SIEMENS

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SITRANS

Radar transmitters
Intrinsically Safe handheld programmer

Compact Operating Instructions

7ML5830-2AH (Intrinsically Safe handheld programmer)

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

⚠ DANGER
indicates that death or severe personal injury **will** result if proper precautions are not taken.

⚠ WARNING
indicates that death or severe personal injury **may** result if proper precautions are not taken.

⚠ CAUTION
indicates that minor personal injury can result if proper precautions are not taken.

NOTICE
indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

⚠ WARNING
Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Introduction

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1.1 Safety notes

1.1.1 Lithium batteries

Lithium batteries are primary power sources with high energy content designed to provide the highest possible degree of safety.

⚠ WARNING
Potential hazard
Lithium batteries may present a potential hazard if they are abused electrically or mechanically. Observe the following precautions when handling and using lithium batteries: • Do not short-circuit, recharge or connect with false polarity. • Do not expose to temperatures beyond the specified temperature range. • Do not incinerate. • Do not crush, puncture or open cells or disassemble. • Do not weld or solder to the battery's body. • Do not expose contents to water.

Note

Use in a domestic environment

This Class B Group 1 equipment is intended for use in industrial areas.

1.1.2 Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit
https://www.siemens.com/industrialsecurity (https://www.siemens.com/industrialsecurity).

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under
https://www.siemens.com/industrialsecurity (https://www.siemens.com/industrialsecurity).

1.1.3 Transportation and storage

To guarantee sufficient protection during transport and storage, observe the following:

- Keep the original packaging for subsequent transportation.

- Devices/replacement parts should be returned in their original packaging.

- If the original packaging is no longer available, ensure that all shipments are properly packaged to provide sufficient protection during transport. Siemens cannot assume liability for any costs associated with transportation damages.

NOTICE
Insufficient protection during storage
The packaging only provides limited protection against moisture and infiltration. • Provide additional packaging as necessary.

Special conditions for storage and transportation of the device are listed in Technical specifications (Page 8).

1.1.4 Disposal

Devices described in this manual should be recycled. They may not be disposed of in the municipal waste disposal services according to the Directive 2012/19/EC on waste electronic and electrical equipment (WEEE).

Devices can be returned to the supplier within the EC and UK, or to a locally approved disposal service for eco-friendly recycling. Observe the specific regulations valid in your country.

Further information about devices containing batteries can be found at: Information about battery/product return (WEEE) (https://support.industry.siemens.com/cs/document/109479891/)

1.2 Introduction

The programmer is a sturdy, hand-held, programming unit offering immediate access to the configuration parameters for Siemens products. Point the programmer at the instrument's display window and press the buttons in the required sequence. Consult individual product manuals for operation distance limits. The programmer is used with the following Siemens products:

- SITRANS LR200
- SITRANS LR250
- SITRANS LR260
- SITRANS LR400
- SITRANS LR460
- SITRANS LR560
- SITRANS Probe LR
- SITRANS Probe LU
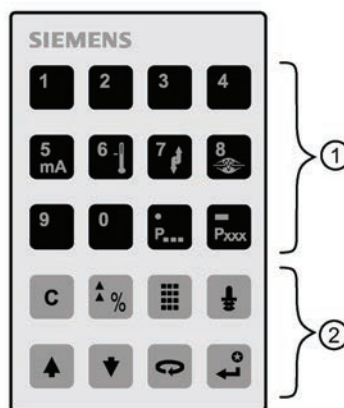
7ML1930-1BK   7ML5830-2AH (Probe LR)

①   Numeric and auxiliary keys
②   Function keys

# 1.3   Instructions Specific to Hazardous Area Installations

(Reference European ATEX Directive 2014/34/EU, Annex II, 1.0.6, and UK Regulation SI 2016/1107)

The following instructions apply to equipment covered by certificate number SIRA 01ATEX2147 and CSAE 21UKEX2095:

1. The equipment may be used with flammable gases and vapours with apparatus group IIC, IIB and IIA and temperature classes T4, T3, T2 and T1.

2. The equipment may be used in zone 20 areas and also in areas requiring Ga equipment.

3. The equipment may be used with combustible dusts with a smouldering temperature of at least 200 °C.

4. The equipment is certified for use in an ambient temperature range of -20 to +50 °C (-4 to +122 °F).

5. The equpiment has not been assessed as a safety related device (as referred to by Directive 2014/34/EU Annex II, clause 1.5, and UK Regulation SI 2016/1107).

6. Installation and inspection of this equipment shall be carried out by suitably trained personnel in accordance with the applicable code of practice (EN 60079-14 and EN 60079-17 in Europe and the UK).

7. If the equipment is likely to come into contact with aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent the equipment from being adversely affected, thus ensuring that the type of protection is not compromised.

   – Aggressive substances: e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials.

   – Suitable precautions: e.g. regular checks as part of routine inspections or establishing from the material's data sheet that it is resistant to specific chemicals.

8. **Equipment marking**

   The equipment marking contains at least the following information:

Technical specifications

<div align="right">

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</div>
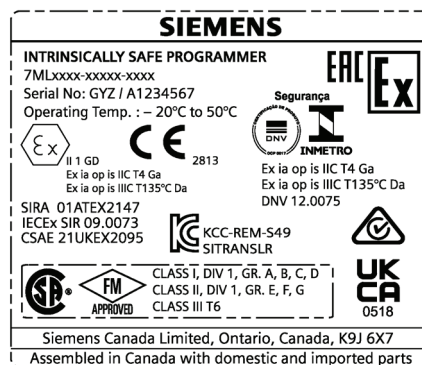
Siemens Infrared IS (Intrinsically Safe) Handheld Programmer for hazardous and all other locations (battery is non-replaceable).

Approvals	CE and UKCA
	FM/CSA Class I, II, III, Div. 1, Gr. A to G T6
	ATEX 1 GD Ex ia op is IIC T4 Ga
	Ex ia op is IIIC T135°C Da
	UKEX 1 GD Ex ia op is IIC T4 Ga
	Ex ia op is IIIC T135 °C Da
	IECEx Ex ia op is IIC T4 Ga
	Ex ia op is IIIC T135°C Da
	INMETRO Ex ia op is IIC T4 Ga
	Ex ia op is IIIC T135°C Da
Ambient temperature	−20 to +50 °C (−5 to +122 °F)
Interface	proprietary infrared pulse signal
Power	3 V non-replaceable lithium battery
Weight	150 g (0.3 lb)
Color	black
Part number	7ML1930-1BK

2.1   Battery serial number

The battery is non-replaceable with a lifetime expectancy of 10 years in normal use. To estimate the lifetime expectancy, check the nameplate on the back for the serial number. The date of manufacture is encoded in the serial number. For example, the following was manufactured on March 5, 2016:

PBD/**H3050001**

H: year of manufacture (H is the alpha code referring to 2016; J refers to 2017 and so on).

3: month of manufacture

05: day of manufacture

0001: 4-digit sequential

Year 2010: Alpha code = A	Year 2016: Alpha code = H
Year 2011: Alpha code = B	Year 2017: Alpha code = J
Year 2012: Alpha code = C	Year 2018: Alpha code = K
Year 2013: Alpha code = D	Year 2019: Alpha code = L
Year 2014: Alpha code = E	Year 2020: Alpha code = M
Year 2015: Alpha code = F	

Product documentation and support

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3.1   Product documentation

Process instrumentation product documentation is available in the following formats:

- Certificates (http://www.siemens.com/processinstrumentation/certificates)
- Downloads (firmware, EDDs, software) (http://www.siemens.com/processinstrumentation/downloads)
- Catalog and catalog sheets (http://www.siemens.com/processinstrumentation/catalogs)
- Manuals (http://www.siemens.com/processinstrumentation/documentation)

  You have the option to show, open, save, or configure the manual.

  - "Display": Open the manual in HTML5 format
  - "Configure": Register and configure the documentation specific to your plant
  - "Download": Open or save the manual in PDF format
  - "Download as html5, only PC": Open or save the manual in the HTML5 view on your PC

You can also find manuals with the Mobile app at Industry Online Support (https://support.industry.siemens.com/cs/ww/en/sc/2067). Download the app to your mobile device and scan the device QR code.

Product documentation by serial number

Using the PIA Life Cycle Portal, you can access the serial number-specific product information including technical specifications, spare parts, calibration data, or factory certificates.

Entering a serial number

1. Open the PIA Life Cycle Portal (https://www.pia-portal.automation.siemens.com).
2. Select the desired language.
3. Enter the serial number of your device. The product documentation relevant for your device is displayed and can be downloaded.

To display factory certificates, if available, log in to the PIA Life Cycle Portal using your login or register.

Scanning a QR code

1. Scan the QR code on your device with a mobile device.
2. Click "PIA Portal".

To display factory certificates, if available, log in to the PIA Life Cycle Portal using your login or register.

3.2   Technical support

Technical support

If this documentation does not completely answer your technical questions, you can enter a Support Request (http://www.siemens.com/automation/support-request).

For help creating a support request, view this video here (www.siemens.com/opensr).

Additional information on our technical support can be found at Technical Support (http://www.siemens.com/automation/csi/service).

Service & support on the Internet

In addition to our technical support, Siemens offers comprehensive online services at Service & Support (http://www.siemens.com/automation/service&support).

Contact

If you have further questions about the device, contact your local Siemens representative at Personal Contact (http://www.automation.siemens.com/partner).

To find the contact for your product, go to "all products and branches" and select "Products & Services > Industrial automation > Process instrumentation".

Contact address for business unit:
Siemens AG
Digital Industries
Process Automation
Östliche Rheinbrückenstr. 50
76187 Karlsruhe, Germany

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