664-1.

## Varningar

ÖPPNA INTE SKÅPET OM ATMOSFÄREN ÄR EXPLOSIV.

## Installation

- Utrustningarna ska installeras och användas enligt deras klassificeringar.
- All utrustning och kabeldragning i farliga områden ska installeras i enlighet med EN 60079-14 och relaterade lokala elektriska bestämmelser och installationen ska även följa tillämpliga krav för icke farliga områden.
- Instruktioner i GS (Allmänna specifikationer), TI (Teknisk information och installationsanvisningar) och/eller IM (Bruksanvisningarna) ska följas.
- Installationen får endast utföras av kvalificerad personal vars träning inkluderar instruktioner på den typ av skydd och installeringsförfarande, relevanta regler och bestämmelser och allmänna principer för områdesklassificering.
- Terminalskruvarna för fältkabelanslutningar ska dras åt med angivna vridmomentvärden.
- Efter installation och före första användning, utför installationskontroll av utrustningen och inställning i enlighet med EN 60079-17.
- Följ följande anvisningar för att säkerställa säkerhet och prestanda.
  - Se till att alla tomma platser i skåpet är ordentligt täckta med lock.
- Läs noggrant igenom och förstå informationen i instruktionsboken innan du använder Roxtecs tätningsmodul och packningsringar.
- Ta inte bort packningsringens eller tätningsmodulens platta från skåpen.
- Sänk inte ned skåpet i vatten.
- Du kan köpa håltätningar med artikelnummer (B1036HZ, B1037HZ) och montera dem på produkten, du kan också välja en produkt som levereras med håltätningar (/SEAL). I båda fallen gäller vår bedömning av produktöverensstämmelse med ATEX-direktivet generellt för S2ZN70D, inklusive håltätningarna. Håltätningarna levereras med ATEX-certifiering som tillhandahålls av tillverkaren när du köper dem under deras artikelnummer.

## Underhåll och reparationer

- Inspektioner och underhåll av utrustningen och installationer får endast utföras av kvalificerad personal och i enlighet med EN 60079-17.
- Reparation, översyn, reklamation av utrustningen får endast utföras av kvalificerad personal och i enlighet med EN IEC 60079-19.
- Reparationer av utrustningen får endast utföras av tränade, erfarna, skickliga, kunniga och/eller övervakad personal eller av servicetekniker som auktoriserats av YOKOGAWA. Annars kan typen av skydd ogiltigförklaras.
- Modifikationer får inte göras på utrustning som ska användas på farliga områden.

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# Appendix 1. Ambient temperature range of standard-compliant devices

## FIO

The following table shows model and ambient temperature range of standard-compliant devices.

- Suffix codes relevant to each equipment are specified in the spaces of ☐.
- Option codes are omitted from the models shown below.

**Table 1 FIO (1/4)**

| Classifications | Model | Ambient temperature (*1) |
|---|---|---|
| Safety control units for Vnet/IP | SSC50S-S2E4☐ | −20 to 40 °C (*2) |
| | SSC50S-F2E4☐ | −20 to 70 °C (*3) |
| | SSC50D-S2E4☐ | −20 to 40 °C (*2) |
| | SSC50D-F2E4☐ | −20 to 70 °C (*3) |
| | SSC57S-S2E4☐ | −20 to 40 °C (*2) |
| | SSC57S-F2E4☐ | −20 to 70 °C (*3) |
| | SSC57D-S2E4☐ | −20 to 40 °C (*2) |
| | SSC57D-F2E4☐ | −20 to 70 °C (*3) |
| | SSC60S-S2E4☐ | −20 to 40 °C (*2) |
| | SSC60S-F2E4☐ | −20 to 70 °C (*3) |
| | SSC60D-S2E4☐ | −20 to 40 °C (*2) |
| | SSC60D-F2E4☐ | −20 to 70 °C (*3) |
| Safety node units | SNB10D-☐4E | −20 to 70 °C (*3) |
| Unit for optical bus repeater module | SNT10D-24E | −20 to 70 °C |
| Processor module | SCP451-E3 | −20 to 70 °C |
| | SCP461-E1 | −20 to 70 °C |
| | S2CP471-11 | −20 to 70 °C |
| Power supply module | SPW484-E3 | −20 to 70 °C |
| Bus interface module | SSB401-E3 | −20 to 70 °C |
| | SEC401-E1 | −20 to 70 °C |
| | SEC402-E1 | −20 to 70 °C |
| | SNT401-E☐ | −20 to 70 °C |
| | SNT501-E☐ | −20 to 70 °C |
| | SNT411-E☐ | −20 to 70 °C |
| | SNT511-E☐ | −20 to 70 °C |
| | SNT421-E3 | −20 to 70 °C |
| | SNT521-E3 | −20 to 70 °C |

Continues on the next page

**Table 1 FIO (2/4)**

| Classifications | Model | Ambient temperature (*1) |
|---|---|---|
| I/O module | SAI143-□E□ | −20 to 70 °C |
| | SAI143-□F□ | |
| | SAV144-SE3 | −20 to 70 °C |
| | SAT145-SF3 | −20 to 70 °C |
| | SAR145-SF3 | −20 to 70 °C |
| | SAI533-HE3 | −20 to 70 °C |
| | SAI533-HF3 | |
| | SDV144-SE□ | −20 to 70 °C |
| | SDV144-SF□ | |
| | SDV531-□E□ | −20 to 70 °C |
| | SDV531-□F□ | |
| | SDV541-SE□ | −20 to 70 °C |
| | SDV541-SF□ | |
| | SDV521-SF□ | −20 to 70 °C |
| | SDV53A-SF3 | −20 to 70 °C |
| | ALR111-SE1 | 0 to 60 °C |
| | ALR121-SE1 | 0 to 60 °C |
| | ALR121-SE3 | −20 to 70 °C |
| | ALE111-SE1 | 0 to 60 °C |
| | ALE111-SE3 | −20 to 70 °C |
| | S2LP131-S11 | −20 to 70 °C |
| Terminal block | STA4S-□0 | −20 to 70 °C |
| | STA4D-□0 | −20 to 70 °C |
| | STB4S-□0 | −20 to 70 °C |
| | STB4D-□0 | −20 to 70 °C |
| | SCCC01 | −20 to 70 °C |
| | SCCC02 | −20 to 70 °C |
| | SDCV01 | −20 to 70 °C |
| Terminal board | SEA4D-□F | −20 to 70 °C |
| | SBA4D-0F | −20 to 70 °C |
| | S1BB4D-0F | −20 to 70 °C |
| | SBT4D-0F | −20 to 70 °C |
| | SBR4D-0F | −20 to 70 °C |
| | SED2D-□F | −20 to 70 °C |
| | SED3D-AF | −20 to 70 °C |
| | SED4D-□F | −20 to 70 °C |
| | SBD2D-0F | −20 to 70 °C |
| | SBD3D-□F | −20 to 70 °C |
| | SBD4D-0F | −20 to 70 °C |
| Wiring diagnosis elements | SCB100-S0 | −40 to 70 °C |
| | SCB110-S0 | −40 to 70 °C |
| Bus cable | YCB301-C□□□ | −20 to 70 °C |

Continues on the next page

**Table 1 FIO (3/4)**

| Classifications | Model | Ambient temperature (*1) |
|---|---|---|
| Signal cable | KS1-□□ | −20 to 70 °C |
| | AKB331-M□□□ | −20 to 70 °C |
| | AKB651-M□□□ | −20 to 70 °C |
| | AKB611-M□□□ | −20 to 70 °C |
| | AKB131-M□□□ | 0 to 60 °C |
| | AKB132-M□□□ | 0 to 60 °C |
| | AKB135-M□□□ | 0 to 60 °C |
| | AKB136-M□□□ | 0 to 60 °C |
| | AKB161-M□□□ | 0 to 60 °C |
| | AKB162-M□□□ | 0 to 60 °C |
| Distribution unit | AEP7D-4F | −20 to 70 °C |
| | AEPV7D-41F | −20 to 70 °C |
| FAN | AIP602 | −20 to 70 °C |
| Safety control units for Vnet/IP | L1SC70S-SA14110 | −20 to 40 °C (*2) |
| | L1SC70S-FA14110 | −20 to 70 °C (*3) |
| | L1SC70D-SA14110 | −20 to 40 °C (*2) |
| | L1SC70D-FA14110 | −20 to 70 °C (*3) |
| Safety node units | L1NB10D-44E | −20 to 70 °C (*3) |
| Unit for optical bus repeater module | L1NT10D-24E | −20 to 70 °C |
| Processor module | L1CP471-11 | −20 to 70 °C |
| Power supply module | L1PW484-E3 | −20 to 70 °C |
| Bus interface module | L1SB401-E3 | −20 to 70 °C |
| | L1EC401-E1 | −20 to 70 °C |
| | L1EC402-E1 | −20 to 70 °C |
| | L1NT401-EF | −20 to 70 °C |
| | L1NT501-EF | −20 to 70 °C |
| | L1NT411-EF | −20 to 70 °C |
| | L1NT511-EF | −20 to 70 °C |
| I/O module | L1AI143-□E□ | −20 to 70 °C |
| | L1AI143-□F□ | |
| | L1AV144-SE3 | −20 to 70 °C |
| | L1AV144-SF3 | |
| | L1AT145-SF3 | −20 to 70 °C |
| | L1AR145-SF3 | |
| | L1AI533-HE3 | −20 to 70 °C |
| | L1AI533-HF3 | |
| | L1DV144-SE□ | −20 to 70 °C |
| | L1DV144-SF□ | |
| | L1DV531-LE□ | −20 to 70 °C |
| | L1DV531-LF□ | |
| | L1DV541-SE□ | −20 to 70 °C |
| | L1DV541-SF□ | |

Continues on the next page

**Table 1 FIO (4/4)**

| Classifications | Model | Ambient temperature (*1) |
|---|---|---|
| I/O module | L1DV521-SF☐ | −20 to 70 °C |
| | L1DV53A-SF3 | −20 to 70 °C |
| Terminal block | L1TA4S-☐0 | −20 to 70 °C |
| | L1TA4D-☐0 | −20 to 70 °C |
| | L1TB4S-☐0 | −20 to 70 °C |
| | L1TB4D-☐0 | −20 to 70 °C |
| | L1CCC01 | −20 to 70 °C |
| | L1CCC02 | −20 to 70 °C |
| | L1DCV01 | −20 to 70 °C |

*1: The ambient temperature ranges are specified for the temperature around Field control unit, Base plate or Terminal board, and not for the temperature around each model.
*2: 0 to 40 °C when ALR111-SE1, ALR121-SE1 or ALE111-SE1 is installed.
*3: 0 to 60 °C when ALR111-SE1, ALR121-SE1 or ALE111-SE1 is installed.

**SEE ALSO** For details of the model and suffix codes of the devices which conform to the standards, also see the following General Specifications (GS):

ProSafe-RS/ProSafe-RS Lite Standards Compliant Models (GS 32P01B60-01EN)

## N-IO

The following table shows ambient temperature range of standard-compliant devices.

- Suffix codes relevant to each equipment are specified in the spaces of ☐.
- Option codes are omitted from the models shown below.

**Table 2 N-IO (1/2)**

| Classifications | Model | Ambient temperature (*1) |
|---|---|---|
| Safety control units for Vnet/IP | S2SC70S-S414110 | −20 to 40 °C (*2) |
| | S2SC70S-F414110 | −20 to 70 °C (*3) |
| | S2SC70D-S414110 | −20 to 40 °C (*2) |
| | S2SC70D-F414110 | −20 to 70 °C (*3) |
| | S2SC70S-SA14110 | −20 to 40 °C (*2) |
| | S2SC70S-FA14110 | −20 to 70 °C (*3) |
| | S2SC70D-SA14110 | −20 to 40 °C (*2) |
| | S2SC70D-FA14110 | −20 to 70 °C (*3) |
| Safety node units | S2NN30D-440☐00013 | −40 to 70 °C |
| | S2NN30D-440☐00113 | −40 to 70 °C (altitude = ~2000m)<br>−40 to 60 °C (altitude = 2000~3000m) |
| | S2NN30D-440☐00213 | |
| | S2NN30D-440☐01013 | |
| | S2NN30D-440☐01113 | |
| | S2NN30D-440☐01213 | |
| | S2NN30D-440☐02013 | |
| | S2NN30D-440☐02113 | |
| | S2NN30D-440☐02213 | |
| | S2BN1D-☐0130 | −40 to 70 °C (*4) |
| | S2BN1D-☐1130 | |
| | S2BN1D-☐2130 | |
| | S2BN1D-☐9130 | −40 to 70 °C (*4) (*5) |
| | S2BN4D-101☐0 | −20 to 60 °C |
| | S2BN5D-121☐0 | −20 to 70 °C (*6) |
| Power supply module | S2PW504-S0130 | −40 to 70 °C |
| Bus interface module | S2EN402-S0011 | −20 to 70 °C |
| | S2EN404-S0011 | −20 to 70 °C |
| | S2EN501-S00130 | −40 to 70 °C |
| | S2EN501-S01130 | −40 to 70 °C (altitude = ~2000m)<br>−40 to 60 °C (altitude = 2000~3000m) |
| | S2EN501-S02130 | |
| | S2EN501-S10130 | |
| | S2EN501-S11130 | |
| | S2EN501-S12130 | |
| | S2EN501-S20130 | |
| | S2EN501-S21130 | |
| | S2EN501-S22130 | |

Continues on the next page

**Table 2 N-IO (2/2)**

| Classifications | Model | Ambient temperature (*1) |
|---|---|---|
| I/O module | S2MMM843-SS1130 | −40 to 70 °C (*4) (*7) |
| | S2MDV843-0S1130 | −40 to 70 °C (*4) (*7) |
| | S2DCV02-0 | −40 to 70 °C (*5) |
| Terminal board | A2BM4-130 | −40 to 70 °C (*5) |
| Power cable | S2KPB10-C□□□ | −40 to 70 °C (*5) |
| Bus cable | S2KLF10-1□□2 | −40 to 70 °C (*5) |

*1: The ambient temperature ranges are specified for the temperature around Field Control Unit, Base Plate or Terminal Board, and not for the temperature around each device.
*2: 0 to 40 °C when ALR111-SE1, ALR121-SE1 or ALE111-SE1 is installed.
*3: 0 to 60 °C when ALR111-SE1, ALR121-SE1 or ALE111-SE1 is installed.
*4: When utilizing Digital output function, the total load current of all channels is limited as shown below according to the derating specifications due to the ambient temperature of modules.
-40 to 40 °C: Max.10.56 A
40 to 50 °C: Max.9.71 A
50 to 60 °C: Max.8.85 A
60 to 70 °C: Max.8 A
*5: The minimum temperature is limited to -20 °C for using AKB331 or AKB651 together.
*6: The maximum temperature is limited to 60 °C depending on the temperature range of barrier modules implemented on this unit.
*7: If it is mounted on S2BN1D-□9130, the minimum temperature is limited to -20 °C for using AKB331 or AKB651 together.

**SEE ALSO** For details of the model and suffix codes of the products which conform to the standards, also see the following General Specifications (GS):

ProSafe-RS/ProSafe-RS Lite Standards Compliant Models (GS 32P01B60-01EN)

# Appendix 2. EU declaration of conformity and attestation of conformity

**You can refer to the following pages to confirm the EU declaration of conformity and the attestation of conformity.**

**The common documents with larger ## in the document number AEN168-A## are newer editions. As for declarations referring to a common document of an old edition, note that appropriate information is provided also in a newer edition.**

**For the latest information on the directives other than the ATEX directive, refer to the EU declaration of conformity at the following URL:**

**https://myportal.yokogawa.com/s/certificates**

YOKOGAWA

Doc. No: AEN305-C11-1

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SSC50D** | **Duplexed Safety Control Unit** |
| **SSC50S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06D20-31E** (Ed.10)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2006**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



DocuSign Envelope ID: 47254692-5AAD-44BA-A1E9-E60454815181



## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **SSC50D** / **SSC50S** – b c d e f / x

(Distinctive combinations of suffix and option codes as indicated per table)

| EU Directive | Standards | -Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment -- Radio-frequency disturbance characteristics -- Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards -- immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment -- Radio-frequency disturbance characteristics -- Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards -- immunity for industrial environment | e = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use -- Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use -- Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use -- Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **1** or **2**. |
| **2014/34/EU** *3 (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n" | e = **4**. and d = **E**. |
| | The marking of the equipment or protective system *4:<br>Ex **II 3 G Ex ec nC IIC T4 Gc X** | |
| **2011/65/EU** *5 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | f = **3** or **4**. |



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| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **4**. |

***1:** *Applicable to Analog Input Module (Model: SAI143, SAV144), TC/mV Input Module (SAT145) and RTD Input Module (SAR145) only.*
***2:** *Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
***3:** *ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***4:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***5:** *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*



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## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN168-C10** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|---|---|
| | | | SSC50D | SSC50S | EMC | LVD | ATEX *2 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP451 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | Fan Unit | ✔ | ✔ | C | NR | A | C |

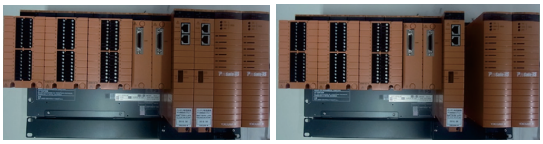
***1**: See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN168-A11**.

**Table 3:** Other accessories
Refer to **AEN168-A11**

## Appendix 3

External View of SSC50D and SSC50S



SSC50D SSC50S

Image of Nameplate
(Typical example; details may differ)

No explosion protection type


Explosion protection type


-/-





YOKOGAWA ◆ Doc. No: AEN307-C11-1

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SSC57D** | **Duplexed Safety Control Unit** |
| **SSC57S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06D25-31E** (Ed.7)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2013**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands







## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **SSC57D** / **SSC57S** – b c d e f / x

(Distinctive combinations of suffix and option codes as indicated per table)

| EU Directive | Standards | -Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | e = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use -- Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **1** or **2**. |
| **2014/34/EU** *3 (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n" | e = **4**. and d = **E**. |
| | The marking of the equipment or protective system *4:<br>**II 3 G Ex ec nC IIC T4 Gc X** | |
| **2011/65/EU** *5 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | f = **3** or **4**. |







| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **4**. |

***1:** *Applicable to Analog Input Module (Model: SAI143, SAV144), TC/mV Input Module (SAT145) and RTD Input Module (SAR145) only.*
***2:** *Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
***3:** *ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P04D20-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***4:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***5:** *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P04D20-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN168-C10** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|---|---|
| | | | SSC57D | SSC57S | EMC | LVD | ATEX *2 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP451 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | Fan Unit | ✔ | ✔ | C | NR | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN168-A11**.

**Table 3:** Other accessories
Refer to **AEN168-A11**.

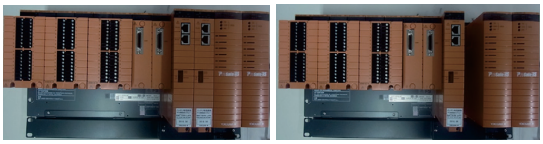






## Appendix 3

External View of SSC57D and SSC57S



SSC57D SSC57S

Image of Nameplate
(Typical example; details may differ)

No explosion protection type


Explosion protection type


-/-





YOKOGAWA ◆

Doc. No: AEN309-C12-1

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SSC60D** | **Duplexed Safety Control Unit** |
| **SSC60S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06D10-31E** (Ed.11)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2009**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands







## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **SSC60D** / **SSC60S** – b c d e f / x

(Distinctive combinations of suffix and option codes as indicated per table)

| EU Directive | Standards | -Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | e = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use -- Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **1** or **2**. |
| **2014/34/EU** *3 (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n"<br>The marking of the equipment or protective system *4:<br>**Ex II 3 G Ex ec nC IIC T4 Gc X** | e = **4**. and d = **E**. |
| **2011/65/EU** *5 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |

| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **4**. |

***1:** Applicable to Analog Input Module (Model: SAI143, SAV144) only.*
***2:** Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
***3:** ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***4:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***5:** Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*



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## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the products.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN168-C10** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|---|---|
| | | | SSC60D | SSC60S | EMC | LVD | ATEX *3 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP461 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| S2CP471 *2 | as a spare of SCP461 | | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | FAN Unit | ✔ | ✔ | C | NR | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: This module is not pre-installed in the SSC60D and SSC60S. However, it is delivered as a spare of SCP461 and to be implemented.*
***3**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN168-A11**.

**Table 3:** Other accessories
Refer to **AEN168-A11**.



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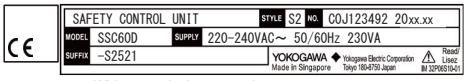
## Appendix 3

External View of SSC60D and SSC60S

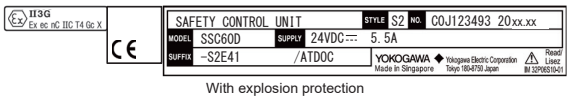

SSC60D


SSC60S

Image of Nameplate
(Typical example; details may differ)



With no explosion protection



With explosion protection

-/-



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YOKOGAWA ◆ Doc. No: AEN311-C11

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SNB10D** | **Safety Node Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06K10-31E** (Ed.5)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2005**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands

# Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **SNB10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table).

| EU Directive | Standards | -Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | c = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **1** or **2**. |
| **2014/34/EU** *3 (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n" | c = **4**.<br>and<br>d = **E**. |
| | The marking of the equipment or protective system *4:<br>**Ⓔx II 3 G Ex ec nC IIC T4 Gc X** | |
| **2011/65/EU** *5 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |



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| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **4**. |

*__1__: *Applicable to Analog Input Module (Model: SAI143, SAV144) only.*
*__2__: *Applicable to Optical ESB Bus Repeater Module (Model: SNT401, SNT411, SNT421, SNT501, SNT511, SNT521) only.*
*__3__: *ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
*__4__: *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
*__5__: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*



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# Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN168-C10** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LVD | ATEX *2 | RoHS |
| SPW481 | c = **1** | Power Supply Module | C | C | NS | C |
| SPW482 | c = **2** | | C | C | NS | C |
| SPW484 | c = **4** | | C | NR | A | C |
| SSB401 | always installed | ESB Bus Interface Module | C | NR | A | C |

*__1__: *See Appendix 1 for the position of suffix code.*
*__2__: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN168-A11**.

**Table 3:** Other accessories
Refer to **AEN168-A11**.



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# Appendix 3

External View of SNB10D

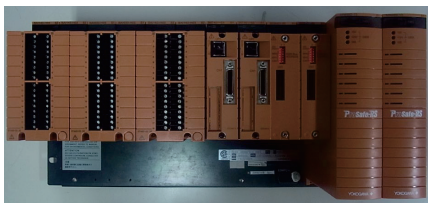
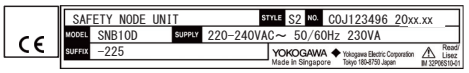
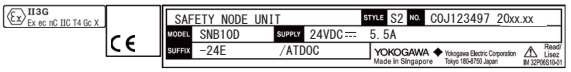


Image of Nameplate
(Typical example; details may differ)

With no explosion protection




With explosion protection

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YOKOGAWA

Doc. No: AEN312-C09

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| Model code | Model name |
|---|---|
| **SNT10D** | **Unit for Optical Bus Repeater Module** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06K11-31E** (Ed.6)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2006**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



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## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **SNT10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table).

| EU Directive | Standards | -Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | c = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **1** or **2**. |
| **2014/34/EU** *2 (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e" | c = **4**. and d = **E**. |
| | The marking of the equipment or protective system *3:<br>Ex **II 3 G Ex ec IIC T4 Gc X** | |
| **2011/65/EU** *4 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |



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| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **4**. |

***1:** *Applicable to Optical ESB Bus Repeater Module (Model: SNT401, SNT411, SNT421, SNT501, SNT511, SNT521) only.*
***2:** *ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***3:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***4**: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*



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## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN168-C10** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LVD | ATEX *2 | RoHS |
| SPW481 | c = **1** | Power Supply Module | C | C | NS | C |
| SPW482 | c = **2** | | C | C | NS | C |
| SPW484 | c = **4** | | C | NR | A | C |

***1**: *See Appendix 1 for the position of suffix code.*
***2**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN168-A11**.

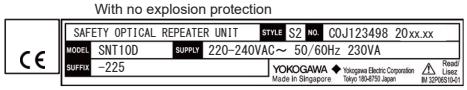
**Table 3:** Other accessories
Refer to **AEN168-A11**.

## Appendix 3

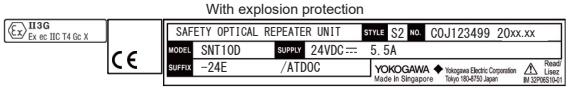
External View of SNT10D

Image of Nameplate
(Typical example; details may differ)

With no explosion protection




With explosion protection

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YOKOGAWA ◆ Doc. No: AEN361-C12-1

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **S2SC70D** | **Duplexed Safety Control Unit** |
| **S2SC70S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06D10-01EN** (Ed.11)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2015**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands







## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **S2SC70D** **S2SC70S** – b c d e f g h / x
(Distinctive combinations of suffix and option codes as indicated per table)

| EU Directive | Standards | -Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) – Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) – Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics –Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) – Part 6-2: General standards – immunity for industrial environment | e = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products – Part 1: Equipment classification and requirements | e = **1** or **2**. |
| **2014/34/EU** *3 (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres – Part 0: Equipment – General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | e = **4** and f = **1**. |
| | The equipment or protective system includes the following specific marking of explosion protection:*4<br>**Ⓔx II 3 G Ex ec nC IIC T4 Gc X** | |
| **2011/65/EU** *5 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |







| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014** *2<br>Safety of laser products – Part 1: Equipment classification and requirements | e = **4** |

***1:** Applicable to Analog Input Module (Model: SAI143, SAV144) only.*
***2:** Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
***3:** ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***4:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***5:** Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

# Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the products.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN168-C10** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|---|---|
| | | | S2SC70D | S2SC70S | EMC | LVD | ATEX *3 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP461 | c = **4** | Processor Module | ✔ | ✔ | C | NR | A | C |
| S2CP471 | c = **A** or **4** *2 | | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | FAN Unit | ✔ | ✔ | C | NR | A | C |

*1: *See Appendix 1 for the position of suffix code.*
*2: *As a spare of SCP461, S2CP471 will be delivered.*
*3: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN168-A11**.

**Table 3:** Other accessories
Refer to **AEN168-A11**.







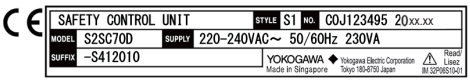
# Appendix 3

External View of S2SC70D and S2SC70S

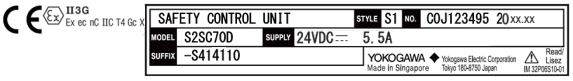
S2SC70D

S2SC70S

Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

-/-





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Date: 30 July 2021

# Lists of configurable modules and accessories for ProSafe-RS

Several configurable modules and accessories are common to ProSafe-RS products.

**SECTION 1:** Configurable modules and accessories

The indications used in the Table 1 and 2 are defied as:
**Indications**: *'X' = Available.*
*'---' = Not available.*

**Table 1** Configurable modules

| Model/Parts No. | Model/Parts Name | Product in which a module is installed | | | | | |
|---|---|---|---|---|---|---|---|
| | | SSC50D SSC50S | SSC57D SSC57S | SSC60D SSC60S | S2SC70D S2SC70S | SNB10D | SNT10D |
| SCP451 | Processor Module | X *1 | X *1 | --- | --- | --- | --- |
| SCP461 | | --- | --- | X *1 | X *2 | --- | --- |
| S2CP471 | | --- | --- | X *3 | X *2 | --- | --- |
| SPW481 | Power Supply Module | X *2 | X *2 | X *2 | X *2 | X *2 | X *2 |
| SPW482 | | X *2 | X *2 | X *2 | X *2 | X *2 | X *2 |
| SPW484 | | X *2 | X *2 | X *2 | X *2 | X *2 | X *2 |
| AIP602 | Fan Unit | X *1 | X *1 | X *1 | X *1 | --- | --- |
| SSB401 | ESB Bus Interface Module | --- | --- | --- | --- | X *1 | --- |
| S2EN402 | N-ESB Bus Coupler Module | --- | --- | --- | X | --- | --- |
| S2EN404 | | --- | --- | --- | X | --- | --- |
| SEC401 | ESB Bus Coupler Module | X | X | X | X | --- | --- |
| SEC402 | | --- | --- | X | X | --- | --- |
| SNT411 | Optical ESB Bus Repeater Master Module | X | X | X | X | X | X |
| SNT401 | | X | X | X | X | X | X |
| SNT421 | | X | X | X | X | X | X |
| SNT511 | Optical ESB Bus Repeater Slave Module | --- | --- | --- | --- | X | X |
| SNT501 | | --- | --- | --- | --- | X | X |
| SNT521 | | --- | --- | --- | --- | X | X |
| SAI143 | Analog Input Module | X | X | X | X | X | --- |
| SAV144 | | X | X | X | X | X | --- |
| SAT145 | TC/mV Input Module | X | X | X | X | X | --- |
| SAR145 | RTD Input Module | X | X | X | X | X | --- |
| SAI533 | Analog Output Module | X | X | X | X | X | --- |
| SDV144 | Digital Input Module | X | X | X | X | X | --- |
| SDV531 | Digital Output Module | X | X | X | X | X | --- |
| SDV541 | | X | X | X | X | X | --- |
| SDV521 | | X | X | X | X | X | --- |
| SDV526 | | X | X | X | X | X | --- |
| SDV53A | | X | X | X | X | X | --- |
| ALR111 | Serial Communication Module | X | X | X | X | X | --- |
| ALR121 | | X | X | X | X | X | --- |
| ALE111 | Ethernet Communication Module | X | X | X | X | X | --- |
| S2LP131 | Fire and Gas Communication Module | --- | --- | --- | X | X | --- |

*1: *This module is pre-installed in the product. Therefore, it is not configurable.*
*2: *This module/unit is specified by the suffix code of the product. By that meaning, it can be said as the configurable module. However, once it is specified, it cannot be replaced with other type of the module by a user.*
*3: This module is not pre-installed in the product. However, it will be delivered as a spare of the pre-installed module, SCP461 and to be implemented.





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**Table 2** Other accessories

| Model/Parts No. | Model/Parts Name | Product for which an accessory is used | | | | | |
|---|---|---|---|---|---|---|---|
| | | SSC50D SSC50S | SSC57D SSC57S | SSC60D SSC60S | S2SC70D S2SC70S | SNB10D | SNT10D |
| STA4S | Pressure Clamp Terminal Block for Analog Signals | X | X | X | X | X | --- |
| STB4S | Pressure Clamp Terminal Block for Digital Signals | X | X | X | X | X | --- |
| STA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | X | X | X | X | X | --- |
| STB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | X | X | X | X | X | --- |
| SEA4D | Analog Terminal Board | X | X | X | X | X | --- |
| SBA4D | Terminal Board for Analog | X | X | X | X | X | --- |
| S1BB4D | Terminal Board for Analog Input, 3-wire | X | X | X | X | X | --- |
| SBT4D | Terminal Board for TC/mV | X | X | X | X | X | --- |
| SBR4D | Terminal Board for RTD Input | X | X | X | X | X | --- |
| SED2D | Digital Terminal Board | X | X | X | X | X | --- |
| SED3D | | X | X | X | X | X | --- |
| SED4D | | X | X | X | X | X | --- |
| SWD2D | | X | X | X | X | X | --- |
| SBD2D | Terminal Board for Digital Output | X | X | X | X | X | --- |
| SBD3D | | X | X | X | X | X | --- |
| SBD4D | Terminal Board for Digital | X | X | X | X | X | --- |
| SRM53D | Relay Board | X | X | X | X | X | --- |
| SRM54D | Relay Board | X | X | X | X | X | --- |
| SBM54D | Relay Board for Digital Output | X | X | X | X | X | --- |
| YCB301 | ESB Bus Cable | X | X | X | X | X | --- |
| AKB131 | RS-232C Modem Cable | X | X | X | X | X | --- |
| AKB132 | RS-232C Null Modem Cable | X | X | X | X | X | --- |
| AKB135 | RS-232C Modem Cable | X | X | X | X | X | --- |
| AKB136 | RS-232C Null Modem Cable | X | X | X | X | X | --- |
| AKB161 | RS-422/RS-485 Cable | X | X | X | X | X | --- |
| AKB162 | | X | X | X | X | X | --- |
| AKB331 | Signal Cable | X | X | X | X | X | --- |

**Table 2** Other accessories (continued)

| Model/Parts No. | Model/Parts Name | Product for which an accessory is used | | | | | |
|---|---|---|---|---|---|---|---|
| | | SSC50D SSC50S | SSC57D SSC57S | SSC60D SSC60S | S2SC70D S2SC70S | SNB10D | SNT10D |
| AKB611 | Signal Cable | X | X | X | X | X | --- |
| AKB651 | | X | X | X | X | X | --- |
| AKB652 | | X | X | X | X | X | --- |
| KS1 | | X | X | X | X | X | --- |
| SYEPD5D | Adapter for CDM | X | X | X | X | X | --- |
| SYEPD4D | Adapter for CDO | X | X | X | X | X | --- |
| SYEPD4B | Adapter for Digital Output branch | X | X | X | X | X | --- |
| SYEPA5D | Adapter for CAI | X | X | X | X | X | --- |
| SYEPA4D | Adapter for VIM | X | X | X | X | X | --- |
| SYK101W | Cable for Digital Input | X | X | X | X | X | --- |
| SYK101 | | X | X | X | X | X | --- |
| SYK501W | Cable for Digital Output | X | X | X | X | X | --- |
| SYK501 | | X | X | X | X | X | --- |
| SYK502 | Cable for Digital Output branch | X | X | X | X | X | --- |
| SYK301 | Cable for Analog | X | X | X | X | X | --- |
| SYPP10 | Adapter Fitting Frame | X | X | X | X | X | --- |
| SCB100 | Wiring Check Adapter for Digital Input | X | X | X | X | X | --- |
| SCB110 | | X | X | X | X | X | --- |
| AEP7D | Primary Power Supply Bus Unit | X | X | X | X | X | X |
| AEPV7D | Power Supply Bus Unit, Vertical Type | X | X | X | X | X | X |
| S1XEU4D | Universal Conversion Board | X | X | X | X | X | --- |
| S1XK301 | Signal cable | X | X | X | X | X | --- |
| S1XK601 | Signal cable | X | X | X | X | X | --- |







**SECTION 2:** CE-marking compliance relevance of each configurable module and accessory (as indicated per EU-Directive)

The following tables show the CE-marking compliance relevance to the product in which configurable modules and accessories are installed.
The indications used in the following tables are defied as:

**Indications**: *'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NS' = The accessory does not support the Directive.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'A' = Compliance by 'Attestation of Conformity'*

**Table 3** Configurable modules

| Model/Parts No. | Model/Parts Name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | ATEX Note 1 | RoHS |
| SCP451 | Processor Module | C | NR | A | C Note 4 |
| SCP461 | | C | NR | A | C |
| S2CP471 | | C | NR | A | C |
| SPW481 | Power Supply Module | C | C | NS | C |
| SPW482 | | C | C | NS | C |
| SPW484 | | C | NR | A | C |
| AIP602 | Fan Unit | C | NR | A | C |
| SSB401 | ESB Bus Interface Module | C | NR | A | C |
| S2EN402 | N-ESB Bus Coupler Module | C | NR | A | C |
| S2EN404 | | C | NR | A | C |
| SEC401 | ESB Bus Coupler Module | C | NR | A | C |
| SEC402 | | C | NR | A | C |
| SNT411 | Optical ESB Bus Repeater Master Module | C | C Note 2 | A | C |
| SNT401 | | C | C Note 2 | A | C |
| SNT421 | | C | C Note 2 | A | C |
| SNT511 | Optical ESB Bus Repeater Slave Module | C | C Note 2 | A | C |
| SNT501 | | C | C Note 2 | A | C |
| SNT521 | | C | C Note 2 | A | C |
| SAI143 | Analog Input Module | C | C Note 3 | A | C |
| SAV144 | | C | C Note 3 | A | C |
| SAT145 | TC/mV Input Module | C | C Note 3 | A | C |
| SAR145 | RTD Input Module | C | C Note 3 | A | C |
| SAI533 | Analog Output Module | C | NR | A | C |
| SDV144 | Digital Input Module | C | NR | A | C |
| SDV531 | Digital Output Module | C | NR | A | C |
| SDV541 | | C | NR | A | C |
| SDV521 | | C | NR | A | C |
| SDV526 | | C | C | NS | C |
| SDV53A | | C | NR | A | C |
| ALR111 Note 5 | Serial Communication Module | C | NR | A | C |
| ALR121 Note 5 | | C | NR | A | C |
| ALE111 Note 5 | Ethernet Communication Module | C | NR | A | C |
| S2LP131 | Fire and Gas Communication Module | C | NR | A | C |

**Note 1**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*
**Note 2**: *EN 60825-1 is applied to these modules.*
**Note 3**: *EN 61010-2-030 is applied to these modules.*
**Note 4**: *Only the following suffix codes conform to the RoHS Directive: -53 and -E3*
**Note 5**: *In its own right, the conformities to the relevant Directives are declared and it bears CE marking.*







**Table 4** Other accessories

| Model/Parts No. | Model/Parts Name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | ATEX Note 1 | RoHS |
| STA4S | Pressure Clamp Terminal Block for Analog Signals | R | NR | ***A*** | C |
| STB4S | Pressure Clamp Terminal Block for Digital Signals | R | NR | ***A*** | C |
| STA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | R | NR | ***A*** | C |
| STB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | R | NR | ***A*** | C |
| SEA4D | Analog Terminal Board | R | NR | A | C |
| SBA4D | Terminal Board for Analog | R | NR | A | C |
| S1BB4D | Terminal Board for Analog Input, 3-wire | R | C | A | C |
| SBT4D | Terminal Board for TC/mV | R | NR | A | C |
| SBR4D | Terminal Board for RTD Input | R | NR | A | C |
| SED2D | Digital Terminal Board | R | NR | A | C |
| SED3D | | R | NR | A | C |
| SED4D | | R | NR | A | C |
| SWD2D | | R | C | NS | C |
| SBD2D | Terminal Board for Digital Output | R | C | A | C |
| SBD3D | | R | C | A | C |
| SBD4D | Terminal Board for Digital | R | C | A | C |
| SRM53D | Relay Board | R | C | NS | C |
| SRM54D | Relay Board | R | C | NS | C |
| SBM54D | Relay Board for Digital Output | R | C | NS | C |
| YCB301 | ESB Bus Cable | R | NR | NR | C |
| AKB131 | RS-232C Modem Cable | R | NR | NR | C |
| AKB132 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB135 | RS-232C Modem Cable | R | NR | NR | C |
| AKB136 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB161 | RS-422/RS-485 Cable | R | NR | NR | C |
| AKB162 | | R | NR | NR | C |
| AKB331 | Signal Cable | R | NR | NR | C |
| AKB611 | | R | NR | NR | C |
| AKB651 | | R | NR | NR | C |
| AKB652 | | R | C | ***NS*** | C |
| KS1 | | R | NR | NR | C |
| SYEPD5D | Adapter for CDM | R | NR | NS | C |
| SYEPD4D | Adapter for CDO | R | NR | NS | C |
| SYEPD4B | Adapter for Digital Output branch | R | NR | NS | C |
| SYEPA5D | Adapter for CAI | R | NR | NS | C |
| SYEPA4D | Adapter for VIM | R | NR | NS | C |
| SYK101W | Cable for Digital Input | R | NR | NR | C |
| SYK101 | | R | NR | NR | C |
| SYK501W | Cable for Digital Output | R | NR | NR | C |
| SYK501 | | R | NR | NR | C |







**Table 4** Other accessories (continued)

| Model/Parts No. | Model/Parts Name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | ATEX Note 1 | *RoHS* |
| SYK502 | Cable for Digital Output branch | R | NR | NR | C |
| SYK301 | Cable for Analog | R | NR | NR | C |
| SYPP10 | Adapter Fitting Frame | R | NR | NS | C |
| SCB100 | Wiring Check Adapter for Digital Input | R | NR | A | C |
| SCB110 | | R | NR | A | C |
| AEP7D Note 3 | Primary Power Supply Bus Unit | R | C Note 2 | A | C |
| AEPV7D Note 3 | Power Supply Bus Unit, Vertical Type | R | C Note 2 | A | C |
| S1XEU4D | Universal Conversion Board | R | NR | NS | C |
| S1XK301 | Signal cable | R | NR | NR | C |
| S1XK601 | Signal cable | R | NR | NR | C |

**Note 1**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*
**Note 2**: *The model of 24 VDC input (the first position of the suffix code is '4') is "NR".*
**Note 3**: *In its own right, the conformities to the relevant Directives are declared and it bears CE marking.*

**SECTION3**: Reason for the update

Changes from the previous edition are shown in ***underlined bold italic*** characters.

| | | | | |
|---|---|---|---|---|
| 2021-07-31 | - Corrected the misdescription in the indication of the relevancy to ATEX regarding STA4S, STB4S, STA4D, STB4D and AKB652 in the Table 4. | Nakagawa | Nakanishi | Yokoi |
| | | System Hardware R&D Dept. System Development Center Digital Solutions HQ Yokogawa Electric Corporation | | |
| Date yyyy-mm-dd | Description | DR | CH | APP |
| | | Div. | | |





# Attestation of Conformity

The Components:

| Model code **Note 1** | Model name | Type of protection **Note 2** |
|---|---|---|
| SCP451 | Processor Module | A-1 |
| SCP461 | | A-1 |
| S2CP471 | | A-1 |
| SPW484 | Power Supply Module | A-1 |
| SEC401 | ESB Bus Coupler Module | A-1 |
| SEC402 | | A-1 |
| SSB401 | ESB Bus Interface Module | A-1 |
| AIP602 | Fan Unit | A-1 |
| S2EN402 | N-ESB Bus Coupler Module | A-1 |
| S2EN404 | N-ESB Bus Coupler Module | A-1 |
| SNT401 | Optical ESB Bus Repeater Master Module | A-1 |
| SNT421 | Optical ESB Bus Repeater Master Module | A-1 |
| SNT411 | Optical ESB Bus Repeater Master Module 5 km to 50 km | A-1 |
| SNT501 | Optical ESB Bus Repeater Slave Module | A-1 |
| SNT511 | Optical ESB Bus Repeater Slave Module 5 km to 50 km | A-1 |
| SNT521 | Optical ESB Bus Repeater Slave Module | A-1 |
| SAI143 | Current Input Module | A-1 |
| SAV144 | Voltage Input module | A-1 |
| SAT145 | TC/mV Input Module | A-1 |
| SAR145 | RTD Input Module | A-1 |
| SAI533 | Current Output Module | A-1 |
| SDV144 | Digital Input Module | A-1 |
| SDV531 | Digital Output Module | A-1 |
| SDV541 | | A-1 |
| SDV521 | | A-1 |
| SDV53A | | A-1 |
| ALR111 | Serial Communication Module | A-1 |
| ALR121 | | A-1 |
| ALE111 | Ethernet Communication Module | A-1 |
| S2LP131 | Fire and Gas Communication Module | A-1 |
| SEA4D | Analog Terminal Board | A-1 |
| SBA4D | Terminal board for Analog | A-1 |
| SBR4D | Terminal board for RTD Input | A-1 |
| SBT4D | Terminal board for TC/mV | A-1 |
| SED4D | Digital Terminal Board | A-1 |
| SED2D | | A-1 |
| SED3D | | A-1 |
| SBD2D | Terminal board for Digital Output | A-2 |
| SBD3D | | A-2 |
| SBD4D | Terminal board for Digital | A-2 |
| S1BB4D | Terminal Board for Analog input | A-2 |
| SCB100 | Wiring Check Adapter for Digital Input | A-1 **Note 3** |
| SCB110 | | A-1 **Note 3** |
| AEP7D | Primary Power Supply Bus Unit | A-1 |
| AEPV7D | Power Supply Bus Unit, Vertical Type | A-1 |

(continued to the next page)





| Model code **Note 1** | Model name | Type of protection **Note 2** |
|---|---|---|
| ***STA4S*** | ***Pressure Clamp Terminal Block for Analog Signals*** | ***A-1 Note 3*** |
| ***STB4S*** | ***Pressure Clamp Terminal Block for Digital Signals*** | ***A-1 Note 3*** |
| ***STA4D*** | ***Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use*** | ***A-1 Note 3*** |
| ***STB4D*** | ***Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use*** | ***A-1 Note 3*** |

**Note 1:** *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

**Note 2**: *Type of protection is show on the marking of each component:*

**A-1:** ⟨Ex⟩ **II 3 G Ex *ec* IIC T4 Gc X**

**A-2:** ⟨Ex⟩ **II 3 G Ex *ec* nC IIC T4 Gc X**

**Note 3**: *This component does not have autonomous function by itself and it will be always used and functional as a part of the other accessory. Therefore, the marking (the Ex hexagon, and applicable ATEX protection codes) to this component is omitted and the marking on the other accessory includes this component. The accessories that are subject to the above description and the accessories to which those accessories belong are shown below:*

| *Part No. of the subject accessory* | *Accessories to which the subject accessory belongs* |
|---|---|
| *SCB100, SCB110* | *SDV144* |
| ***STA4S*** | ***SAI143, SAV144, SAI533*** |
| ***STB4S*** | ***SDV144, SDV531, SDV541*** |
| ***STA4D*** | ***SAI143, SAV144, SAI533*** |
| ***STB4D*** | ***SDV144, SDV531, SDV541*** |

further specified with model suffix and option codes:
**as listed in General Specification for each component guided by: IM 32P06S10-01Z1**
further technical specifications can be found:
**in General Specification for each component guided by: IM 32P06S10-01Z1**
Intended for use as components in Yokogawa Systems with model code:
**Product-models listed in AEN168-*A11***
were successfully assessed as Components against the requirements of the EU Directive **2014/34/EU** (ATEX) and the following Harmonised Standards:
**EN IEC 60079-0:2018**,
***EN IEC 60079-7:2015 + A1:2018***,
**EN 60079-15:2010, *EN IEC 60079-15:2019***

These components shall be incorporated, put in operation and maintained as instructed:
**in User's manuals guided by IM 32P06S10-01Z1.**





Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

**Toyoaki Yokoi**
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

Reasons for the update
- STA4S, STB4S, STA4D and STB4D were added because these had been omitted by mistake even though their conformities were confirmed.
- Application of EN IEC 60079-7:2015+A1:2018 and EN IEC 60079-15:2019. Accordingly, the symbol of the equipment protection is changed from Ex "nA" to Ex "ec".

Changes from the previous edition are shown in ***underlined bold italic characters***.

YOKOGAWA

Doc. No: AEN362-C07

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **S2NN30D** | **Node Interface Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06F20-01EN** (Ed.5)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2015**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



DocuSign Envelope ID: 47254692-5AAD-44BA-A1E9-E60454815181



## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **S2NN30D** – b c d e f g h i j / x
(Distinctive combinations of suffix and option codes as indicated per table).

| EU Directive | Standards | -Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | c = **3**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | c = **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **3**. |
| **2014/34/EU** (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>The marking of the equipment or protective system *2<br>Ex **II 3 G Ex ec IIC T4 Gc X** | c = 4 and i = 1. |
| **2011/65/EU** *3 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |

***1:** *Applicable to N-ESB Bus Module (Model: S2EN501) only.*
***2:** *Symbol 'X' denotes the specific condition of use. See* ***IM 32Q01J30-31E*** *guided by* ***IM 32P06S10-01Z1*** *for details.*
***3:** *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*



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| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **4**. |

***1:** *Applicable to N-ESB Bus Module (Model: S2EN501) only.*



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## Appendix 2

The Models/Parts in the list below are elements of the **S2NN30D**, Node Interface Unit with significant relevance to compliance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity'*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LVD | ATEX **Note** | RoHS |
| S2PW503 | c = **3** | 24 V DC Output Power Supply Unit | C | C | NS | C |
| S2PW504 | c = **4** | | C | NR | A | C |
| S2EN501 | always installed | N-ESB Bus Module | C | C *2 | A | C |

***1**: *See Appendix 1 for the position of suffix code.*
***2**: *EN 60825-1 is applied to this module.*

**Table 2:** Configurable modules for the product
There is no configurable module for S2NN30D.

**Table 3:** Other accessories

| Model code | Model name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | ATEX **Note** | RoHS |
| S2KLF10 | F-SB Bus Cable | R | NR | NR | C |
| S2KPB10 | Power Supply Cable for Base Plate | R | NR | NR | C |

**Note**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

## Attestation of Conformity

The Components:

| Model code | Model name | Type of protection<br>Note |
|---|---|---|
| S2PW504 | 24 V DC Output Power Supply Unit | The following marking is affixed to the component.<br>Ⓔx **II 3 G Ex ec IIC T4 Gc X** |
| S2EN501 | N-ESB Bus Module | |

further specified with model suffix and option codes:
as listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2NN30D**
were successfully assessed as Components against the requirements of the EU Directive **2014/34/EU** (ATEX) and the following Harmonised Standards:
**EN IEC 60079-0:2018**
**EN IEC 60079-7:2015+A1:2018**.

These components shall be incorporated, put in operation and maintained as instructed in User's manuals guided by **IM 32P06S10-01Z1**.

**Note**: *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*



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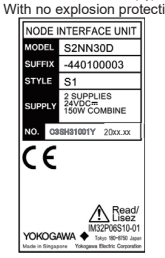
## Appendix 3

External View of S2NN30D

Image of Nameplate
(Typical example; details may differ)

With no explosion protection




With explosion protection


Module Name plate (example: S2EN501)

With no explosion protection


With explosion protection


-/-



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YOKOGAWA ◆ Doc No: AEN363-C13

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| System Model | System Name |
|---|---|
| **S2ZN1D** | **N-IO I/O Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06K20-01EN** (Ed.8)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2015**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 15 September 2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



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## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

| EU Directive | Standards |
|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment |
| **2014/34/EU** (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>The equipment or protective system includes the following specific marking of explosion protection:*1<br>Ⓔx **II 3 G Ex ec IIC T4 Gc X** |
| **2011/65/EU** *2 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1**: *Symbol 'X' denotes the specific condition of use. See* ***IM 32Q01J30-31E*** *guided by* ***IM 32P06S10-01Z1*** *for details.*
***2**: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| **EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |
| **EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits |

***1**: *Applicable to Analog Digital I/O Module (Model: S2MMM843) only.*

## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

**Indications**: *'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity'*

| Model code | Model name | Relevant EU Directives | | |
|---|---|---|---|---|
| | | EMC | ATEX Note | RoHS |
| S2BN1D | Base Plate with disconnecting terminal | C | A | C |
| S2MMM843 | Analog Digital I/O Module | C | A | C |
| S2MDV843 | Digital I/O Module | C | A | C |
| S2DCV02 | Dummy Cover | NR | NR | C |
| S9905UV | FG Cable | R | NR | C |
| S9990FA *1 | Pressure clamp terminal block | NR | A | C |
| A2BM4 | Terminal board for analog digital I/O | R | A | C |
| AKB331 | Signal Cable (50 pin) | R | NR | C |
| AKB651 | Signal Cable (50 pin) | R | NR | C |
| SCB100 | Wiring Check Adapter for Digital Input | R | A | C |
| SCB110 | | R | A | C |

***1**: This is the terminal of the Base Plate, S2BN1D. When S2BN1D is delivered without the terminal, this terminal is delivered separately and to be combined with S2BN1D at a customer's site.*

**Note**: *When the accessory has both explosion protection type and non-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*



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Appendix of AEN363-C13

### Attestation of Conformity

The Components:

| Model code | Model name | Type of protection Note |
|---|---|---|
| S2BN1D | Base Plate with disconnecting terminal | The following marking is affixed to the component. ⟨Ex⟩ **II 3 G Ex ec IIC T4 Gc X** |
| S2MMM843 | Analog Digital I/O Module | |
| S2MDV843 | Digital I/O Module | |
| S9990FA *1 | Pressure clamp terminal block | |
| A2BM4 | Terminal board for analog digital I/O | |
| SCB100 *2 | Wiring Check Adapter for Digital Input | |
| SCB110 *2 | | |

**Note**: *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

***1**: This component does not have autonomous function by itself and it will be always used and functional as a part of S2BN1D. Therefore, the marking (the Ex hexagon, and applicable ATEX protection codes) to this component is omitted and the marking on the S2BN1D includes this component.*
***2**: This component does not have autonomous function by itself and it will be always used and functional as a part of S2MMM843 and S2MDV843. Therefore, the marking (the Ex hexagon, and applicable ATEX protection codes) to this component is omitted and the marking on the S2MMM843 and S2MDV843 includes this component.*

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2ZN1D**
were successfully assessed as Components against the requirements of the EU Directive **2014/34/EU** (ATEX) and the following Harmonised Standards:
**EN IEC 60079-0:2018,**
**EN IEC 60079-7:2015+A1:2018**

These components shall be incorporated, put in operation and maintained as instructed in User's manuals guided by **IM 32P06S10-01Z1**.



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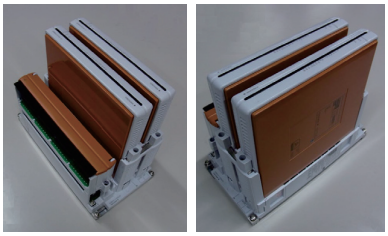
Appendix of AEN363-C13

## Appendix 3

External View of S2ZN1D





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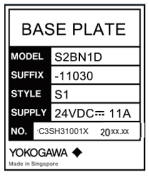
Appendix of AEN363-C13

Image of Name Plate (System Name Plate)
(Typical example; details may differ)

No explosion protection type

System Name Plate


Module Name Plate (example)




** System Name Plate is affixed to the Base Plate.*

Explosion protection type

System Name Plate


Module Name Plate (example)


** System Name Plate is affixed to the Base Plate.*

-/-

YOKOGAWA

Doc No: AEN364-C09

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| System model | System name |
|---|---|
| **S2ZN4D** | **N-IO I/O Unit** (for Barrier) |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06P10-01EN** (Ed.21)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2015**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware D&E Dept.
Systems Development Center
IA Systems and Service Business HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 02 December 2022

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Process Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



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## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

| EU Directive | Standards |
|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment |
| **2014/34/EU** (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN 60079-7:2015+A1:2018**<br>Explosive atmospheres -- Part 7: Equipment protection by increased safety "e"<br>The equipment or protective system includes the following specific marking of explosion protection: *1<br>Ex **II 3 G Ex ec IIC T4 Gc X** |
| **2011/65/EU** *2 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1**: *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***2**: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| **EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |
| **EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits |

***1**: *Applicable to Analog Digital I/O Module (Model: S2MMM843) only.*



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## Appendix 2

**S2ZN4D** is N-IO I/O Unit (for Barrier) for exclusive use of the intrinsic safety barriers made by Eaton Electric Limited. The intrinsic safety barriers which can be mounted to S2ZN4D are listed in **GS 32P06P10-01EN**.
The Model codes in the list below are elements of the **S2ZN4D** N-IO I/O Unit (for Barrier) with significant relevance to compliance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
**Indications**: *'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity'*

| Model code | Model name | Relevant EU Directives | | |
|---|---|---|---|---|
| | | EMC | ATEX Note | RoHS |
| S2BN4D *1 | Base Plate for Barrier | C | C | C |
| S2MMM843 | Analog Digital I/O Module | C | A | C |
| S2MDV843 | Digital I/O Module | C | A | C |
| S2DCV02 | Dummy Cover | NR | NR | C |
| S9906UV | FG Cable | R | NR | C |

***1**: *In its own right, the conformity to EMC, ATEX (Type of protection "e") and RoHS Directives are declared individually. Type of protection for S2BN4D is shown as the marking on the S2BN4D below:*
Ex **II 3 G Ex ec IIC T4 Gc**

**Note**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*



DocuSign Envelope ID: E16574D3-9E6D-4487-B089-4FED72B096C0



### Attestation of Conformity

The Components:

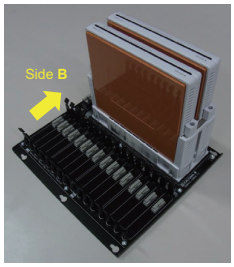
| Model code | Model name | Type of protection |
|---|---|---|
| S2MMM843 | Analog Digital I/O Module | The following marking is affixed to the component.<br>Ex **II 3 G Ex ec IIC T4 Gc X** |
| S2MDV843 | Digital I/O Module | |

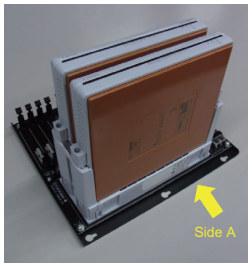
further specified with model suffix and option codes:
as listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2ZN4D**
were successfully assessed as Components against the requirements of the EU Directive **2014/34/EU ATEX**.
These components shall be incorporated, put in operation and maintained as instructed:
in User's manuals guided by **IM 32P06S10-01Z1**.

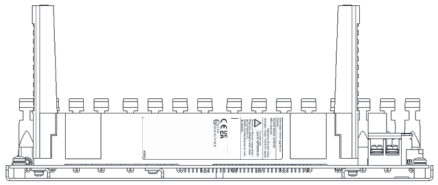
**Note**: *The explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

## Appendix 3

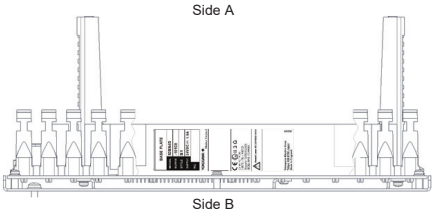
External View of S2ZN4D



Side A



Side B



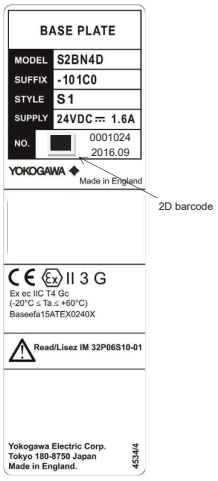




Image of Nameplate (System Name Plate)
(Typical example; details may differ)

System Name Plate


Module Name Plate (example)




** System Name Plate is affixed to the Base Plate.*

-/-





YOKOGAWA ◆ Doc No: AEN365-C07

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| System model | System name |
|---|---|
| **S2ZN5D** | **N-IO I/O Unit** (for Barrier) |

as part of Product Family: **ProSafe-RS**
further information:

**as listed in General Specification: GS 32P06P10-01EN** (Ed.18)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2015**.

Signature:

(Manufacturer)

Tokyo, 19 January 2022

T. Yokoi 19-Jan-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 14 February 2022

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands







## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

| EU Directive | Standards |
|---|---|
| **2014/30/EU** (EMC) | **EN 61326-1:2013 Class A Table 2**<br>Electrical equipment for measurement, control and laboratory user – EMC requirements – Part 1: General requirements |
| **2014/34/EU (ATEX)** | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres -- Part 7: Equipment protection by increased safety "e" |
| | The equipment or protective system includes the following specific marking of explosion protection:*1<br>Ex **II 3 G Ex ec IIC T4 Gc X** |
| **2011/65/EU** *2 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1**: Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***2**: Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| **EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |
| **EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits |

***1**: Applicable to Analog Digital I/O Module (Model: S2MMM843) only.*

# Appendix 2

**S2ZN5D** is Network I/O for Barrier for exclusive use of the intrinsic safety barriers made by PEPPERL+FUCHS GmbH. The intrinsic safety barriers which can be mounted to S2ZN5D are listed in **GS 32P06P10-01EN**.
The Models/Parts in the list below are elements of the **S2ZN5D** Network I/O for Barrier with significant relevance to compliance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

**Indications**: *'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NS' = The accessory does not support the Directive.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'A' = Compliance by 'Attestation of Conformity'*

| Model code | Model name | Relevant EU Directives | | |
|---|---|---|---|---|
| | | EMC | ATEX Note | RoHS |
| S2BN5D *1 | Base Plate for Barrier | C | C | C |
| S2MMM843 | Analog Digital I/O Module | C | A | C |
| S2MDV843 | Digital I/O Module | C | A | C |
| S2DCV02 | Dummy Cover | NR | NR | C |
| S9907UV | FG Cable | R | NR | C |

***1:** In its own right, the conformity to EMC, ATEX (Type of protection "e" and intrinsic safety "i") and RoHS Directives are declared individually. Type of protection for S2BN5D is shown as the marking on the S2BN5D below:*

**II 3 (1) G Ex ec [ia Ga] IIC T4 Gc**
**II (1) D [Ex ia Da] IIIC**
**I (M1) [Ex ia Ma] I**

**Note**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*



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## Attestation of Conformity

The Components:

| Model code | Model name | Type of protection |
|---|---|---|
| S2MMM843 | Analog Digital I/O Module | The following marking is affixed to the component. |
| S2MDV843 | Digital I/O Module | **II 3 G Ex ec IIC T4 Gc X** |

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2ZN5D**
were successfully assessed as Components against the requirements of the EU Directive **2014/34/EU ATEX**.
These components shall be incorporated, put in operation and maintained as instructed:
in User's manuals guided by **IM 32P06S10-01Z1**.

**Note**: *The explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*



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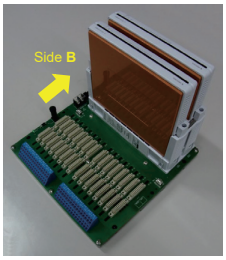
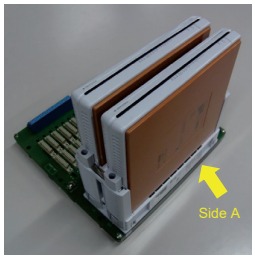
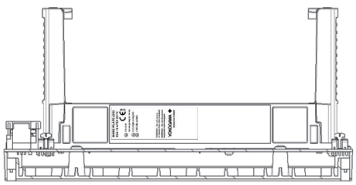
# Appendix 3

External View of S2ZN5D




Side A



Side B



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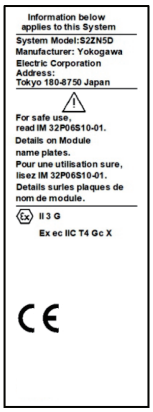
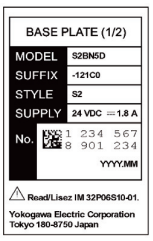
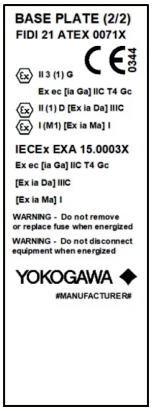
Image of Nameplate (System Name Plate)
(Typical example; details may differ)

System Name Plate




Module Name Plate (example)

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YOKOGAWA

Doc. No: AEN556-C06

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

Model code: **S2BN4D** Model name: **Base Plate for Barrier**
specified with the third suffix code: **1** (with explosion protection)

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in User's Manual: GS 32P06P10-01EN** (Ed.21)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2016**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware D&E Dept.
Systems Development Center
IA Systems and Service Business HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 02 December 2022

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Process Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



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## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **S2BN4D** – # # **1** # #
(# is defined in the General Specification: **GS 32P06P10-01EN**)

| EU Directive | Standards |
|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment |
| **2014/34/EU** (ATEX) | **EN IEC 60079-0:2018** *1<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN 60079-7:2015+A1:2018**<br>Explosive atmospheres -- Part 7: Equipment protection by increased safety "e"<br>The equipment or protective system includes the following specific marking of explosion protection:<br>Ex **II 3 G Ex ec IIC T4 Gc (-20°C ≤ Ta ≤ +60°C)**<br>Type-Examination Certificate of the product was issued by the Notified body.<br>The Number of the Type-Examination Certificate: **Baseefa15ATEX0240X** *2<br>The name of the Notified Body: **SGS Fimko Oy**<br>The Identification Number of the Notified Body: **0598**<br>The Address of the Notified Body: **Takomotie 8, FI-00380 Helsinki, Finland** |
| **2011/65/EU** *3 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1**: The listed standards have been compared to the standards EN 60079-0:2012+A11:2013 and EN 60079-15:2010 used for certification purposes, but no clauses containing changes in state-of-art apply to this product-model.*
***2**: Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by guided by **IM 32P06S10-01Z1** for details.*
***3**: Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |



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## Appendix 2

The product has no accessories.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product. Instructions relevant for safe use are described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1**.



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## Appendix 3

External View of S2BN4D

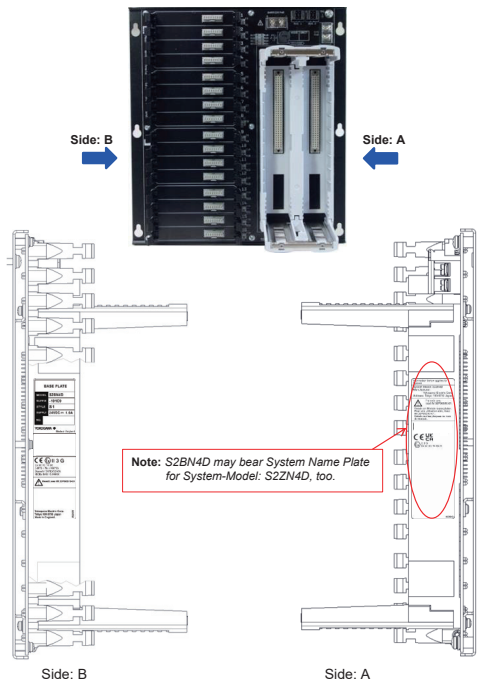
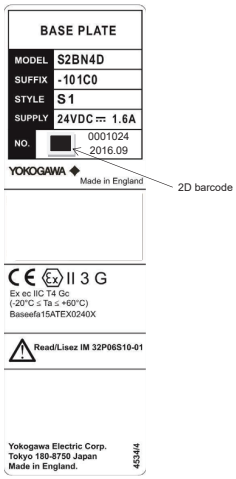


Image of the name plate
(Typical example; details may differ)

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YOKOGAWA ◆

Doc No: AEN366-C05

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| Model code | Model name |
|---|---|
| **S2BN5D** | **Base Plate for Barrier** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06P10-01EN** (Ed.18)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2015**.

Signature:

(Manufacturer)

Tokyo, 19 January 2022

T. Yokoi 19-Jan-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 14 February 2022

DocuSigned by:
Patrick van Vreeswijk
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Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands







## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

| EU Directives and Standards | |
|---|---|
| **EU Directives** | **Standards** |
| **2014/30/EU** (EMC) | **EN 61326-1:2013 Class A Table 2**<br>Electrical equipment for measurement, control and laboratory user – EMC requirements – Part 1: General requirements |
| **2014/34/EU** (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres – Part 0: Equipment - General requirements<br>**EN 60079-11:2012**<br>Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e" |
| | The equipment or protective system includes the following specific marking of explosion protection:<br>**II 3 (1) G Ex ec [ia Ga] IIC T4 Gc**<br>**II (1) D [Ex ia Da] IIIC**<br>**I (M1) [Ex ia Ma] I** |
| | The Name of the Notified Body: **FIDITAS d.o.o.**<br>The Identification Number of the Notified Body: **2829**<br>The Address of the Notified Body: **Karlovačka cesta 197, 10250 Zagreb - Lučko, Croatia**<br>The Number of the EU Type-Examination Certificate: **FIDI 21 ATEX 0071X** *1 |
| | Quality Assurance Notification is issued by:<br>The Name of the Notified Body: **DEKRA Certification B.V.**<br>The Identification Number of the Notified Body: **0344**<br>The Address of the Notified Body: **Meander 1051 6825 MJ Arnhem, The Netherlands**<br>The Number of Quality Assurance Notification: **DEKRA 11ATEXQ0127** |
| **2011/65/EU** *2 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***2:** *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |





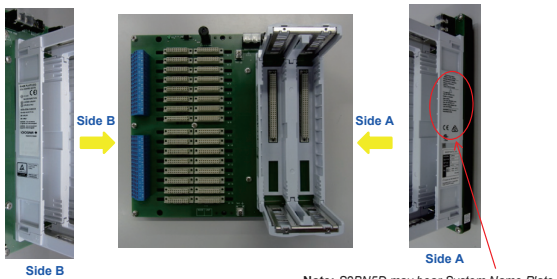


## Appendix 2

The product has no accessories.
Instructions relevant for safe use are described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1**.

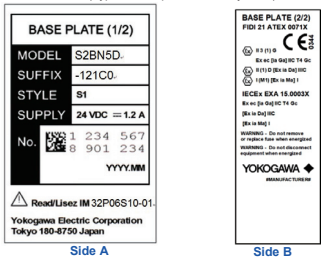
## Appendix 3

External View of S2BN5D




**Note:** *S2BN5D may bear System Name Plate for System-Model: S2ZN5D, too.*

Image of Nameplate
(Typical example; details may differ)

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YOKOGAWA

Doc. No. AEN590-C07

# EU DECLARATION OF CONFORMITY

We: **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| System Model | System Name |
|---|---|
| **S2ZN70D** | **N-IO field enclosure** |

as part of Product Family: **ProSafe-RS**
further specified with suffix- and option-codes:

**as listed in General Specification: GS 32P06Q10-01EN** (Ed.8)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedures.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 9/7/2021

DocuSigned by:
Patrick van Vreeswijk
590C870C15F149...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



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## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

| EU Directives and Standards | |
|---|---|
| EU Directives | Standards |
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group 1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN 61010-2-030:2010**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements |
| **2011/65/EU** *2 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |
| **2014/34/EU** (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres - Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n"<br>The marking of the equipment or protective system *3<br>Ex **II 3 G Ex ec nC IIC T4 Gc X** |

*1: *Applicable to N-ESB Bus Module (Model: S2EN501) only. N-ESB Bus Module (Model: S2EN501) is the constituent element of S2NN30D installed in S2ZN60D.*
*2: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*
*3: *Symbol 'X' denotes the specific condition of use. See IM32Q01J30-31E for details.*



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## Appendix 2

The Models/Parts in the list below are elements of the **S2ZN70D** N-IO field enclosure with significant relevance to compliance, as indicated per EU-Directive; their application and use – as described in **IM 30A30A10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defied as:
**C:** This module/accessory is within the scope of this Directive and in its own right it conforms to this Directive and bears CE marking. And this accessory is significantly relevant to the conformity of the main Product-model.
For ATEX, the following indications mean the markings (the Ex hexagon and applicable ATEX protection codes) on the module/accessory:
Ex **II 3 G Ex ec nC IIC T4 Gc X**
Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** for details.
**CD:** This accessory conforms to this Directive as a part of the main Product-model. (The main Product-model is within the scope of this Directive.)
For ATEX, if the accessory conforms to ATEX Directive as a component of the main Product-model and its conformity is attested by 'Attestation of Conformity', the indication of '**A**' is used instead of 'CD':
**A:** This accessory conforms to ATEX Directive as a component of the main Product-model. Compliance is stated by 'Attestation of Conformity'. Refer to 'Attestation of Conformity'.
On the other hand, if the accessory does not have autonomous function by itself and it will be always used and functioned as a part of the other accessory, the marking (the Ex hexagon and applicable ATEX protection codes) to this accessory is omitted.
**R:** This accessory itself is not within the scope of this Directive, but it is relevant to the conformity of the main Product-model.
**NR:** This accessory is not within the scope of this Directive nor it is not relevant to the conformity of the main Product-model.
**NS:** This Directive is not applied to this accessory and/or this accessory does not conform to this Directive.



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| Model/Parts code | Model/Parts name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | RoHS | ATEX *2 |
| S2ZN60D *1 | N-IO field enclosure base unit | C | C | C | C |
| S2CB60 | Enclosure for S2NN60D | R | C | C | A |
| S9415FE | Short bar (RED) | NR | NR | R | CD *3 |
| S9416FE | Short bar (BLUE) | NR | NR | R | CD *3 |
| S9417FE | Fuse plug (2A) | NR | R | C | CD *3 |
| S9393FE | Fuse plug (3.15A) | NR | R | C | CD *3 |
| B1036HZ | Hole seal for M20 | NR | R | R | CD *3, *4 |
| B1037HZ | Hole seal for M32 | NR | R | R | CD *3, *4 |

*1: *In its own right, CE marking is affixed to this product. The independent Technical Documentation: **AEN591** is available.*
*2: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*
*3: *This component does not have autonomous function by itself and it will be always used and functional as a part of S2ZN70D. The marking (the Ex hexagon, and applicable ATEX protection codes) on the S2ZN70D includes this component.*
*4: *This accessory is the resale product which is certified in its own right as the Ex component. We re-assessed it as a constituent element of S2ZN70D.*

### Attestation of Conformity

The Component:

| Model code<br>**Note** | Model name | Type of protection |
|---|---|---|
| S2CB60 | Enclosure for A2NN60D | The following marking is affixed to the component.<br>Ex **II 3 G Ex ec IIC T4 Gc X** |

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model codes: **S2ZN70D** was successfully assessed as Components against the requirements of the EU Directive **2014/34/EU** (ATEX) and the following Harmonised Standards:
**EN IEC 60079-0:2018,**
**EN IEC 60079-7:2015+A1:2018,**
**EN 60079-15:2010, EN IEC 60079-15:2019**
These components shall be incorporated, put in operation and maintained as instructed:
in User's manuals guided by **IM 32P06S10-01Z1**

**Note**: *If both of explosion protection type and non-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

# Appendix 3

External View of S2ZN70D

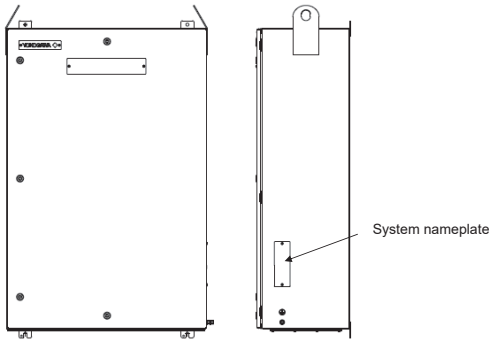


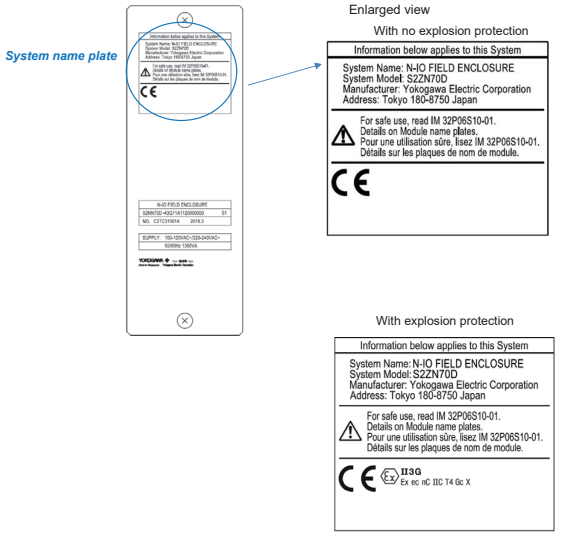







Image of Name plate (System Name plate)
(Typical example; details may differ)

When collectively ordering the base unit and the enclosure.




**Note:** *System name plate is affixed to S2CB60. Name plate of S2CB60 is affixed inside the enclosure.*

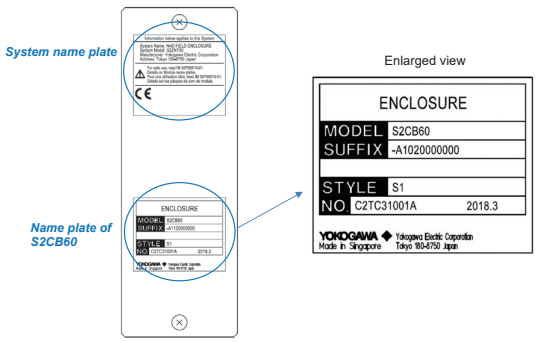




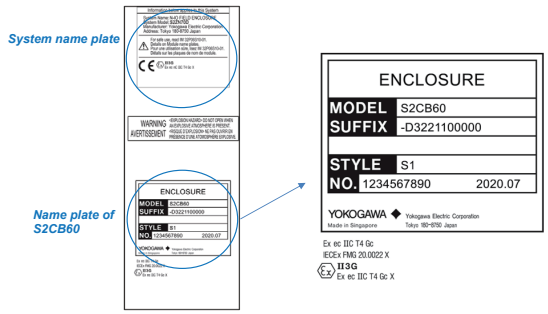


When respectively ordering the base unit and the enclosure.

With no explosion protection




With no explosion protection




**Note:** *When respectively ordering the base unit and the enclosure, Name plate of S2CB60 is affixed to the same area as System name plate.*

-/-





YOKOGAWA ◆ Doc. No. AEN591-C07

# EU DECLARATION OF CONFORMITY

We: **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| System Model | System Name |
|---|---|
| **S2ZN60D** | **N-IO field enclosure base unit** |

as part of Product Family: **ProSafe-RS**
further specified with suffix- and option-codes:

**as listed in General Specification: GS 32P06Q10-01EN** (Ed.8)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedures.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 9/7/2021

DocuSigned by:
Patrick van Vreeswijk
890E87B635F1465...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands

# Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

| EU Directives and Standards | |
|---|---|
| EU Directives | Standards |
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group 1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN 61010-2-030:2010**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements |
| **2011/65/EU** *2 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |
| **2014/34/EU** (ATEX) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres - Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n"<br>The marking of the equipment or protective system *3<br>**Ⓔx II 3 G Ex ec nC IIC T4 Gc X** |

*1: *Applicable to N-ESB Bus Module (Model: S2EN501) only. N-ESB Bus Module (Model: S2EN501) is the constituent element of S2NN30D.*
*2: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*
*3: *Symbol 'X' denotes the specific condition of use. See IM32Q01J30-31E for details.*







# Appendix 2

The Models/Parts in the list below are elements of the **S2ZN60D** N-IO field enclosure base unit with significant relevance to compliance, as indicated per EU-Directive; their application and use – as described in **IM 30A30A10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity.
**IM 32P06S10-01Z1** has CE-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defied as:
**C:** This module/accessory is within the scope of this Directive and in its own right it conforms to this Directive and bears CE marking. And this accessory is significantly relevant to the conformity of the main Product-model.
For ATEX, the following indications mean the markings (the Ex hexagon and applicable ATEX protection codes) on the module/accessory:

**C-1:** Ⓔx **II 3 G Ex ec IIC T4 Gc X**

**C-2:** Ⓔx **II 3 G Ex ec nC IIC T4 Gc X**

Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** for details.
**CD:** This accessory conforms to this Directive as a part of the main Product-model. (The main Product-model is within the scope of this Directive.)
For ATEX, if the accessory conforms to ATEX Directive as a component of the main Product-model and its conformity is attested by 'Attestation of Conformity', the indication of '**A**' is used instead of 'CD':
**A:** This accessory conforms to ATEX Directive as a component of the main Product-model. Compliance is stated by 'Attestation of Conformity'. Refer to 'Attestation of Conformity'.
**R:** This accessory itself is not within the scope of this Directive, but it is relevant to the conformity of the main Product-model.
**NR:** This accessory is not within the scope of this Directive nor it is not relevant to the conformity of the main Product-model.
**NS:** This Directive is not applied to this accessory and/or this accessory does not conform to this Directive.







| Model/Parts code | Mode/Parts name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | RoHS | ATEX *3 |
| S2NN30D *1 | Node Interface Unit | C | C | C | C-1 |
| S2ZN1D *2 | N-IO I/O unit | C | R | C | C-2 |
| S9391FE | IO base unit assembly | R | R | R | NR |
| S9392FE | NIU base unit assembly | CD | CD | CD | NS |
| S9510FE | | CD | CD | CD | A |

*1: *In its own right, CE marking is affixed to this product. The independent Technical Documentation: **AEN362** is available. For the hazardous location, the model code that can be mounted on the S2ZN60D is limited to S2NN30D-44010##13. (# means any defined code is selectable.)*
*2: *In its own right, CE marking is affixed to this product. The independent Technical Documentation: **AEN363** is available.*
*3: *When the accessory has both explosion protection type and non-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

## Attestation of Conformity

The Component:

| Model code **Note** | Model name | Type of protection |
|---|---|---|
| S9510FE | NIU base unit assembly | The following marking is affixed to the component.<br>Ⓔx **II 3 G Ex ec nC IIC T4 Gc X** |

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model codes: **S2ZN60D** was successfully assessed as Components against the requirements of the EU Directive **2014/34/EU** (ATEX) and the following Harmonised Standards:
**EN IEC 60079-0:2018, EN**
**IEC 60079-7:2015+A1:2018,**
**EN 60079-15:2010, EN IEC 60079-15:2019**
These components shall be incorporated, put in operation and maintained as instructed:
in User's manuals guided by **IM 32P06S10-01Z1**.

**Note**: *If both of explosion protection type and non-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*







# Appendix 3

External View of S2ZN60D

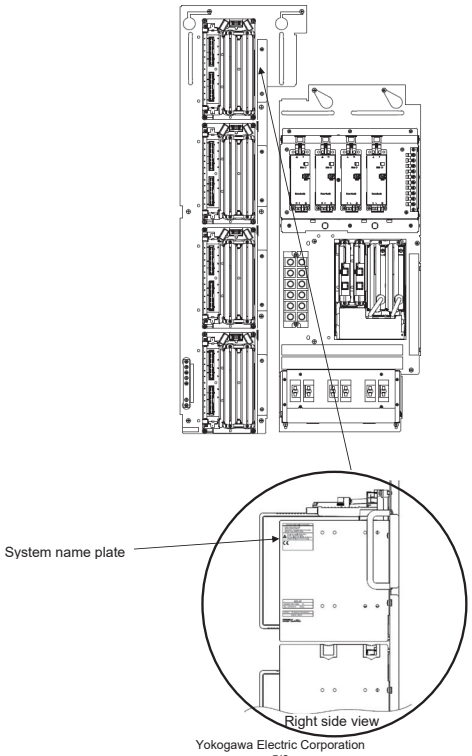


Image of Name plate (System Name plate)
(Typical example; details may differ)

With no explosion protection

Information below applies to this System

System Name: BASE UNIT
System Model: S2ZN60D
Manufacturer: Yokogawa Electric Corporation
Address: Tokyo 180-8750 Japan

For safe use, read IM 32P06S10-01.
Details on Module name plates.
Pour une utilisation sûre, lisez IM 32P06S10-01.
Détails sur les plaques de nom de module.

CE

With explosion protection

Information below applies to this System

System Name: BASE UNIT
System Model: S2ZN60D
Manufacturer: Yokogawa Electric Corporation
Address: Tokyo 180-8750 Japan

For safe use, read IM 32P06S10-01.
Details on Module name plates.
Pour une utilisation sûre, lisez IM 32P06S10-01.
Détails sur les plaques de nom de module.

CE Ex II3G
Ex ec nC IIC T4 Gc X

-/-





YOKOGAWA

Doc. No. AEN690-C03-1

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the product identified as:

| Model code | Model name |
|---|---|
| **L1SC70D** | **Duplex Safety Control Unit** |
| **L1SC70S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS Lite**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P56D10-01EN** (Ed.2)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2020**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 9/3/2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands







## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **L1SC70D** / **L1SC70S** – b c d e f g h / x

(Distinctive combinations of suffix and option codes as indicated per table)

| EU Directives | Standards | - Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005**<br>**EN 61000-3-2:2014**<br>**EN 61000-3-3:2013** | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005** | e = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *1<br>**EN 60825-1:2014** *2 | e = **1** or **2**. |
| **2014/34/EU** *3 (ATEX) | **EN IEC 60079-0:2018**<br>**EN IEC 60079-7:2015+A1:2018**<br>**EN 60079-15:2010, EN IEC 60079-15:2019**<br>The equipment or protective system includes the following specific marking of explosion protection: *4<br>Ex **II 3 G Ex ec nC IIC T4 Gc X** | e = **4** and f = **1**. |
| **2011/65/EU** *5 (RoHS) | **EN IEC 63000:2018** | any |

*1: *Applicable to Analog Input Modules (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
*2: *Applicable to Optical ESB Bus Repeater Master Modules (Model: L1NT401 and L1NT411) only.*
*3: *ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
*4: *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
*5: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards | - Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *1<br>**EN 60825-1:2014** *2 | e = **4** |

*1: *Applicable to Analog Input Modules (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
*2: *Applicable to Optical ESB Bus Repeater Master Modules (Model: L1NT401 and L1NT411) only.*







## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity. The full list of accessories for this product can be found in **IM 32P06S10-01Z1**.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN699-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|---|---|
| | | | L1SC70D | L1SC70S | EMC | LVD | ATEX *2 | RoHS |
| L1PW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| L1PW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| L1PW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| L1CP471 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | FAN Unit | ✔ | ✔ | C | NR | A | C |

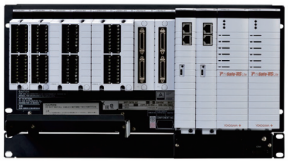
*1: *See Appendix 1 for the position of suffix code.*
*2: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN699-A02**.

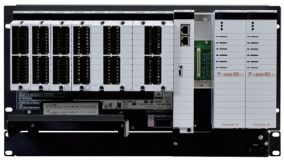
**Table 3:** Other accessories
Refer to **AEN699-A02**.

## Appendix 3

External View of L1SC70D and L1SC70S



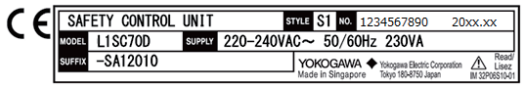
L1SC70D



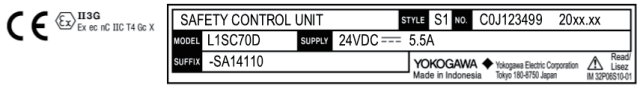
L1SC70S

**Note**: *A dummy cover will be mounted in the empty slot.*

Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

-/-





YOKOGAWA ◆ Doc. No. AEN692-C03

# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the product identified as:

| Model code | Model name |
|---|---|
| **L1NB10D** | **Safety Node Unit** |

as part of Product Family: **ProSafe-RS Lite**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P56K10-01EN** (Ed.3)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2020**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 9/3/2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E..

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands







## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **L1NB10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table)

| EU Directives | Standards | - Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005**<br>**EN 61000-3-2:2014**<br>**EN 61000-3-3:2013** | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005** | c = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *1<br>**EN 60825-1:2014** *2 | c = **1** or **2**. |
| **2014/34/EU** *3 (ATEX) | **EN IEC 60079-0:2018**<br>**EN IEC 60079-7:2015+A1:2018**<br>**EN 60079-15:2010, EN IEC 60079-15:2019**<br>The equipment or protective system includes the following specific marking of explosion protection: *4<br>Ex **II 3 G Ex ec nC IIC T4 Gc X** | c = **4**.<br>and<br>d = **E**. |
| **2011/65/EU** *5 (RoHS) | **EN IEC 63000:2018** | any |

***1**: *Applicable to Analog Input Module (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
***2**: *Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*
***3**: *ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***4**: *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***5**: *Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *1<br>**EN 60825-1:2014** *2 | c = **4** |

***1**: *Applicable to Analog Input Module (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
***2**: *Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*







## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity. The full list of accessories for this product can be found in **IM 32P06S10-01Z1**.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN699-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LVD | ATEX *2 | RoHS |
| L1PW481 | c = **1** | Power Supply Module | C | C | NS | C |
| L1PW482 | c = **2** | | C | C | NS | C |
| L1PW484 | c = **4** | | C | NR | A | C |
| L1SB401 | always installed | ESB Bus Interface Module | C | NR | A | C |

***1**: *See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.

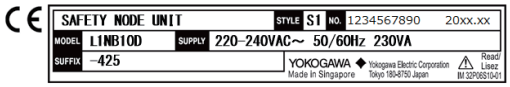
**Table 2:** Configurable modules for the product
Refer to **AEN699-A02**.

**Table 3:** Other accessories
Refer to **AEN699-A02**.

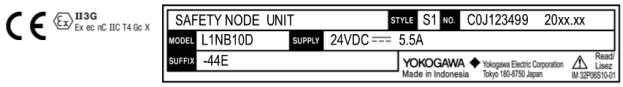
## Appendix 3

External View of L1NB10D

Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

-/-



DocuSign Envelope ID: 8324789C-8B00-4275-8E47-6841CB1ACF31

YOKOGAWA ◆



# EU DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the product identified as:

| Model code | Model name |
|---|---|
| **L1NT10D** | **Unit for Optical Bus Repeater Module** |

as part of Product Family: **ProSafe-RS Lite**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P56K11-01EN** (Ed.3)

are in compliance with the EU law and legislation providing for the CE-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the CE-marking as from **2020**.

Signature:

(Manufacturer)

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

(Authorized Representative in the EEA)

Amersfoort, 9/3/2021

DocuSigned by:
Patrick van Vreeswijk
890E67B935F149E...

Patrick van Vreeswijk
QHSE Manager – Regional Business Owner
Yokogawa Europe B.V.
Euroweg 2, 3825 HD Amersfoort,
P.O.Box 163, 3800 AD Amersfoort,
The Netherlands



DocuSign Envelope ID: 8324789C-8B00-4275-8E47-6841CB1ACF31



## Appendix 1

The products are built in compliance with requirements of the following EU Directives and Standards:

Model – Suffix / Option code structure: **L1NT10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table)

| EU Directives | Standards | - Suffix |
|---|---|---|
| **2014/30/EU** (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005**<br>**EN 61000-3-2:2014**<br>**EN 61000-3-3:2013** | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005** | c = **1** or **4**. |
| **2014/35/EU** (LVD) | **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 60825-1:2014** *1 | c = **1** or **2**. |
| **2014/34/EU** *2 (ATEX) | **EN IEC 60079-0:2018**<br>**EN IEC 60079-7:2015+A1:2018**<br>The equipment or protective system includes the following specific marking of explosion protection:*3<br>Ⓔx **II 3 G Ex ec IIC T4 Gc X** | c = **4**.<br>and<br>d = **E**. |
| **2011/65/EU** *4 (RoHS) | **EN IEC 63000:2018** | any |

***1:** Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*
***2:** ATEX is only supported by the configuration consisting of the elements that attests with the ATEX Directive only. For detailed configuration, see **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***3:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*
***4:** Including the Commission Delegated Directive (EU) 2015/863 that defines the ten (10) restricted substances and amends Annex II to Directive 2011/65/EU.*

| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 60825-1:2014** *1 | c = **4** |

***1:** Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*



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## Appendix 2

The accessories in the list below have CE-marking significant compliance relevance, as indicated per EU-Directive; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this EU Declaration of Conformity. The full list of accessories for this product can be found in **IM 32P06S10-01Z1**.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Directive.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AEN699-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant EU Directives | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LVD | ATEX *2 | RoHS |
| L1PW481 | c = **1** | Power Supply Module | C | C | NS | C |
| L1PW482 | c = **2** | | C | C | NS | C |
| L1PW484 | c = **4** | | C | NR | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AEN699-A02**.

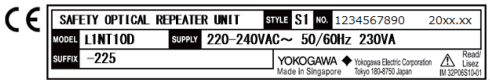
**Table 3:** Other accessories
Refer to **AEN699-A02**.

# Appendix 3

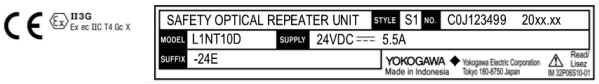
External View of L1NT10D

**Note**: *Configurable modules and/or dummy covers will be mounted in the empty slots.*

Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

-/-







# Lists of configurable modules and accessories for ProSafe-RS Lite

Several configurable modules and accessories are common to ProSafe-RS Lite products.

**SECTION 1:** Configurable modules and accessories

The indications used in the Table 1 and 2 are defied as:
**Indications**: *'X' = Available.*
*'---' = Not available.*

**Table 1** Configurable modules

| Model/Parts No. | Model/Parts Name | Product in which a module is installed | | |
|---|---|---|---|---|
| | | L1SC70D L1SC70S | L1NB10D | L1NT10D |
| L1CP471 | Processor Module | X *1 | --- | --- |
| L1PW481 | Power Supply Module | X *2 | X *2 | X *2 |
| L1PW482 | | X *2 | X *2 | X *2 |
| L1PW484 | | X *2 | X *2 | X *2 |
| AIP602 | Fan Unit | X *1 | --- | --- |
| L1SB401 | ESB Bus Interface Module | --- | X *1 | --- |
| L1EC401 | ESB Bus Coupler Module | X | --- | --- |
| L1EC402 | | X | --- | --- |
| L1NT411 | Optical ESB Bus Repeater Master Module | X | X | X |
| L1NT401 | | X | X | X |
| L1NT511 | Optical ESB Bus Repeater Slave Module | --- | X | X |
| L1NT501 | | --- | X | X |
| L1AI143 | Analog Input Module | X | X | --- |
| L1AV144 | | X | X | --- |
| L1AT145 | TC/mV Input Module | X | X | --- |
| L1AR145 | RTD Input Module | X | X | --- |
| L1AI533 | Analog Output Module | X | X | --- |
| L1DV144 | Digital Input Module | X | X | --- |
| L1DV531 | Digital Output Module | X | X | --- |
| L1DV541 | | X | X | --- |
| L1DV521 | | X | X | --- |
| L1DV526 | | X | X | --- |
| L1DV53A | | X | X | --- |
| ALR111 | Serial Communication Module | X | X | --- |
| ALR121 | | X | X | --- |
| ALE111 | Ethernet Communication Module | X | X | --- |

***1**: *This module is pre-installed in the product. Therefore, it is not configurable.*
***2**: *This module/unit is specified by the suffix code of the product. By that meaning, it can be said as the configurable module. However, once it is specified, it cannot be replaced with other type of the module by a user.*







**Table 2** Other accessories

| Model/Parts No. | Model/Parts Name | Product for which an accessory is used | | |
|---|---|---|---|---|
| | | L1SC70D L1SC70S | L1NB10D | L1NT10D |
| L1TA4S | Pressure Clamp Terminal Block for Analog Signals | X | X | --- |
| L1TB4S | Pressure Clamp Terminal Block for Digital Signals | X | X | --- |
| L1TA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | X | X | --- |
| L1TB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | X | X | --- |
| SEA4D | Analog Terminal Board | X | X | --- |
| SBA4D | Terminal Board for Analog | X | X | --- |
| S1BB4D | Terminal Board for Analog Input, 3-wire | X | X | --- |
| SBT4D | Terminal Board for TC/mV | X | X | --- |
| SBR4D | Terminal Board for RTD Input | X | X | --- |
| SED2D | Digital Terminal Board | X | X | --- |
| SED3D | | X | X | --- |
| SED4D | | X | X | --- |
| SWD2D | | X | X | --- |
| SBD2D | Terminal Board for Digital Output | X | X | --- |
| SBD3D | | X | X | --- |
| SBD4D | Terminal Board for Digital | X | X | --- |
| SRM53D | Relay Board | X | X | --- |
| SRM54D | Relay Board | X | X | --- |
| SBM54D | Relay Board for Digital Output | X | X | --- |
| YCB301 | ESB Bus Cable | X | X | --- |
| AKB131 | RS-232C Modem Cable | X | X | --- |
| AKB132 | RS-232C Null Modem Cable | X | X | --- |
| AKB135 | RS-232C Modem Cable | X | X | --- |
| AKB136 | RS-232C Null Modem Cable | X | X | --- |
| AKB161 | RS-422/RS-485 Cable | X | X | --- |
| AKB162 | | X | X | --- |
| AKB331 | Signal Cable | X | X | --- |
| AKB611 | Signal Cable | X | X | --- |
| AKB651 | | X | X | --- |
| AKB652 | | X | X | --- |
| KS1 | | X | X | --- |
| SCB100 | Wiring Check Adapter for Digital Input | X | X | --- |
| SCB110 | | X | X | --- |
| AEP7D | Primary Power Supply Bus Unit | X | X | X |
| AEPV7D | Power Supply Bus Unit, Vertical Type | X | X | X |







**SECTION 2:** CE-marking compliance relevance of each configurable module and accessory (as indicated per EU-Directive)

The following tables show the CE-marking compliance relevance to the product in which configurable modules and accessories are installed.
The indications used in the following tables are defied as:

**Indications**: *'C' = The accessory conforms to the Directive as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NS' = The accessory does not support the Directive.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'A' = Compliance by 'Attestation of Conformity'*

**Table 3** Configurable modules

| Model/Parts No. | Model/Parts Name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | ATEX Note 4 | RoHS |
| L1CP471 | Processor Module | C | NR | A | C |
| L1PW481 | Power Supply Module | C | C | NS | C |
| L1PW482 | | C | C | NS | C |
| L1PW484 | | C | NR | A | C |
| AIP602 | Fan Unit | C | NR | A | C |
| L1SB401 | ESB Bus Interface Module | C | NR | A | C |
| L1EC401 | ESB Bus Coupler Module | C | NR | A | C |
| L1EC402 | | C | NR | A | C |
| L1NT411 | Optical ESB Bus Repeater Master Module | C | C Note 1 | A | C |
| L1NT401 | | C | C Note 1 | A | C |
| L1NT511 | Optical ESB Bus Repeater Slave Module | C | C Note 1 | A | C |
| L1NT501 | | C | C Note 1 | A | C |
| L1AI143 | Analog Input Module | C | C Note 2 | A | C |
| L1AV144 | | C | C Note 2 | A | C |
| L1AT145 | TC/mV Input Module | C | C Note 2 | A | C |
| L1AR145 | RTD Input Module | C | C Note 2 | A | C |
| L1AI533 | Analog Output Module | C | NR | A | C |
| L1DV144 | Digital Input Module | C | NR | A | C |
| L1DV531 | Digital Output Module | C | NR | A | C |
| L1DV541 | | C | NR | A | C |
| L1DV521 | | C | NR | A | C |
| L1DV526 | | C | C | NS | C |
| L1DV53A | | C | NR | A | C |
| ALR111 Note 3 | Serial Communication Module | C | NR | C | C |
| ALR121 Note 3 | | C | NR | C | C |
| ALE111 Note 3 | Ethernet Communication Module | C | NR | C | C |

**Note 1**: *EN 60825-1 is applied to these modules.*
**Note 2**: *EN 61010-2-030 is applied to these modules.*
**Note 3**: *In its own right, the conformities to the relevant Directives are declared and it bears CE marking.*
**Note 4**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 4** Other accessories

| Model/Parts No. | Model/Parts Name | Relevant EU Directives | | | |
|---|---|---|---|---|---|
| | | EMC | LVD | ATEX Note 3 | RoHS |
| L1TA4S | Pressure Clamp Terminal Block for Analog Signals | R | NR | A | C |
| L1TB4S | Pressure Clamp Terminal Block for Digital Signals | R | NR | A | C |
| L1TA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | R | NR | A | C |
| L1TB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | R | NR | A | C |
| SEA4D | Analog Terminal Board | R | NR | A | C |
| SBA4D | Terminal Board for Analog | R | NR | A | C |
| S1BB4D | Terminal Board for Analog Input, 3-wire | R | C | A | C |
| SBT4D | Terminal Board for TC/mV | R | NR | A | C |
| SBR4D | Terminal Board for RTD Input | R | NR | A | C |
| SED2D | Digital Terminal Board | R | NR | A | C |
| SED3D | | R | NR | A | C |
| SED4D | | R | NR | A | C |
| SWD2D | | R | C | NS | C |
| SBD2D | Terminal Board for Digital Output | R | C | A | C |
| SBD3D | | R | C | A | C |
| SBD4D | Terminal Board for Digital | R | C | A | C |
| SRM53D | Relay Board | R | C | NS | C |
| SRM54D | Relay Board | R | C | NS | C |
| SBM54D | Relay Board for Digital Output | R | C | NS | C |
| YCB301 | ESB Bus Cable | R | NR | NR | C |
| AKB131 | RS-232C Modem Cable | R | NR | NR | C |
| AKB132 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB135 | RS-232C Modem Cable | R | NR | NR | C |
| AKB136 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB161 | RS-422/RS-485 Cable | R | NR | NR | C |
| AKB162 | | R | NR | NR | C |
| AKB331 | Signal Cable | R | NR | NR | C |
| AKB611 | | R | NR | NR | C |
| AKB651 | | R | NR | NR | C |
| AKB652 | | R | C | NS | C |
| KS1 | | R | NR | NR | C |
| SCB100 | Wiring Check Adapter for Digital Input | R | NR | A | C |
| SCB110 | | R | NR | A | C |
| AEP7D Note 2 | Primary Power Supply Bus Unit | R | C Note 1 | A | C |
| AEPV7D Note 2 | Power Supply Bus Unit, Vertical Type | R | C Note 1 | A | C |

**Note 1**: *The model of 24 VDC input (the first position of the suffix code is '4') is "NR".*
**Note 2**: *In its own right, the conformities to the relevant Directives are declared and it bears CE marking.*
**Note 3**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*





**SECTION3**: Reason for the update

| Date yyyy-mm-dd | Description | Ootsubo | Tanba | Yokoi |
|---|---|---|---|---|
| | | System Hardware R&D Dept. D-Sol<br>System Development Center<br>Yokogawa Electric Corporation | | |
| 2021-7-30 | Conformity to ATEX Directive was confirmed. Descriptions of the relevant accessories were updated. | DR | CH | APP |
| | | Div. | | |





# Attestation of Conformity

The Components:

| Model code **Note 1** | Model name | Type of protection **Note 2** |
|---|---|---|
| L1CP471 | Processor Module | A-1 |
| L1PW484 | Power Supply Module | A-1 |
| AIP602 | Fan Unit | A-1 |
| L1SB401 | ESB Bus Interface Module | A-1 |
| L1EC401 | ESB Bus Coupler Module | A-1 |
| L1EC402 | | A-1 |
| L1NT411 | Optical ESB Bus Repeater Master Module | A-1 |
| L1NT401 | | A-1 |
| L1NT511 | Optical ESB Bus Repeater Slave Module | A-1 |
| L1NT501 | | A-1 |
| L1AI143 | Analog Input Module | A-1 |
| L1AV144 | | A-1 |
| L1AT145 | TC/mV Input Module | A-1 |
| L1AR145 | RTD Input Module | A-1 |
| L1AI533 | Analog Output Module | A-1 |
| L1DV144 | Digital Input Module | A-1 |
| L1DV531 | Digital Output Module | A-1 |
| L1DV541 | | A-1 |
| L1DV521 | | A-1 |
| L1DV53A | | A-1 |
| L1TA4S | Pressure Clamp Terminal Block for Analog Signals | A-1 **Note 3** |
| L1TB4S | Pressure Clamp Terminal Block for Digital Signals | A-1 **Note 3** |
| L1TA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | A-1 **Note 3** |
| L1TB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | A-1 **Note 3** |
| SEA4D | Analog Terminal Board | A-1 |
| SBA4D | Terminal Board for Analog | A-1 |
| S1BB4D | Terminal Board for Analog Input, 3-wire | A-2 |
| SBT4D | Terminal Board for TC/mV | A-1 |
| SBR4D | Terminal Board for RTD Input | A-1 |
| SED2D | Digital Terminal Board | A-1 |
| SED3D | | A-1 |
| SED4D | | A-1 |
| SBD2D | Terminal Board for Digital Output | A-2 |
| SBD3D | | A-2 |
| SBD4D | Terminal Board for Digital | A-2 |
| SCB100 | Wiring Check Adapter for Digital Input | A-1 **Note 3** |
| SCB110 | | A-1 **Note 3** |
| AEP7D | Primary Power Supply Bus Unit | A-1 |
| AEPV7D | Power Supply Bus Unit, Vertical Type | A-1 |





**Note 1:** *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*
**Note 2**: *Type of protection is show on the marking of each component:*

**A-1:**  **II 3 G Ex ec IIC T4 Gc X**

**A-2:**  **II 3 G Ex ec nC IIC T4 Gc X**

***Note 3:*** *This component does not have autonomous function by itself and it will be always used and functional as a part of the other accessory. Therefore, the marking (the Ex hexagon, and applicable ATEX protection codes) to this component is omitted and the marking on the other accessory includes this component. Accessories with which these accessories are used together:*

| *Part No. of the subject accessory* | *Accessories to which the subject accessory belongs* |
|---|---|
| *L1TA4S, L1TA4D* | *L1AI143, L1AV144, L1AI533* |
| *L1TB4S, L1TB4D* | *L1DV144, L1DV531, L1DV541* |
| *SCB100, SCB110* | *L1DV144* |

further specified with model suffix and option codes:
**as listed in General Specification for each component guided by: IM 32P06S10-01Z1**
further technical specifications can be found:
**in General Specification for each component guided by: IM 32P06S10-01Z1**
Intended for use as components in Yokogawa Systems with model code:
**L1SC70D, L1SC70S, L1NB10D and L1NT10D**
were successfully assessed as Components against the requirements of the EU Directive **2014/34/EU** (ATEX) and the following Harmonised Standards:
**EN IEC 60079-0:2018**,
**EN IEC 60079-7:2015+A1:2018**,
**EN 60079-15:2010, EN IEC 60079-15:2019**

These components shall be incorporated, put in operation and maintained as instructed:
**in User's manuals guided by IM 32P06S10-01Z1.**

Tokyo, 30 July 2021

T. Yokoi 30-Jul-2021

**Toyoaki Yokoi**
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

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# Appendix 3. UK declaration of conformity and attestation of conformity

**You can refer to the following pages to confirm the UK declaration of conformity and the attestation of conformity.**

**The common documents with larger ## in the document number AGB058-A## are newer editions. As for declarations referring to a common document of an old edition, note that appropriate information is provided also in a newer edition.**

**For the latest information on the directives other than the UKEX directive, refer to the UK declaration of conformity at the following URL:**

**https://myportal.yokogawa.com/s/certificates**

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SSC50D** | **Duplexed Safety Control Unit** |
| **SSC50S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06D20-31E** (Ed.11)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **SSC50D** / **SSC50S** – b c d e f / x
(Distinctive combinations of suffix and option codes as indicated per table)

| UK Regulations *1 | UK Designated Standards | -Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | e = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use -- Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use -- Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use -- Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *4 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres -- Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n"<br>The marking of the equipment or protective system *5:<br>Ex **II 3 G Ex ec nC IIC T4 Gc X** | e = **4**. and d = **E**. |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | f = **3** or **4**. |





| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **4**. |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Applicable to Analog Input Module (Model: SAI143, SAV144), TC/mV Input Module (SAT145) and RTD Input Module (SAR145) only.*
***3:** Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
***4:** Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***5:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*





## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB058-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|---|---|
| | | | SSC50D | SSC50S | EMC | LV | Ex *2 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP451 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | Fan Unit | ✔ | ✔ | C | NR | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AGB058-A01**.

**Table 3:** Other accessories
Refer to **AGB058-A01**

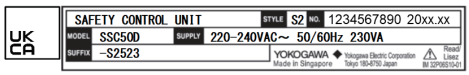
## Appendix 3

External View of SSC50D and SSC50S

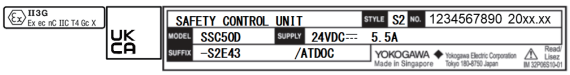
SSC50D SSC50S

Image of Nameplate
(Typical example; details may differ)

No explosion protection type




Explosion protection type

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YOKOGAWA ◆



# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SSC57D** | **Duplexed Safety Control Unit** |
| **SSC57S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06D25-31E** (Ed.8)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi
19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **SSC57D** / **SSC57S** – b c d e f / x

(Distinctive combinations of suffix and option codes as indicated per table)

| UK Regulations *1 | UK Designated Standards | -Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | e = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *4 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n" | e = **4**. and d = **E**. |
| | The marking of the equipment or protective system *5:<br>**Ⓔx II 3 G Ex ec nC IIC T4 Gc X** | |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | f = **3** or **4**. |





| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **4**. |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Applicable to Analog Input Module (Model: SAI143, SAV144), TC/mV Input Module (SAT145) and RTD Input Module (SAR145) only.*
***3:** Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
***4:** Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P04D20-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***5:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P04D20-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB058-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|---|---|
| | | | SSC57D | SSC57S | EMC | LV | Ex *2 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP451 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | Fan Unit | ✔ | ✔ | C | NR | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AGB058-A01**.

**Table 3:** Other accessories
Refer to **AGB058-A01**.





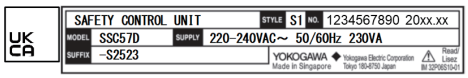
## Appendix 3

External View of SSC57D and SSC57S

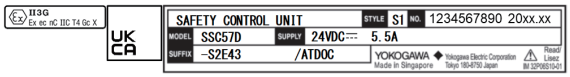
SSC57D SSC57S

Image of Nameplate
(Typical example; details may differ)

No explosion protection type




Explosion protection type

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YOKOGAWA ◆

Doc. No: AGB077-C02-1

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SSC60D** | **Duplexed Safety Control Unit** |
| **SSC60S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06D10-31E** (Ed.11)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **SSC60D** / **SSC60S** – b c d e f / x

(Distinctive combinations of suffix and option codes as indicated per table)

| UK Regulations *1 | UK Designated Standards | -Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) – Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) – Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) – Part 6-2: General standards – immunity for industrial environment | e = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products – Part 1: Equipment classification and requirements | e = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *4 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres – Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | e = **4**. and d = **E**. |
| | The marking of the equipment or protective system *5:<br>**Ex II 3 G Ex ec nC IIC T4 Gc X** | |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |

| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products -- Part 1: Equipment classification and requirements | e = **4**. |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Applicable to Analog Input Module (Model: SAI143, SAV144) only.*
***3:** Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
***4:** Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***5:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*





## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the products.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB058-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|---|---|
| | | | SSC60D | SSC60S | EMC | LVD | Ex *3 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP461 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| S2CP471 *2 | as a spare of SCP461 | | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | FAN Unit | ✔ | ✔ | C | NR | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: This module is not pre-installed in the SSC60D and SSC60S. However, it is delivered as a spare of SCP461 and to be implemented.*
***3**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AGB058-A01**.

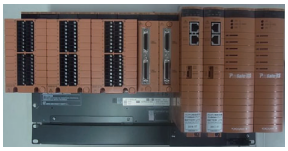
**Table 3:** Other accessories
Refer to **AGB058-A01**.





## Appendix 3

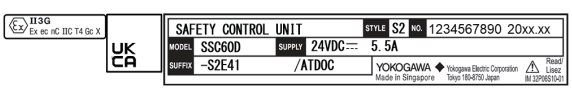
External View of SSC60D and SSC60S


SSC60D


SSC60S

Image of Nameplate
(Typical example; details may differ)

With no explosion protection



With explosion protection

-/-



YOKOGAWA ◆ Doc. No: AGB078-C02

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **SNB10D** | **Safety Node Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06K10-31E** (Ed.6)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi
19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **SNB10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table).

| UK Regulations *1 | UK Designated Standards | -Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | c = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *4 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n" | c = **4**.<br>and<br>d = **E**. |
| | The marking of the equipment or protective system *5:<br>**II 3 G Ex ec nC IIC T4 Gc X** | |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |





| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **4**. |

**1: The description in parentheses are the abbreviations for UK Regulations used in this document.*
**2: Applicable to Analog Input Module (Model: SAI143, SAV144) only.*
**3: Applicable to Optical ESB Bus Repeater Module (Model: SNT401, SNT411, SNT421, SNT501, SNT511, SNT521) only.*
**4: Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
**5: Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*





## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB058-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LV | Ex *2 | RoHS |
| SPW481 | c = **1** | Power Supply Module | C | C | NS | C |
| SPW482 | c = **2** | | C | C | NS | C |
| SPW484 | c = **4** | | C | NR | A | C |
| SSB401 | always installed | ESB Bus Interface Module | C | NR | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AGB058-A01**.

**Table 3:** Other accessories
Refer to **AGB058-A01**.





## Appendix 3

External View of SNB10D

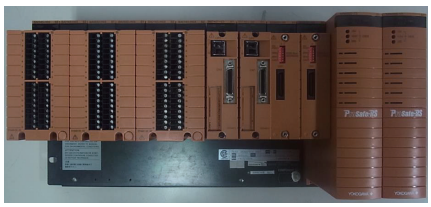
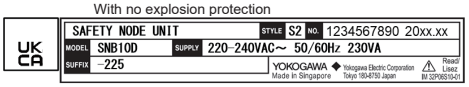
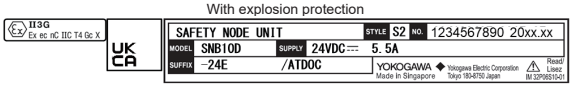


Image of Nameplate
(Typical example; details may differ)

With no explosion protection




With explosion protection

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# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| Model code | Model name |
|---|---|
| **SNT10D** | **Unit for Optical Bus Repeater Module** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32Q06K11-31E** (Ed.7)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **SNT10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table).

| UK Regulations *1 | UK Designated Standards | -Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | c = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014+A11:2021** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *3 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e" | c = **4**. and d = **E**. |
| | The marking of the equipment or protective system *4:<br>Ex **II 3 G Ex ec IIC T4 Gc X** | |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |





| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201: 2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014+A11:2021** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **4**. |

***1:** *The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** *Applicable to Optical ESB Bus Repeater Module (Model: SNT401, SNT411, SNT421, SNT501, SNT511, SNT521) only.*
***3:** *Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***4:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*





## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB058-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LV | Ex *2 | RoHS |
| SPW481 | c = **1** | Power Supply Module | C | C | NS | C |
| SPW482 | c = **2** | | C | C | NS | C |
| SPW484 | c = **4** | | C | NR | A | C |

***1**: *See Appendix 1 for the position of suffix code.*
***2**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AGB058-A01**.

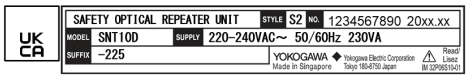
**Table 3:** Other accessories
Refer to **AGB058-A01**.

## Appendix 3

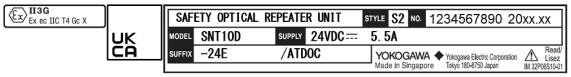
External View of SNT10D

Image of Nameplate
(Typical example; details may differ)

With no explosion protection




With explosion protection

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YOKOGAWA ◆ Doc. No: AGB080-C02-1

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **S2SC70D** | **Duplexed Safety Control Unit** |
| **S2SC70S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06D10-01EN** (Ed.11)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi
19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **S2SC70D** / **S2SC70S** – b c d e f g h / x
(Distinctive combinations of suffix and option codes as indicated per table)

| UK Regulations *1 | UK Designated Standards | -Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1** Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005** Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014** Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013** Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1** Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics –Limits and methods of measurement<br>**EN 61000-6-2:2005** Electromagnetic compatibility (EMC) – Part 6-2: General standards – immunity for industrial environment | e = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019** Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018** Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2 Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3 Safety of laser products – Part 1: Equipment classification and requirements | e = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *4 (Ex) | **EN IEC 60079-0:2018** Explosive atmospheres – Part 0: Equipment – General requirements<br>**EN IEC 60079-7:2015+A1:2018** Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019** Explosive atmospheres – Part 15: Equipment protection by type of protection "n" | e = **4** and f = **1**. |
| | The equipment or protective system includes the following specific marking of explosion protection *5:<br>Ⓔx **II 3 G Ex ec nC IIC T4 Gc X** | |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018** Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |





| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019** Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018** Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 61010-2-030:2010** *2 Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN 60825-1:2014+A11:2021** *3 Safety of laser products – Part 1: Equipment classification and requirements | e = **4** |

*1: *The description in parentheses are the abbreviations for UK Regulations used in this document.*
*2: *Applicable to Analog Input Module (Model: SAI143, SAV144) only.*
*3: *Applicable to Optical ESB Bus Repeater Master Module (Model: SNT401, SNT411, SNT421) only.*
*4: *Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** and **GS 32Q06L17-31E** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
*5: *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity. **IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the products.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB058-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|---|---|
| | | | S2SC70D | S2SC70S | EMC | LV | Ex *3 | RoHS |
| SPW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| SPW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| SPW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| SCP461 | c = **4** | Processor Module | ✔ | ✔ | C | NR | A | C |
| S2CP471 | c = **A** or **4** *2 | | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | FAN Unit | ✔ | ✔ | C | NR | A | C |

*1: *See Appendix 1 for the position of suffix code.*
*2: *As a spare of SCP461, S2CP471 will be delivered.*
*3: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AGB058-A01**.

**Table 3:** Other accessories
Refer to **AGB058-A01**.



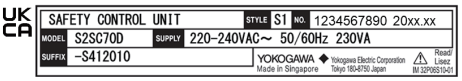


## Appendix 3

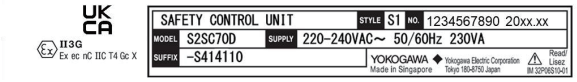
External View of S2SC70D and S2SC70S

S2SC70D S2SC70S

Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

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Doc. No: AGB058-A01
Date: 15 October 2021

## Lists of configurable modules and accessories for ProSafe-RS (UKCA marking)

Several configurable modules and accessories are common to ProSafe-RS products.

**SECTION 1:** Configurable modules and accessories

The indications used in the Table 1 and 2 are defied as:
**Indications**: *'X' = Available.* *'---' = Not available.*

**Table 1** Configurable modules

| Model/Parts No. | Model/Parts Name | Product in which a module is installed | | | | | |
|---|---|---|---|---|---|---|---|
| | | SSC50D SSC50S | SSC57D SSC57S | SSC60D SSC60S | S2SC70D S2SC70S | SNB10D | SNT10D |
| SCP451 | Processor Module | X *1 | X *1 | --- | --- | --- | --- |
| SCP461 | | --- | --- | X *1 | X *2 | --- | --- |
| S2CP471 | | --- | --- | X *3 | X *2 | --- | --- |
| SPW481 | Power Supply Module | X *2 | X *2 | X *2 | X *2 | X *2 | X *2 |
| SPW482 | | X *2 | X *2 | X *2 | X *2 | X *2 | X *2 |
| SPW484 | | X *2 | X *2 | X *2 | X *2 | X *2 | X *2 |
| AIP602 | Fan Unit | X *1 | X *1 | X *1 | X *1 | --- | --- |
| SSB401 | ESB Bus Interface Module | --- | --- | --- | --- | X *1 | --- |
| S2EN402 | N-ESB Bus Coupler Module | --- | --- | --- | X | --- | --- |
| S2EN404 | | --- | --- | --- | X | --- | --- |
| SEC401 | ESB Bus Coupler Module | X | X | X | X | --- | --- |
| SEC402 | | --- | --- | X | X | --- | --- |
| SNT411 | Optical ESB Bus Repeater Master Module | X | X | X | X | X | X |
| SNT401 | | X | X | X | X | X | X |
| SNT421 | | X | X | X | X | X | X |
| SNT511 | Optical ESB Bus Repeater Slave Module | --- | --- | --- | --- | X | X |
| SNT501 | | --- | --- | --- | --- | X | X |
| SNT521 | | --- | --- | --- | --- | X | X |
| SAI143 | Analog Input Module | X | X | X | X | X | --- |
| SAV144 | | X | X | X | X | X | --- |
| SAT145 | TC/mV Input Module | X | X | X | X | X | --- |
| SAR145 | RTD Input Module | X | X | X | X | X | --- |
| SAI533 | Analog Output Module | X | X | X | X | X | --- |
| SDV144 | Digital Input Module | X | X | X | X | X | --- |
| SDV531 | Digital Output Module | X | X | X | X | X | --- |
| SDV541 | | X | X | X | X | X | --- |
| SDV521 | | X | X | X | X | X | --- |
| SDV526 | | X | X | X | X | X | --- |
| SDV53A | | X | X | X | X | X | --- |
| ALR111 | Serial Communication Module | X | X | X | X | X | --- |
| ALR121 | | X | X | X | X | X | --- |
| ALE111 | Ethernet Communication Module | X | X | X | X | X | --- |
| S2LP131 | Fire and Gas Communication Module | --- | --- | --- | X | X | --- |

*1: *This module is pre-installed in the product. Therefore, it is not configurable.*
*2: *This module/unit is specified by the suffix code of the product. By that meaning, it can be said as the configurable module. However, once it is specified, it cannot be replaced with other type of the module by a user.*
*3: This module is not pre-installed in the product. However, it will be delivered as a spare of the pre-installed module, SCP461 and to be implemented.



Doc. No: AGB058-A01
Date: 15 October 2021

**Table 2** Other accessories

| Model/Parts No. | Model/Parts Name | Product for which an accessory is used | | | | | |
|---|---|---|---|---|---|---|---|
| | | SSC50D SSC50S | SSC57D SSC57S | SSC60D SSC60S | S2SC70D S2SC70S | SNB10D | SNT10D |
| STA4S | Pressure Clamp Terminal Block for Analog Signals | X | X | X | X | X | --- |
| STB4S | Pressure Clamp Terminal Block for Digital Signals | X | X | X | X | X | --- |
| STA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | X | X | X | X | X | --- |
| STB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | X | X | X | X | X | --- |
| SEA4D | Analog Terminal Board | X | X | X | X | X | --- |
| SBA4D | Terminal Board for Analog | X | X | X | X | X | --- |
| S1BB4D | Terminal Board for Analog Input, 3-wire | X | X | X | X | X | --- |
| SBT4D | Terminal Board for TC/mV | X | X | X | X | X | --- |
| SBR4D | Terminal Board for RTD Input | X | X | X | X | X | --- |
| SED2D | Digital Terminal Board | X | X | X | X | X | --- |
| SED3D | | X | X | X | X | X | --- |
| SED4D | | X | X | X | X | X | --- |
| SWD2D | | X | X | X | X | X | --- |
| SBD2D | Terminal Board for Digital Output | X | X | X | X | X | --- |
| SBD3D | | X | X | X | X | X | --- |
| SBD4D | Terminal Board for Digital | X | X | X | X | X | --- |
| SRM53D | Relay Board | X | X | X | X | X | --- |
| SRM54D | Relay Board | X | X | X | X | X | --- |
| SBM54D | Relay Board for Digital Output | X | X | X | X | X | --- |
| YCB301 | ESB Bus Cable | X | X | X | X | X | --- |
| AKB131 | RS-232C Modem Cable | X | X | X | X | X | --- |
| AKB132 | RS-232C Null Modem Cable | X | X | X | X | X | --- |
| AKB135 | RS-232C Modem Cable | X | X | X | X | X | --- |
| AKB136 | RS-232C Null Modem Cable | X | X | X | X | X | --- |
| AKB161 | RS-422/RS-485 Cable | X | X | X | X | X | --- |
| AKB162 | | X | X | X | X | X | --- |
| AKB331 | Signal Cable | X | X | X | X | X | --- |

**Table 2** Other accessories (continued)

| Model/Parts No. | Model/Parts Name | Product for which an accessory is used | | | | | |
|---|---|---|---|---|---|---|---|
| | | SSC50D SSC50S | SSC57D SSC57S | SSC60D SSC60S | S2SC70D S2SC70S | SNB10D | SNT10D |
| AKB611 | Signal Cable | X | X | X | X | X | --- |
| AKB651 | | X | X | X | X | X | --- |
| AKB652 | | X | X | X | X | X | --- |
| KS1 | | X | X | X | X | X | --- |
| SYEPD5D | Adapter for CDM | X | X | X | X | X | --- |
| SYEPD4D | Adapter for CDO | X | X | X | X | X | --- |
| SYEPD4B | Adapter for Digital Output branch | X | X | X | X | X | --- |
| SYEPA5D | Adapter for CAI | X | X | X | X | X | --- |
| SYEPA4D | Adapter for VIM | X | X | X | X | X | --- |
| SYK101W | Cable for Digital Input | X | X | X | X | X | --- |
| SYK101 | | X | X | X | X | X | --- |
| SYK501W | Cable for Digital Output | X | X | X | X | X | --- |
| SYK501 | | X | X | X | X | X | --- |
| SYK502 | Cable for Digital Output branch | X | X | X | X | X | --- |
| SYK301 | Cable for Analog | X | X | X | X | X | --- |
| SYPP10 | Adapter Fitting Frame | X | X | X | X | X | --- |
| SCB100 | Wiring Check Adapter for Digital Input | X | X | X | X | X | --- |
| SCB110 | | X | X | X | X | X | --- |
| AEP7D | Primary Power Supply Bus Unit | X | X | X | X | X | X |
| AEPV7D | Power Supply Bus Unit, Vertical Type | X | X | X | X | X | X |
| S1XEU4D | Universal Conversion Board | X | X | X | X | X | --- |
| S1XK301 | Signal cable | X | X | X | X | X | --- |
| S1XK601 | Signal cable | X | X | X | X | X | --- |





**SECTION 2:** UKCA-marking compliance relevance of each configurable module and accessory (as indicated per UK-Regulation)

The following tables show the UKCA-marking compliance relevance to the product in which configurable modules and accessories are installed.
The indications used in the following tables are defied as:

**Indications**: *'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NS' = The accessory does not support the Regulation.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'A' = Compliance by 'Attestation of Conformity'*

**Table 3** Configurable modules

| Model/Parts No. | Model/Parts Name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | Ex Note 1 | RoHS |
| SCP451 | Processor Module | C | NR | A | C Note 4 |
| SCP461 | | C | NR | A | C |
| S2CP471 | | C | NR | A | C |
| SPW481 | Power Supply Module | C | C | NS | C |
| SPW482 | | C | C | NS | C |
| SPW484 | | C | NR | A | C |
| AIP602 | Fan Unit | C | NR | A | C |
| SSB401 | ESB Bus Interface Module | C | NR | A | C |
| S2EN402 | N-ESB Bus Coupler Module | C | NR | A | C |
| S2EN404 | | C | NR | A | C |
| SEC401 | ESB Bus Coupler Module | C | NR | A | C |
| SEC402 | | C | NR | A | C |
| SNT411 | Optical ESB Bus Repeater Master Module | C | C Note 2 | A | C |
| SNT401 | | C | C Note 2 | A | C |
| SNT421 | | C | C Note 2 | A | C |
| SNT511 | Optical ESB Bus Repeater Slave Module | C | C Note 2 | A | C |
| SNT501 | | C | C Note 2 | A | C |
| SNT521 | | C | C Note 2 | A | C |
| SAI143 | Analog Input Module | C | C Note 3 | A | C |
| SAV144 | | C | C Note 3 | A | C |
| SAT145 | TC/mV Input Module | C | C Note 3 | A | C |
| SAR145 | RTD Input Module | C | C Note 3 | A | C |
| SAI533 | Analog Output Module | C | NR | A | C |
| SDV144 | Digital Input Module | C | NR | A | C |
| SDV531 | Digital Output Module | C | NR | A | C |
| SDV541 | | C | NR | A | C |
| SDV521 | | C | NR | A | C |
| SDV526 | | C | C | NS | C |
| SDV53A | | C | NR | A | C |
| ALR111 Note 5 | Serial Communication Module | C | NR | A | C |
| ALR121 Note 5 | | C | NR | A | C |
| ALE111 Note 5 | Ethernet Communication Module | C | NR | A | C |
| S2LP131 | Fire and Gas Communication Module | C | NR | A | C |

**Note 1**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*
**Note 2**: *EN 60825-1 is applied to these modules.*
**Note 3**: *EN 61010-2-030 is applied to these modules.*
**Note 4**: *Only the following suffix codes conform to the RoHS Regulation: -53 and -E3*
**Note 5**: *In its own right, the conformities to the relevant Regulations are declared and it bears UKCA marking.*





**Table 4** Other accessories

| Model/Parts No. | Model/Parts Name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | Ex Note 1 | RoHS |
| STA4S | Pressure Clamp Terminal Block for Analog Signals | R | NR | A | C |
| STB4S | Pressure Clamp Terminal Block for Digital Signals | R | NR | A | C |
| STA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | R | NR | A | C |
| STB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | R | NR | A | C |
| SEA4D | Analog Terminal Board | R | NR | A | C |
| SBA4D | Terminal Board for Analog | R | NR | A | C |
| S1BB4D | Terminal Board for Analog Input, 3-wire | R | C | A | C |
| SBT4D | Terminal Board for TC/mV | R | NR | A | C |
| SBR4D | Terminal Board for RTD Input | R | NR | A | C |
| SED2D | Digital Terminal Board | R | NR | A | C |
| SED3D | | R | NR | A | C |
| SED4D | | R | NR | A | C |
| SWD2D | | R | C | NS | C |
| SBD2D | Terminal Board for Digital Output | R | C | A | C |
| SBD3D | | R | C | A | C |
| SBD4D | Terminal Board for Digital | R | C | A | C |
| SRM53D | Relay Board | R | C | NS | C |
| SRM54D | Relay Board | R | C | NS | C |
| SBM54D | Relay Board for Digital Output | R | C | NS | C |
| YCB301 | ESB Bus Cable | R | NR | NR | C |
| AKB131 | RS-232C Modem Cable | R | NR | NR | C |
| AKB132 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB135 | RS-232C Modem Cable | R | NR | NR | C |
| AKB136 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB161 | RS-422/RS-485 Cable | R | NR | NR | C |
| AKB162 | | R | NR | NR | C |
| AKB331 | Signal Cable | R | NR | NR | C |
| AKB611 | | R | NR | NR | C |
| AKB651 | | R | NR | NR | C |
| AKB652 | | R | C | NS | C |
| KS1 | | R | NR | NR | C |
| SYEPD5D | Adapter for CDM | R | NR | NS | C |
| SYEPD4D | Adapter for CDO | R | NR | NS | C |
| SYEPD4B | Adapter for Digital Output branch | R | NR | NS | C |
| SYEPA5D | Adapter for CAI | R | NR | NS | C |
| SYEPA4D | Adapter for VIM | R | NR | NS | C |
| SYK101W | Cable for Digital Input | R | NR | NR | C |
| SYK101 | | R | NR | NR | C |
| SYK501W | Cable for Digital Output | R | NR | NR | C |
| SYK501 | | R | NR | NR | C |





**Table 4** Other accessories (continued)

| Model/Parts No. | Model/Parts Name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | Ex Note 1 | *RoHS* |
| SYK502 | Cable for Digital Output branch | R | NR | NR | C |
| SYK301 | Cable for Analog | R | NR | NR | C |
| SYPP10 | Adapter Fitting Frame | R | NR | NS | C |
| SCB100 | Wiring Check Adapter for Digital Input | R | NR | ***A*** | C |
| SCB110 | | R | NR | ***A*** | C |
| AEP7D Note 3 | Primary Power Supply Bus Unit | R | C Note 2 | A | C |
| AEPV7D Note 3 | Power Supply Bus Unit, Vertical Type | R | C Note 2 | A | C |
| S1XEU4D | Universal Conversion Board | R | NR | NS | C |
| S1XK301 | Signal cable | R | NR | NR | C |
| S1XK601 | Signal cable | R | NR | NR | C |

**Note 1**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*
**Note 2**: *The model of 24 VDC input (the first position of the suffix code is '4') is "NR".*
**Note 3**: *In its own right, the conformities to the relevant Regulations are declared and it bears UKCA marking.*

**SECTION3**: Reason for the update

| Date yyyy-mm-dd | Description | DR | CH | APP |
|---|---|---|---|---|
| 2021-10-15 | - Initial issue | A.Tsuruta | Y.Oowaki | T.Yokoi |
| | | Systems Hardware R&D Dept. Systems Development Center Digital Solutions HQ | | |
| | | Div. | | |





# Attestation of Conformity (UK Ex Regulation)

The Components:

| Model code **Note 1** | Model name | Type of protection **Note 2** |
|---|---|---|
| SCP451 | Processor Module | A-1 |
| SCP461 | | A-1 |
| S2CP471 | | A-1 |
| SPW484 | Power Supply Module | A-1 |
| SEC401 | ESB Bus Coupler Module | A-1 |
| SEC402 | | A-1 |
| SSB401 | ESB Bus Interface Module | A-1 |
| AIP602 | Fan Unit | A-1 |
| S2EN402 | N-ESB Bus Coupler Module | A-1 |
| S2EN404 | N-ESB Bus Coupler Module | A-1 |
| SNT401 | Optical ESB Bus Repeater Master Module | A-1 |
| SNT421 | Optical ESB Bus Repeater Master Module | A-1 |
| SNT411 | Optical ESB Bus Repeater Master Module 5 km to 50 km | A-1 |
| SNT501 | Optical ESB Bus Repeater Slave Module | A-1 |
| SNT511 | Optical ESB Bus Repeater Slave Module 5 km to 50 km | A-1 |
| SNT521 | Optical ESB Bus Repeater Slave Module | A-1 |
| SAI143 | Current Input Module | A-1 |
| SAV144 | Voltage Input module | A-1 |
| SAT145 | TC/mV Input Module | A-1 |
| SAR145 | RTD Input Module | A-1 |
| SAI533 | Current Output Module | A-1 |
| SDV144 | Digital Input Module | A-1 |
| SDV531 | Digital Output Module | A-1 |
| SDV541 | | A-1 |
| SDV521 | | A-1 |
| SDV53A | | A-1 |
| ALR111 | Serial Communication Module | A-1 |
| ALR121 | | A-1 |
| ALE111 | Ethernet Communication Module | A-1 |
| S2LP131 | Fire and Gas Communication Module | A-1 |
| SEA4D | Analog Terminal Board | A-1 |
| SBA4D | Terminal board for Analog | A-1 |
| SBR4D | Terminal board for RTD Input | A-1 |
| SBT4D | Terminal board for TC/mV | A-1 |
| SED4D | Digital Terminal Board | A-1 |
| SED2D | | A-1 |
| SED3D | | A-1 |
| SBD2D | Terminal board for Digital Output | A-2 |
| SBD3D | | A-2 |
| SBD4D | Terminal board for Digital | A-2 |
| S1BB4D | Terminal Board for Analog input | A-2 |
| SCB100 | Wiring Check Adapter for Digital Input | A-1 **Note 3** |
| SCB110 | | A-1 **Note 3** |
| AEP7D | Primary Power Supply Bus Unit | A-1 |
| AEPV7D | Power Supply Bus Unit, Vertical Type | A-1 |

(continued to the next page)





| Model code **Note 1** | Model name | Type of protection **Note 2** |
|---|---|---|
| STA4S | Pressure Clamp Terminal Block for Analog Signals | A-1 **Note 3** |
| STB4S | Pressure Clamp Terminal Block for Digital Signals | A-1 **Note 3** |
| STA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | A-1 **Note 3** |
| STB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | A-1 **Note 3** |

**Note 1:** *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

**Note 2**: *Type of protection is show on the marking of each component:*

**A-1:** Ex **II 3 G Ex ec IIC T4 Gc X**

**A-2:** Ex **II 3 G Ex ec nC IIC T4 Gc X**

**Note 3**: *This component does not have autonomous function by itself and it will be always used and functional as a part of the other accessory. Therefore, the marking (the Ex hexagon, and applicable Ex protection codes) to this component is omitted and the marking on the other accessory includes this component. The accessories that are subject to the above description and the accessories to which those accessories belong are shown below:*

| *Part No. of the subject accessory* | *Accessories to which the subject accessory belongs* |
|---|---|
| *SCB100, SCB110* | *SDV144* |
| *STA4S* | *SAI143, SAV144, SAI533* |
| *STB4S* | *SDV144, SDV531, SDV541* |
| *STA4D* | *SAI143, SAV144, SAI533* |
| *STB4D* | *SDV144, SDV531, SDV541* |

further specified with model suffix and option codes:
**as listed in General Specification for each component guided by: IM 32P06S10-01Z1**
further technical specifications can be found:
**in General Specification for each component guided by: IM 32P06S10-01Z1**
Intended for use as components in Yokogawa Systems with model code:
**Product-models listed in AGB058-A01**
were successfully assessed as Components against the requirements of the UK Regulations, **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016** and the following Designated Standards:
**EN IEC 60079-0:2018**,
**EN IEC 60079-7:2015+A1:2018**,
**EN 60079-15:2010, EN IEC 60079-15:2019**

These components shall be incorporated, put in operation and maintained as instructed:
**in User's manuals guided by IM 32P06S10-01Z1.**





Tokyo, 15 October 2021

T. Yokoi 15-Oct-2021

**Toyoaki Yokoi**
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| Model code | Model name |
|---|---|
| **S2NN30D** | **Node Interface Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06F20-01EN** (Ed.6)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi
19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **S2NN30D** – b c d e f g h i j / x
(Distinctive combinations of suffix and option codes as indicated per table).

| UK Regulations *1 | UK Designated Standards | -Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection | c = **3**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment | c = **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014+A11:2021** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **3**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e" | c = 4 and i = 1. |
| | The marking of the equipment or protective system *3<br>Ex **II 3 G Ex ec IIC T4 Gc X** | |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances | any |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Applicable to N-ESB Bus Module (Model: S2EN501) only.*
***3:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*





| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014+A11:2021** *1<br>Safety of laser products -- Part 1: Equipment classification and requirements | c = **4**. |

***1:** Applicable to N-ESB Bus Module (Model: S2EN501) only.*





## Appendix 2

The Models/Parts in the list below are elements of the **S2NN30D**, Node Interface Unit with significant relevance to compliance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity'*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LV | Ex Note | RoHS |
| S2PW503 | c = **3** | 24 V DC Output Power Supply Unit | C | C | NS | C |
| S2PW504 | c = **4** | | C | NR | A | C |
| S2EN501 | always installed | N-ESB Bus Module | C | C *2 | A | C |

***1**: See Appendix 1 for the position of suffix code.*
***2**: EN 60825-1 is applied to this module.*

**Table 2:** Configurable modules for the product
There is no configurable module for S2NN30D.

**Table 3:** Other accessories

| Model code | Model name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | Ex Note | RoHS |
| S2KLF10 | F-SB Bus Cable | R | NR | NR | C |
| S2KPB10 | Power Supply Cable for Base Plate | R | NR | NR | C |

**Note**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

## Attestation of Conformity

The Components:

| Model code | Model name | Type of protection Note |
|---|---|---|
| S2PW504 | 24 V DC Output Power Supply Unit | The following marking is affixed to the component. |
| S2EN501 | N-ESB Bus Module | Ex **II 3 G Ex ec IIC T4 Gc X** |

further specified with model suffix and option codes:
as listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2NN30D** were successfully assessed as Components against the requirements of the UK Regulation, **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016** and the following Designated Standards:

**EN IEC 60079-0:2018**
**EN IEC 60079-7:2015+A1:2018**.

These components shall be incorporated, put in operation and maintained as instructed in User's manuals guided by **IM 32P06S10-01Z1**.

**Note**: *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*





## Appendix 3

External View of S2NN30D

Image of Nameplate
(Typical example; details may differ)

With no explosion protection


With explosion protection


Module Name plate (example: S2EN501)

With no explosion protection


With explosion protection


-/-



YOKOGAWA ◆

Doc No: AGB082-C02

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| System Model | System Name |
|---|---|
| **S2ZN1D** | **N-IO I/O Unit** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06K20-01EN** (Ed.8)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi
19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

| UK Regulations *1 | UK Designated Standards |
|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres – Part 7: Equipment protection by increased safety "e"<br><br>The equipment or protective system includes the following specific marking of explosion protection:*2<br>Ex **II 3 G Ex ec IIC T4 Gc X** |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Symbol "X" denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| **EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |
| **EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits |

***1:** Applicable to Analog Digital I/O Module (Model: S2MMM843) only.*

## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity. **IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

**Indications**: *'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity'*

| Model code | Model name | Relevant UK Regulations | | |
|---|---|---|---|---|
| | | EMC | Ex Note | RoHS |
| S2BN1D | Base Plate with disconnecting terminal | C | A | C |
| S2MMM843 | Analog Digital I/O Module | C | A | C |
| S2MDV843 | Digital I/O Module | C | A | C |
| S2DCV02 | Dummy Cover | NR | NR | C |
| S9905UV | FG Cable | R | NR | C |
| S9990FA *1 | Pressure clamp terminal block | NR | A | C |
| A2BM4 | Terminal board for analog digital I/O | R | A | C |
| AKB331 | Signal Cable (50 pin) | R | NR | C |
| AKB651 | Signal Cable (50 pin) | R | NR | C |
| SCB100 | Wiring Check Adapter for Digital Input | R | A | C |
| SCB110 | | R | A | C |

***1**: *This is the terminal of the Base Plate, S2BN1D. When S2BN1D is delivered without the terminal, this terminal is delivered separately and to be combined with S2BN1D at a customer's site.*

**Note**: *When the accessory has both explosion protection type and non-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*





### Attestation of Conformity

The Components:

| Model code | Model name | Type of protection Note |
|---|---|---|
| S2BN1D | Base Plate with disconnecting terminal | The following marking is affixed to the component. Ⓔx **II 3 G Ex ec IIC T4 Gc X** |
| S2MMM843 | Analog Digital I/O Module | |
| S2MDV843 | Digital I/O Module | |
| S9990FA *1 | Pressure clamp terminal block | |
| A2BM4 | Terminal board for analog digital I/O | |
| SCB100 *2 | Wiring Check Adapter for Digital Input | |
| SCB110 *2 | | |

**Note**: *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

***1**: *This component does not have autonomous function by itself and it will be always used and functional as a part of S2BN1D. Therefore, the marking (the Ex hexagon, and applicable Ex protection codes) to this component is omitted and the marking on the S2BN1D includes this component.*
***2**: *This component does not have autonomous function by itself and it will be always used and functional as a part of S2MMM843 and S2MDV843. Therefore, the marking (the Ex hexagon, and applicable Ex protection codes) to this component is omitted and the marking on the S2MMM843 and S2MDV843 includes this component.*

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2ZN1D** were successfully assessed as Components against the requirements of the UK Regulation, **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016** and the following Designated Standards:
**EN IEC 60079-0:2018,**
**EN IEC 60079-7:2015+A1:2018**

These components shall be incorporated, put in operation and maintained as instructed in User's manuals guided by **IM 32P06S10-01Z1**.





## Appendix 3

External View of S2ZN1D

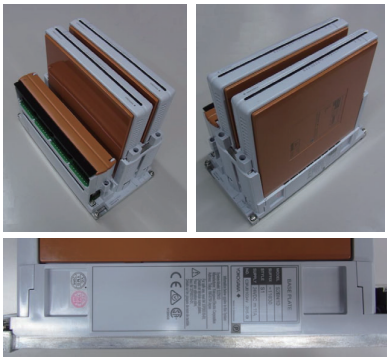




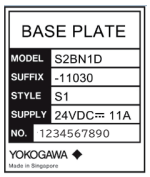


Image of Name Plate (System Name Plate)
(Typical example; details may differ)

No explosion protection type

System Name Plate


Module Name Plate (example)

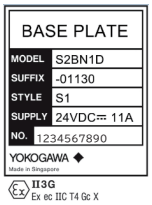



** System Name Plate is affixed to the Base Plate.*

Explosion protection type

System Name Plate


Module Name Plate (example)




** System Name Plate is affixed to the Base Plate.*

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YOKOGAWA ◆ Doc No: AGB083-C02

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| System model | System name |
|---|---|
| **S2ZN4D** | **N-IO I/O Unit** (for Barrier) |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06P10-01EN** (Ed.21)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

| UK Regulations *1 | UK Designated Standards |
|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN 60079-7:2015+A1:2018**<br>Explosive atmospheres -- Part 7: Equipment protection by increased safety "e"<br>The equipment or protective system includes the following specific marking of explosion protection: *2<br>Ex **II 3 G Ex ec IIC T4 Gc X** |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| **EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |
| **EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits |

***1:** Applicable to Analog Digital I/O Module (Model: S2MMM843) only.*





## Appendix 2

**S2ZN4D** is N-IO I/O Unit (for Barrier) for exclusive use of the intrinsic safety barriers made by Eaton Electric Limited. The intrinsic safety barriers which can be mounted to S2ZN4D are listed in **GS 32P06P10-01EN**.
The Model codes in the list below are elements of the **S2ZN4D** N-IO I/O Unit (for Barrier) with significant relevance to compliance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defined as:
**Indications**: *'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity'*

| Model code | Model name | Relevant UK Regulations | | |
|---|---|---|---|---|
| | | EMC | Ex **Note** | RoHS |
| S2BN4D | Base Plate for Barrier | C | A | C |
| S2MMM843 | Analog Digital I/O Module | C | A | C |
| S2MDV843 | Digital I/O Module | C | A | C |
| S2DCV02 | Dummy Cover | NR | NR | C |
| S9906UV | FG Cable | R | NR | C |

**Note**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*





## Attestation of Conformity

The Components:

| Model code | Model name | Type of protection |
|---|---|---|
| S2BN4D | Base Plate for Barrier | The following marking is affixed to the component.<br>Ex **II 3 G Ex ec IIC T4 Gc X** |
| S2MMM843 | Analog Digital I/O Module | |
| S2MDV843 | Digital I/O Module | |

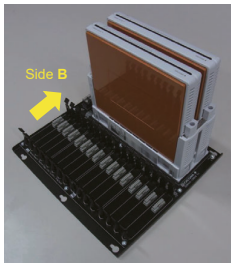
further specified with model suffix and option codes:
as listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2ZN4D** were successfully assessed as Components against the requirements of the UK Regulation, **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016** and the following Designated Standards:
**EN IEC 60079-0:2018,**
**EN 60079-7:2015+A1:2018**

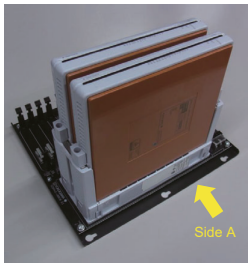
These components shall be incorporated, put in operation and maintained as instructed: in User's manuals guided by **IM 32P06S10-01Z1**.

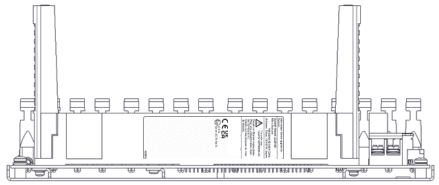
**Note**: *The explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

## Appendix 3

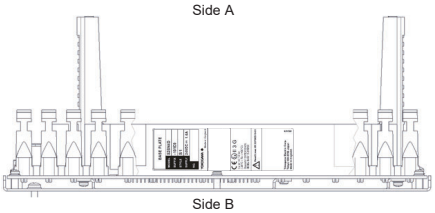
External View of S2ZN4D



Side A



Side B





Image of Nameplate (System Name Plate)
(Typical example; details may differ)

System Name Plate


Module Name Plate
(example: S2BN4D, S2MM843)



**Note**: *UKCA marking will be indicated in the System Name Plate and System Name Plate is affixed to the Base Plate.*

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YOKOGAWA ◆

Doc No: AGB084-C01

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| System model | System name |
|---|---|
| **S2ZN5D** | **N-IO I/O Unit** (for Barrier) |

as part of Product Family: **ProSafe-RS**
further information:

**as listed in General Specification: GS 32P06P10-01EN** (Ed.19)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2022**.

Signature:

(Manufacturer)

Tokyo, 30 September 2022

T. Yokoi 30-Sep-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

| UK Regulations *1 | UK Designated Standards |
|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 61326-1:2013 Class A Table 2**<br>Electrical equipment for measurement, control and laboratory user – EMC requirements – Part 1: General requirements |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres -- Part 7: Equipment protection by increased safety "e"<br>The equipment or protective system includes the following specific marking of explosion protection:*2<br>**II 3 G Ex ec IIC T4 Gc X** |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

*1: *The description in parentheses are the abbreviations for UK Regulations used in this document.*
*2: *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| **EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |
| **EN 61010-2-030:2010** *1<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits |

*1: *Applicable to Analog Digital I/O Module (Model: S2MMM843) only.*

## Appendix 2

**S2ZN5D** is Network I/O for Barrier for exclusive use of the intrinsic safety barriers made by PEPPERL+FUCHS GmbH. The intrinsic safety barriers which can be mounted to S2ZN5D are listed in **GS 32P06P10-01EN**.
The Models/Parts in the list below are elements of the **S2ZN5D** Network I/O for Barrier with significant relevance to compliance, as indicated per UK Regulations; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

**Indications**: *'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NS' = The accessory does not support the Regulation.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'A' = Compliance by 'Attestation of Conformity'*

| Model code | Model name | Relevant UK Regulations | | |
|---|---|---|---|---|
| | | EMC | Ex Note | RoHS |
| S2BN5D *1 | Base Plate for Barrier | C | C | C |
| S2MMM843 | Analog Digital I/O Module | C | A | C |
| S2MDV843 | Digital I/O Module | C | A | C |
| S2DCV02 | Dummy Cover | NR | NR | C |
| S9907UV | FG Cable | R | NR | C |

***1:** In its own right, the conformity to EMC, UKCA Ex (Type of protection "e" and intrinsic safety "i") and RoHS Directives are declared individually. Type of protection for S2BN5D is shown as the marking on the S2BN5D below:*

**II 3 (1) G Ex ec [ia Ga] IIC T4 Gc**
**II (1) D [Ex ia Da] IIIC**
**I (M1) [Ex ia Ma] I**

**Note**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*





### Attestation of Conformity

The Components:

| Model code | Model name | Type of protection |
|---|---|---|
| S2MMM843 | Analog Digital I/O Module | The following marking is affixed to the component. |
| S2MDV843 | Digital I/O Module | II 3 G Ex ec IIC T4 Gc X |

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model code: **S2ZN5D** were successfully assessed as Components against the requirements of the Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016.

These components shall be incorporated, put in operation and maintained as instructed:
in User's manuals guided by **IM 32P06S10-01Z1**.

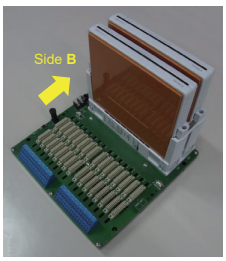
**Note**: *The explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

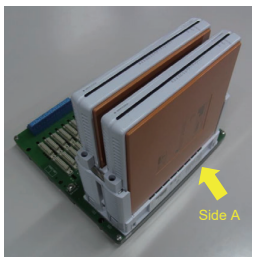




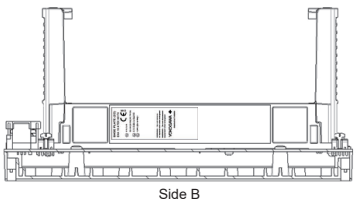
## Appendix 3

External View of S2ZN5D




Side A



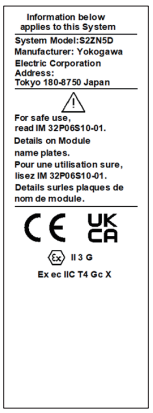
Side B



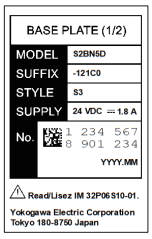


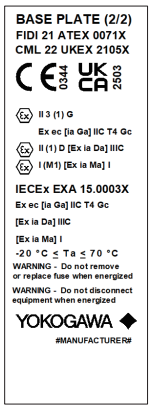
Image of Nameplate (System Name Plate)
(Typical example; details may differ)

System Name Plate




Module Name Plate (example)

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YOKOGAWA

Doc No: AGB085-C01

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| Model code | Model name |
|---|---|
| **S2BN5D** | **Base Plate for Barrier** |

as part of Product Family: **ProSafe-RS**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P06P10-01EN** (Ed.19)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2022**.

Signature:

(Manufacturer)

Tokyo, 30 September 2022

T. Yokoi 30-Sep-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

| UK Regulations *1 | UK Designated Standards |
|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 61326-1:2013 Class A Table 2**<br>Electrical equipment for measurement, control and laboratory user – EMC requirements – Part 1: General requirements |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN 60079-11:2012**<br>Explosive atmospheres -- Part 11: Equipment protection by intrinsic safety "i"<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres -- Part 7: Equipment protection by increased safety "e" |
| | The equipment or protective system includes the following specific marking of explosion protection:<br>**II 3 (1) G Ex ec [ia Ga] IIC T4 Gc**<br>**II (1) D [Ex ia Da] IIIC**<br>**I (M1) [Ex ia Ma] I**<br>UK Type-Examination Certificate No.: **CML 22UKEX2105X** *2 |
| | UK Type-Examination Certificate and Quality Assurance Notification is issued by:<br>The Name of the Notified Body: **Eurofins E&E CML Limited**<br>The Identification Number of the Notified Body: **2503**<br>The Address of the Notified Body: **Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ**<br>The Number of Quality Assurance Notification: **CML 22UKQAN15565** |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |

***1:** *The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

| Other Normative Standards |
|---|
| **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements |
| **EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment |



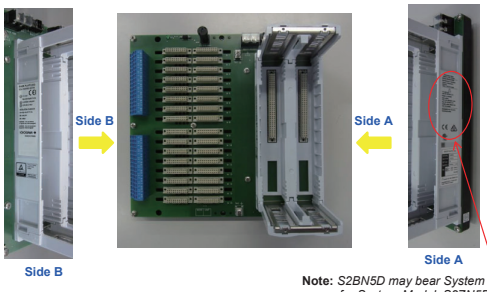


## Appendix 2

The product has no accessories.
Instructions relevant for safe use are described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1**.

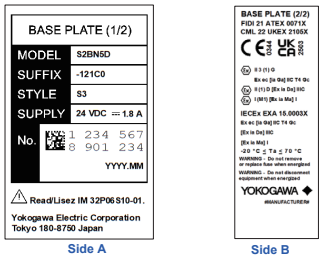
## Appendix 3

External View of S2BN5D




**Note:** *S2BN5D may bear System Name Plate for System-Model: S2ZN5D, too.*

Image of Nameplate
(Typical example; details may differ)

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YOKOGAWA

Doc. No. AGB090-C03

# UK DECLARATION OF CONFORMITY

We: **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the Products identified as:

| System Model | System Name |
|---|---|
| **S2ZN70D** | **N-IO field enclosure** |

as part of Product Family: **ProSafe-RS**
further specified with suffix- and option-codes:

**as listed in General Specification: GS 32P06Q10-01EN** (Ed.9)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedures.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

| UK Regulations and Standards | |
|---|---|
| UK Regulations *1 | UK Designated Standards |
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group 1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) -- Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements<br>**EN 61010-2-030:2010**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use – Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014+A11:2021** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres - Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n"<br>The marking of the equipment or protective system *3<br>**II 3 G Ex ec nC IIC T4 Gc X** |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Applicable to N-ESB Bus Module (Model: S2EN501) only. N-ESB Bus Module (Model: S2EN501) is the constituent element of S2NN30D installed in S2ZN60D.*
***3:** Symbol 'X' denotes the specific condition of use. See IM32Q01J30-31E for details.*





## Appendix 2

The Models/Parts in the list below are elements of the **S2ZN70D** N-IO field enclosure with significant relevance to compliance, as indicated per UK-Regulation; their application and use – as described in **IM 30A30A10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defied as:
**C:** This module/accessory is within the scope of this Regulation and in its own right it conforms to this Regulation and bears UKCA marking. And this accessory is significantly relevant to the conformity of the main Product-model.
For Ex, the following indications mean the markings (the Ex hexagon and applicable Ex protection codes) on the module/accessory:
**II 3 G Ex ec nC IIC T4 Gc X**
Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** for details.
**CD:** This accessory conforms to this Regulation as a part of the main Product-model. (The main Product-model is within the scope of this Regulation.)
For Ex, if the accessory conforms to Ex Regulation as a component of the main Product-model and its conformity is attested by 'Attestation of Conformity', the indication of '**A**' is used instead of 'CD':
**A:** This accessory conforms to Ex Regulation as a component of the main Product-model. Compliance is stated by 'Attestation of Conformity'. Refer to 'Attestation of Conformity'.
On the other hand, if the accessory does not have autonomous function by itself and it will be always used and functioned as a part of the other accessory, the marking (the Ex hexagon and applicable Ex protection codes) to this accessory is omitted.
**R:** This accessory itself is not within the scope of this Regulation, but it is relevant to the conformity of the main Product-model.
**NR:** This accessory is not within the scope of this Regulation nor it is not relevant to the conformity of the main Product-model.
**NS:** This Regulation is not applied to this accessory and/or this accessory does not conform to this Regulation.





| Model/Parts code | Model/Parts name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | RoHS | Ex *2 |
| S2ZN60D *1 | N-IO field enclosure base unit | C | C | C | C |
| S2CB60 | Enclosure for S2NN60D | R | C | C | A |
| S9415FE | Short bar (RED) | NR | NR | R | CD *3 |
| S9416FE | Short bar (BLUE) | NR | NR | R | CD *3 |
| S9417FE | Fuse plug (2A) | NR | R | C | CD *3 |
| S9393FE | Fuse plug (3.15A) | NR | R | C | CD *3 |
| B1036HZ | Hole seal for M20 | NR | R | R | CD *3, *4 |
| B1037HZ | Hole seal for M32 | NR | R | R | CD *3, *4 |

*1: *In its own right, UKCA marking is affixed to this product. The independent Technical Documentation: **AGB091** is available.*
*2: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*
*3: *This component does not have autonomous function by itself and it will be always used and functional as a part of S2ZN70D. The marking (the Ex hexagon, and applicable Ex protection codes) on the S2ZN70D includes this component.*
*4: *This accessory is the resale product which is certified in its own right as the Ex component. We re-assessed it as a constituent element of S2ZN70D.*

### Attestation of Conformity

The Component:

| Model code **Note** | Model name | Type of protection |
|---|---|---|
| S2CB60 | Enclosure for A2NN60D | The following marking is affixed to the component.<br>**II 3 G Ex ec IIC T4 Gc X** |

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model codes: **S2ZN70D**
was successfully assessed as Components against the requirements of the UK Regulation, **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016** and the following Designated Standards:
**EN IEC 60079-0:2018,**
**EN IEC 60079-7:2015+A1:2018,**
These components shall be incorporated, put in operation and maintained as instructed:
in User's manuals guided by **IM 32P06S10-01Z1**

**Note**: *If both of explosion protection type and non-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*





## Appendix 3

External View of S2ZN70D

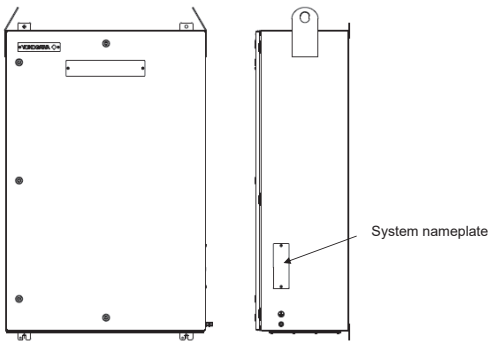
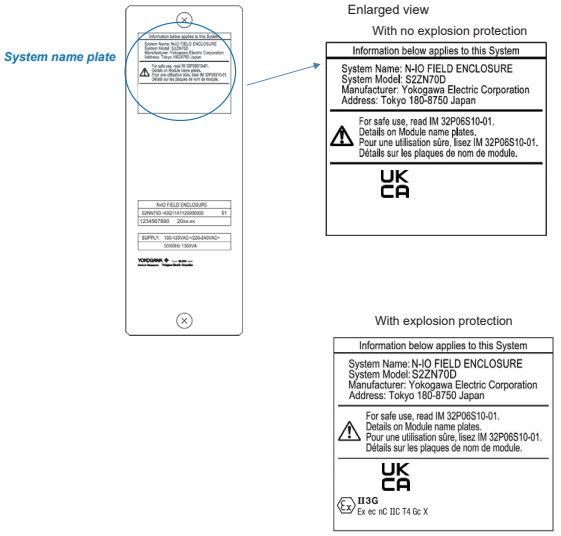


Image of Name plate (System Name plate)
(Typical example; details may differ)

When collectively ordering the base unit and the enclosure.

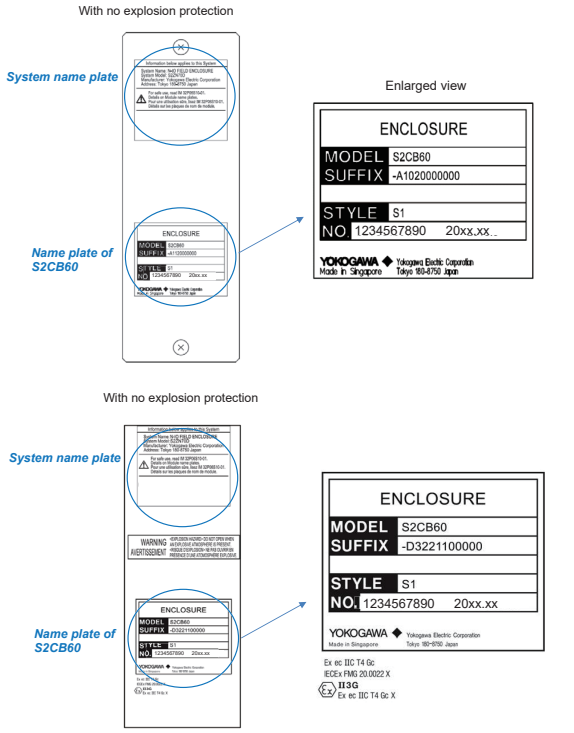



**Note:** *System name plate is affixed to S2CB60. Name plate of S2CB60 is affixed inside the enclosure.*





When respectively ordering the base unit and the enclosure.




**Note 1:** *When respectively ordering the base unit and the enclosure, Name plate of S2CB60 is affixed to the same area as System name plate.*

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YOKOGAWA ◆ Doc. No. AGB091-C02

# UK DECLARATION OF CONFORMITY

We: **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the products identified as:

| System Model | System Name |
|---|---|
| **S2ZN60D** | **N-IO field enclosure base unit** |

as part of Product Family: **ProSafe-RS**
further specified with suffix- and option-codes:

**as listed in General Specification: GS 32P06Q10-01EN** (Ed.8)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedures.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi
19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

| UK Regulations and Standards | |
|---|---|
| UK Regulations *1 | UK Designated Standards |
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group 1**<br>Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement<br>**EN 61000-6-2:2005**<br>Electromagnetic compatibility (EMC) – Part 6-2: General standards – immunity for industrial environment<br>**EN 61000-3-2:2014**<br>Electromagnetic compatibility (EMC) – Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)<br>**EN 61000-3-3:2013**<br>Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>Safety requirements for electrical equipment for measurement, control, and laboratory use –<br>Part 1: General requirements<br>**EN 61010-2-030:2010**<br>Safety requirements for electrical equipment for measurement, control and laboratory use –<br>Part 2-030: Particular requirements for testing and measuring circuits<br>**EN IEC 61010-2-201:2018**<br>Safety requirements for electrical equipment for measurement, control and laboratory use –<br>Part 2-201: Particular requirements for control equipment<br>**EN 60825-1:2014+A11:2021** *2<br>Safety of laser products -- Part 1: Equipment classification and requirements |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018**<br>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (Ex) | **EN IEC 60079-0:2018**<br>Explosive atmospheres -- Part 0: Equipment - General requirements<br>**EN IEC 60079-7:2015+A1:2018**<br>Explosive atmospheres - Part 7: Equipment protection by increased safety "e"<br>**EN 60079-15:2010**<br>**EN IEC 60079-15:2019**<br>Explosive atmospheres -- Part 15: Equipment protection by type of protection "n"<br>The marking of the equipment or protective system *3<br>**Ⓔx II 3 G Ex ec nC IIC T4 Gc X** |

***1:** The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** Applicable to N-ESB Bus Module (Model: S2EN501) only. N-ESB Bus Module (Model: S2EN501) is the constituent element of S2NN30D.*
***3:** Symbol 'X' denotes the specific condition of use. See IM32Q01J30-31E for details.*

## Appendix 2

The Models/Parts in the list below are elements of the **S2ZN60D** N-IO field enclosure base unit with significant relevance to compliance, as indicated per UK-Regulation; their application and use – as described in **IM 30A30A10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity.
**IM 32P06S10-01Z1** has UKCA-marking significant compliance relevance as the essential part of the product.

The indications used in the following tables are defied as:
**C:** This module/accessory is within the scope of this Regulation and in its own right it conforms to this Regulation and bears UKCA marking. And this accessory is significantly relevant to the conformity of the main Product-model.
For Ex, the following indications mean the markings (the Ex hexagon and applicable Ex protection codes) on the module/accessory:

**C-1:** Ⓔx **II 3 G Ex ec IIC T4 Gc X**

**C-2:** Ⓔx **II 3 G Ex ec nC IIC T4 Gc X**

Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** for details.
**CD:** This accessory conforms to this Regulation as a part of the main Product-model. (The main Product-model is within the scope of this Regulation.)
For Ex, if the accessory conforms to Ex Regulation as a component of the main Product-model and its conformity is attested by 'Attestation of Conformity', the indication of '**A**' is used instead of 'CD':
**A:** This accessory conforms to Ex Regulation as a component of the main Product-model. Compliance is stated by 'Attestation of Conformity'. Refer to 'Attestation of Conformity'.
**R:** This accessory itself is not within the scope of this Regulation, but it is relevant to the conformity of the main Product-model.
**NR:** This accessory is not within the scope of this Regulation nor it is not relevant to the conformity of the main Product-model.
**NS:** This Regulation is not applied to this accessory and/or this accessory does not conform to this Regulation.





| Model/Parts code | Mode/Parts name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | RoHS | Ex *3 |
| S2NN30D *1 | Node Interface Unit | C | C | C | C-1 |
| S2ZN1D *2 | N-IO I/O unit | C | R | C | C-2 |
| S9391FE | IO base unit assembly | R | R | R | NR |
| S9392FE | NIU base unit assembly | CD | CD | CD | NS |
| S9510FE | | CD | CD | CD | A |

*1: *In its own right, UKCA marking is affixed to this product. The independent Technical Documentation: **AGB081** is available. For the hazardous location, the model code that can be mounted on the S2ZN60D is limited to S2NN30D-44010##13. (# means any defined code is selectable.)*
*2: *In its own right, UKCA marking is affixed to this product. The independent Technical Documentation: **AGB082** is available.*
*3: *When the accessory has both explosion protection type and non-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

### Attestation of Conformity

The Component:

| Model code **Note** | Model name | Type of protection |
|---|---|---|
| S9510FE | NIU base unit assembly | The following marking is affixed to the component. Ⓔx **II 3 G Ex ec nC IIC T4 Gc X** |

further specified with model suffix and option codes:
As listed in General Specification guided by: **IM 32P06S10-01Z1**
further technical specifications can be found:
in General Specification guided by: **IM 32P06S10-01Z1**
Intended for use as components in Yokogawa products with model codes: **S2ZN60D**
was successfully assessed as Components against the requirements of the UK Regulation, **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016** and the following Designated Standards:
**EN IEC 60079-0:2018, EN**
**IEC 60079-7:2015+A1:2018,**
**EN 60079-15:2010, EN IEC 60079-15:2019**
These components shall be incorporated, put in operation and maintained as instructed:
in User's manuals guided by **IM 32P06S10-01Z1**.

**Note**: *If both of explosion protection type and non-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*





## Appendix 3

External View of S2ZN60D

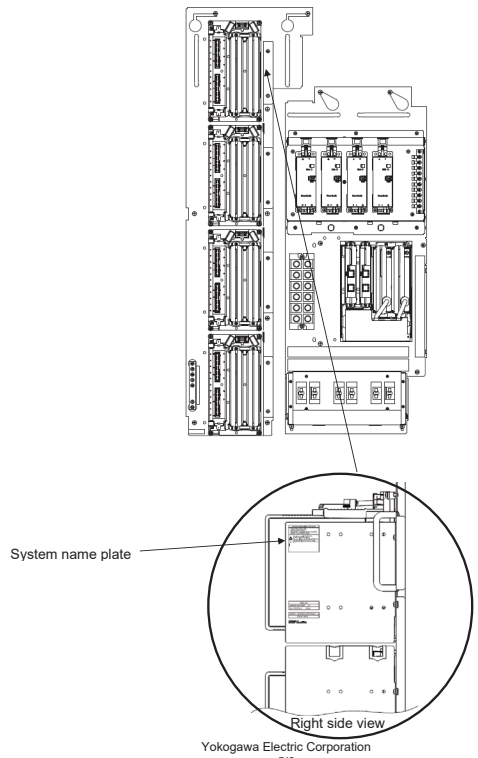
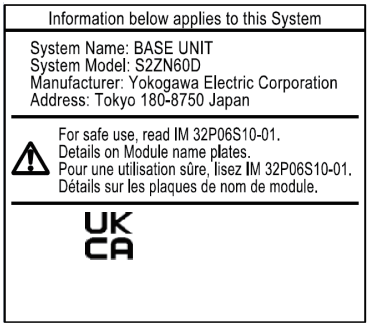




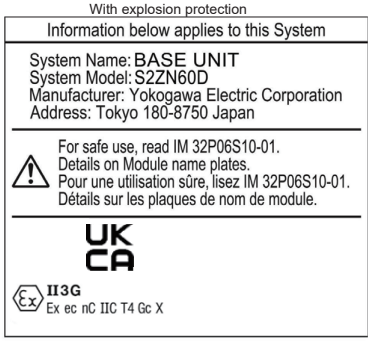



Image of Name plate (System Name plate)
(Typical example; details may differ)

With no explosion protection




With explosion protection

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YOKOGAWA ◆ Doc. No. AGB093-C02-1

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the product identified as:

| Model code | Model name |
|---|---|
| **L1SC70D** | **Duplex Safety Control Unit** |
| **L1SC70S** | **Safety Control Unit** |

as part of Product Family: **ProSafe-RS Lite**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P56D10-01EN** (Ed.2)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **L1SC70D** / **L1SC70S** – b c d e f g h / x

(Distinctive combinations of suffix and option codes as indicated per table)

| UK Regulations *1 | UK Designated Standards | - Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005**<br>**EN 61000-3-2:2014**<br>**EN 61000-3-3:2013** | e = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005** | e = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *2<br>**EN 60825-1:2014+A11:2021** *3 | e = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *4 (Ex) | **EN IEC 60079-0:2018**<br>**EN IEC 60079-7:2015+A1:2018**<br>**EN 60079-15:2010, EN IEC 60079-15:2019**<br>The equipment or protective system includes the following specific marking of explosion protection: *5<br>Ex **II 3 G Ex ec nC IIC T4 Gc X** | e = **4** and f = **1**. |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018** | any |

***1:** *The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** *Applicable to Analog Input Modules (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
***3:** *Applicable to Optical ESB Bus Repeater Master Modules (Model: L1NT401 and L1NT411) only.*
***4:** *Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***5:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

| Other Normative Standards | - Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *1<br>**EN 60825-1:2014+A11:2021** *2 | e = **4** |

***1:** *Applicable to Analog Input Modules (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
***2:** *Applicable to Optical ESB Bus Repeater Master Modules (Model: L1NT401 and L1NT411) only.*





## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity. The full list of accessories for this product can be found in **IM 32P06S10-01Z1**.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB096-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Product-model in which the module is used | | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|---|---|
| | | | L1SC70D | L1SC70S | EMC | LV | Ex *2 | RoHS |
| L1PW481 | e = **1** | Power Supply Module | ✔ | ✔ | C | C | NS | C |
| L1PW482 | e = **2** | | ✔ | ✔ | C | C | NS | C |
| L1PW484 | e = **4** | | ✔ | ✔ | C | NR | A | C |
| L1CP471 | always installed | Processor Module | ✔ | ✔ | C | NR | A | C |
| AIP602 | b = **F** | FAN Unit | ✔ | ✔ | C | NR | A | C |

***1**: *See Appendix 1 for the position of suffix code.*
***2**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**Table 2:** Configurable modules for the product
Refer to **AGB096-A01**.

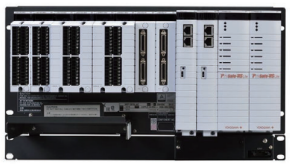
**Table 3:** Other accessories
Refer to **AGB096-A01**.



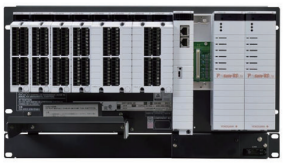


## Appendix 3

External View of L1SC70D and L1SC70S



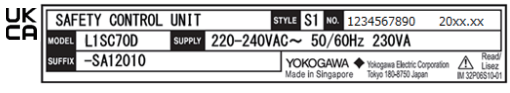
L1SC70D



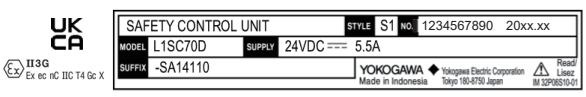
L1SC70S

**Note**: *A dummy cover will be mounted in the empty slot.*

Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

-/-

YOKOGAWA ◆ Doc. No. AGB095-C02

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the product identified as:

| Model code | Model name |
|---|---|
| **L1NB10D** | **Safety Node Unit** |

as part of Product Family: **ProSafe-RS Lite**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P56K10-01EN** (Ed.3)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **L1NB10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table)

| UK Regulations *1 | UK Designated Standards | - Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005**<br>**EN 61000-3-2:2014**<br>**EN 61000-3-3:2013** | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005** | c = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *2<br>**EN 60825-1:2014+A11:2021** *3 | c = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *4 (Ex) | **EN IEC 60079-0:2018**<br>**EN IEC 60079-7:2015+A1:2018**<br>**EN 60079-15:2010, EN IEC 60079-15:2019**<br>The equipment or protective system includes the following specific marking of explosion protection:*5<br>**Ⓔx II 3 G Ex ec nC IIC T4 Gc X** | c = **4**.<br>and<br>d = **E**. |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018** | any |

***1:** *The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** *Applicable to Analog Input Module (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
***3:** *Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*
***4:** *Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***5:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 61010-2-030:2010** *1<br>**EN 60825-1:2014+A11:2021** *2 | c = **4** |

***1:** *Applicable to Analog Input Module (Model: L1AI143, L1AV144, L1AT145 and L1AR145) only.*
***2:** *Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*





## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity. The full list of accessories for this product can be found in **IM 32P06S10-01Z1**.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB096-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LV | Ex *2 | RoHS |
| L1PW481 | c = **1** | Power Supply Module | C | C | NS | C |
| L1PW482 | c = **2** | | C | C | NS | C |
| L1PW484 | c = **4** | | C | NR | A | C |
| L1SB401 | always installed | ESB Bus Interface Module | C | NR | A | C |

***1**: *See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.

**Table 2:** Configurable modules for the product
Refer to **AGB096-A01**.

**Table 3:** Other accessories
Refer to **AGB096-A01**.





## Appendix 3

External View of L1NB10D

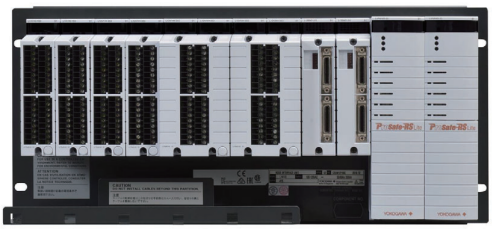
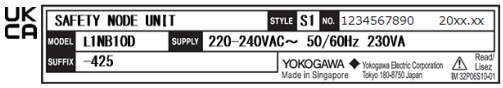
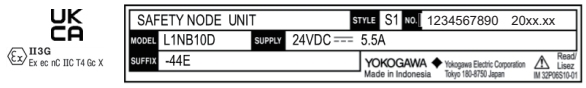


Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

-/-

YOKOGAWA ◆ Doc. No. AGB094-C02

# UK DECLARATION OF CONFORMITY

We **Yokogawa Electric Corporation**
**2-9-32 Nakacho, Musashino-shi, Tokyo, 180-8750 Japan**

declare under our sole responsibility that the product identified as:

| Model code | Model name |
|---|---|
| **L1NT10D** | **Unit for Optical Bus Repeater Module** |

as part of Product Family: **ProSafe-RS Lite**
further specified with model suffix and option codes:

**as listed in General Specification: GS 32P56K11-01EN** (Ed.3)

are in compliance with the UK law and legislation providing for the UKCA-marking, as listed in Appendix 1.

Information relevant to the conformity and identification of these Products is provided in Appendix 2 and Appendix 3.

Subject products are:
- Produced according to appropriate quality control procedure.
- Provided with the UKCA-marking as from **2021**.

Signature:

(Manufacturer)

Tokyo, 19 October 2022

T. Yokoi 19-Oct-2022

Toyoaki Yokoi
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation





## Appendix 1

The products are built in compliance with requirements of the following UK Regulations and Standards:

Model – Suffix / Option code structure: **L1NT10D** – b c d / x
(Distinctive combinations of suffix and option codes as indicated per table)

| UK Regulations *1 | UK Designated Standards | - Suffix |
|---|---|---|
| Electromagnetic Compatibility Regulations 2016 (EMC) | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005**<br>**EN 61000-3-2:2014**<br>**EN 61000-3-3:2013** | c = **2**. |
| | **EN 55011:2016+A1:2017 Class A Group1**<br>**EN 61000-6-2:2005** | c = **1** or **4**. |
| Electrical Equipment (Safety) Regulations 2016 (LV) | **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 60825-1:2014+A11:2021** *2 | c = **1** or **2**. |
| Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 *3 (Ex) | **EN IEC 60079-0:2018**<br>**EN IEC 60079-7:2015+A1:2018**<br>The equipment or protective system includes the following specific marking of explosion protection: *4<br>Ex **II 3 G Ex ec IIC T4 Gc X** | c = **4**.<br>and<br>d = **E**. |
| The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS) | **EN IEC 63000:2018** | any |

***1:** *The description in parentheses are the abbreviations for UK Regulations used in this document.*
***2:** *Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*
***3:** *Ex is only supported by the configuration consisting of the elements that attests with the Ex Regulation only. For detailed configuration, see **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** and **IM 32Q01J30-31E**.*
***4:** *Symbol 'X' denotes the specific condition of use. See **IM 32Q01J30-31E** guided by **IM 32P06S10-01Z1** for details.*

| Other Normative Standards | -Suffix |
|---|---|
| **EN 61010-1:2010+A1:2019**<br>**EN IEC 61010-2-201:2018**<br>**EN 60825-1:2014+A11:2021** *1 | c = **4** |

***1:** *Applicable to Optical ESB Bus Repeater Module (Model: L1NT401, L1NT411, L1NT501 and L1NT511) only.*





## Appendix 2

The accessories in the list below have UKCA-marking significant compliance relevance, as indicated per UK-Regulation; their application and use – as described in **IM 32P06C10-01EN** guided by **IM 32P06S10-01Z1** – is supported by this UK Declaration of Conformity. The full list of accessories for this product can be found in **IM 32P06S10-01Z1**.

The indications used in the following tables are defined as:
*'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'NS' = The accessory does not support the Regulation.*
*'A' = Compliance by 'Attestation of Conformity', Refer to **AGB096-C01** for 'Attestation of Conformity'.*

**Table 1:** Pre-installed modules (specified by the suffix code of the product)

| Model code | Suffix code of the product *1 | Model name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|---|
| | | | EMC | LV | Ex *2 | RoHS |
| L1PW481 | c = **1** | Power Supply Module | C | C | NS | C |
| L1PW482 | c = **2** | | C | C | NS | C |
| L1PW484 | c = **4** | | C | NR | A | C |

***1**: *See Appendix 1 for the position of suffix code.*
***2**: When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.

**Table 2:** Configurable modules for the product
Refer to **AGB096-A01**.

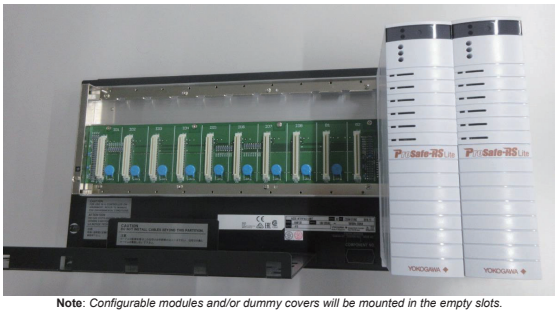
**Table 3:** Other accessories
Refer to **AGB096-A01**.





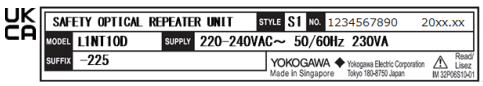
## Appendix 3

External View of L1NT10D

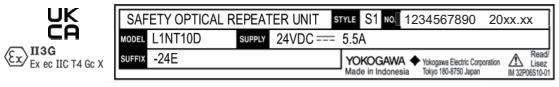



**Note**: *Configurable modules and/or dummy covers will be mounted in the empty slots.*

Image of Nameplate
(Typical example; details may differ)




No explosion protection type




Explosion protection type

-/-

# Lists of configurable modules and accessories for ProSafe-RS Lite (UKCA marking)

Several configurable modules and accessories are common to ProSafe-RS Lite products.

**SECTION 1:** Configurable modules and accessories

The indications used in the Table 1 and 2 are defied as:

**Indications**: *'X' = Available.*
*'---' = Not available.*

**Table 1** Configurable modules

| Model/Parts No. | Model/Parts Name | Product in which a module is installed | | |
|---|---|---|---|---|
| | | L1SC70D L1SC70S | L1NB10D | L1NT10D |
| L1CP471 | Processor Module | X *1 | --- | --- |
| L1PW481 | Power Supply Module | X *2 | X *2 | X *2 |
| L1PW482 | | X *2 | X *2 | X *2 |
| L1PW484 | | X *2 | X *2 | X *2 |
| AIP602 | Fan Unit | X *1 | --- | --- |
| L1SB401 | ESB Bus Interface Module | --- | X *1 | --- |
| L1EC401 | ESB Bus Coupler Module | X | --- | --- |
| L1EC402 | | X | --- | --- |
| L1NT411 | Optical ESB Bus Repeater Master Module | X | X | X |
| L1NT401 | | X | X | X |
| L1NT511 | Optical ESB Bus Repeater Slave Module | --- | X | X |
| L1NT501 | | --- | X | X |
| L1AI143 | Analog Input Module | X | X | --- |
| L1AV144 | | X | X | --- |
| L1AT145 | TC/mV Input Module | X | X | --- |
| L1AR145 | RTD Input Module | X | X | --- |
| L1AI533 | Analog Output Module | X | X | --- |
| L1DV144 | Digital Input Module | X | X | --- |
| L1DV531 | Digital Output Module | X | X | --- |
| L1DV541 | | X | X | --- |
| L1DV521 | | X | X | --- |
| L1DV526 | | X | X | --- |
| L1DV53A | | X | X | --- |
| ALR111 | Serial Communication Module | X | X | --- |
| ALR121 | | X | X | --- |
| ALE111 | Ethernet Communication Module | X | X | --- |

***1**: *This module is pre-installed in the product. Therefore, it is not configurable.*
***2**: *This module/unit is specified by the suffix code of the product. By that meaning, it can be said as the configurable module. However, once it is specified, it cannot be replaced with other type of the module by a user.*





**Table 2** Other accessories

| Model/Parts No. | Model/Parts Name | Product for which an accessory is used | | |
|---|---|---|---|---|
| | | L1SC70D L1SC70S | L1NB10D | L1NT10D |
| L1TA4S | Pressure Clamp Terminal Block for Analog Signals | X | X | --- |
| L1TB4S | Pressure Clamp Terminal Block for Digital Signals | X | X | --- |
| L1TA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | X | X | --- |
| L1TB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | X | X | --- |
| SEA4D | Analog Terminal Board | X | X | --- |
| SBA4D | Terminal Board for Analog | X | X | --- |
| S1BB4D | Terminal Board for Analog Input, 3-wire | X | X | --- |
| SBT4D | Terminal Board for TC/mV | X | X | --- |
| SBR4D | Terminal Board for RTD Input | X | X | --- |
| SED2D | Digital Terminal Board | X | X | --- |
| SED3D | | X | X | --- |
| SED4D | | X | X | --- |
| SWD2D | | X | X | --- |
| SBD2D | Terminal Board for Digital Output | X | X | --- |
| SBD3D | | X | X | --- |
| SBD4D | Terminal Board for Digital | X | X | --- |
| SRM53D | Relay Board | X | X | --- |
| SRM54D | Relay Board | X | X | --- |
| SBM54D | Relay Board for Digital Output | X | X | --- |
| YCB301 | ESB Bus Cable | X | X | --- |
| AKB131 | RS-232C Modem Cable | X | X | --- |
| AKB132 | RS-232C Null Modem Cable | X | X | --- |
| AKB135 | RS-232C Modem Cable | X | X | --- |
| AKB136 | RS-232C Null Modem Cable | X | X | --- |
| AKB161 | RS-422/RS-485 Cable | X | X | --- |
| AKB162 | | X | X | --- |
| AKB331 | Signal Cable | X | X | --- |
| AKB611 | Signal Cable | X | X | --- |
| AKB651 | | X | X | --- |
| AKB652 | | X | X | --- |
| KS1 | | X | X | --- |
| SCB100 | Wiring Check Adapter for Digital Input | X | X | --- |
| SCB110 | | X | X | --- |
| AEP7D | Primary Power Supply Bus Unit | X | X | X |
| AEPV7D | Power Supply Bus Unit, Vertical Type | X | X | X |





**SECTION 2:** UKCA-marking compliance relevance of each configurable module and accessory (as indicated per UK-Regulation)

The following tables show the UKCA-marking compliance relevance to the product in which configurable modules and accessories are installed.
The indications used in the following tables are defied as:

**Indications**: *'C' = The accessory conforms to the Regulation as a part of the product.*
*'R' = The accessory is relevant to the conformity of the product as a part of the product.*
*'NS' = The accessory does not support the Regulation.*
*'NR' = The accessory is not relevant to the conformity of the product.*
*'A' = Compliance by 'Attestation of Conformity'*

**Table 3** Configurable modules

| Model/Parts No. | Model/Parts Name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | Ex Note 4 | RoHS |
| L1CP471 | Processor Module | C | NR | A | C |
| L1PW481 | Power Supply Module | C | C | NS | C |
| L1PW482 | | C | C | NS | C |
| L1PW484 | | C | NR | A | C |
| AIP602 | Fan Unit | C | NR | A | C |
| L1SB401 | ESB Bus Interface Module | C | NR | A | C |
| L1EC401 | ESB Bus Coupler Module | C | NR | A | C |
| L1EC402 | | C | NR | A | C |
| L1NT411 | Optical ESB Bus Repeater Master Module | C | C Note 1 | A | C |
| L1NT401 | | C | C Note 1 | A | C |
| L1NT511 | Optical ESB Bus Repeater Slave Module | C | C Note 1 | A | C |
| L1NT501 | | C | C Note 1 | A | C |
| L1AI143 | Analog Input Module | C | C Note 2 | A | C |
| L1AV144 | | C | C Note 2 | A | C |
| L1AT145 | TC/mV Input Module | C | C Note 2 | A | C |
| L1AR145 | RTD Input Module | C | C Note 2 | A | C |
| L1AI533 | Analog Output Module | C | NR | A | C |
| L1DV144 | Digital Input Module | C | NR | A | C |
| L1DV531 | Digital Output Module | C | NR | A | C |
| L1DV541 | | C | NR | A | C |
| L1DV521 | | C | NR | A | C |
| L1DV526 | | C | C | NS | C |
| L1DV53A | | C | NR | A | C |
| ALR111 Note 3 | Serial Communication Module | C | NR | C | C |
| ALR121 Note 3 | | C | NR | C | C |
| ALE111 Note 3 | Ethernet Communication Module | C | NR | C | C |

**Note 1**: *EN 60825-1 is applied to these modules.*
**Note 2**: *EN 61010-2-030 is applied to these modules.*
**Note 3**: *In its own right, the conformities to the relevant Regulations are declared and it bears UKCA marking.*
**Note 4**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*





**Table 4** Other accessories

| Model/Parts No. | Model/Parts Name | Relevant UK Regulations | | | |
|---|---|---|---|---|---|
| | | EMC | LV | Ex Note 3 | RoHS |
| L1TA4S | Pressure Clamp Terminal Block for Analog Signals | R | NR | A | C |
| L1TB4S | Pressure Clamp Terminal Block for Digital Signals | R | NR | A | C |
| L1TA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | R | NR | A | C |
| L1TB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | R | NR | A | C |
| SEA4D | Analog Terminal Board | R | NR | A | C |
| SBA4D | Terminal Board for Analog | R | NR | A | C |
| S1BB4D | Terminal Board for Analog Input, 3-wire | R | C | A | C |
| SBT4D | Terminal Board for TC/mV | R | NR | A | C |
| SBR4D | Terminal Board for RTD Input | R | NR | A | C |
| SED2D | Digital Terminal Board | R | NR | A | C |
| SED3D | | R | NR | A | C |
| SED4D | | R | NR | A | C |
| SWD2D | | R | C | NS | C |
| SBD2D | Terminal Board for Digital Output | R | C | A | C |
| SBD3D | | R | C | A | C |
| SBD4D | Terminal Board for Digital | R | C | A | C |
| SRM53D | Relay Board | R | C | NS | C |
| SRM54D | Relay Board | R | C | NS | C |
| SBM54D | Relay Board for Digital Output | R | C | NS | C |
| YCB301 | ESB Bus Cable | R | NR | NR | C |
| AKB131 | RS-232C Modem Cable | R | NR | NR | C |
| AKB132 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB135 | RS-232C Modem Cable | R | NR | NR | C |
| AKB136 | RS-232C Null Modem Cable | R | NR | NR | C |
| AKB161 | RS-422/RS-485 Cable | R | NR | NR | C |
| AKB162 | | R | NR | NR | C |
| AKB331 | Signal Cable | R | NR | NR | C |
| AKB611 | | R | NR | NR | C |
| AKB651 | | R | NR | NR | C |
| AKB652 | | R | C | NS | C |
| KS1 | | R | NR | NR | C |
| SCB100 | Wiring Check Adapter for Digital Input | R | NR | A | C |
| SCB110 | | R | NR | A | C |
| AEP7D Note 2 | Primary Power Supply Bus Unit | R | C Note 1 | A | C |
| AEPV7D Note 2 | Power Supply Bus Unit, Vertical Type | R | C Note 1 | A | C |

**Note 1**: *The model of 24 VDC input (the first position of the suffix code is '4') is "NR".*
**Note 2**: *In its own right, the conformities to the relevant Regulations are declared and it bears UKCA marking.*
**Note 3**: *When the accessory has both explosion protection type and no-explosion protection type, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the accessory.*

**SECTION3**: Reason for the update

| | | | | |
|---|---|---|---|---|
| 2021-10-15 | First edition | A.Tsuruta | Y.Oowaki | T.Yokoi |
| | | Systems Hardware R&D Dept. Systems Development Center Digital Solutions HQ | | |
| Date yyyy-mm-dd | Description | DR | CH | APP |
| | | Div. | | |





# Attestation of Conformity (UK Ex Regulation)

The Components:

| Model code **Note 1** | Model name | Type of protection **Note 2** |
|---|---|---|
| L1CP471 | Processor Module | A-1 |
| L1PW484 | Power Supply Module | A-1 |
| AIP602 | Fan Unit | A-1 |
| L1SB401 | ESB Bus Interface Module | A-1 |
| L1EC401 | ESB Bus Coupler Module | A-1 |
| L1EC402 | | A-1 |
| L1NT411 | Optical ESB Bus Repeater Master Module | A-1 |
| L1NT401 | | A-1 |
| L1NT511 | Optical ESB Bus Repeater Slave Module | A-1 |
| L1NT501 | | A-1 |
| L1AI143 | Analog Input Module | A-1 |
| L1AV144 | | A-1 |
| L1AT145 | TC/mV Input Module | A-1 |
| L1AR145 | RTD Input Module | A-1 |
| L1AI533 | Analog Output Module | A-1 |
| L1DV144 | Digital Input Module | A-1 |
| L1DV531 | Digital Output Module | A-1 |
| L1DV541 | | A-1 |
| L1DV521 | | A-1 |
| L1DV53A | | A-1 |
| L1TA4S | Pressure Clamp Terminal Block for Analog Signals | A-1 **Note 3** |
| L1TB4S | Pressure Clamp Terminal Block for Digital Signals | A-1 **Note 3** |
| L1TA4D | Pressure Clamp Terminal Block for Analog Signals, Dual-Redundant Use | A-1 **Note 3** |
| L1TB4D | Pressure Clamp Terminal Block for Digital Signals, Dual-Redundant Use | A-1 **Note 3** |
| SEA4D | Analog Terminal Board | A-1 |
| SBA4D | Terminal Board for Analog | A-1 |
| S1BB4D | Terminal Board for Analog Input, 3-wire | A-2 |
| SBT4D | Terminal Board for TC/mV | A-1 |
| SBR4D | Terminal Board for RTD Input | A-1 |
| SED2D | Digital Terminal Board | A-1 |
| SED3D | | A-1 |
| SED4D | | A-1 |
| SBD2D | Terminal Board for Digital Output | A-2 |
| SBD3D | | A-2 |
| SBD4D | Terminal Board for Digital | A-2 |
| SCB100 | Wiring Check Adapter for Digital Input | A-1 **Note 3** |
| SCB110 | | A-1 **Note 3** |
| AEP7D | Primary Power Supply Bus Unit | A-1 |
| AEPV7D | Power Supply Bus Unit, Vertical Type | A-1 |





**Note 1:** *If both of explosion protection type and no-explosion protection type exist, the explosion protection type is only relevant. Type is distinguished by the suffix-code of the component.*

**Note 2**: *Type of protection is show on the marking of each component:*

**A-1: Ex II 3 G Ex ec IIC T4 Gc X**

**A-2: Ex II 3 G Ex ec nC IIC T4 Gc X**

***Note 3:*** *This component does not have autonomous function by itself and it will be always used and functional as a part of the other accessory. Therefore, the marking (the Ex hexagon, and applicable Ex protection codes) to this component is omitted and the marking on the other accessory includes this component. Accessories with which these accessories are used together:*

| *Part No. of the subject accessory* | *Accessories to which the subject accessory belongs* |
|---|---|
| *L1TA4S, L1TA4D* | *L1AI143, L1AV144, L1AI533* |
| *L1TB4S, L1TB4D* | *L1DV144, L1DV531, L1DV541* |
| *SCB100, SCB110* | *L1DV144* |

further specified with model suffix and option codes:
**as listed in General Specification for each component guided by: IM 32P06S10-01Z1**
further technical specifications can be found:
**in General Specification for each component guided by: IM 32P06S10-01Z1**
Intended for use as components in Yokogawa Systems with model code:
**L1SC70D, L1SC70S, L1NB10D and L1NT10D**
were successfully assessed as Components against the requirements of the UK Regulation, **Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016** and the following Designated Standards:
**EN IEC 60079-0:2018**,
**EN IEC 60079-7:2015+A1:2018**,
**EN 60079-15:2010, EN IEC 60079-15:2019**

These components shall be incorporated, put in operation and maintained as instructed:
**in User's manuals guided by IM 32P06S10-01Z1.**

Tokyo, 15 October 2021

T. Yokoi
15-Oct-2021

**Toyoaki Yokoi**
General Manager
Systems Hardware R&D Dept.
Systems Development Center
Digital Solutions HQ
Yokogawa Electric Corporation

# Revision Information

Title : ProSafe-RS Explosion Protection
Manual No. : IM 32Q01J30-31E

**May 2023/20th Edition**

1.2 For safe use—S2BN4D : Description has been updated.
The same changes have been made to sections 2.2 to 11.2.
Appendix 2 : Revised “EU declaration of conformity and attestation of conformity.”
Appendix 3 : Revised “UK declaration of conformity and attestation of conformity.”

**Nov. 2022/19th Edition**

Appendix 3 : Revised “UK declaration of conformity and attestation of conformity.”

**May 2022/18th Edition**

1.1 For safe use : Description has been updated.
The same changes have been made to sections 2.1 to 11.1.
1.3 For safe use—S2BN5D : Description has been updated.
The same changes have been made to sections 2.3 to 11.3.
Appendix 1 : Revised “Ambient temperature range of standard-compliant devices.”
Appendix 2 : Revised “EU declaration of conformity and attestation of conformity.”

**Apr.2022/17th Edition**

Appendix 2 : Revised “EU declaration of conformity and attestation of conformity.”
Appendix 3 : Added “UK declaration of conformity and attestation of conformity.”

**Dec. 2021/16th Edition**

1.1 For safe use : Description in “■Applicable standards” and “■Markings” has been updated.
The same changes have been made to sections 2.1 to 11.1.
Appendix 1 : Revised “ATEX compliant products.”
Appendix 2 : Revised “EU declaration of conformity and attestation of conformity (for Ex “ec”).”
Appendix 3 : Added “EU declaration of conformity and attestation of conformity (for Type “n”).”

**May 2021/15th Edition**

1.1 Type of protection “n”—For safe use : Description in “■ Applicable standards” has been updated.
The same changes have been made to sections 2.1 to 11.1.
1.2 S2BN4D—For safe use : Description in “■ Applicable standards” has been updated. The same changes have been made to sections 2.2 to 11.2.
1.3 S2BN5D—For safe use : Description in “■ Applicable standards” has been updated. The same changes have been made to sections 2.3 to 11.3.
12. Technical Date : Added SCB100 and SCB110.
Appendix 1 : Revised “EU declaration of conformity and attestation of conformity.”

**Feb. 2021/14th Edition**

1.4 N-IO field enclosure—For safe use : Newly added. The same changes have been made to sections 2.4 to 11.4.

12. Technical Date : Added S2ZN70D, S2ZN60D, S2NN70D, S2NN60D, and S2CB60.

Appendix 1 : Revised "EU declaration of conformity and attestation of conformity."

**Jun. 2020/13th Edition**

1.1 Type of protection "n"—For safe use:
Description in "■ Maintenance and Repair" has been updated. The same changes have been made to sections 2.1 to 11.1.

12. Technical Data : Added S2CP471

Appendix 1 : Revised "EU declaration of conformity and attestation of conformity."

**May 2020/12th Edition**

12. Technical Data : Added A2BM4.

Appendix 1 : "EU declaration of conformity and attestation of conformity" has been updated.

**Jun. 2018/11th Edition**

Appendix 1 : Revised "EU declaration of conformity and attestation of conformity."

**Feb. 2018/10th Edition**

12. Technical Data : Added S2LP131, and S2MDV843 for S2ZN4D.

**May 2017/9th Edition**

1.1 Type of protection "n"—For safe use:
Description in "■ Specific conditions of use" has been updated. The same changes have been made to sections 2.1 to 11.1.

1.2 S2BN4D—For safe use:
Description in "■ Specific conditions of use" has been updated. The same changes have been made to sections 2.2 to 11.2.

1.3 S2BN5D—For safe use:
Description in "■ Specific conditions of use" has been updated.
The same changes have been made to sections 2.3 to 11.3.

12. Technical Data : Added S2MDV843 and option codes for SED2D, SED3D, SED4D, and SEA4D.

**Nov. 2016/8th Edition**

1.1 Type of protection "n" : Added descriptions about IECEx.

1.2 S2BN4D : Added as a new section. The same additions have been made to chapters 2 to 11.

1.3 S2BN5D : Changed the section number from 1.2 to 1.3. The same changes have been made to chapters 2 to 11.

12. Technical Data : Added products.

Appendix 1 : Revised "EU declaration of conformity and attestation of conformity."

**July 2016/7th Edition**

Appendix 1 : Revised “EU declaration of conformity and attestation of conformity.”

**Jun. 2016/6th Edition**

12. Technical Data : “■ Marking” has been updated.

**Dec. 2015/5th Edition**

1.1 Type of protection “n” : “■ Applicable standards” has been updated. The same changes have been made to chapters 2 to 11.

1.2 S2BN5D : Descriptions of S2BN5D have been added. The same changes have been made to chapters 2 to 11.

12. Technical Data : “■ Marking” has been updated.

Appendix 1 : “EU declaration of conformity and attestation of conformity” has been added.

**Feb. 2015/4th Edition**

12. Technical Data : Descriptions of ALR121-SE3 and ALE111-SE3 have been added.

**Sep. 2014/3rd Edition**

12. Technical Data : Descriptions of SNT421 and SNT521 have been added.

**Oct. 2013/2nd Edition**

12. Technical Data : Descriptions of SSC57 have been added.

**May 2013/1st Edition**

Newly published.

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Online Query: A query form is available on the following URL.
http://www.yokogawa.com/iss
■ Written by Yokogawa Electric Corporation
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2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750, JAPAN

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