SIEMENS

SICAM
FCM Configurator

V03.00

Configuration and Operation

Preface

Open Source Software

Table of Contents

1 SICAM FCM plus Configurator

Index

E50417-H8940-C605-A1

NOTE

For your own safety, observe the warnings and safety instructions contained in this document, if available.

Disclaimer of Liability

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

Document version: E50417-H8940-C605-A1.00

Edition: 04.2023

Version of the product described: V03.00

Copyright

Copyright © Siemens 2023. All rights reserved.

The disclosure, duplication, distribution and editing of this document, or utilization and communication of the content are not permitted, unless authorized in writing. All rights, including rights created by patent grant or registration of a utility model or a design, are reserved.

Trademarks

SIPROTEC, DIGSI, SIGRA, SIGUARD, SIMEAS, SAFIR, SICAM, and MindSphere are trademarks of Siemens. Any unauthorized use is prohibited.

Preface

Purpose of the Manual

This manual describes the application, functions, installation, and operation of SICAM FCM Configurator.

Target Audience

Protection system engineers, commissioning engineers, persons entrusted with the setting, testing and maintenance of automation, selective protection and control equipment, and operational crew in electrical installations and power plants.

Scope

This manual applies to SICAM FCM Configurator.

Indication of Conformity

CE

This product complies with the directive of the Council of the European Communities on the harmonization of the laws of the Member States relating to electromagnetic compatibility (EMC Directive 2014/30/EU) and concerning electrical equipment for use within specified voltage limits (Low Voltage Directive 2014/35/EU) as well as restriction on usage of hazardous substances in electrical and electronic equipment (RoHS Directive 2011/65/EU).

This conformity has been proved by tests performed according to the Council Directive and in accordance with the generic standard IEC/EN 61326-1 (for EMC directive) and with the standards IEC/EN 61010-1 and IEC/EN 61010-2-30 (for Low Voltage Directive) by Siemens AG.

The device is designed and manufactured for application in an industrial environment.

RoHS directive 2011/65/EU is met using the standard IEC/EN 63000.

The product conforms with the international standards of IEC 61326-1.

Standards

IEEE Std C 37.90 and EN 55011
IEC/EN 62271-1: 2007-10
IEC/EN 62271-213

Customer Support Center

Our Customer Support Center provides a 24-hour service.

Siemens AG
Smart Infrastructure – Protection Automation
Customer Support Center
Tel.: +49 911 2155 4466
E-Mail: *energy.automation@siemens.com*

Additional Support

For questions about the system, contact your Siemens sales partner.

Training Courses

Inquiries regarding individual training courses should be addressed to our Training Center:

Siemens AG
Siemens Power Academy TD
Humboldtstraße 59
90459 Nuremberg
Germany

Phone: +49 911 9582 7100
E-mail: *poweracademy@siemens.com*
Internet: *www.siemens.com/poweracademy*

Notes on Safety

This document is not a complete index of all safety measures required for operation of the equipment (module or device). However, it comprises important information that must be followed for personal safety, as well as to avoid material damage. Information is highlighted and illustrated as follows according to the degree of danger:

DANGER

DANGER means that death or severe injury **will** result if the measures specified are not taken.

✧ Comply with all instructions, in order to avoid death or severe injuries.

WARNING

WARNING means that death or severe injury **may** result if the measures specified are not taken.

✧ Comply with all instructions, in order to avoid death or severe injuries.

CAUTION

CAUTION means that medium-severe or slight injuries **can** occur if the specified measures are not taken.

✧ Comply with all instructions, in order to avoid moderate or minor injuries.

NOTICE

NOTICE means that property damage **can** result if the measures specified are not taken.

✧ Comply with all instructions, in order to avoid property damage.

NOTE

Important information about the product, product handling or a certain section of the documentation which must be given attention.

Selection of Used Symbols on the Device

No.	Symbol	Description
1		Direct current, IEC 60417, 5031
2		Alternating current, IEC 60417, 5032
3		Direct and alternating current, IEC 60417, 5033
4		Earth (ground) terminal, IEC 60417, 5017
5		Protective conductor terminal, IEC 60417, 5019
6		Caution, risk of electric shock
7		Caution, risk of danger, ISO 7000, 0434
8		Protective Insulation, IEC 60417, 5172, Safety Class II devices
9		Guideline 2002/96/EC for electrical and electronic devices
10		Guideline for the Eurasian Market
11		Mandatory Conformity Mark for Electronics and Electrotechnical Products in Morocco

OpenSSL

This product includes software developed by the OpenSSL Project for use in OpenSSL Toolkit (*http://www.openssl.org/*).

This product includes software written by Tim Hudson (*tjh@cryptsoft.com*).

This product includes cryptographic software written by Eric Young (*eay@cryptsoft.com*).

Open Source Software

The product contains, among other things, Open Source Software developed by third parties. The Open Source Software used in the product and the license agreements concerning this software can be found in the Readme_OSS. These Open Source Software files are protected by copyright. Your compliance with those license conditions will entitle you to use the Open Source Software as foreseen in the relevant license. In the event of conflicts between Siemens license conditions and the Open Source Software license conditions, the Open Source Software conditions shall prevail with respect to the Open Source Software portions of the software. The Open Source Software is licensed royalty-free. Insofar as the applicable Open Source Software License Conditions provide for it you can order the source code of the Open Source Software from your Siemens sales contact – against payment of the shipping and handling charges – for a period of at least 3 years after purchase of the product. We are liable for the product including the Open Source Software contained in it pursuant to the license conditions applicable to the product. Any liability for the Open Source Software beyond the program flow intended for the product is explicitly excluded. Furthermore, any liability for defects resulting from modifications to the Open Source Software by you or third parties is excluded. We do not provide any technical support for the product if it has been modified.

Table of Contents

Preface **3**

Open Source Software **7**

1 SICAM FCM Configurator **11**

1.1 Overview 12

1.2 Hardware Configuration Requirements 13

1.3 Installation 14

1.4 Connecting SICAM FCM plus to USB Interface 18

1.5 Connecting SICAM FCM plus with Rear RS485 Port 19

1.6 Control Elements and Control Functions 20

1.7 Starting the SICAM FCM Configurator User Interface 21

1.8 Dashboard 24

1.8.1 SICAM FCM plus Configurator Dashboard 24

1.8.2 Reports and Monitoring Group 27

1.8.2.1 Reports Group 27

1.8.2.2 Monitoring Group 29

1.9 Parameter Settings 36

1.10 Backup Device Settings 38

1.11 Device Maintenance Replacement Procedure 40

1.12 Restore Device Settings 41

1.13 Update Application 44

1.14 Update Sensor Configuration 47

1.15 Log off 51

1.16 SICAM FCM Configurator Uninstallation 52

Index **55**

1 SICAM FCM Configurator

1.1	Overview	12
1.2	Hardware Configuration Requirements	13
1.3	Installation	14
1.4	Connecting SICAM FCM plus to USB Interface	18
1.5	Connecting SICAM FCM plus with Rear RS485 Port	19
1.6	Control Elements and Control Functions	20
1.7	Starting the SICAM FCM Configurator User Interface	21
1.8	Dashboard	24
1.9	Parameter Settings	36
1.10	Backup Device Settings	38
1.11	Device Maintenance Replacement Procedure	40
1.12	Restore Device Settings	41
1.13	Update Application	44
1.14	Update Sensor Configuration	47
1.15	Log off	51
1.16	SICAM FCM Configurator Uninstallation	52

1.1 Overview

SICAM FCM Configurator is a Web-based configurator which allows you to monitor, configure, and apply the parameters to the SICAM FCM and SICAM FCM plus devices.

For more information on SICAM FCM Configurator V2.19, refer to *SICAM FCM Configurator Manual*.

The main functions of SICAM FCM Configurator V3.00 are:

- Update the SICAM FCM plus firmware
- Configure and apply the engineering parameter settings to the SICAM FCM plus device
- Read the parameter settings from SICAM FCM plus device and save the settings in .xml file
- Restore the device settings from the stored backup settings
- Display the following device information:
  - SICAM FCM plus firmware version
  - Boot-loader version
  - Application software version
- Display the device health status
- Monitor and display the events and trailing pointer values
- Monitor and display the following:
  - Current
  - Voltage
  - Temperature
  - Power
  - Energy
  - Frequency
  - Power-flow direction
- Monitoring of alarms and warnings

1.2 Hardware Configuration Requirements

Before installing and operating the SICAM FCM Configurator V3.00, ensure that your personal computer (PC) or laptop computer is equipped with the following minimum hardware specifications and the operating system.

- 1-GHz processor or higher
- 1 GB of free storage capacity on the hard disk
- 1 GB of RAM (2 GB recommended)
- Graphic display with a resolution of 1024 x 768 pixels (1280 x 1024 pixels recommended)
- Micro-B USB 1.0, maximum length < 5 m
- Operating system: Windows 7 and 10/Win2008 Server R2

You cannot install and operate the SICAM FCM Configurator V3.00 with the following operating systems:

- Microsoft Windows XP and older operating systems
- Microsoft Windows 7 Starter, Home Basic, Home Premium
- Microsoft Windows Server 2003

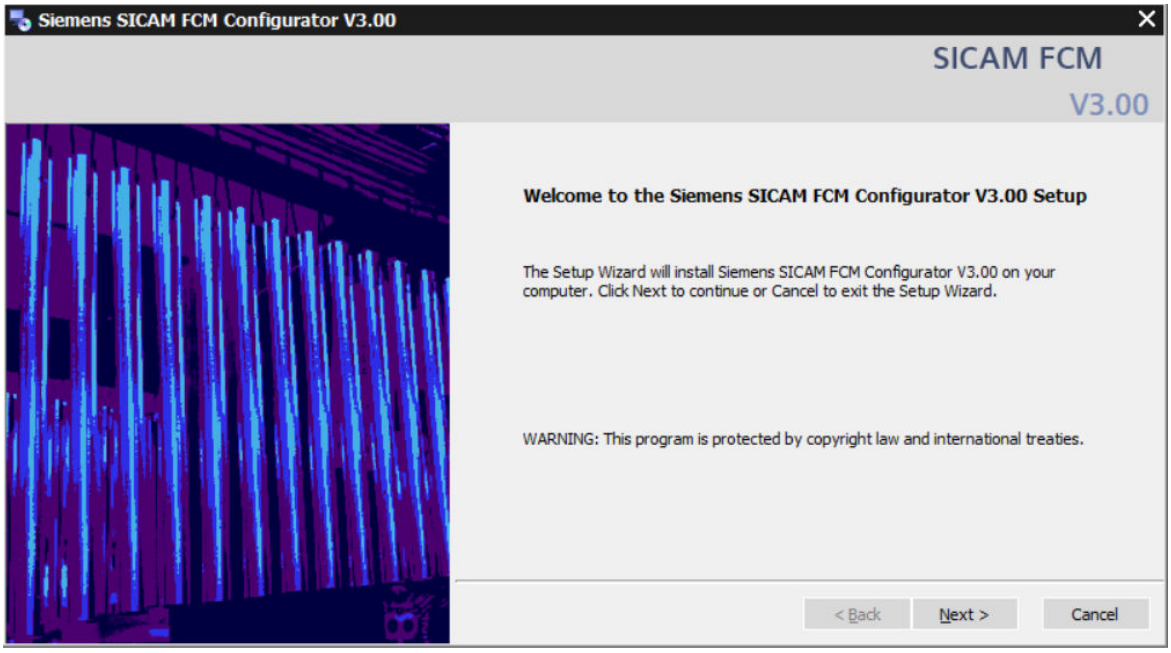
1.3 Installation

Before installing the SICAM FCM Configurator on the PC or laptop computer, download the SICAM FCM Configurator V03.00 (**Setup.exe**) from the following Siemens internet page:

https://support.industry.siemens.com/cs/start?lc=en-US

To install the SICAM FCM Configurator, proceed as follows:

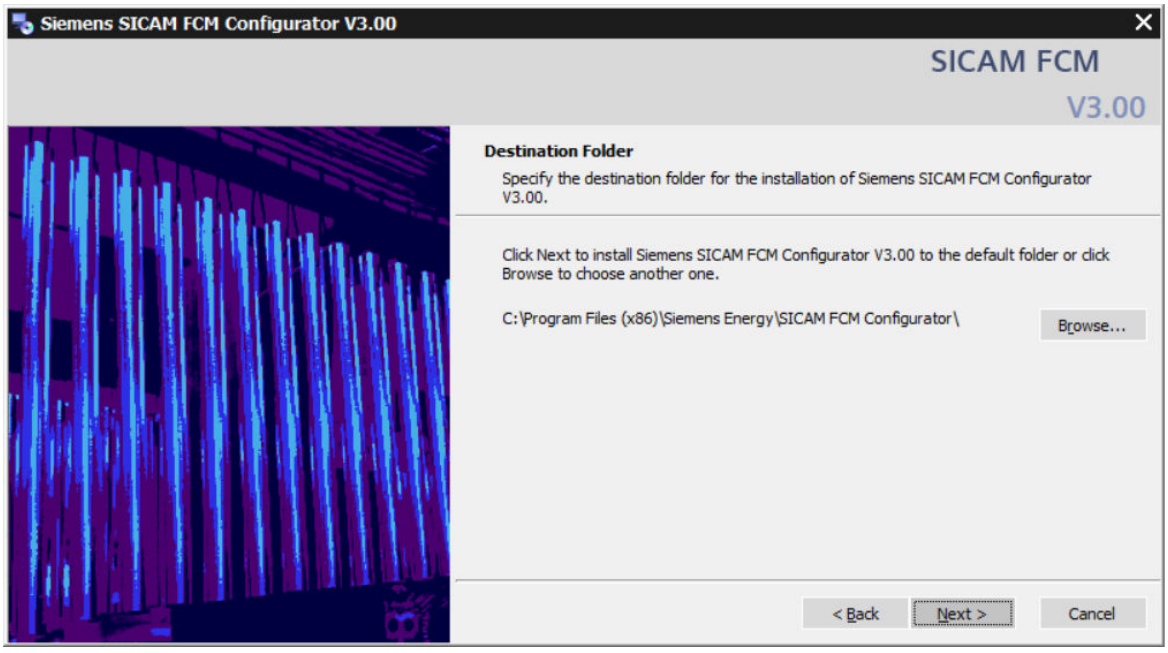
✧ Double-click the **Setup.exe**. The following **Welcome Setup** screen appears if the SICAM FCM Configurator is installed for first time.



[sc_fcmplus_welcome, 1, --_--]

Figure 1-1 SICAM FCM Configurator Setup – Welcome Screen

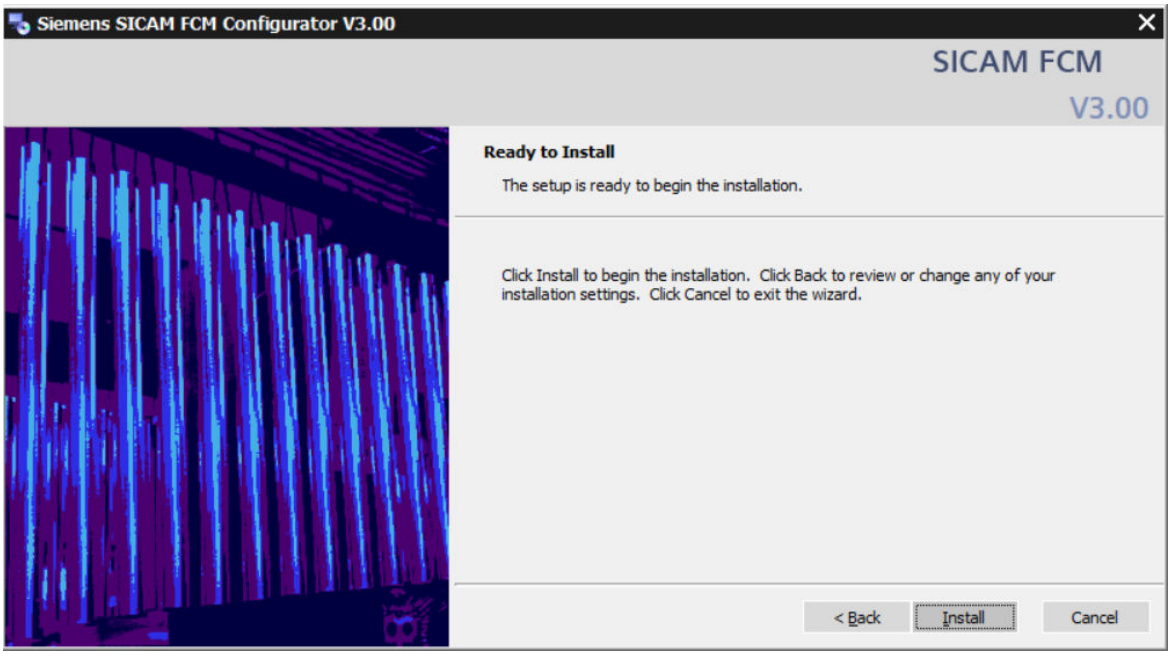
✧ Click **Next >** to install the SICAM FCM Configurator in the destination folder.
Siemens recommends keeping the SICAM FCM Configurator installation in the default folder C:\Program Files (x86)\Siemens Energy\SICAM FCM Configurator\.



[sc_fcmplus_destination, 1, --, --]

Figure 1-2 SICAM FCM Configurator Setup – Destination Folder

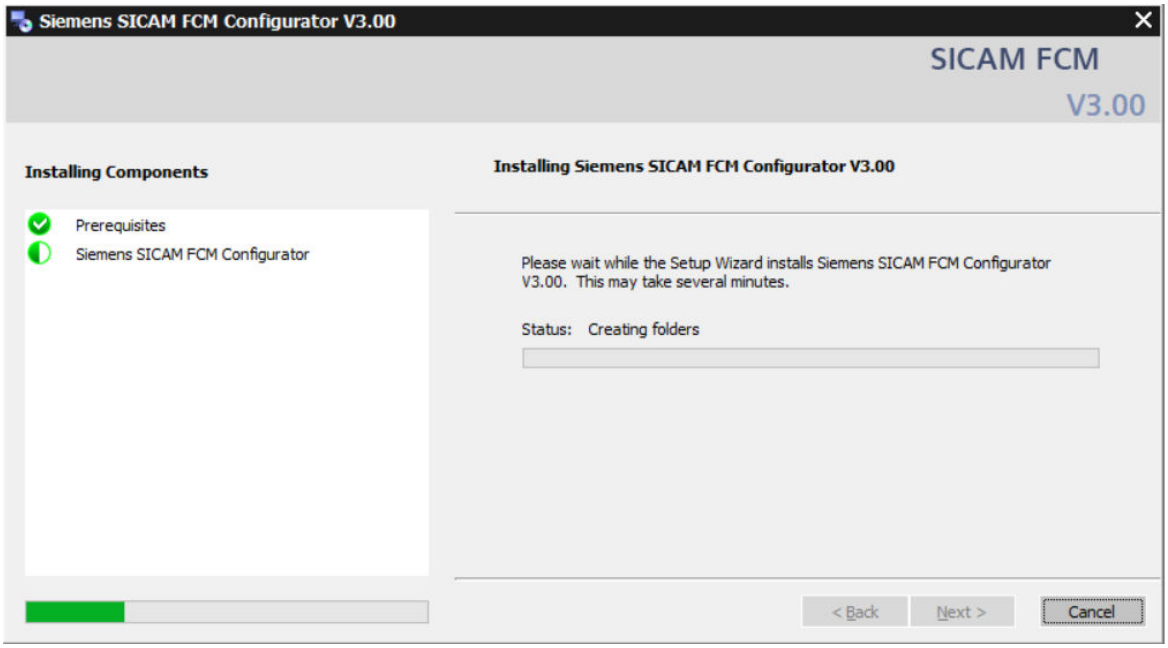
✧ Click **Next >** to begin the SICAM FCM Configurator installation.



[sc_fcmplus_readytoinstall, 1, --, --]

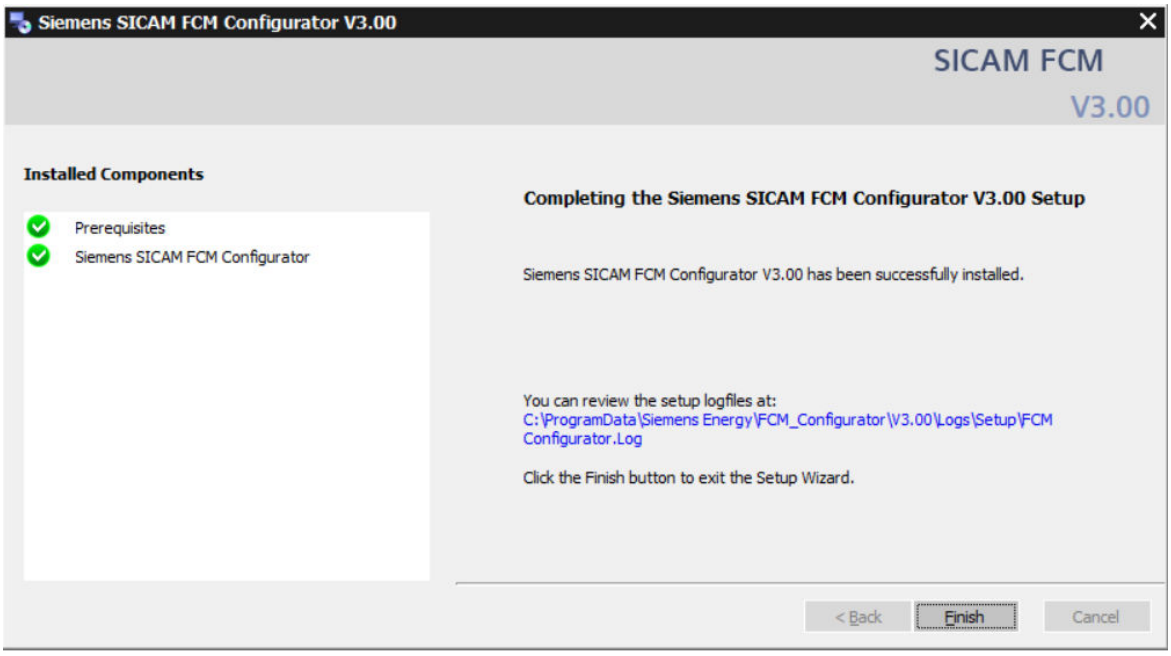
Figure 1-3 SICAM FCM Configurator Setup – Ready to Install

✧ Click **Install** to start the SICAM FCM Configurator installation.



[sc_fcmplus_installinprogress, 1, --_--]

Figure 1-4 SICAM FCM Configurator Setup – Installation in Progress



[sc_fcmplus_installfinish, 1, --_--]

Figure 1-5 SICAM FCM Configurator Setup – Installation Finished

✧ Click **Finish** to complete the SICAM FCM Configurator installation.

Launching the SICAM FCMConfigurator

To launch the SICAM FCM Configurator, proceed as follows:

✧ Double-click the icon **SICAM FCM Configurator** from the desktop to open the SICAM FCM Configurator.

- or -

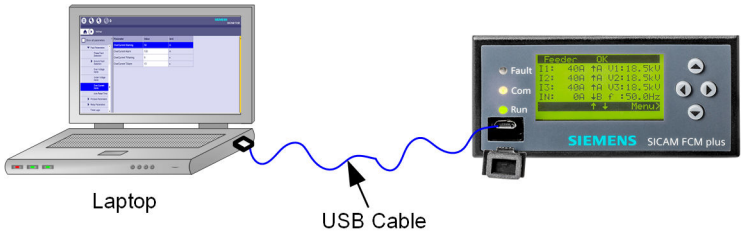
✧ Select **Start Menu** → **Siemens Energy** → **SICAM FCM Configurator**.

1.4 Connecting SICAM FCM plus to USB Interface

If you are using the SICAM FCM Configurator for the first time, install the **USB drivers** on your PC or laptop computer.

Before starting the SICAM FCM Configurator, connect the device with the USB cable which provides the connectivity and interfaces.

- ✧ Connect one end of the USB cable to the PC or laptop computer.
- ✧ Connect the other end of the USB cable to the USB interface of the device. The maximum recommended length of the USB cable is 5 m which is tested at ambient temperature.



[dw_fcm-sib_usb-serial-converter, 1, en_US]

Figure 1-6 Connecting SICAM FCM plus to a PC or Laptop Computer

1.5 Connecting SICAM FCM plus with Rear RS485 Port

If you are installing the SICAM FCM Configurator for the first time, install the **USB to serial (RS485) converter drivers** on your PC or laptop computer.

Before starting the SICAM FCM Configurator user interface, connect the SICAM FCM plus with the USB to a serial (RS485) converter which provides the connectivity and interfaces.

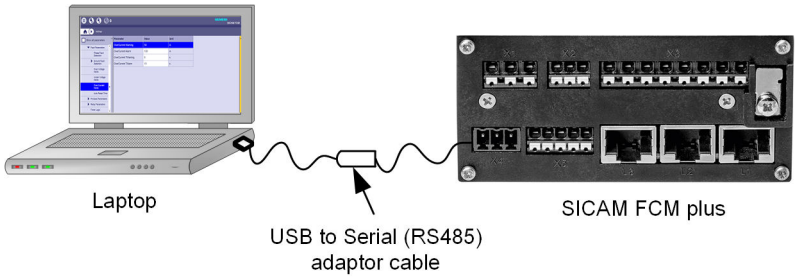
To connect the SICAM FCM plus with the USB to serial (RS485) converter, proceed as follows:

- ✧ Connect the USB end of the USB to serial (RS485) converter to the PC or laptop computer.
- ✧ Connect the serial port of the USB to serial (RS485) converter to the SICAM FCM plus terminals with wires.

The following table shows the equivalent SICAM FCM plus terminals and the USB to serial (RS485) converter:

Table 1-1 SICAM FCM Terminals and USB to Serial (RS485) Converter

SICAM FCM plus Terminals	USB to Serial (RS485) Converter
17 (COM)	GND
16 (A/-)	R- (D-)
15 (B/+)	R+ (D+)



[dw_fcmplus_usb-serial-converter, 1, en_US]

Figure 1-7 Connecting SICAM FCM plus via USB to Serial (RS485) Converter to a PC or Laptop Computer

1.6 Control Elements and Control Functions

The following table lists the control elements and control functions of SICAM FCM Configurator V3.00.

Table 1-2 Control Elements and Control Functions

Control Elements	Control Functions
	Home screen
	Open menu • Update application • Backup device settings • Restore device settings • Log off
	Apply/write the settings from current page view to the device
	Reload the current page view settings from the device
	Displays the status log information with log numbers
	Pause unpressed
	Pause pressed

1.7 Starting the SICAM FCM Configurator User Interface

SICAM FCM Configurator supports the following Web browsers:

- Microsoft Internet Explorer 8.0 or higher
- Google Chrome 10.0 or higher
- Mozilla Firefox 45.0 or higher

NOTE

Siemens recommends using Google Chrome 10.0 or higher.

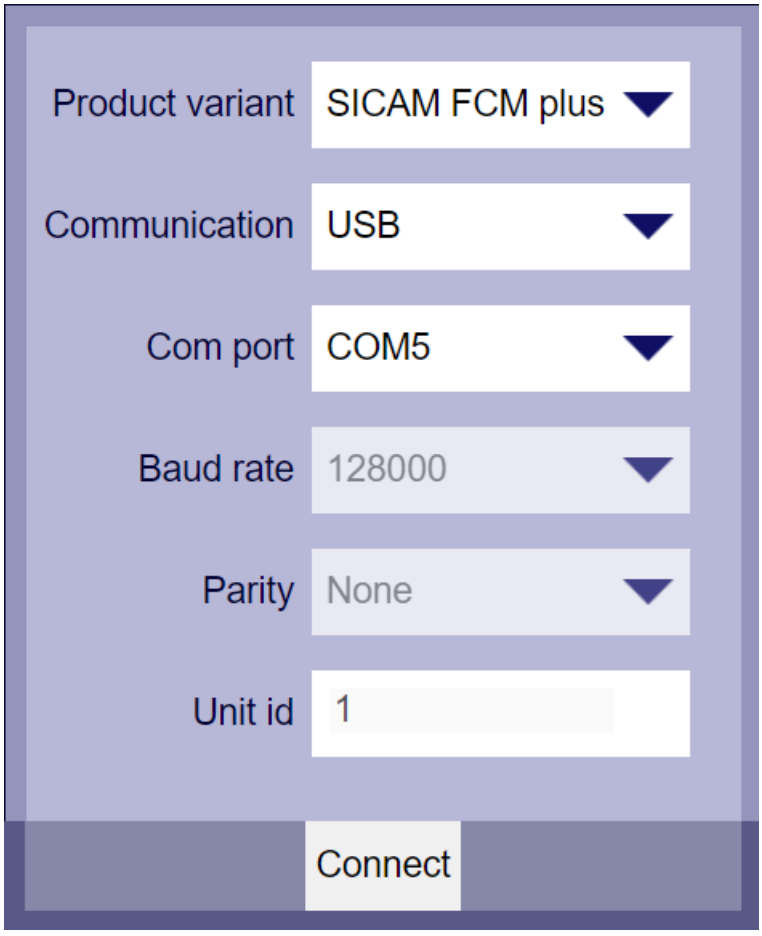
Before starting the SICAM FCM Configurator user interface, the following preconditions must be satisfied:

- Observe the safety requirements when connecting the device.
  For more information about SICAM FCM plus device safety requirements, refer to the *SICAM FCM plus User Manual*.
- The connection between the SICAM FCM plus device and PC or laptop computer using USB is established.
- The SICAM FCM plus device is powered on.

To start the SICAM FCM Configurator user interface, proceed as follows:

✧ Double-click the icon **SICAM FCM Configurator** from the desktop.

✧ Select the **Product variant** from the list box.
  The default product is **SICAM FCM**.



[sc_fcmplus_configconnection, 1, --_--]

Figure 1-8 Configurator Connection

- ✧ Select the **Communication** from the list box.
  For SICAM FCM plus by default **USB** is automatically listed. SICAM FCM plus communication can also be established with RS-485 adaptor.
- ✧ Select the **Com port** from the list box.
- ✧ Select the **Baud rate** from the list box.
  The baud rate is fixed to **128 000 Bit/s** via **USB** communication.
  The default baud rate is **115 200 Bit/s** via **RS-485** communication.
- ✧ Select the **Parity** from the list box.
  The parity is fixed to **None** via **USB** communication.
  The default parity is **None** via **RS-485** communication.
- ✧ Enter the **Unit id** from **1** to **247**.
  The unit id is fixed to **1** via **USB** communication.
  The default unit id is **247** via **RS-485** communication.

NOTE

To establish the communication over device USB port, ensure that the **USB communication** is enabled from SICAM FCM plus HMI menu.

- ✧ Click **Connect**.

The **Log-on to device** dialog appears.

[sc_fcmplus_admin-logon, 1, --_--]

Figure 1-9 SICAM FCM Configurator – Log on to device

✧ Click **OK** to log on to the SICAM FCM plus Configurator.

The **Dashboard** page appears.

1.8 Dashboard

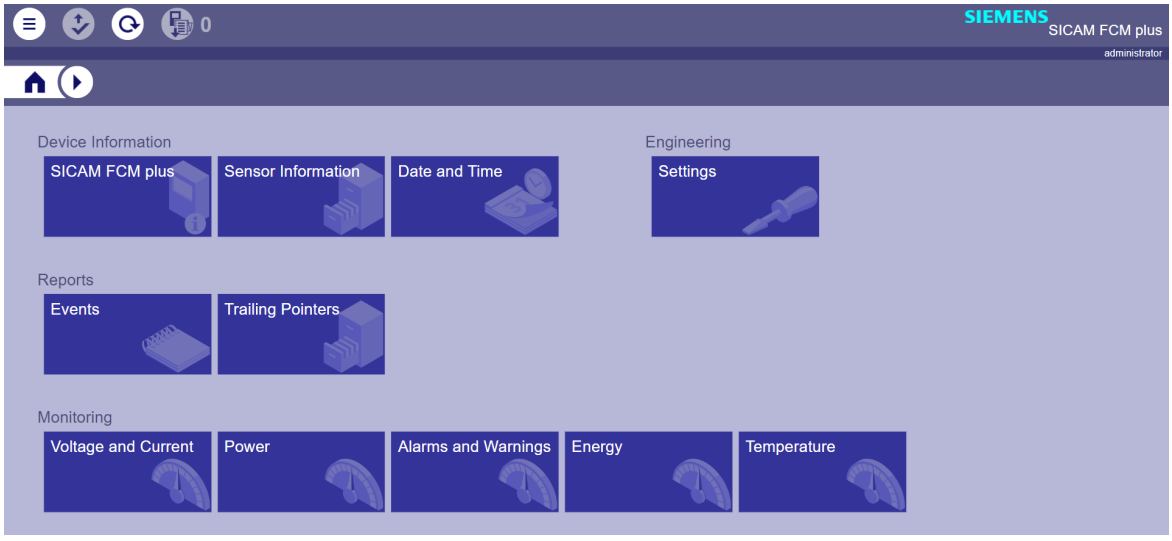
1.8.1 SICAM FCM plus Configurator Dashboard

Device Information Group

The device information page displays the following:

- SICAM FCM plus details
  - Device health
  - Boot-loader version
  - Firmware version
  - Application software (SICAM FCM plus Configurator) version
- Sensor information
- Date and time

The device information group parameters are read-only.



[sc_fcmplus_dashboard, 1, --_--]

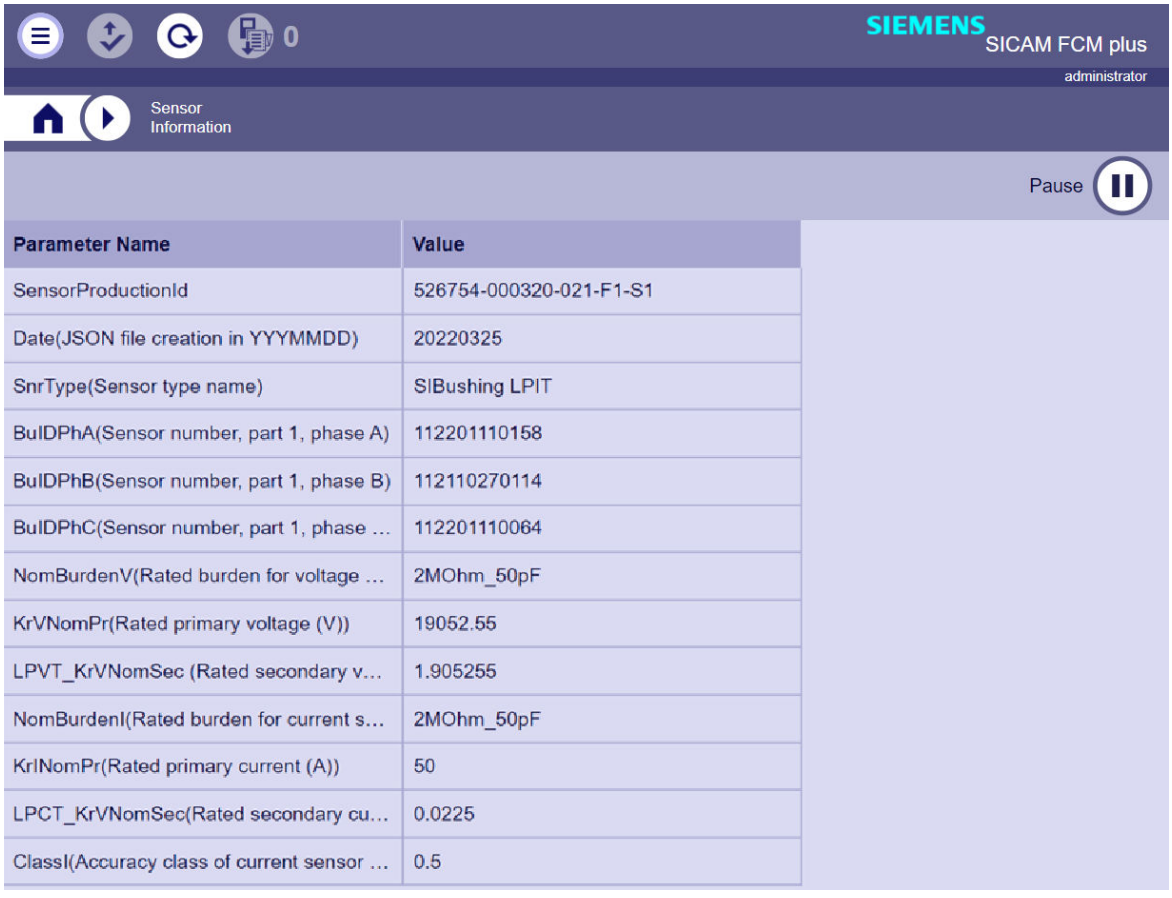
Figure 1-10 SICAM FCM plus Configurator – Dashboard

✧ Click the tile **SICAM FCM plus** under **Device Information**.

[sc_fcmplus_devinfo, 1, --_--]

Figure 1-11 SICAM FCM plus Configurator – Device Information

✧ Click the tile **Sensor Information** under **Device Information** to know the details of SIBushing sensor details and respective L1, L2, L3 parameters configured. Refer to *1.14 Update Sensor Configuration* .



Parameter Name	Value
SensorProductionId	526754-000320-021-F1-S1
Date(JSON file creation in YYYMMDD)	20220325
SnrType(Sensor type name)	SIBushing LPIT
BuIDPhA(Sensor number, part 1, phase A)	112201110158
BuIDPhB(Sensor number, part 1, phase B)	112110270114
BuIDPhC(Sensor number, part 1, phase ...	112201110064
NomBurdenV(Rated burden for voltage ...	2MOhm_50pF
KrVNomPr(Rated primary voltage (V))	19052.55
LPVT_KrVNomSec (Rated secondary v...	1.905255
NomBurdenI(Rated burden for current s...	2MOhm_50pF
KrINomPr(Rated primary current (A))	50
LPCT_KrVNomSec(Rated secondary cu...	0.0225
ClassI(Accuracy class of current sensor ...	0.5

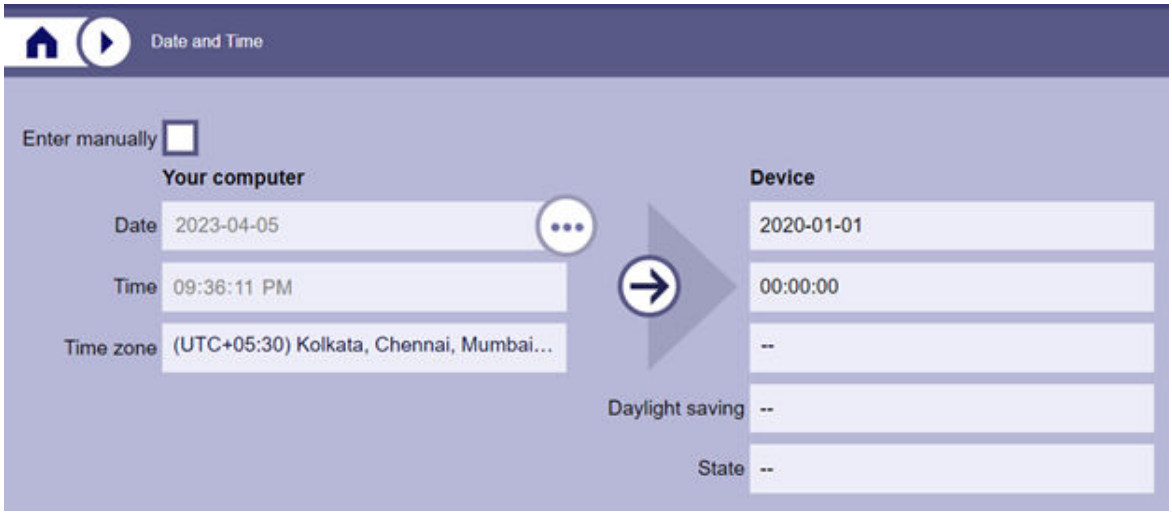
[sc_fcmplus_sensorinfo, 1, --_--]

Figure 1-12 SICAM FCM plus Configurator – SIBushing Sensor Details

✧ Click the tile **Date and Time** under **Device Information** to setup the date and time.

– By default, PC or laptop computer date and time is displayed on the left side. Click the right arrow to transfer the settings to the device.

– You can also manually enter the date, time and time zone details. During this the default PC or laptop computer date and time on the left side remains inactive.



[sc_fcmplus_datetime, 1, --_--]

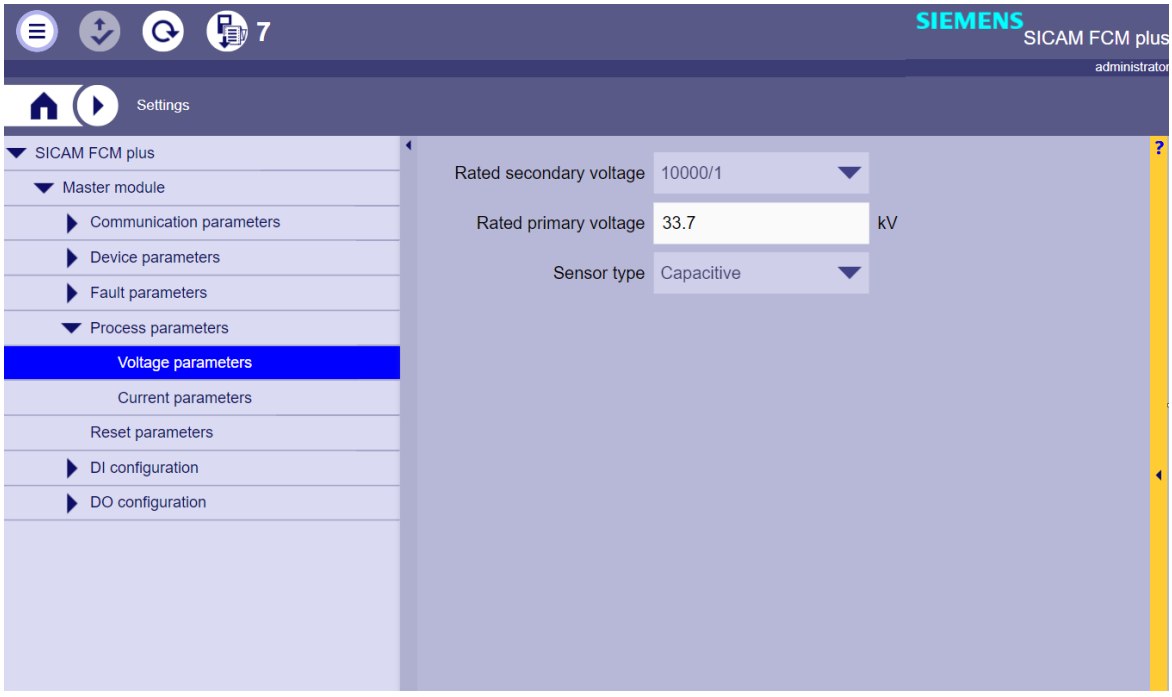
Figure 1-13 SICAM FCM plus Configurator – Set Date and Time

Engineering Group

The engineering settings page displays the following parameters in a tree view structure:

- Communication parameters
- Device parameters
- Fault parameters
- Process parameters
- Reset parameters
- DI configuration
- DO configuration

✧ Click the tile **Settings** under **Engineering**.



[sc_fcmplus_enggsettings, 1, --_--]

Figure 1-14 SICAM FCM plus Configurator – Engineering (Settings)

NOTE

For better navigation some of the **Settings** pages are intentionally left blank. Such pages are not assigned with any parameter settings.

1.8.2 Reports and Monitoring Group

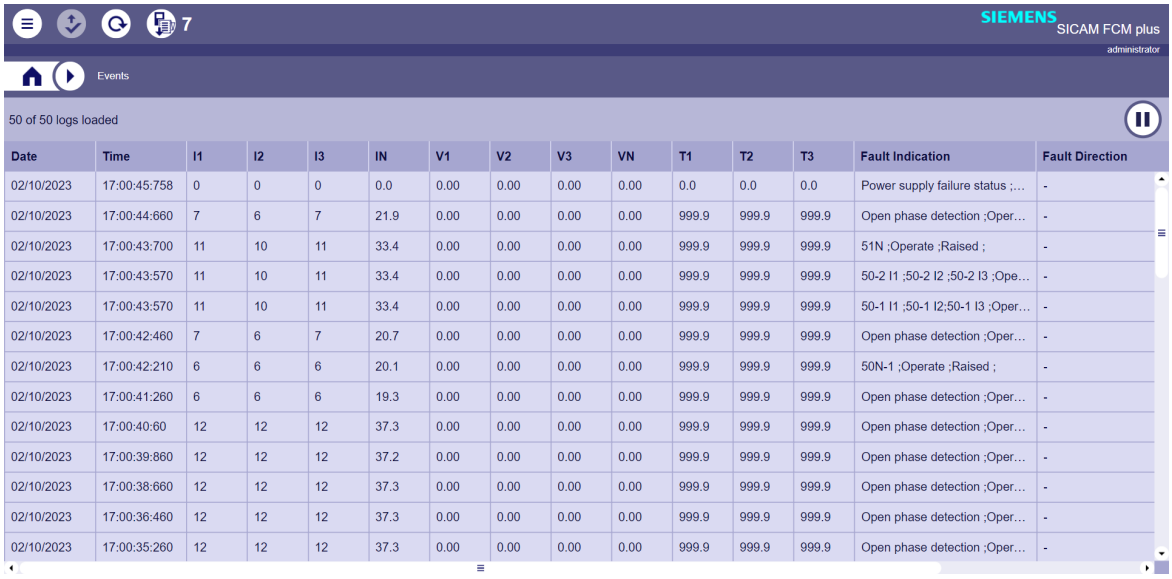
1.8.2.1 Reports Group

The reports page displays the events and trailing pointers.

Events Tile

This tile provides information on the events logged in the SICAM FCM plus device.

✧ Click the tile **Events** under **Reports**.



Date	Time	I1	I2	I3	IN	V1	V2	V3	VN	T1	T2	T3	Fault Indication	Fault Direction
02/10/2023	17:00:45:758	0	0	0	0.0	0.00	0.00	0.00	0.00	0.0	0.0	0.0	Power supply failure status ;…	-
02/10/2023	17:00:44:660	7	6	7	21.9	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-
02/10/2023	17:00:43:700	11	10	11	33.4	0.00	0.00	0.00	0.00	999.9	999.9	999.9	51N ;Operate ;Raised ;	-
02/10/2023	17:00:43:570	11	10	11	33.4	0.00	0.00	0.00	0.00	999.9	999.9	999.9	50-2 I1 ;50-2 I2 ;50-2 I3 ;Ope…	-
02/10/2023	17:00:43:570	11	10	11	33.4	0.00	0.00	0.00	0.00	999.9	999.9	999.9	50-1 I1 ;50-1 I2;50-1 I3 ;Oper…	-
02/10/2023	17:00:42:460	7	6	7	20.7	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-
02/10/2023	17:00:42:210	6	6	6	20.1	0.00	0.00	0.00	0.00	999.9	999.9	999.9	50N-1 ;Operate ;Raised ;	-
02/10/2023	17:00:41:260	6	6	6	19.3	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-
02/10/2023	17:00:40:60	12	12	12	37.3	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-
02/10/2023	17:00:39:860	12	12	12	37.2	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-
02/10/2023	17:00:38:660	12	12	12	37.3	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-
02/10/2023	17:00:36:460	12	12	12	37.3	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-
02/10/2023	17:00:35:260	12	12	12	37.3	0.00	0.00	0.00	0.00	999.9	999.9	999.9	Open phase detection ;Oper…	-

[sc_fcmplus_events, 1, --,--]

Figure 1-15 SICAM FCM plus Configurator – Reports (Events)

NOTE

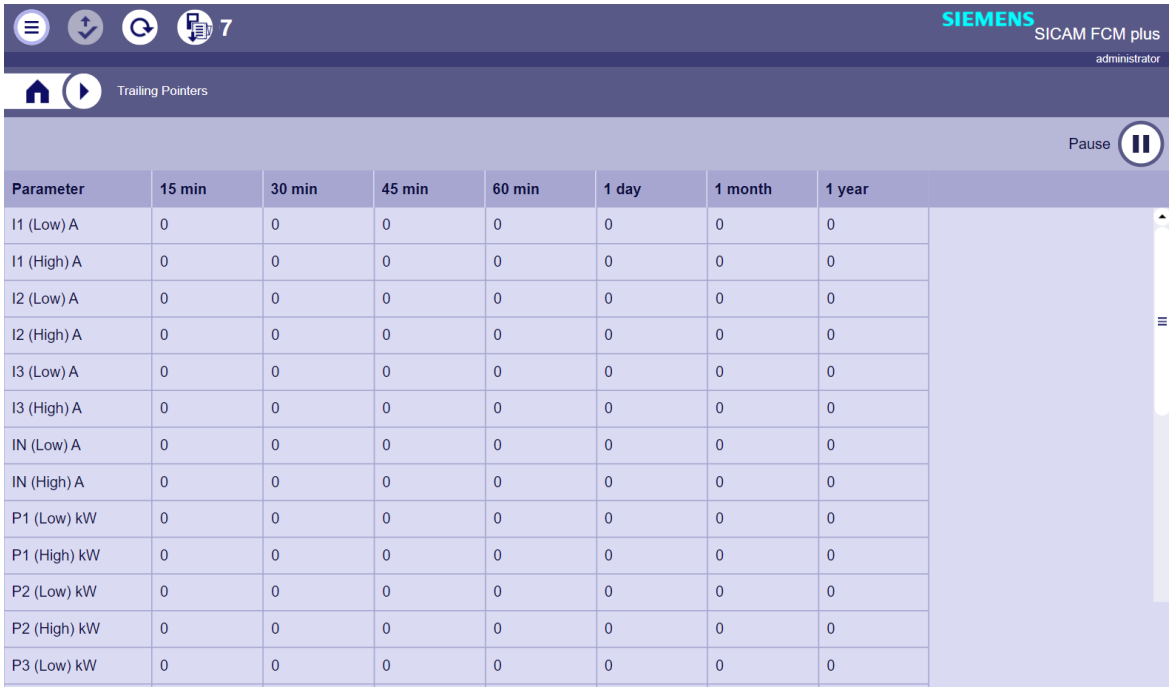
For the device error event over Modbus and Configurator, the logged current/voltage/temperature values are only for debug purpose.

Values shown in Events against each phase L1, L2, and L3 will be in voltage (kV), temperature (°C) or current (A).

Trailing Pointers Tile

This tile provides information on the trailing pointers recorded in the SICAM FCM plus device.

✧ Click the tile **Trailing pointers** under **Reports**.



Parameter	15 min	30 min	45 min	60 min	1 day	1 month	1 year
I1 (Low) A	0	0	0	0	0	0	0
I1 (High) A	0	0	0	0	0	0	0
I2 (Low) A	0	0	0	0	0	0	0
I2 (High) A	0	0	0	0	0	0	0
I3 (Low) A	0	0	0	0	0	0	0
I3 (High) A	0	0	0	0	0	0	0
IN (Low) A	0	0	0	0	0	0	0
IN (High) A	0	0	0	0	0	0	0
P1 (Low) kW	0	0	0	0	0	0	0
P1 (High) kW	0	0	0	0	0	0	0
P2 (Low) kW	0	0	0	0	0	0	0
P2 (High) kW	0	0	0	0	0	0	0
P3 (Low) kW	0	0	0	0	0	0	0

[sc_fcmplus_trailingpointers, 1, --_--]

Figure 1-16 SICAM FCM plus Configurator – Reports (Trailing Pointers)

1.8.2.2 Monitoring Group

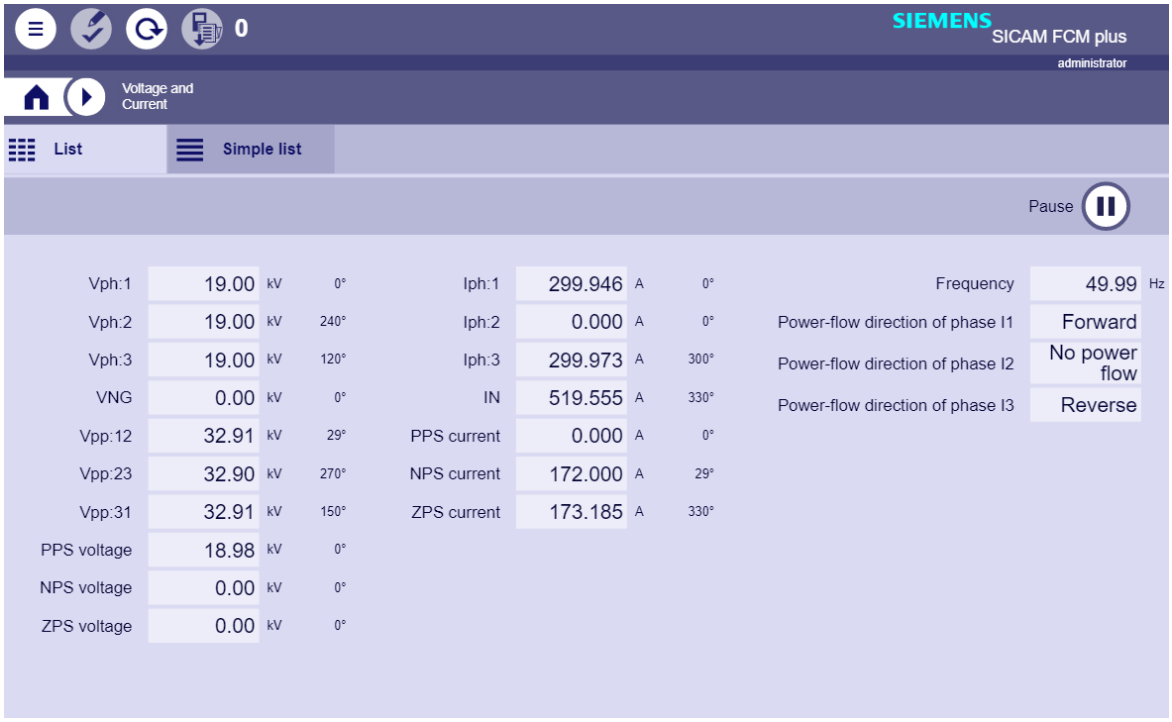
The monitoring page displays the following parameters:

- Voltage and current
- Power
- Alarm and warnings
- Energy
- Temperature

Voltage and Current Tile

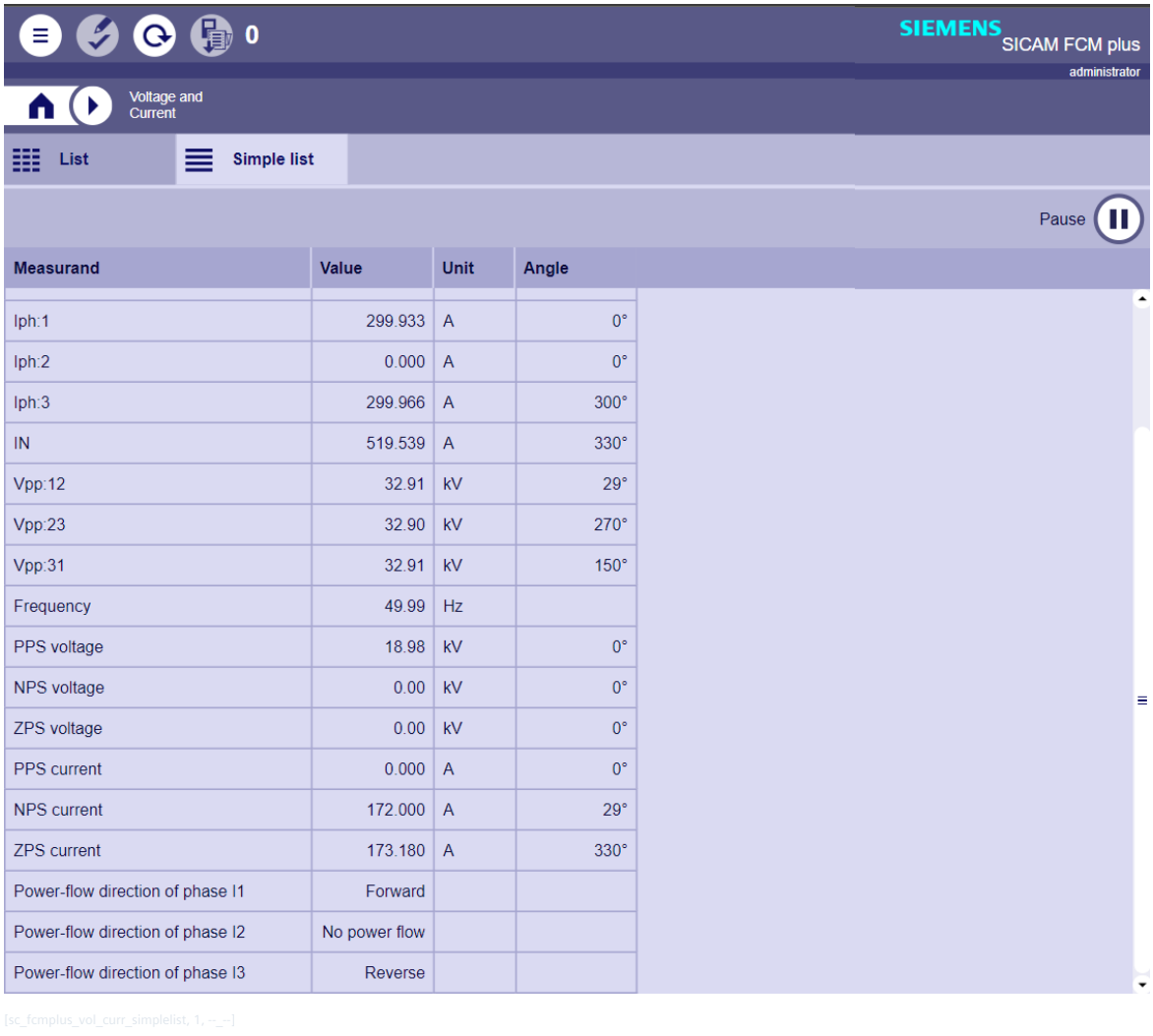
This tile provides information on the real-time current and voltage measurements.

✧ Click the tile **Voltage and Current** under **Monitoring**.



[sc_fcmplus_vol_curr, 1, --_--]

Figure 1-17 SICAM FCM plus Configurator – Monitoring (Voltage and Current) in List



Measurand	Value	Unit	Angle
Iph:1	299.933	A	0°
Iph:2	0.000	A	0°
Iph:3	299.966	A	300°
IN	519.539	A	330°
Vpp:12	32.91	kV	29°
Vpp:23	32.90	kV	270°
Vpp:31	32.91	kV	150°
Frequency	49.99	Hz	
PPS voltage	18.98	kV	0°
NPS voltage	0.00	kV	0°
ZPS voltage	0.00	kV	0°
PPS current	0.000	A	0°
NPS current	172.000	A	29°
ZPS current	173.180	A	330°
Power-flow direction of phase I1	Forward		
Power-flow direction of phase I2	No power flow		
Power-flow direction of phase I3	Reverse		

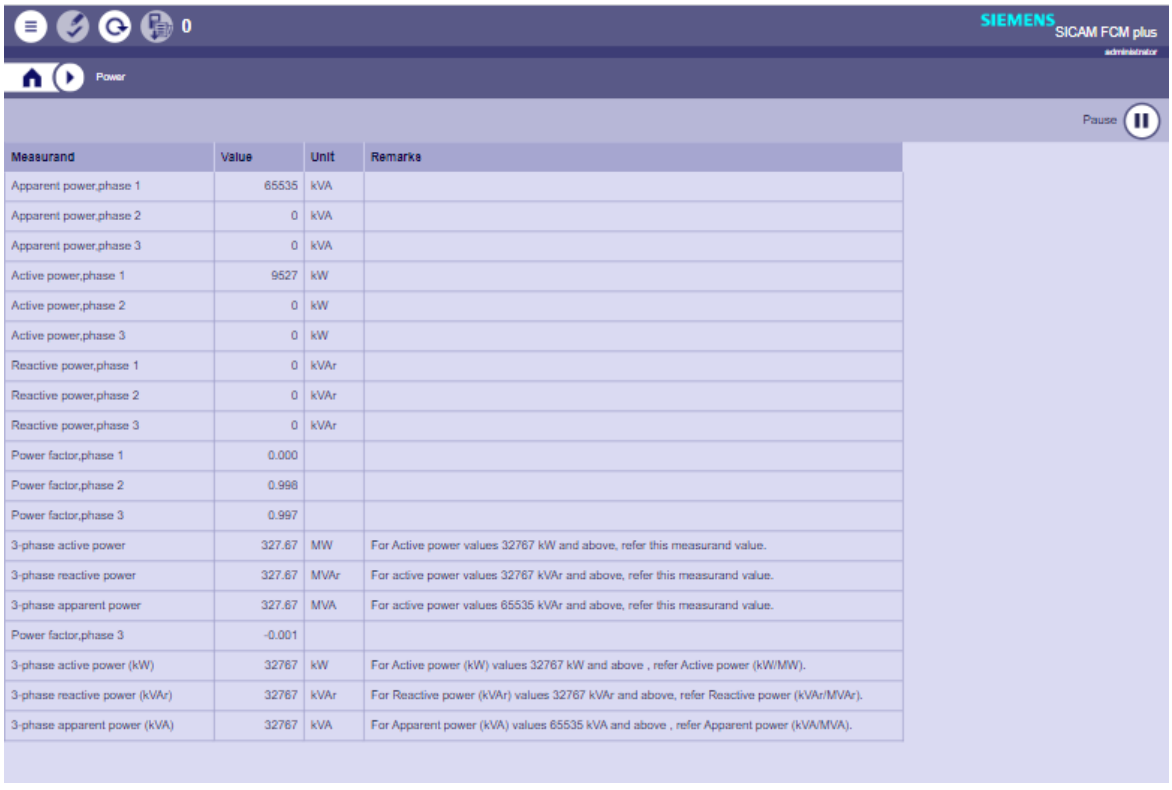
[sc_fcmplus_vol_curr_simplelist, 1, --_--]

Figure 1-18 SICAM FCM plus Configurator – Monitoring (Voltage and Current) in Simple List

Power Tile

This tile provides information on the real-time power measurements.

✧ Click the tile **Power** under **Monitoring**.



Measurand	Value	Unit	Remarks
Apparent power,phase 1	65535	kVA	
Apparent power,phase 2	0	kVA	
Apparent power,phase 3	0	kVA	
Active power,phase 1	9527	kW	
Active power,phase 2	0	kW	
Active power,phase 3	0	kW	
Reactive power,phase 1	0	kVAr	
Reactive power,phase 2	0	kVAr	
Reactive power,phase 3	0	kVAr	
Power factor,phase 1	0.000		
Power factor,phase 2	0.998		
Power factor,phase 3	0.997		
3-phase active power	327.67	MW	For Active power values 32767 kW and above, refer this measurand value.
3-phase reactive power	327.67	MVAr	For active power values 32767 kVAr and above, refer this measurand value.
3-phase apparent power	327.67	MVA	For active power values 65535 kVAr and above, refer this measurand value.
Power factor,phase 3	-0.001		
3-phase active power (kW)	32767	kW	For Active power (kW) values 32767 kW and above , refer Active power (kW/MW).
3-phase reactive power (kVAr)	32767	kVAr	For Reactive power (kVAr) values 32767 kVAr and above, refer Reactive power (kVAr/MVAr).
3-phase apparent power (kVA)	32767	kVA	For Apparent power (kVA) values 65535 kVA and above , refer Apparent power (kVA/MVA).

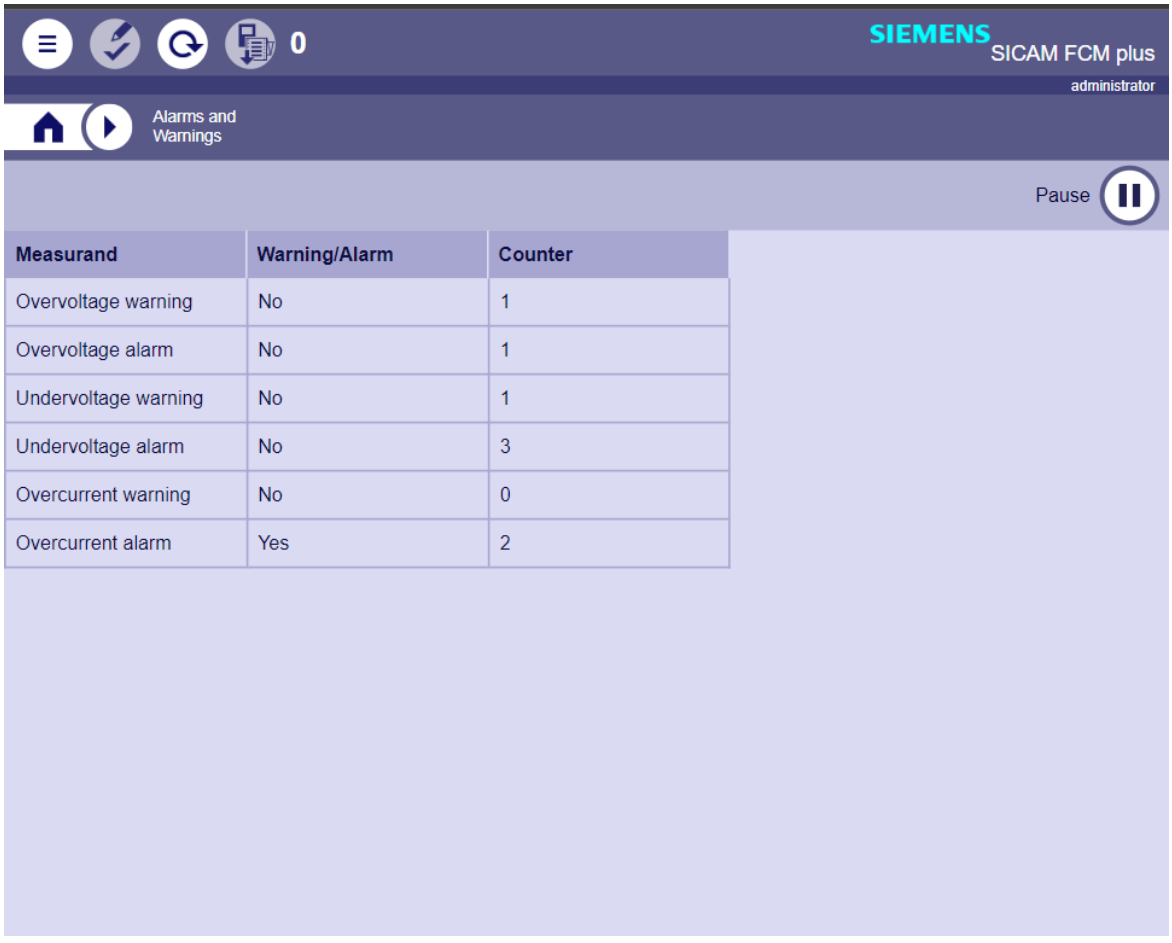
[sc_fcmplus_power, 1, --_--]

Figure 1-19 SICAM FCM plus Configurator – Monitoring (Power)

Alarms and Warnings Tile

This tile provides information on the alarms and warnings recorded by the SICAM FCM plus device.

✧ Click the tile **Alarms and Warnings** under **Monitoring**.



Measurand	Warning/Alarm	Counter
Overvoltage warning	No	1
Overvoltage alarm	No	1
Undervoltage warning	No	1
Undervoltage alarm	No	3
Overcurrent warning	No	0
Overcurrent alarm	Yes	2

[sc_fcmplus_monalarmwarn_count, 1, --_--]

Figure 1-20 SICAM FCM plus Configurator – Monitoring (Alarms and Warnings)

Energy Tile

This tile provides information on the energy measurements.

✧ Click the tile **Energy** under **Monitoring**.

Measurand	Value	Unit
Active import energy	9	MWh
Active export energy	4	MWh
Reactive import energy	9	MVArh
Reactive export energy	4	MVArh

[sc_fcmplus_monenergy, 1, --_--]

Figure 1-21 SICAM FCM plus Configurator – Monitoring (Energy)

Temperature Tile

This tile provides information on the temperature measurements.

✧ Click the tile **Temperature** under **Monitoring**.

{sc_fcmplus_mon-temp, 1, –, –}

Figure 1-22 SICAM FCM plus Configurator – Monitoring (Temperature)

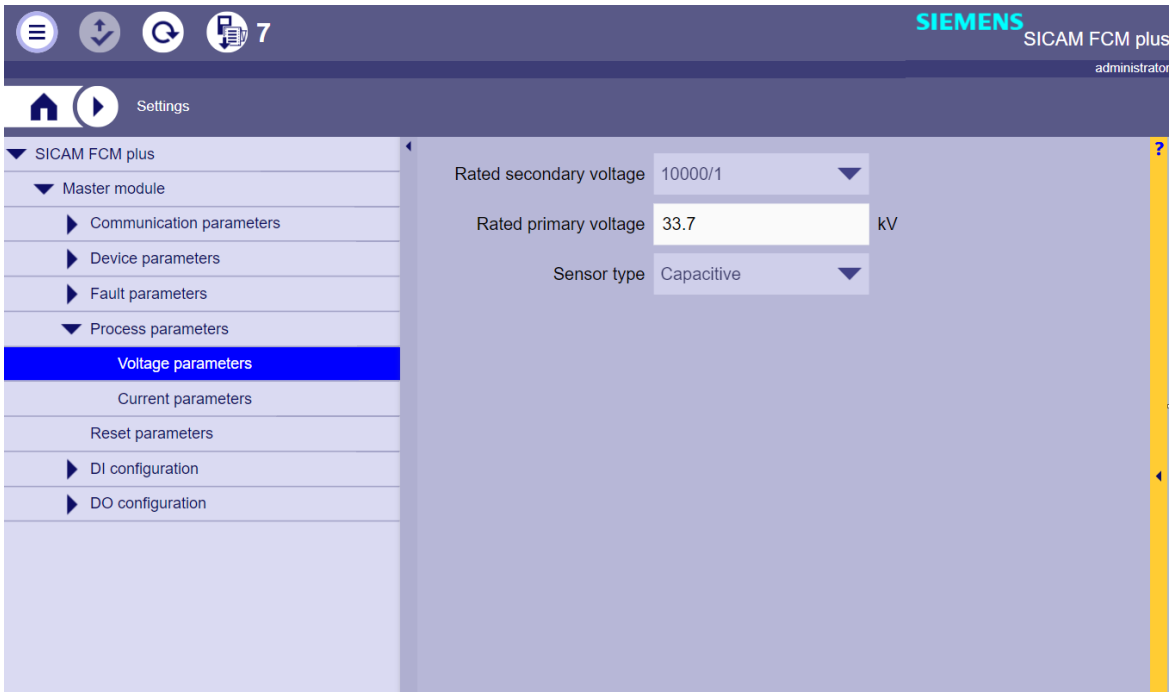
1.9 Parameter Settings

This chapter gives an example of how to set the process parameters with the SICAM FCM plus Configurator.
To set the process parameters, proceed as follows:

✧ In the SICAM FCM plus Configurator dashboard, click the tile **Settings** under **Engineering** and select **Process parameters**.

✧ Select the rated secondary voltage from the **Voltage parameters** list box.

✧ Enter the rated primary voltage in the text box **Voltage parameters**.



[sc_fcmplus_enggsettings, 1, --_--]

Figure 1-23 Process Parameters

✧ Click the button **Apply Changes** to write the settings to the device.
The updated settings are applied to the SICAM FCM plus device and displayed in the log information.

NOTE

Similarly, you can configure the following parameters:

- Communication parameters
- Device parameters
- Fault parameters
- Reset parameters
- DI configuration
- DO configuration

NOTE

For more information about SICAM FCM plus device parameterization, safety requirements, and device functions, refer to the *SICAM FCM plus User Manual*.

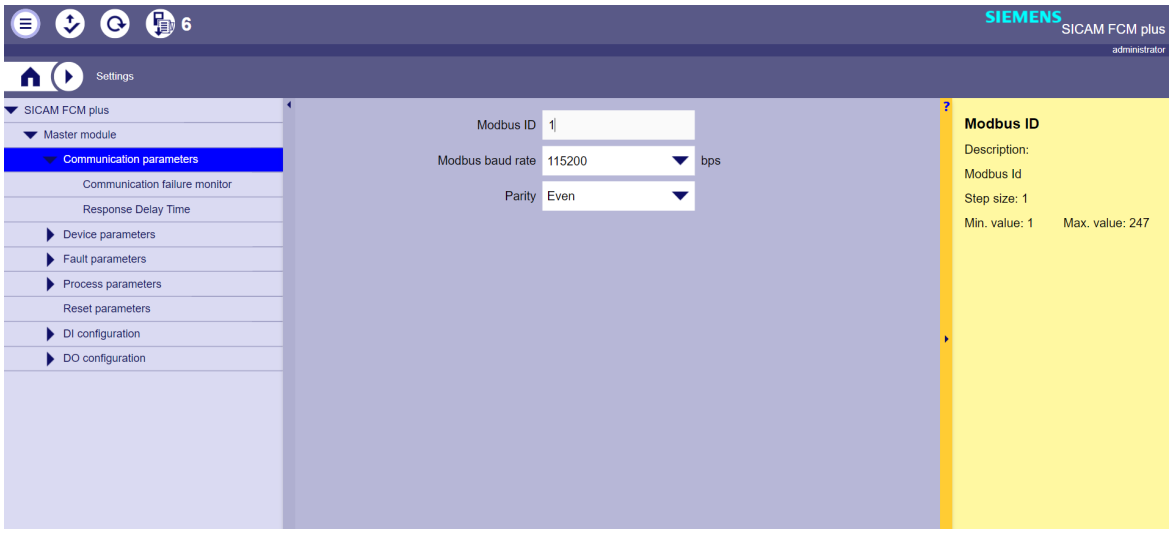
Information Section

The information section provides you more information about the description of parameters and the settings range when you are configuring the parameters.

To find more information about the parameter, proceed as follows:

✧ Select any parameter for which user wants to see the information and click the arrow sign◄ on the yellow bar.

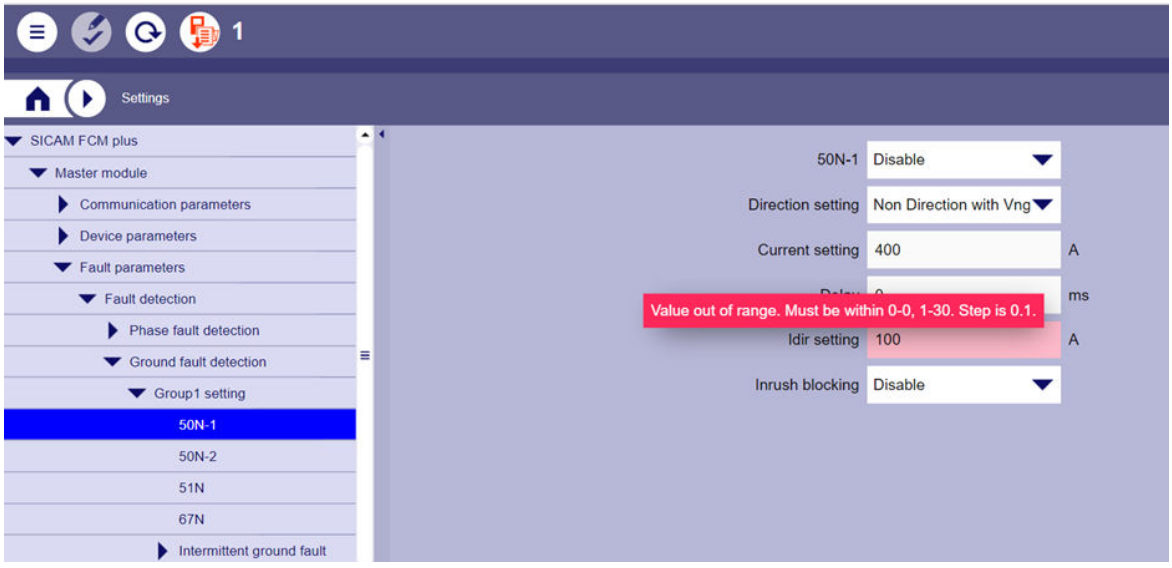
The following figure shows an information example for the Modbus ID.



[sc_fcmplus_infosec, 1, --, --]

Figure 1-24 Information Display with Modbus ID Settings Range

✧ If you enter invalid or out-of-range value in the parameter fields, then error message pops-up indicating non-configurable value. Click button **ESC** on the keyboard to reflect the previous range or you can enter the valid value.



[sc_fcmplus_outofrange, 1, --, --]

Figure 1-25 Invalid, Out-of-Range Error Pop-up

1.10 Backup Device Settings

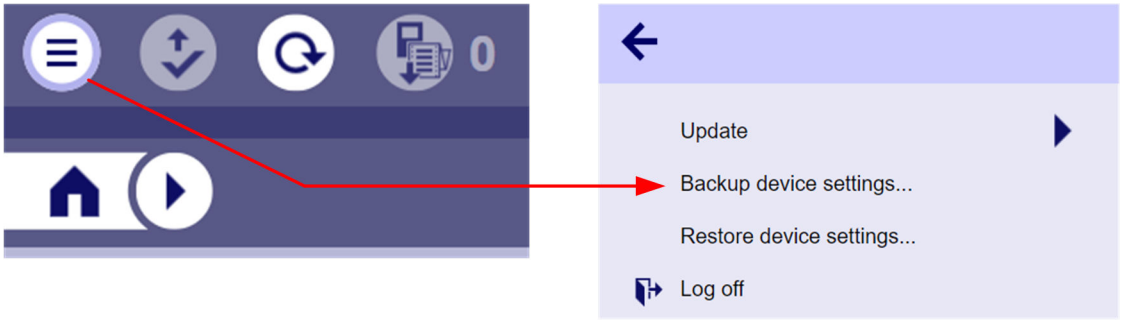
Backup device settings allows you to save the configured device settings data in the PC or laptop computer. Siemens recommends creating a backup of the device settings at regular intervals. The backup settings file is used for archiving and to restore device settings.

NOTE

Siemens recommends creating a backup of the device settings from **Home** or **Settings** page only.

To create a backup of the device settings, proceed as follows:

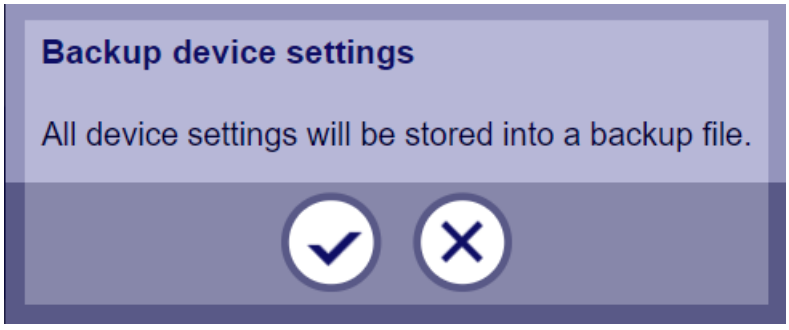
✧ In the SICAM FCM plus Configurator dashboard, click the **Open** menu and select **Backup device settings...**



[dw_fcmplus_backup, 1, --_--]

Figure 1-26 Backup Device Settings

The **Backup device settings** dialog appears.

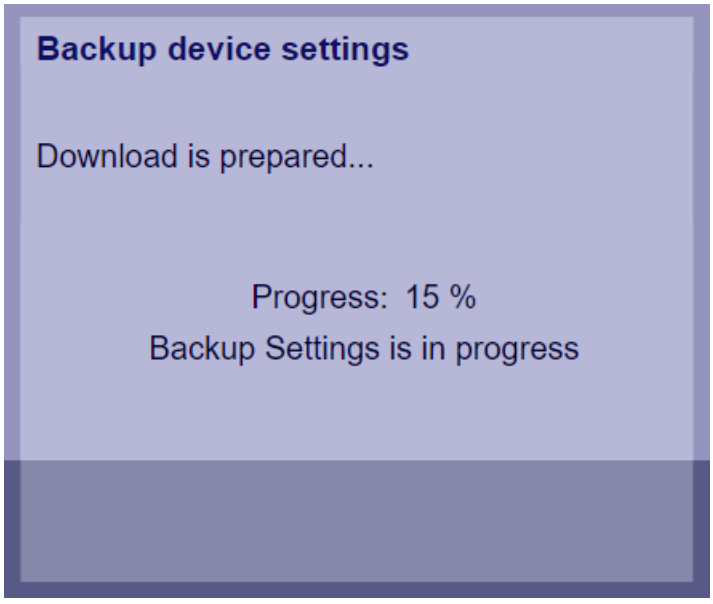


[sc_fcmplus_backup_dialog, 1, --_--]

Figure 1-27 Backup Device Settings Dialog

✧ Click **OK**.

The **BackupSettings is in progress** dialog appears.



[sc_fcmplus_backup_inprogress, 1, --_--]

Figure 1-28 Backup Device Settings - Download in Progress

The **File ready for download** dialog appears.

✧ Once the backup is completed, the file downloads automatically.

By default, the SICAM FCM plus device settings backup file is downloaded to browser default download path. For example, Chrome browser by default the settings are stored in **Downloads** folder.

NOTE

Modbus ID, parity, baud rate, password details and sensor configuration (imported from JSON file) are not available in backup file.

1.11 Device Maintenance Replacement Procedure

The **Backup device settings** can be imported to new device by enabling the USB communication from device HMI.

To migrate backup device settings, proceed as follows:

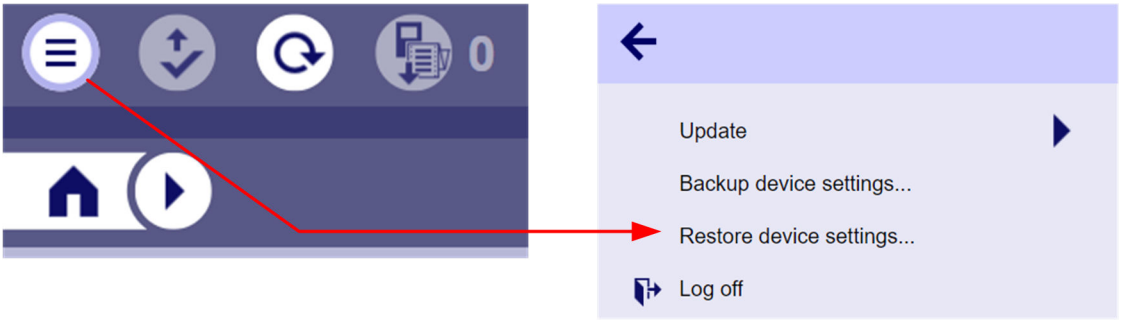
- ✧ Connect the new device with USB and to the PC or laptop computer.
- ✧ Power on the device and enable the RTC from the device HMI.
- ✧ Select the communication from the list box of SICAM FCM Configurator. Refer to *Figure 1-8*.
- ✧ If the backup device settings are available, execute the procedure mentioned in *1.10 Backup Device Settings* .
- ✧ If the backup device settings are not available, then configure the device as per the procedure mentioned in *1.8.1 SICAM FCM plus Configurator Dashboard*.
- ✧ Update sensor configuration, refer to *1.14 Update Sensor Configuration* .
- ✧ Once the procedure of configuring device settings is done, disconnect USB from device and disable communication from HMI.

1.12 Restore Device Settings

Restore device settings restores the device settings from the saved backup file to connected device.

To restore the device settings, proceed as follows:

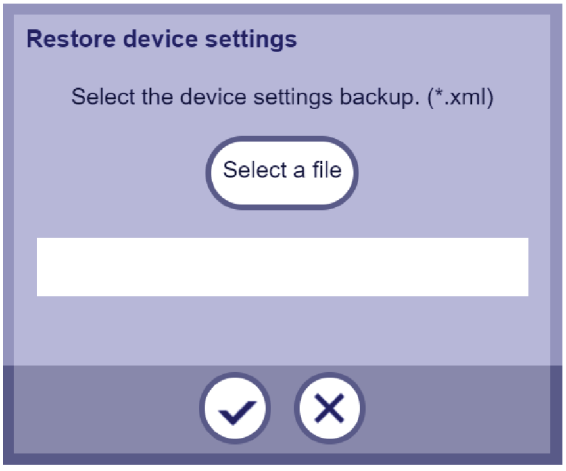
✧ In the SICAM FCM plus Configurator dashboard from **Home** or **Settings** page, click the **Open** menu and select **Restore device settings....**



[dw_fcmplus_restore, 1, --_--]

Figure 1-29 Restore Device Settings

The **Restore device settings** dialog appears.

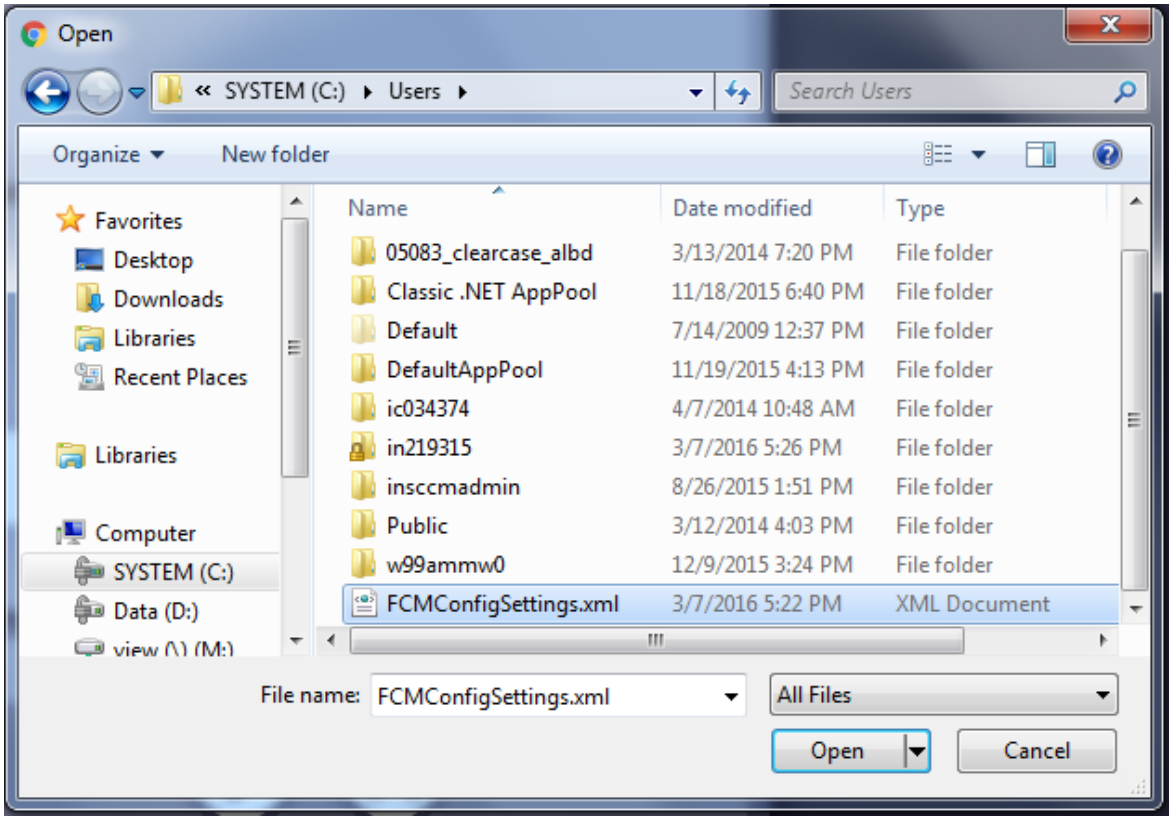


[sc_fcm_restoredeviceset_20210713, 2, --_--]

Figure 1-30 Restore Device Settings Dialog

✧ Click **Select a file**.

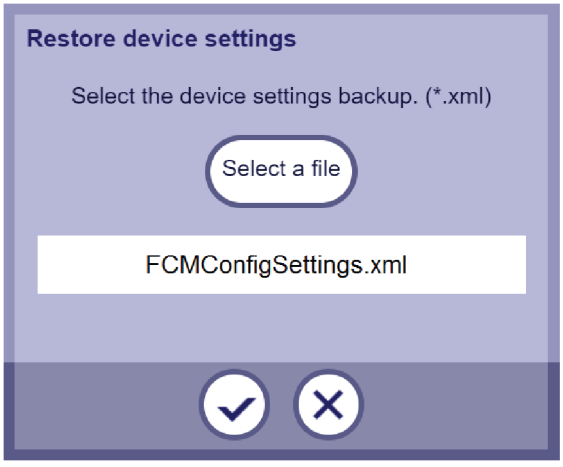
✧ Select the valid device settings backup (*.xml) file, for example, FCMConfigSettings.xml.



[sc_fcm_configfiledial_20160307, 1, en_US]

Figure 1-31 Valid Backup-File Selection

✧ Click **Open**.

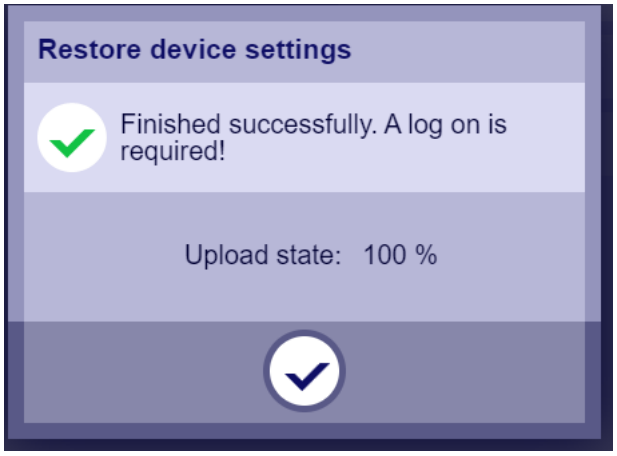


[sc_fcm_restdevset_20210713, 2, --_--]

Figure 1-32 Restore Device Settings from the Backup File

✧ Click **OK**.

The device settings are restored from the selected file and **Finished successfully. A log-on is required!** dialog appears.



[sc_fcm_restdevsucc_20211407, 1, --_--]

Figure 1-33 Device Settings Restored Successfully

✧ Click **Close**.

The **Log-on to device** dialog appears.

[sc_fcmplus_admin-logon, 1, --_--]

Figure 1-34 Log-on to Device

✧ Click **OK** to log on to the SICAM FCM plus Configurator again.

1.13 Update Application

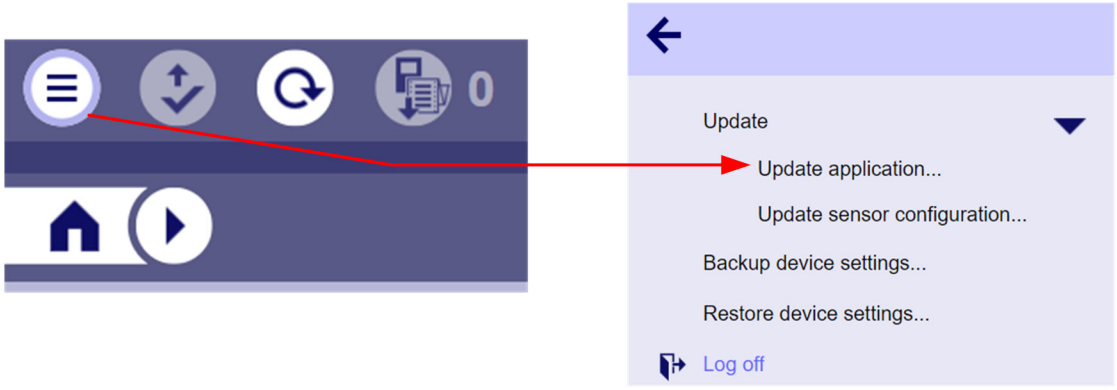
You can update the SICAM FCM plus application to the device via SICAM FCM Configurator.

Before updating the application, download the SICAM FCM plus application (for example, FCM_PLUS_APP_CM7.srec) from the following SIOS website:

https://support.industry.siemens.com/cs/start?lc=en-US

To update the application, proceed as follows:

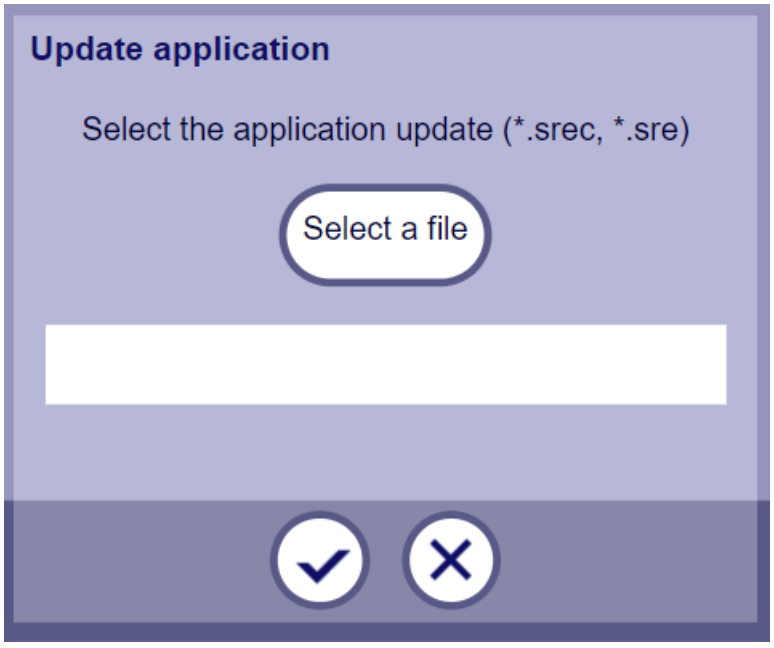
✧ In the SICAM FCM plus dashboard, click the menu **Open** → **Update** → **Update application...**



[dw_fcmplus_updatefw1, 1, --_--]

Figure 1-35 Update application

The dialog **Update application** appears.

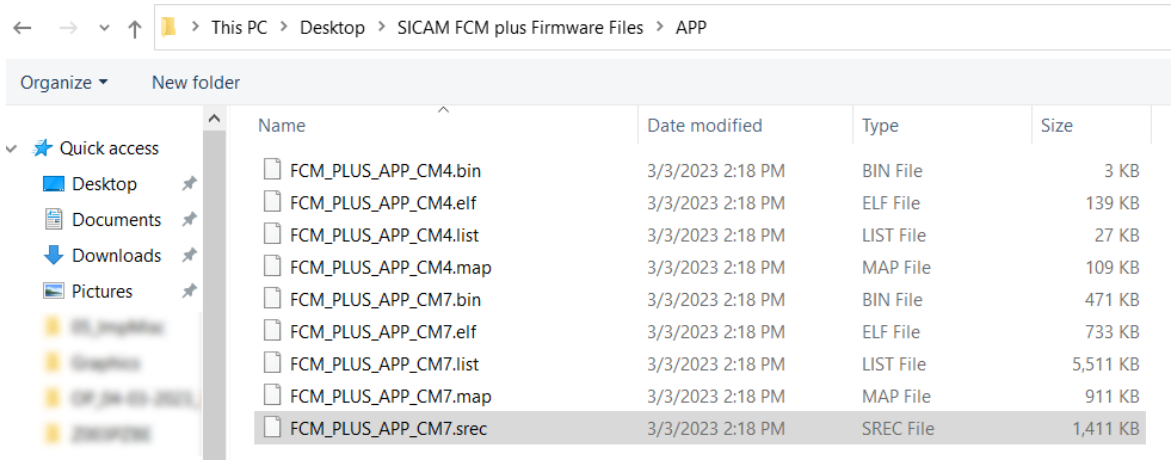


[sc_fcmplus_upfwdialog, 1, --_--]

Figure 1-36 Application File Update Dialog

✧ Click **Select a file**.

The dialog **Select File to Upload** appears.

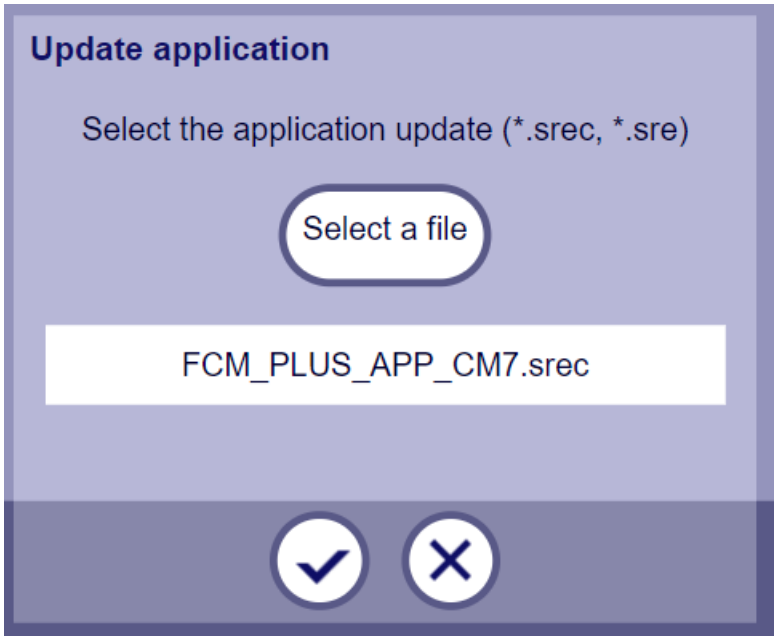


[sc_fcmplus_appsrec, 1, --_--]

Figure 1-37 Select File to Upload

✧ Select the valid application file, for example, **FCM_PLUS_APP_CM7.srec**.

✧ Click **Open**.

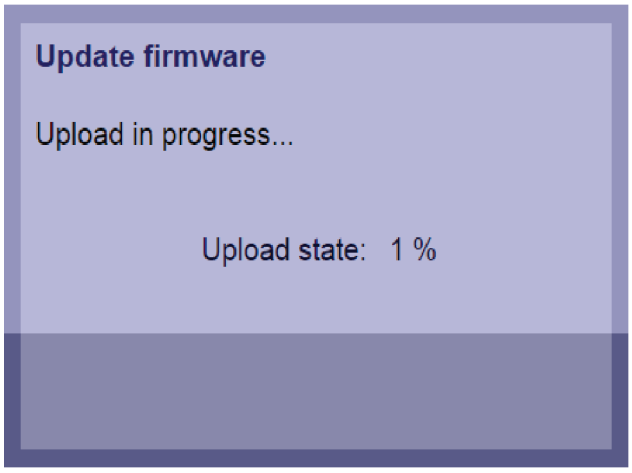


[sc_fcmplus_updapp, 1, --_--]

Figure 1-38 Update Application File

✧ Click **OK**.

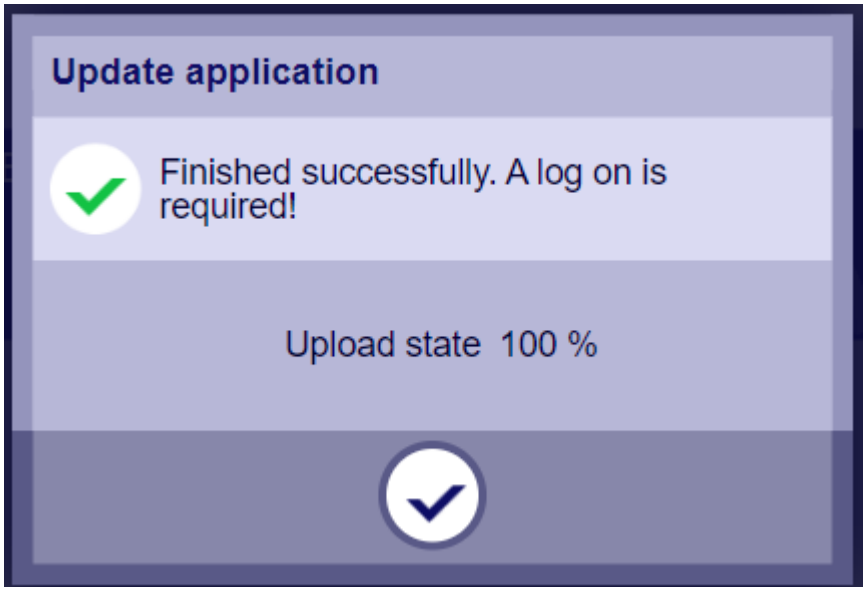
The **Update application** dialog appears.



[sc_fcm_updatefirmprog_20160307, 2, en_US]

Figure 1-39 Application Upload in Progress

✧ After successful application update, the **Finished successfully. A log on is required!** dialog appears.



[sc_fcmplus_updapp-finish, 1, --_--]

Figure 1-40 Application File Update Successful

✧ Click **Close**.

After the successful application download, the SICAM FCM plus device reboots in application mode.

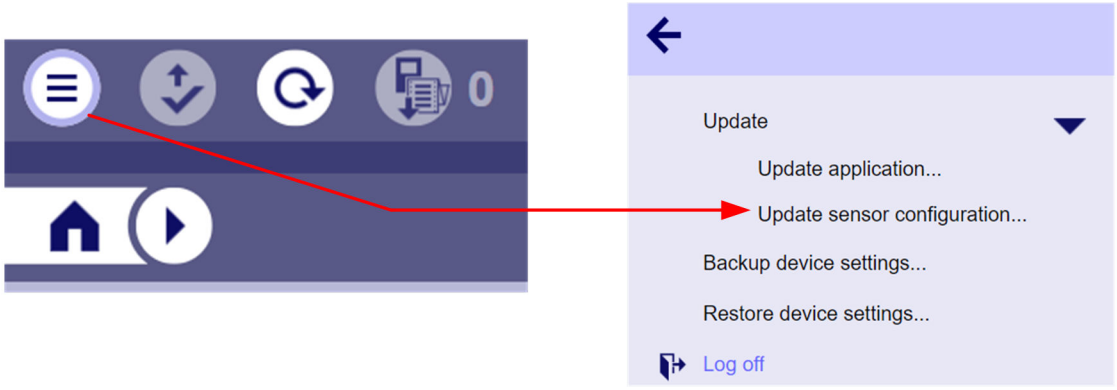
1.14 Update Sensor Configuration

You can update the sensor configuration to the device via SICAM FCM Configurator. This feature is available only with communication USB and Configurator tool is connected to USB port of the device.

Before updating the sensor configuration, fetch the JSON file from the sensor manufacturer and save in your PC or laptop computer.

To update the sensor configuration, proceed as follows:

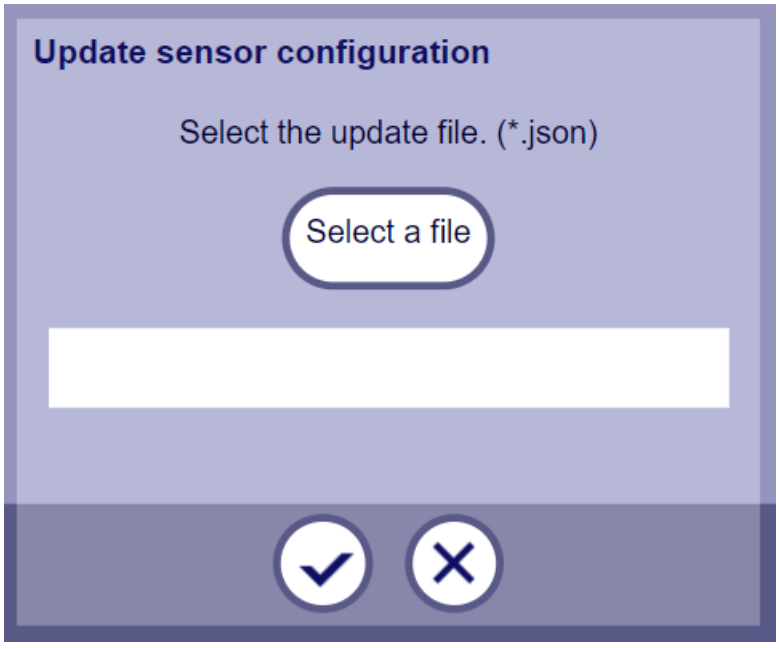
✧ In the SICAM FCM plus dashboard, click the menu **Open** → **Update** → **Update sensor configuration...**



[dw_fcmplus_update_sen, 1, --_--]

Figure 1-41 Update Sensor Configuration

The dialog **Update sensor configuration** appears.

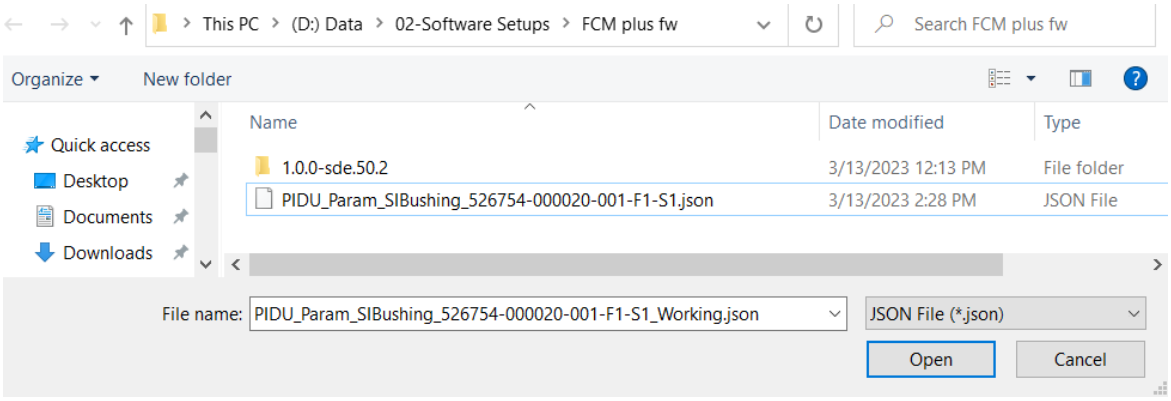


[sc_fcmplus_json_updatedia, 1, --_--]

Figure 1-42 Configuration File Update Dialog

✧ Click **Select a file**.

The dialog **Select File to Upload** appears.

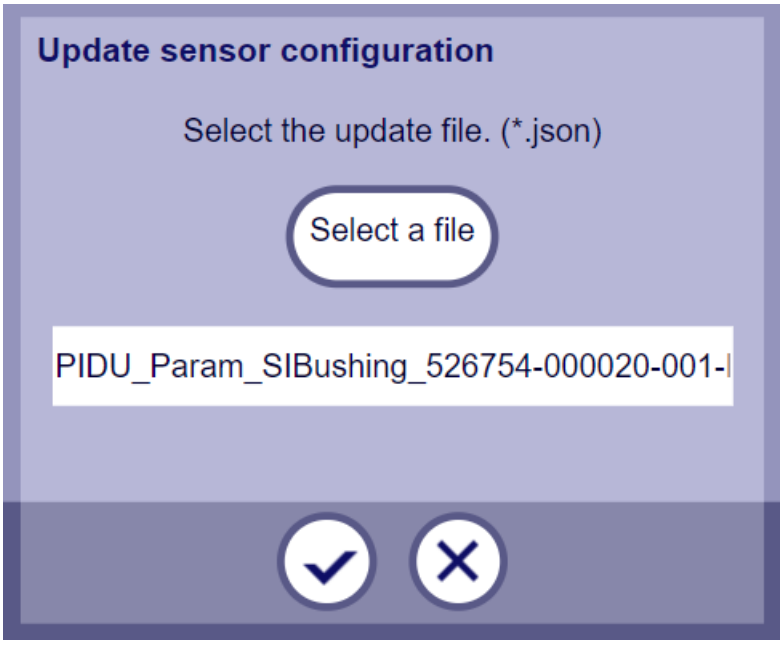


[sc_fcmplus_json_selfileupload, 1, --_--]

Figure 1-43 Select File to Upload

✧ Select the valid configuration file, for example, **PIDU_Param_SIBushing.json**.

✧ Click **Open**.

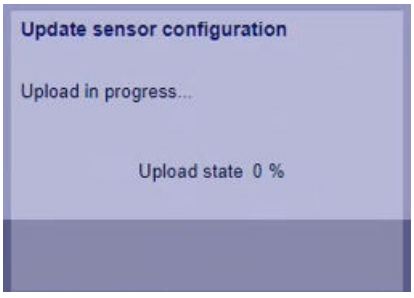


[sc_fcmplus_json_clickok, 1, --_--]

Figure 1-44 Update Configuration File

✧ Click **OK**.

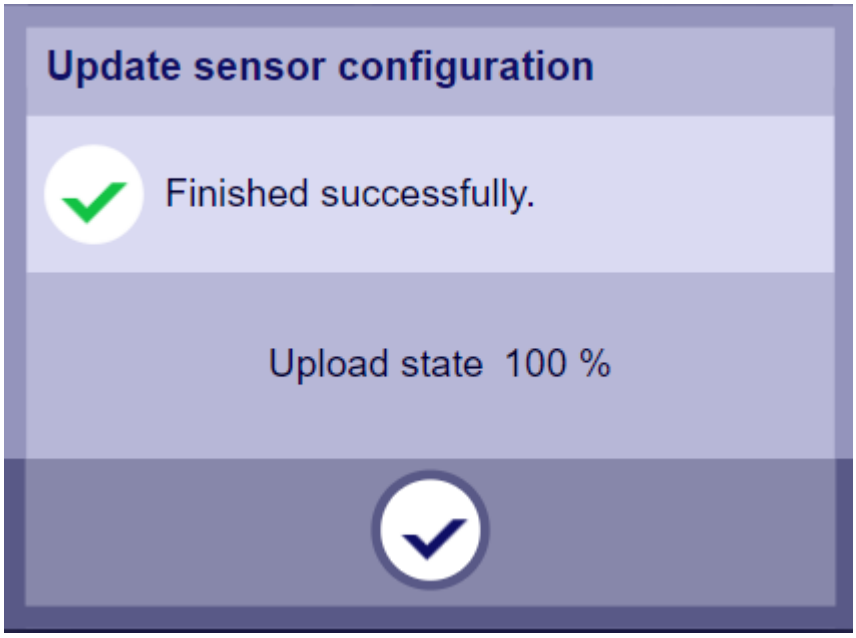
The dialog **Update sensor configuration** appears.



[sc_fcmplus_json_updsenconf, 1, --_--]

Figure 1-45 Configuration Upload in Progress

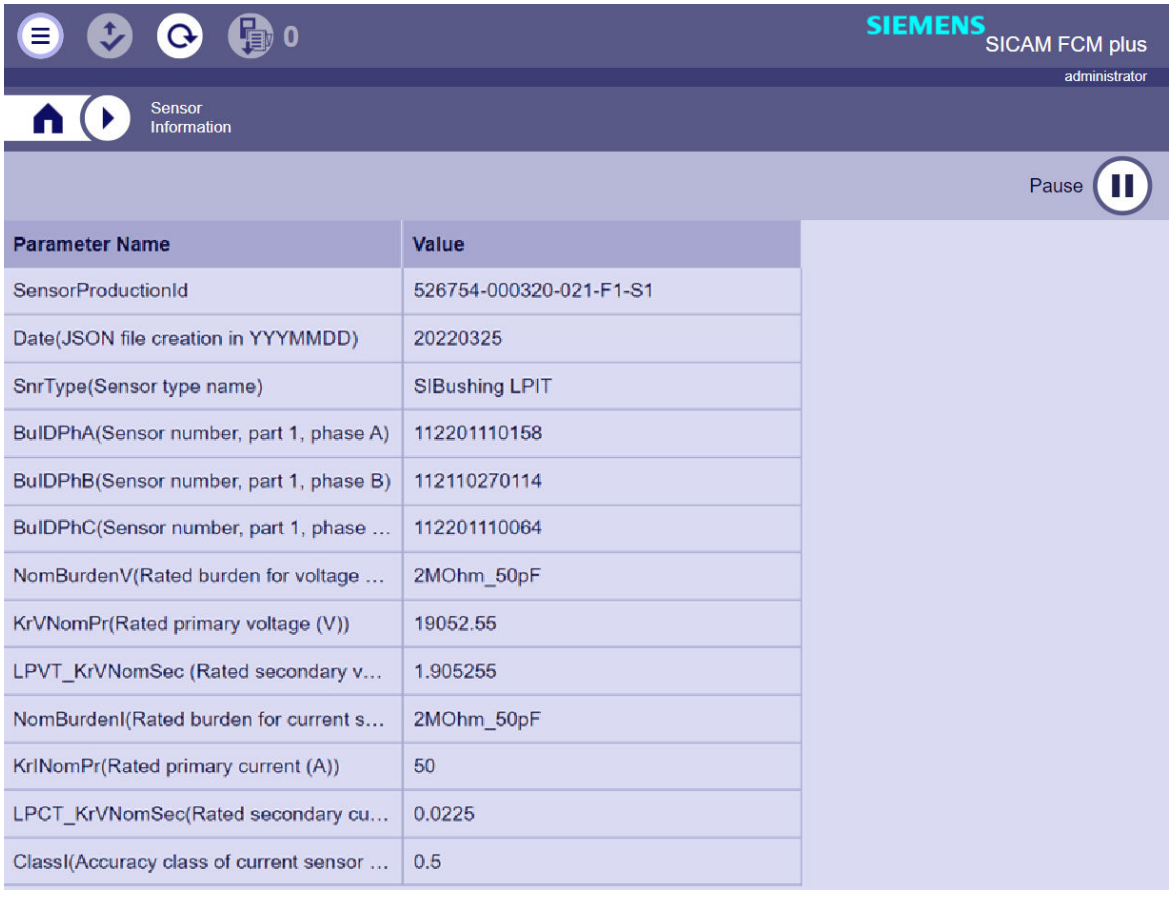
✧ After successful configuration update, the **Finished successfully.** dialog appears.



[sc_fcmplus_json_finish, 1, --_--]

Figure 1-46 Configuration File Update Successful

✧ Click the tile **Sensor Information** under **Device Information** to know the details of SIBushing sensor details and respective L1, L2, L3 parameters configured.



Parameter Name	Value
SensorProductionId	526754-000320-021-F1-S1
Date(JSON file creation in YYYMMDD)	20220325
SnrType(Sensor type name)	SIBushing LPIT
BuIDPhA(Sensor number, part 1, phase A)	112201110158
BuIDPhB(Sensor number, part 1, phase B)	112110270114
BuIDPhC(Sensor number, part 1, phase ...	112201110064
NomBurdenV(Rated burden for voltage ...	2MOhm_50pF
KrVNomPr(Rated primary voltage (V))	19052.55
LPVT_KrVNomSec (Rated secondary v...	1.905255
NomBurdenI(Rated burden for current s...	2MOhm_50pF
KrINomPr(Rated primary current (A))	50
LPCT_KrVNomSec(Rated secondary cu...	0.0225
ClassI(Accuracy class of current sensor ...	0.5

[sc_fcmplus_sensorinfo, 1, --_--]

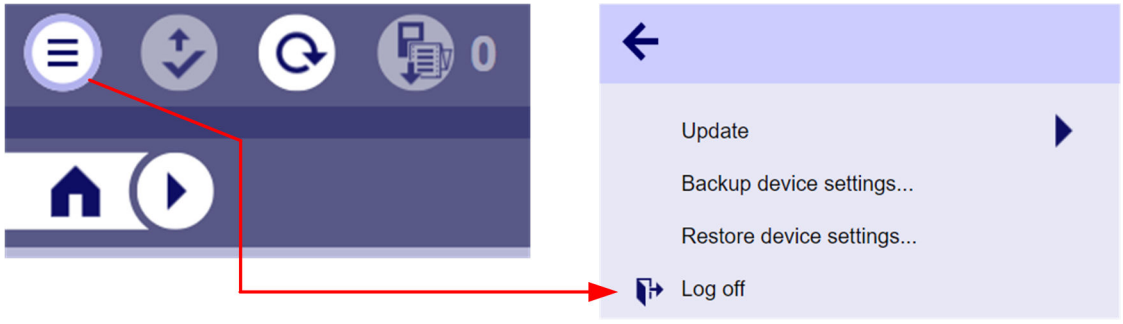
Figure 1-47 SICAM FCM plus Configurator – SIBushing Sensor Details

1.15 Log off

Log off allows to end the user session of the SICAM FCM plus Configurator.

To log off from the SICAM FCM plus Configurator, proceed as follows:

✧ In the SICAM FCM plus Configurator dashboard, click the **Open** menu and select **Log off** to disconnect from the SICAM FCM plus Configurator and return to the logon screen.



[dw_fcmplus_logoff, 1, --_--]

Figure 1-48 Log off

NOTE

In order to use the SICAM FCM configurator for any other device you must log off, which disconnects the COM port.

1.16 SICAM FCM Configurator Uninstallation

You can uninstall the SICAM FCM Configurator in one of the following possibilities:

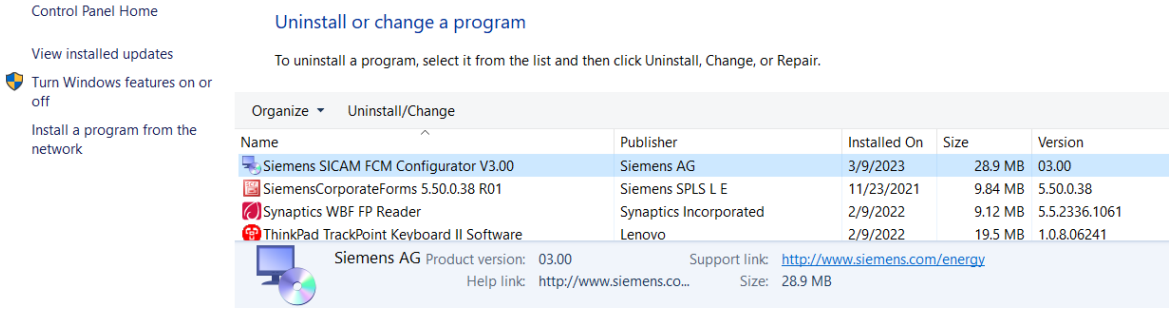
- Uninstallation via the control panel
- Uninstallation via the start menu

Uninstallation via the Control Panel

To uninstall the SICAM FCM Configurator via the control panel, proceed as follows:

✧ To open the control panel, click **Start** → **Control Panel** → **Programs and Features**.

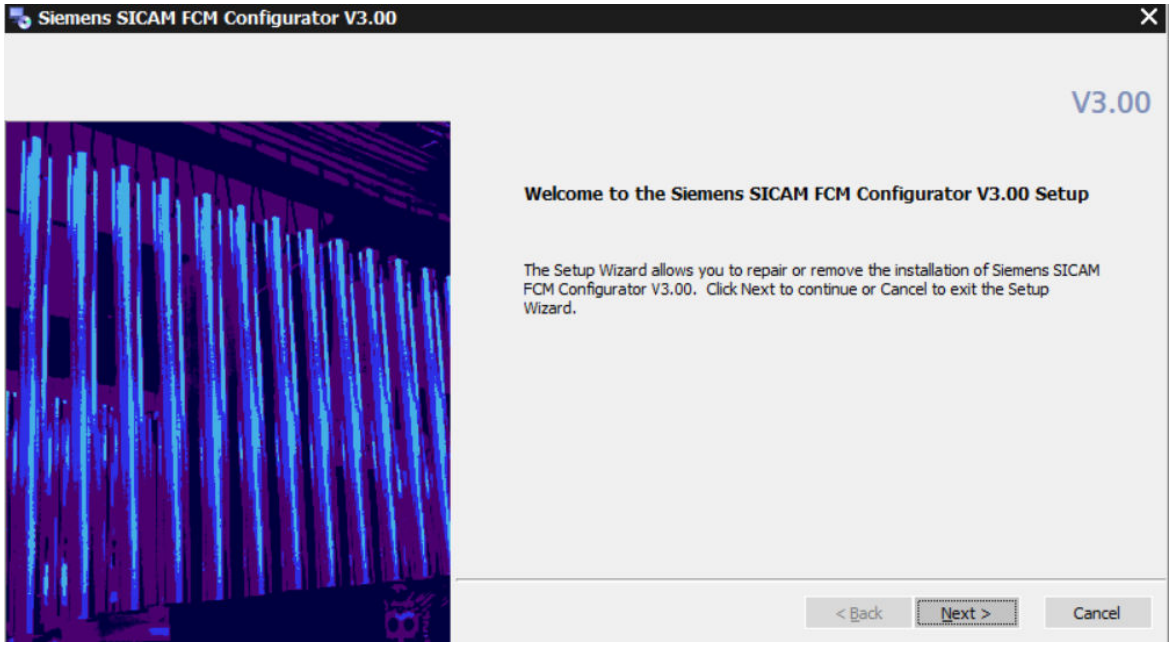
The **Programs and Features** window is displayed.



[sc_fcmplus_uninstall1, 1, --_--]

Figure 1-49 Programs and Features Window

✧ Right-click **Siemens SICAM FCM Configurator V3.00** and select the **Uninstall/Change** option from the context menu.

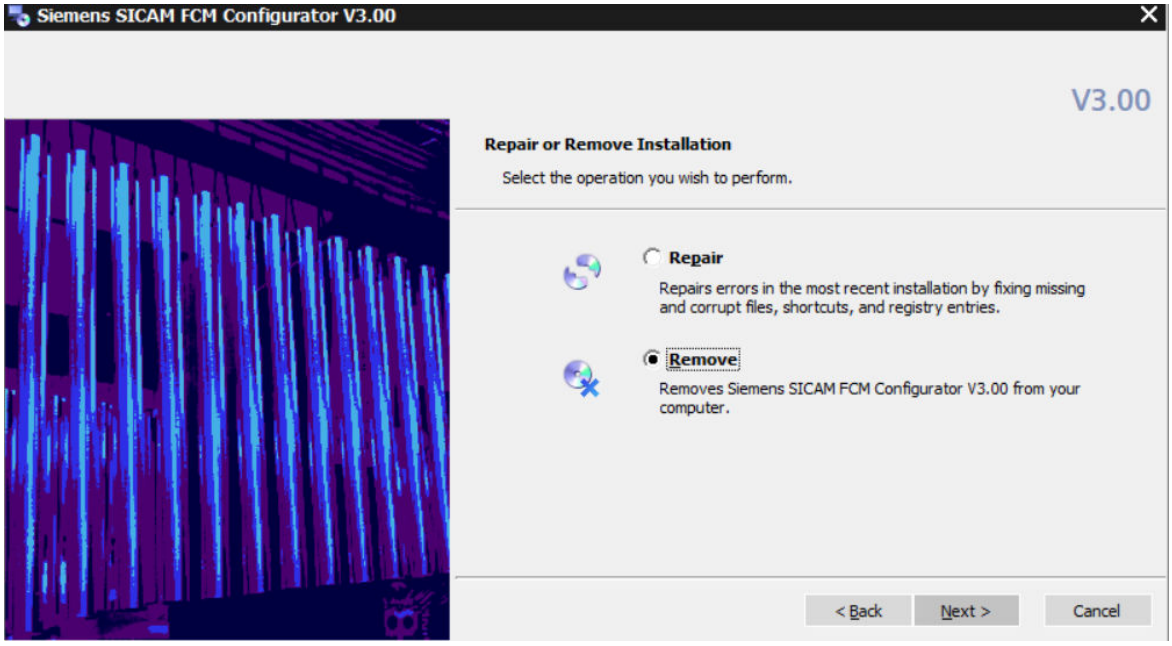


[sc_fcmplus_uninstall2, 1, --_--]

Figure 1-50 SICAM FCM Configurator – Setup Uninstallation

✧ Click **Next >**.

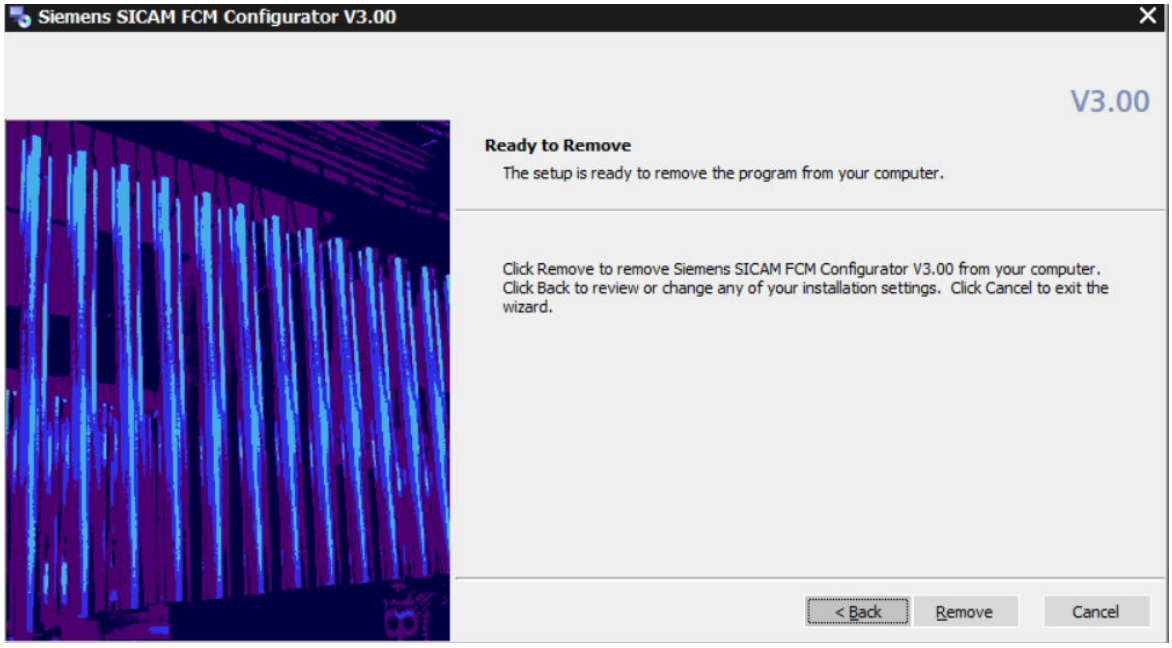
✧ Select the **Remove** option to start the uninstallation process.



[sc_fcmplus_uninstall3, 1, --_--]

Figure 1-51 SICAM FCM Configurator – Remove Installation

✧ Click **Next >**.



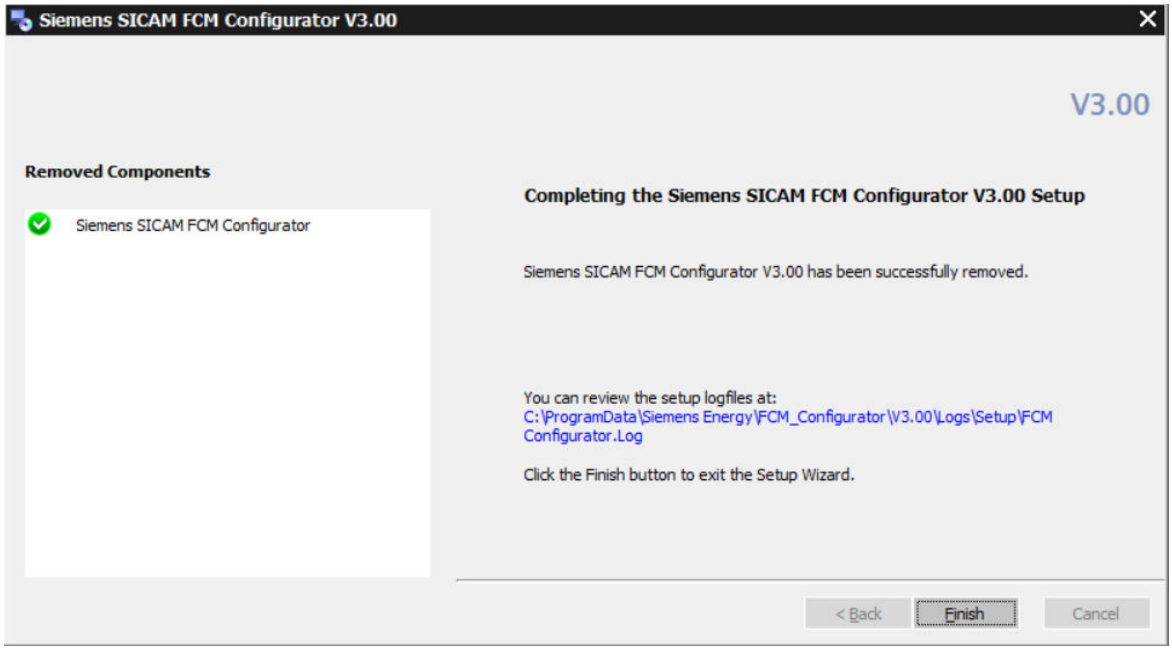
[sc_fcmplus_uninstall4, 1, --_--]

Figure 1-52 SICAM FCM Configurator – Setup Ready to Remove

✧ Click **Remove** to start the uninstallation process.

The SICAM FCM plus Configurator program is removed from your computer. This process can take several minutes.

✧ Click **Finish** to complete the **Siemens SICAM FCM Configurator** uninstallation.



[sc_fcmplus_uninstall5, 1, --, --]

Figure 1-53 SICAM FCM Configurator – Setup Uninstallation Finished

Index

A

Alarms and warnings 32
Application software version number 24

B

Backup device settings 20, 38
Backup file 38
Boot-loader version number 24

C

Control elements 20
Control functions 20

D

Device information 24

E

Energy 33
Engineering group 27
Events 27

F

Firmware version number 24

H

Hardware configuration requirements 13

I

Information section 37
Installing SICAM FCM plus Configurator 14

L

Log off 20, 51

M

Monitoring 29

P

Parameter settings 36
Power 31

R

Reports 27
Restore device settings 20, 41
RS485 converter 19

S

SICAM FCM configurator user interface 21
SICAM FCM plus configurator dashboard 24
SICAM FCM plus terminals 19

T

Temperature 34
Trailing pointers 28

U

Uninstallation via the control panel 52
Uninstallation via the start menu 52
Uninstalling SICAM FCM plus configurator 52
Update firmware 20, 44
Update sensor configuration 47

V

Voltage and current 29

W

Web browsers 21