Enerlin'X

FDM121 Front Display Module for One Circuit Breaker

User Guide

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www.se.com

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Table of Contents

Safety Information

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

About the Document

Document Scope

The aim of this document is to provide installers and maintenance personnel with the information needed to set up and operate the FDM121 front display module for one circuit breaker.

Validity Note

This document is applicable to FDM121 front display module for one circuit breaker associated with circuit breakers:

- MasterPacT™ MTZ circuit breakers with MicroLogic™ X control unit
- MasterPacT™ MTZ circuit breakers with MicroLogic™ Active control unit
- MasterPacT™ NT/NW circuit breakers
- ComPacT™ NS 630...1600 A and 1600...3200 A circuit breakers
- PowerPacT™ P- and R-frame circuit breakers
- ComPacT™ NSX 100...630 A circuit breakers
- PowerPacT™ H-, J-, and L-frame circuit breakers

NOTE:

- The information related to the new generation of ComPacT NS and PowerPacT P- and R-frame circuit breakers in this document applies to the existing range ComPact NS and PowerPact P- and R-frame circuit breakers also. The exceptions are mentioned wherever applicable.
- The information related to the new generation of ComPacT NSX and PowerPacT H-, J-, and L-Frame circuit breakers in this document applies to the existing range ComPact NSX and PowerPact H-, J-, and L-frame circuit breakers also. The exceptions are mentioned wherever applicable.
- These new ranges are based on the same technical and dimensional architecture as that of the existing range of circuit breakers.
- The FDM121 display is compatible with MasterPacT MTZ circuit breakers for firmware version 004.000.009 or later.

Online Information

The technical characteristics of the devices described in this guide also appear online. To access the information online, go to the Schneider Electric country website at www.se.com.

The information contained in this guide is likely to be updated at any time. Schneider Electric strongly recommends that you have the most recent and up-to-date version available on www.se.com/ww/en/download/.

General Cybersecurity Information

In recent years, the growing number of networked machines and production plants has seen a corresponding increase in the potential for cyber threats, such as unauthorized access, data breaches, and operational disruptions. You must, therefore, consider all possible cybersecurity measures to help protect assets and systems against such threats.

To help keep your Schneider Electric products secure and protected, it is in your best interest to implement the cybersecurity best practices as described in the Cybersecurity Best Practices document.

Schneider Electric provides additional information and assistance:

- Subscribe to the Schneider Electric security newsletter.
- Visit the Cybersecurity Support Portal web page to:
  - Find Security Notifications.
  - Report vulnerabilities and incidents.
- Visit the Schneider Electric Cybersecurity and Data Protection Posture web page to:
  - Access the cybersecurity posture.
  - Learn more about cybersecurity in the cybersecurity academy.
  - Explore the cybersecurity services from Schneider Electric.

Product Related Cybersecurity Information

⚠WARNING

POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY

- Change default passwords at first use to help prevent unauthorized access to device settings, controls, and information.
- Disable unused ports/services and default accounts to help minimize pathways for malicious attackers.
- Place networked devices behind multiple layers of cyber defenses (such as firewalls, network segmentation, and network intrusion detection and protection).
- Use cybersecurity best practices (for example, least privilege, separation of duties) to help prevent unauthorized exposure, loss, modification of data and logs, or interruption of services.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

Environmental Data

For product compliance and environmental information, refer to the Schneider Electric Environmental Data Program.

Available Languages of the Document

The document is available in these languages:

- English (DOCA0088EN), original language
- Spanish (DOCA0088ES)
- French (DOCA0088FR)
- Chinese (DOCA0088ZH)

Related Documents for IEC Devices

Title of documentation	Reference number
Enerlin'X FDM121 – Front Display Module for One Circuit Breaker – Instruction Sheet	QGH80971
Enerlin'X FDM121 - Front Display Module for One Circuit Breaker - Firmware Release Notes	DOCA0150EN DOCA0150ES DOCA0150FR DOCA0150ZH
ComPacT NSX – MicroLogic 5/6/7 Electronic Trip Units – User Guide	DOCA0188EN DOCA0188DE DOCA0188FR DOCA0188ZH
MasterPacT NT/NW – MicroLogic A and E Control Units – User Guide	04443724AA
MasterPacT NT/NW – MicroLogic 5.0P to 7.0P Control Units – User Guide	04443726AA
MasterPacT NT/NW – MicroLogic 5.0H to 7.0H Control Units – User Guide	04443728AA
MasterPacT, ComPacT, PowerPacT Circuit Breakers - Modbus Communication - User Guide	DOCA0384EN DOCA0384ES DOCA0384FR DOCA0384ZH
MasterPacT MTZ - MicroLogic Active Control Unit - User Guide	DOCA0265EN DOCA0265ES DOCA0265ZH
Breaker Communication and Isolation Module (BCIM) for MicroLogic Active Control Unit - User Guide	DOCA0387EN DOCA0387ES DOCA0387ZH
MasterPacT MTZ - MicroLogic X Control Unit - User Guide	DOCA0102EN DOCA0102ES DOCA0102FR DOCA0102ZH
ULP (Universal Logic Plug) System - User Guide	DOCA0093EN DOCA0093ES DOCA0093FR DOCA0093ZH
MasterPacT, ComPacT, PowerPacT - Cybersecurity Guide	DOCA0122EN DOCA0122ES DOCA0122FR DOCA0122ZH
Enerlin'X IFE - Ethernet Interface for One Circuit Breaker - User Guide	DOCA0142EN DOCA0142ES DOCA0142FR DOCA0142ZH
Enerlin'X IFE - Ethernet Switchboard Server - User Guide	DOCA0084EN DOCA0084ES DOCA0084FR DOCA0084ZH

Title of documentation	Reference number
Enerlin'X EIFE - Embedded Ethernet Interface for One MasterPacT MTZ Drawout Circuit Breaker - User Guide	DOCA0106EN DOCA0106ES DOCA0106FR DOCA0106ZH
Enerlin'X IO - Input/Output Application Module for One Circuit Breaker - User Guide	DOCA0055EN DOCA0055ES DOCA0055FR DOCA0055ZH

You can download these technical publications and other technical information from our website at www.se.com/ww/en/download/.

Related Documents for UL/ANSI Devices

Title of documentation	Reference number
Enerlin'X FDM121 – Front Display Module for One Circuit Breaker – Instruction Sheet	QGH80971
PowerPacT H-, J-, and L-Frame – MicroLogic 5 and 6 Electronic Trip Units – User Guide	48940-312-01 (EN)
MasterPacT NT/NW – MicroLogic 2.0A, 3.0A, 5.0A, and 6.0A Trip Units – Instruction Bulletin	48049-136-05
MasterPacT NT/NW – MicroLogic 5.0P and 6.0P Trip Units – Instruction Bulletin	48049-137-05
MasterPacT NT/NW – MicroLogic 5.0H and 6.0H Trip Units – Instruction Bulletin	48049-330-03
MasterPacT MTZ - MicroLogic X Control Unit - User Guide	DOCA0102EN DOCA0102ES DOCA0102FR DOCA0102ZH
ULP (Universal Logic Plug) System - User Guide	DOCA0093EN DOCA0093ES DOCA0093FR DOCA0093ZH
Enerlin'X IFE - Ethernet Interface for One Circuit Breaker - User Guide	DOCA0142EN DOCA0142ES DOCA0142FR DOCA0142ZH
Enerlin'X IFE - Ethernet Switchboard Server - User Guide	DOCA0084EN DOCA0084ES DOCA0084FR DOCA0084ZH
Enerlin'X EIFE - Embedded Ethernet Interface for One MasterPacT MTZ Drawout Circuit Breaker - User Guide	DOCA0106EN DOCA0106ES DOCA0106FR DOCA0106ZH
Enerlin'X IO - Input/Output Application Module for One Circuit Breaker - User Guide	DOCA0055EN DOCA0055ES DOCA0055FR DOCA0055ZH

You can download these technical publications and other technical information from our website at www.se.com/ww/en/download/.

Information on non-inclusive or insensitive terminology

As a responsible, inclusive company, Schneider Electric is constantly updating its communications and products that contain non-inclusive or insensitive terminology. However, despite these efforts, our content may still contain terms that are deemed inappropriate by some customers.

FDM121 Presentation

What's in This Part

Introduction

Description

The FDM121 display shows the measurements, alarms, and operating assistance data from the intelligent modular unit (IMU). The FDM121 display can control the circuit breaker equipped with a motor mechanism or the pre-defined application performed by the IO module, page 42.

The FDM121 display is compatible with MasterPacT MTZ, MasterPacT NT/NW, ComPacT NS, ComPacT NSX, and PowerPacT circuit breakers.

FDM121 Display Features

The main features of the FDM121 display are:

- Display interface for MasterPacT, ComPacT, and PowerPacT circuit breakers
- ULP compliant for location of the FDM121 display in switchboard
- Dual ULP interface for easy daisy chain
- Monitoring and controlling operation of circuit breakers
- Alarm LED for medium/high priority events

Intelligent Modular Unit

Definition

A modular unit is a mechanical and electrical assembly containing one or more products to perform a function in a switchboard (incoming protection, motor command, and control).

The circuit breaker with its internal communicating components (MicroLogic control unit or MicroLogic trip unit) and external ULP modules (IO module) connected to one communication interface is called an Intelligent Modular Unit (IMU).

An IMU is composed around a circuit breaker from the following ranges:

- MasterPacT MTZ circuit breakers with MicroLogic Active control unit
- MasterPacT MTZ circuit breakers with MicroLogic X control unit
- MasterPacT NT/NW circuit breakers
- ComPacT NS 1600b-3200 circuit breakers
- ComPacT NS 630b-1600 circuit breakers
- PowerPacT P- and R-frame circuit breakers
- ComPacT NSX circuit breakers
- PowerPacT H-, J-, and L-frame circuit breakers

ULP Modules Per Circuit Breaker Range

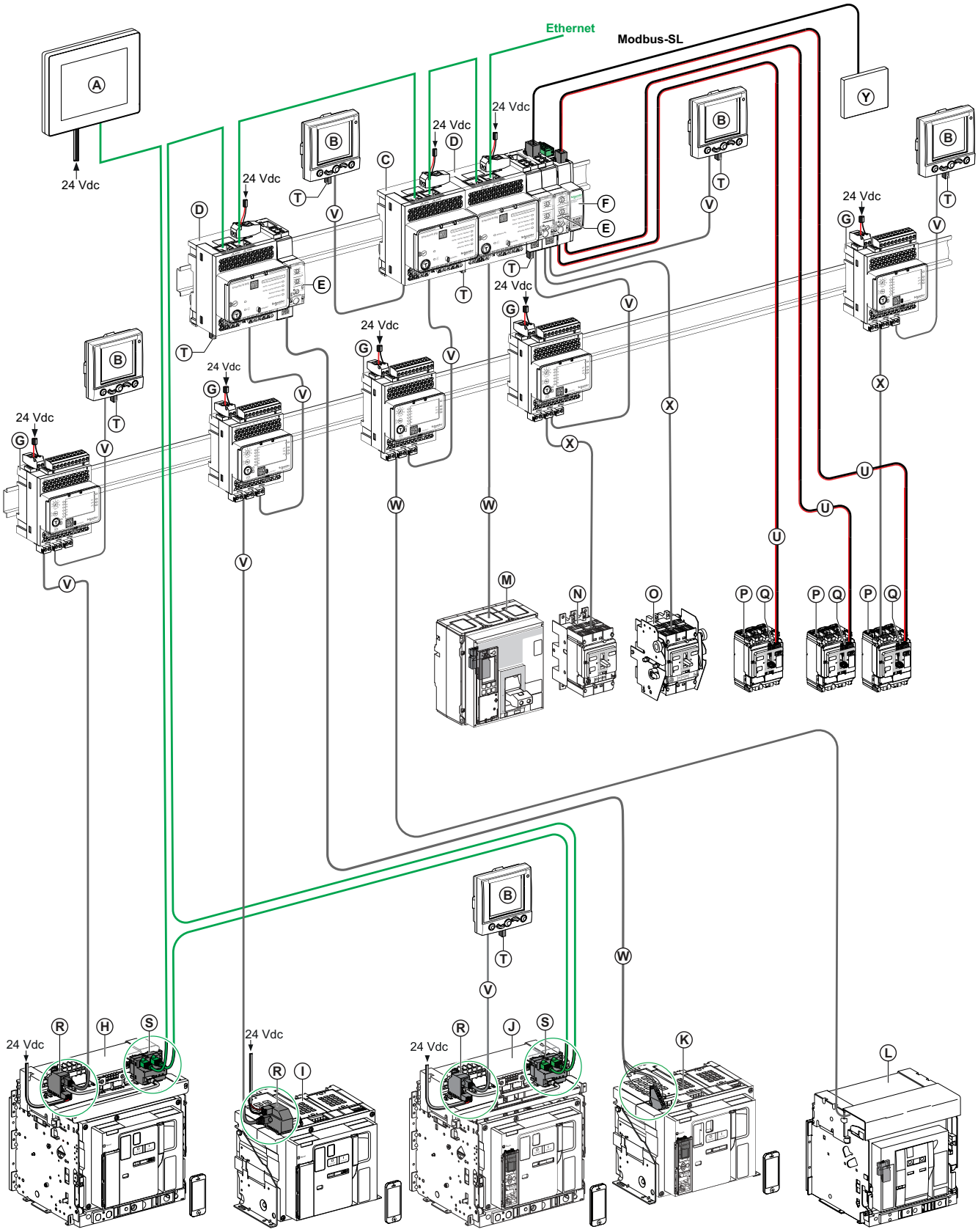
The following table lists the compatible ULP modules for each range of circuit breakers.

ULP Module	Part Number	MasterPacT MTZ circuit breaker with BCIM Module and MicroLogic Active Control Unit	MasterPacT MTZ circuit breaker with ULP Port Module and MicroLogic X Control Unit	MasterPacT NT/NW or ComPacT NS or PowerPacT P- and R-frame circuit breaker with BCM ULP Module and MicroLogic Trip Unit	ComPacT NSX or PowerPacT H-, J-, and L-frame circuit breaker with BSCM or BSCM Modbus SL/ ULP Module and/or MicroLogic Trip Unit
IFE Ethernet interface for one circuit breaker	LV434001 LV434010	✓	✓	✓	✓
IFE Ethernet switchboard server	LV434002 LV434011	✓	✓	✓	✓
EIFE Embedded Ethernet interface for one MasterPacT MTZ drawout circuit breaker	LV851001	✓	✓	–	–
Spare part kit EIFE for one MasterPacT MTZ1 drawout circuit breaker	LV851100SP	✓	✓	–	–
Spare part kit EIFE for one MasterPacT MTZ2/MTZ3 drawout circuit breaker	LV851200SP	✓	✓	–	–
IFM Modbus-SL interface for one circuit breaker	TRV00210 STRV00210	-	–	✓	✓
IFM Modbus-SL interface for one circuit breaker	LV434000	✓	✓	✓	✓
FDM121 front display module for one circuit breaker	TRV00121 STRV00121	✓	–	✓	✓

ULP Module	Part Number	MasterPacT MTZ circuit breaker with BCIM Module and MicroLogic Active Control Unit	MasterPacT MTZ circuit breaker with ULP Port Module and MicroLogic X Control Unit	MasterPacT NT/NW or ComPacT NS or PowerPacT P- and R-frame circuit breaker with BCM ULP Module and MicroLogic Trip Unit	ComPacT NSX or PowerPacT H-, J-, and L-frame circuit breaker with BSCM or BSCM Modbus SL/ ULP Module and/or MicroLogic Trip Unit
IO input/output application module for one circuit breaker	LV434063	–	✓	✓	✓
USB maintenance interface or Universal Test Adapter (UTA) module	TRV00911 STRV00911	–	–	✓	✓

For more information on the ULP System and its components, refer to the DOCA0093•• *ULP (Universal Logic Plug) System - User Guide* in Related Documents section at the beginning of the guide.

Communication Architecture



A FDM128 Ethernet display for eight devices

B FDM121 front display module for one circuit breaker

C IFE Ethernet interface for one circuit breaker

D IFE Ethernet switchboard server

E IFM Modbus-SL interface for one circuit breaker

F Modbus-SL hub

G IO input/output application module for one circuit breaker

H MasterPacT MTZ drawout circuit breaker with MicroLogic X control unit

I MasterPacT MTZ fixed circuit breaker with MicroLogic X control unit

J MasterPacT MTZ drawout circuit breaker with MicroLogic Active control unit and BCIM module

K MasterPacT MTZ fixed circuit breaker with MicroLogic Active control unit and BCIM module

L MasterPacT NT/NW circuit breaker with MicroLogic trip unit and BCM ULP module

M ComPacT NS/PowerPacT P- and R-frame circuit breaker with MicroLogic trip unit and BCM ULP module

N ComPacT NSX/PowerPacT H-, J-, and L-frame plug-in circuit breaker

O ComPacT NSX/PowerPacT H-, J-, and L-frame drawout circuit breaker

P ComPacT NSX/PowerPacT H-, J-, and L-frame fixed circuit breaker

Q BSCM Modbus SL/ULP module

R ULP port module

S EIFE Embedded Ethernet Interface for one MasterPacT MTZ drawout circuit breaker

T ULP line termination

U BSCM Modbus-SL cord

V RJ45 ULP cord

W Breaker ULP cord

X NSX cord

Y Modbus-SL server

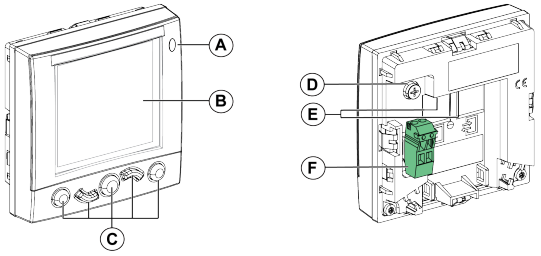
Remote Controller

A remote controller is a device that is able to communicate with an IMU using a communication interface, such as the IFE server, IFE interface, and EIFE interface. For example, FDM121 and FDM128 display modules, supervisor, PLC, BMS, SCADA system, and so on.

For more information on Modbus registers and commands, refer to the DOCA0384•• *MasterPacT, ComPacT, PowerPacT Circuit Breakers - Modbus Communication - User Guide* in Related Documents section at the beginning of the guide.

Hardware Description

Description



A Alarm indicator LED

B LCD screen

C Navigation keys

D Functional ground

E 2 RJ45 ULP ports

F 24 Vdc power supply terminal block

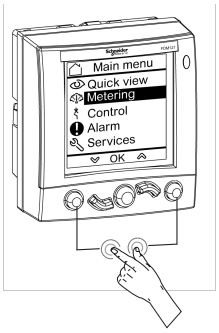
Alarm Indicator LED

The orange alarm indicator LED alerts when a new high-priority or medium-priority alarm is detected in the IMU. It also indicates that one of the ULP modules of the IMU is in degraded mode or off.

Alarm indicator LED status	Meaning
Steady OFF	Nominal operation (no high-priority or medium-priority alarm detected, no module in degraded mode or off)
Flashing	• At least one high-priority alarm is present in the **Event Log** list and has not been acknowledged. • An IMU module is off. The LED goes off after acknowledgment on the non-operational module or when the module concerned is no longer off.
Steady ON	• At least one medium-priority alarm is present in the **Event Log** list and there is no high-priority alarm. • An IMU module is in degraded mode. The LED goes off after acknowledgment on the degraded module or when the module concerned is no longer degraded.

For more information on the management of events and alarms, refer to the Alarms menu, page 46.

Factory Reset



You can reset the FDM121 display to its factory default settings by pressing and holding the **Back/Home** key and **Context-Sensitive** key simultaneously for 8–12 seconds. For more information, refer section Navigation Keys, page 29.

After reset, the device restarts and restores the following settings to their factory default values:

Parameter	Default Value
Brightness	50%
Contrast	50%
Language	English UK
Temperature Unit	°C
Volume Unit	m^3
ULP Password	1111, 2222, 3333, or 0000

Functional Ground

In an environment with a high level of electromagnetic disturbance, connect the FDM121 display functional ground to the local machine ground in the switchboard by using a grounding strip.

Power Supply

NOTICE

HAZARD OF EQUIPMENT DAMAGE

It is recommended to use an UL listed/UL recognized limited voltage/limited current or a class 2 power supply with 24 Vdc, 3 A maximum. For more information, refer to the *ULP System User Guides* provided in the section Related Documents, page 6.

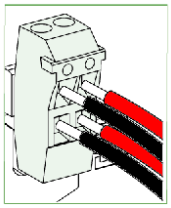
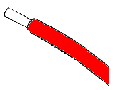
Failure to follow these instructions can result in equipment damage.

The FDM121 display is supplied either through the ULP cables or by direct connection of the power supply to the FDM121 power supply terminal block:

- For a communicating architecture, connect the 24 Vdc power supply to the connector on the IFM or IFE communication interface. The communication interface powers the other modules on the IMU through the ULP cables.

  In this architecture, the FDM121 power supply terminal block can be removed to reduce the dimensions.

- For a standalone architecture, connect the 24 Vdc power supply to the FDM121 power supply terminal block. The FDM121 display powers the other modules on the IMU through the ULP cables.

Power supply terminal block	Wire	Color	Description	Cross-section	Stripped length
		Black	0 V	0.2...1.5 mm² (24...16 AWG)	7 mm (0.28 in)
		Red	24 Vdc	0.2...1.5 mm² (24...16 AWG)	7 mm (0.28 in)

The FDM121 power supply terminal block has two points per terminal to simplify, if necessary, distribution of the power supply to other devices in the switchboard.

ULP Connection

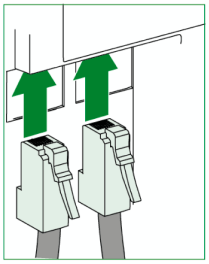
NOTICE

HAZARD OF EQUIPMENT DAMAGE

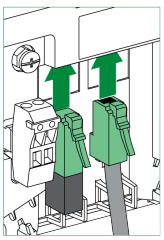
- The FDM121 RJ45 ports are for ULP modules only.
- Any other use can damage the FDM121 display or the device connected to it.
- To check if a ULP module is compatible with the FDM121 RJ45 ports, refer to the *ULP System User Guides* provided in the section Related Documents, page 6.

Failure to follow these instructions can result in equipment damage.

Use the two RJ45 ULP ports on the FDM121 display to connect it to the IMU. Both ULP ports are identical and in parallel, allowing the ULP modules of the IMU to be connected in any order.



When the second RJ45 ULP port is not used, it must be closed with an ULP line termination.



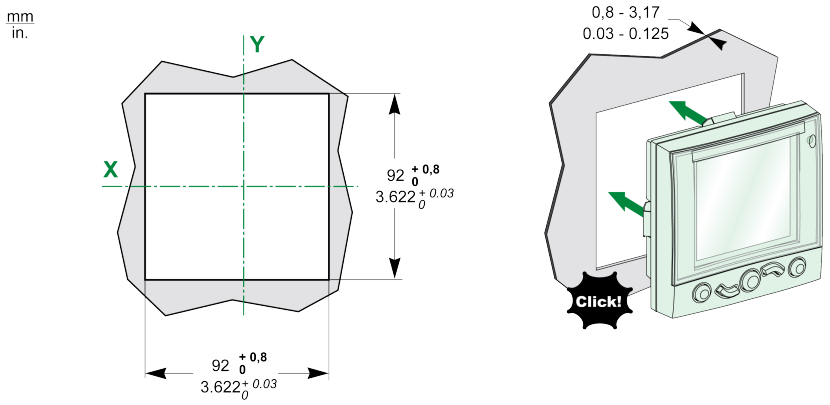
Mounting

There are two possible mounting configurations for the FDM121 display:

- Mounting in a door cut-out fasten with a clip.
- Retrofit mounting through drill holes and secured with a surface-mounted accessory.

Door Cut-Out Mounting

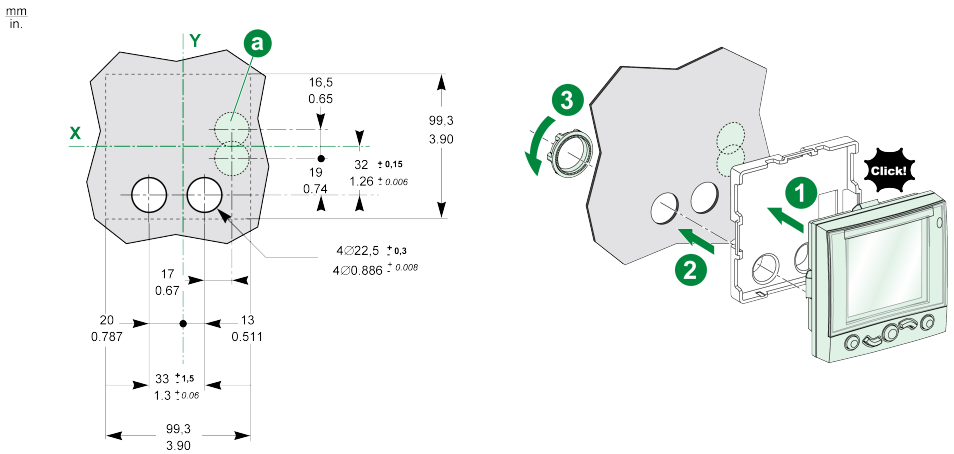
Mount the FDM121 display by cutting a standard 92 x 92 mm (3.622 x 3.622 in) cut-out on the door and pushing FDM121 display through the hole until secured by clips.



Hole Mounting

Mount the FDM121 display by drilling two holes 22.5 mm (0.89 in) in diameter and securing the FDM121 display by using a surface-mounting accessory and a locking nut.

If the FDM121 power supply terminal block is used to power the IMUs, a third cut-out made up of two drill holes 22.5 mm (0.89 in) in diameter is needed.



EcoStruxure Power Commission Software

Overview

EcoStruxure ™ Power Commission software helps you to manage a project as part of testing, commissioning, and maintenance phases of the project life cycle. The innovative features in it provide simple ways to configure, test, and commission the smart electrical devices.

EcoStruxure Power Commission software automatically discovers the smart devices and allows you to add the devices for an easy configuration. You can generate comprehensive reports as part of Factory Acceptance Test and Site Acceptance Test to replace your heavy manual work. Additionally, when the panels are under operation, any change of settings made can be easily identified by a yellow highlighter. This indicates the difference between the project and device values, and hence provides a system consistency during the operation and maintenance phase.

EcoStruxure Power Commission software enables the configuration of the following circuit breakers, modules, and accessories:

Circuit breaker ranges	Modules	Accessories
MasterPacT MTZ circuit breakers	• MicroLogic Active control units • Communication interface modules: BCIM module, IFM interface, IFE interface, IFE server, and EIFE interface • ULP modules: FDM121 display (1)	–
MasterPacT MTZ circuit breakers	• MicroLogic X control units • Communication interface modules: IFM interface, IFE interface, IFE server, and EIFE interface • ULP modules: IO module and FDM121 display (1)	M2C output module
• MasterPacT NT/NW circuit breakers • ComPacT NS circuit breakers • PowerPacT P- and R-frame circuit breakers	• MicroLogic trip units • Communication interface modules: BCM module, CCM module, BCM ULP module, IFM interface, IFE interface, and IFE server • ULP modules: IO module and FDM121 display (1)	M2C and M6C output modules
• ComPacT NSX circuit breakers • PowerPacT H-, J-, and L-frame circuit breakers	• MicroLogic trip units • Communication interface modules: BSCM or BSCM Modbus SL/ULP module, IFE interface, IFM interface, and IFE server • ULP modules: IO module and FDM121 display (1)	SDTAM and SDx output modules

For more information, refer to the *EcoStruxure Power Commission Software Online Help*.

Click here to download the latest version of EcoStruxure Power Commission software.

(1) For FDM121 display, only the firmware and language download are supported.

Key Features

EcoStruxure Power Commission software performs the following actions for the supported devices and modules:

- Create projects by device discovery.
- Save the project in the EcoStruxure Power Commission cloud for reference.
- Upload standard protection settings to the device and download standard protection settings from the device.
- Compare the standard protection settings between the project and the device.
- Generate and print the device standard protection settings report.
- View the logs and maintenance information.
- View the alarm details.
- Check the system firmware compatibility status.
- Update to the latest device firmware.
- Perform automatic trip curve tests with preconfigured or custom test points.
- Perform arc energy reduction tests in compliance with NEC 240.87(C).

Technical Characteristics

Environmental Characteristics

Characteristics		Value
Conforming to standards		• IACS E10 • EN 61326-1 • CSA C22.2 • IEC/UL 61010-2-201 • IEC 61000-6-2 Ed.2
Certification		• CE and C-Tick marking
		• UL • CSA
Ambient temperature	Storage	-40...+85 °C (104...185 °F)
	Operation	-10...+55 °C (14...131 °F) (on the front panel)
Relative humidity	Conforming to IEC/EN 60068-2-78	Four days, 40 °C (104 °F), 93% RH, energized
Protective treatment	Conforming to IEC/EN 60068-2-30	Six cycles of 24 hours, 25/55 °C (77/131°F), 95% RH, energized
Pollution		Level 3
Corrosive atmosphere	Conforming to IEC 60068-2-60	Four gases (H_2S, SO_2, NO_2, Cl_2)
Level of pollution	Access to hazardous parts and water penetration	IP53 (splashing outside the protective cover)
	Conforming to IEC/EN 60947-1 and IEC/EN 60529	IP2x (connectors)
	Conforming to IEC 62262/EN 50102	IK05 (external mechanical impacts)
Flame resistance	Conforming to IEC/EN 60947-1 and IEC/EN 60695-2-11	• 650 °C (1,202 °F) 30 s/30 s on de-energized insulating parts • 960 °C (1,760 °F) 30 s/30 s on de-energized insulating parts
	Conforming to UL94	V0

Mechanical Characteristics

Characteristics		Value
Degree of protection of the installed module		• Part projecting beyond the escutcheon: IP4x • Other module parts: IP3x • Connectors: IP2x
Shock resistance	Conforming to NF EN 22248 (free fall, in packaging)	H = 90 cm (35.4 in)
	Conforming to IEC 60068-2-27	15 g (0.53 oz)/11 ms 1/2 sinusoidal
Resistance to sinusoidal vibration	Conforming to IEC/EN 60068-2-6	1 g (0.035 oz)/5-150 Hz

Electrical Characteristics

Characteristics		Value
Power supply		24 Vdc, -20%/+10% (19.2...26.4 Vdc)
Consumption	Typical	21 mA/24 Vdc at 20 °C (68 °F)
	Maximum	30 mA/19.2 Vdc at 60 °C (140 °F)
Resistance to electromagnetic discharges	Conforming to IEC/EN 61000-4-2	• 4 kV (direct) • 8 kV (air)
Immunity to radiated electromagnetic interference	Conforming to IEC/EN 61000-4-3	10 V/m
Immunity to electrical fast transients/burst	Conforming to IEC/EN 61000-4-4	• 2 kV (power) • 8 kV (signal)
Immunity to radiated fields	Conforming to IEC/EN 61000-4-6	10 V
Immunity to surges	Conforming to IEC/EN 61000-4-5	

NOTE: It is recommended to use an UL listed and recognized limited voltage/limited current or a class 2 power supply with a 24 Vdc, 3 A maximum. For more information, refer to the *ULP (Universal Logic Plug) System - User Guide*, page 6.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designated to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Physical Characteristics

Characteristics		Value
Dimensions (W x D x H)		• Without power supply terminal block: 96 x 96 x 33.1 mm (3.8 x 3.8 x 1.3 in) • With power supply terminal block: 96 x 96 x 43.2 mm (3.8 x 3.8 x 1.7 in)
Weight		0.2 kg (7.06 oz)
Mounting		• Flush-mounted • Surface-mounted, with surface-mounting accessory
Display	Screen	128 x 128 pixels
	Viewing angle	• Horizontal: ± 30° • Vertical: ± 60°

Firmware Update

Description

Use the latest version of EcoStruxure Power Commission software for all firmware updates.

After updating the firmware of one device in the IMU, use the latest version of EcoStruxure Power Commission software to check the firmware compatibility between the IMU devices. The **Firmware Update** table helps you to diagnose and identify all discrepancy issues between the IMU devices. This table also provides the recommended actions relevant to the detected discrepancies.

For more information on FDM121 display firmware versions, refer to the DOCA0150EN•• *Enerlin'X FDM121 - Front Display Module for One Circuit Breaker - Firmware Release Notes*, page 9.

Checking the Firmware Version

You can find the firmware version of the devices in the IMU by using EcoStruxure Power Commission software.

For more information, refer to the *EcoStruxure Power Commission Software Online Help*.

Updating the Firmware Using EcoStruxure Power Commission Software

Click here to download the latest version of EcoStruxure Power Commission software.

For more information, refer to the *EcoStruxure Power Commission Software Online Help*.

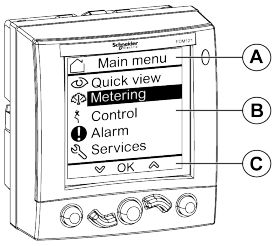
FDM121 Use

What's in This Part

Operation

Screen

The screen displays the information needed to operate the ULP modules.



A Identification zone

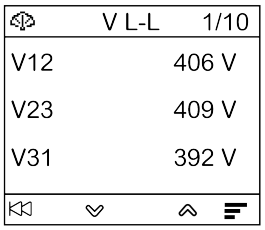
B Information zone

C Navigation zone

The FDM121 display is divided in three zones:

- The identification zone identifies the current screen (screen title) and notifies when an alarm trips.
- The information zone displays specific data on the screen (such as measurements, alarms, and settings).
- The navigation zone indicates which navigation options are available by using the keys, depending on the menu displayed.

The following table displays the example of a FDM121 display screen:

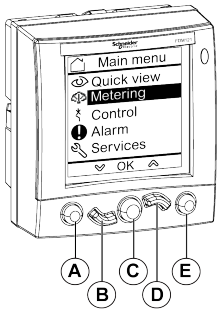
Example	Description
	• Identification zone ◦ The icon indicates that you are in the **Metering** menu. ◦ The measurements displayed are voltages. ◦ The **V L-L V L-N** submenu in the **Metering** menu consists of 10 screens. The **V L-L** screen displayed is number 1. • Information zone ◦ The voltage values **V12**, **V23**, and **V31** are displayed. • Navigation zone ◦ The navigation options for the **V L-L** screen are displayed.

The FDM121 display also has white backlighting:

- Pressing a navigation key turns the backlighting on for 3 minutes.
- The backlighting flashes every 250 ms when an invalid ULP modular unit configuration is detected (for example, if two identical modules are part of the same IMU).
- The backlighting flashes once per second over a period of 15 seconds when the test mode is active. Push the test button located on one of the ULP modules connected to the FDM121 display.

Navigation Keys

There are five keys which provide navigation:



A Back/Home key

B Down key

C Confirm/clear/set-up key

D Up key

E Context-sensitive key

The navigation zone indicates which navigation options are available by using the keys, depending on the menu displayed.

The table below lists the navigation options available from the five keys on the FDM121 display. When no icon is displayed in the zone corresponding to a key, this key is inactive for the menu displayed.

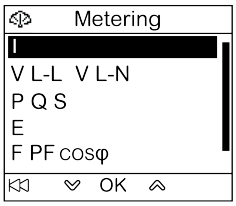
Key	Icon	Description
Back/Home		• Exits a menu or a submenu and returns to the previous menu. • Used to return to the **Main menu** from the **Quick view** menu displayed when the FDM121 display is powered up. • Used to factory reset the FDM121 display.
Down		Used to point to the desired measurements or moves on to the next screen.
Confirm	**OK**	• Confirms selection of a menu option. • Clears a new event.
Set-up		Used to access settings: • FDM121 time and date • Temperature or volume unit • IFE IP address
Up		Used to point to the desired measurements or to go back to the previous screen.
Context-sensitive		Displays measurements in bar graph mode.
		Displays measurements in dial graph mode.
	888	Displays measurements in numeric mode.
		Used to display detailed information for an event in the event log or for an alarm in the alarm history.
		Used to return to the event log or alarm history.
		Used to change the selected field in edition mode.
	–	Used to factory reset the FDM121 display.

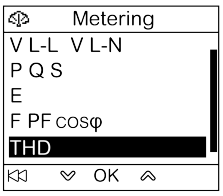
Scrolling

The screen can display a maximum of five visible menu items. When a list includes more than five items, a scroll bar appears on the right side of the screen.

Use the ^ and v keys to scroll through a menu item list. The position of the scroll bar indicates the relative position of the highlighted item in the list.

Example: The **Metering** menu is displayed on two screens.





Password Management

NOTICE
POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY Use cybersecurity best practices for password creation and management. **Failure to follow these instructions can result in unintended data loss or loss of application function.**

General Description

Four passwords are defined, each one corresponding to a level.

A level is assigned to a role:

- Levels 1, 2, and 3 are used for general-purpose roles, like an operator role.
- Level 4 is the administrator level. The administrator level is required to write the settings to the ULP modules using the EcoStruxure Power Commission software.

When an FDM121 command is protected by password, you must enter the password of the right level in a dedicated window.

Initial Passwords

The password values set in factory are:

Password level	User profile	Factory setting
Level 1	Services	‘1111’ = 0x31313131
Level 2	Engineer	‘2222’ = 0x32323232
Level 3	Operator	‘3333’ = 0x33333333
Level 4	Administrator	‘0000’ = 0x30303030

Password Modification

Passwords are modified with the EcoStruxure Power Commission software.

Passwords are composed of exactly four ASCII characters. They are case-sensitive and the allowed characters are:

- digits from 0 to 9
- letters from a to z
- letters from A to Z

Password Reset

If the initial passwords have been changed, three cases require to reset the passwords to their factory settings with the EcoStruxure Power Commission software:

- A password is forgotten.
- A new module is added in the IMU: for example, an FDM121 display.
- An inoperative module is replaced in the IMU.

Resetting passwords with the EcoStruxure Power Commission software is only available with the **Schneider Electric service** user profile.

Password Screen

The **Password** screen displays when a password protected command is to be accessed and the default level 3 password is modified in the controlled device.

NOTE: The FDM121 display supports only level 3 password.

Entering a Password

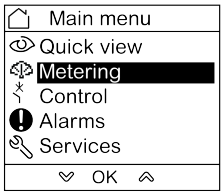
The procedure for entering a password is as follows:

Step	Action
1	Use the ⌄ and ⌃ keys to increase or decrease the value of the digit. It automatically rolls over from numeric to alphabetical characters.
2	Use the ▷ key to move to the next digit. Pressing this key on the fourth digit loops you back to the first digit.
3	Use the **OK** key to confirm the password. If the password is correct, the given command is sent. Otherwise an error screen is displayed.
4	Use the ⏮ key to return to the previous menu without sending any command.

Main Menu

Presentation

The **Main menu** offers five menus for monitoring and using the ULP system intelligent modular units (IMU).



The description and content of the menus depend on the IMU. For more information, refer to the documentation for the device connected to the FDM121 display.

For example, if you have an FDM121 display connected to a ComPacT NSX, refer to the *ComPacT NSX – MicroLogic 5/6/7 Electronic Trip Units – User Guide*.

The menus available in the **Main menu** are as follows:

Menu	Description
Quick view	The **Quick view** menu provides quick access to the information essential for operation. For more information, refer section Quick View Menu, page 35.
Metering	The **Metering** menu displays the data made available by the MicroLogic trip unit: • Current, voltage, power, energy, power factor, frequency, and harmonic distortion measurements • Minimum and maximum metering values For more information, refer section Metering Menu, page 38.
Control	The **Control** menu is used to control a circuit breaker equipped with a communicating motor mechanism from the FDM121 display. The proposed commands are: • Circuit breaker opening • Circuit breaker closing with or without self-timer • Circuit breaker reset after trip • IO module lighting control • IO module load control For more information, refer section Control Menu, page 40.

Menu	Description
	The **Alarms** menu is used to display: • The event log file for the last 40 events and alarms detected by the devices connected to the FDM121 display since the last power-up of the FDM121 display. • The alarm history (for example, alarms, trips, maintenance, and control status) for the device connected to the FDM121 display. For more information, refer section Alarms Menu, page 46.
	The **Services** menu contains all the FDM121 display setup functions and the operating assistance information: • Reset (peak demand values, energy meters, minimum and maximum values) • Setup (display module date and time, parameters, display settings, date and time, units) • Maintenance (operation counters, load profile) • Product version (identification of the intelligent modular units) • Language (choice of language display) • Monitoring and controlling the IO modules (IO status, forcing command, pulse counters, and temperature) • Setup of the IP address of the IFE Ethernet interface for one circuit breaker • Setup of the Modbus device address and serial communication parameters (Auto go, Parity, Baud rate, and Stop bits) for the BSCM Modbus SL/ULP module • Display of QR code to get device information For more information, refer section Services Menu, page 51.

Navigation

Navigation within the **Main menu** is as follows:

- Use the ^ and v keys to select one of the menus.
- Use the **OK** key to confirm selection of a menu.

Quick View Menu

Presentation

The **Quick view** menu presents information that is essential for operating the device connected to the FDM121 display, divided into a number of screens.

The **Quick view** menu is displayed by default when the FDM121 display is powered up.

The number of available screens and their content depend on the device connected to the FDM121 display. The behavior is the same for MasterPacT, ComPacT, and PowerPacT circuit breakers.

For example, with ComPacT NSX circuit breakers, they depend on:

- The type of MicroLogic trip unit (A or E)
- The number of circuit breaker poles (3-pole or 4-pole)
- The presence of options (ENVT or ENCT)

The screen number and the number of available screens are indicated in the upper right of the display.

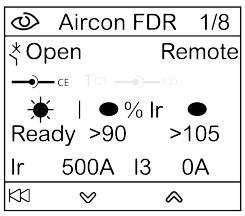
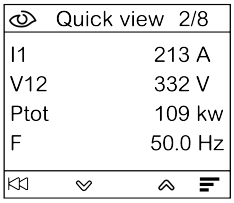
Navigation

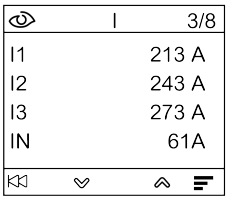
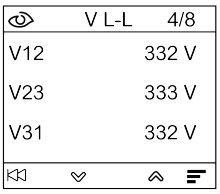
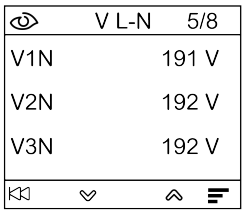
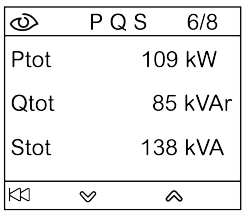
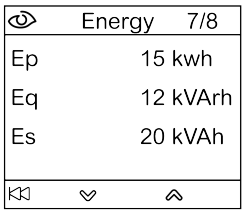
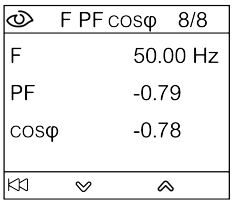
Navigation within the **Quick view** menu is as follows:

- Use the ⌃ and ⌄ keys to go from one screen to another.
- Use the ⏮ key to return to **Main menu**.
- Use the ☰, ◿, and 888 keys to modify how measurements are displayed.

Example of Screens in the Quick View Menu

The following table displays screens 1 to 8 of the **Quick view** menu for a ComPacT NSX 4-pole circuit breaker equipped with a MicroLogic E trip unit:

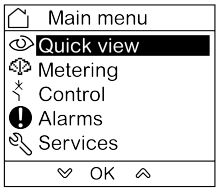
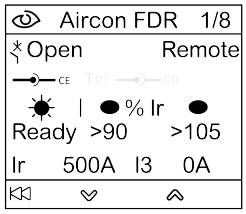
Screen	Description
	Screen 1 in the **Quick view** menu displays the following information: • The name of the IMU (**Aircon FDR** on the screen example). The name of the IMU is defined with the EcoStruxure Power Commission software or with the remote controller by using the communication network. It can be up to 45 characters long, but only the first 14 characters are visible on the FDM121 display. • The open/closed/trip status of the circuit breaker if the BSCM or BSCM Modbus SL/ULP module is present (**Open** on the screen example opposite). • The status of the LED indicators on the front of the trip unit. • The long-time protection Ir pickup setting. • The current intensity of the most heavily loaded phase (**I3 = 217 A** in the screen example opposite). • The cradle status of the circuit breaker. When two IO modules are connected to the FDM121 display, the FDM121 display does not display the cradle status in case of configuration discrepancy due to cradle application configured in both the IO modules.
	Screen 2 in the **Quick view** menu displays the current, voltage, active power, and frequency: • Phase 1 current **I1** • Phase 1 to phase 2 voltage **V12** • Active power total **Ptot** • Frequency **F**

Screen	Description
	Screen 3 in the **Quick view** menu displays the currents: • Phase 1 current **I1** • Phase 2 current **I2** • Phase 3 current **I3** • Neutral current **IN** **NOTE:** IN displays the current for neutral applicable breakers.
	Screen 4 in the **Quick view** menu displays the phase-to-phase voltages: • Phase 1 to phase 2 voltage **V12** • Phase 2 to phase 3 voltage **V23** • Phase 3 to phase 1 voltage **V31**
	Screen 5 in the **Quick view** menu displays the phase-to-neutral voltages: • Phase 1 to neutral voltage **V1N** • Phase 2 to neutral voltage **V2N** • Phase 3 to neutral voltage **V3N**
	Screen 6 in the **Quick view** menu displays the powers: • Active power **Ptot** in **kW** • Reactive power **Qtot** in **kVAr** • Apparent power **Stot** in **kVA**
	Screen 7 in the **Quick view** menu displays the energy meters: • Active energy **Ep** in **kWh** • Reactive energy **Eq** in **kVArh** • Apparent energy **Es** in **kVAh**
	Screen 8 in the **Quick view** menu displays: • The frequency **F** in **Hz** • The power factor **PF** • **cos ϕ**

Intelligent Modular Unit (IMU) Name

For optimum use of the electrical equipment, use the EcoStruxure Power Commission software or the remote controller by using the communication network to assign a name to the IMU relating to the function with which it is associated.

The procedure for displaying the IMU name is as follows:

Step	Action	Display
1	Select the **Quick view** menu in the **Main menu** by using the ^ and v keys. Confirm selection of the **Quick view** menu by pressing the **OK** key.	
2	Screen 1 in the **Quick view** menu displays the IMU name: **Aircon FDR**. The IMU name defined with EcoStruxure Power Commission software or the remote controller can consist of 45 characters maximum, but only the first 14 characters are visible on the FDM121 display.	

Metering Menu

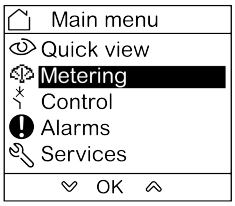
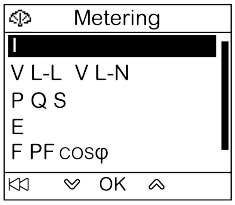
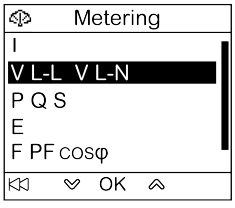
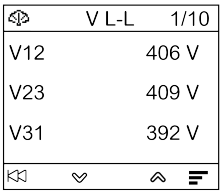
Presentation

Use the **Metering** menu to display current, voltage, energy measurements, and so on.

The full list of measurements displayed depends on the device connected to the FDM121 display.

Navigation

The procedure below describes an example of access to the **Metering** menu, the metering screens, and selection of the voltage measurements when a ComPacT NSX circuit breaker equipped with a MicroLogic 5.2 E trip unit is connected to the FDM121 display.

Step	Action	Display
1	Select the **Metering** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Metering** menu by pressing the **OK** key.	
2	The **Metering** menu is displayed on two screens. The following selections can be made in the **Metering** menu: • Current **I** • Voltage **V L-L V L-N** • Power **PQS** • Energy **E** • Frequency **F**, power factor **PF**, and cos ϕ • Total harmonic distortion **THD**	
3	Select, for example, the **V L-L V L-N** submenu in the **Metering** menu by using the ⌄ and ⌃ keys.	
4	Screen 1/10 in the **V L-L V L-N** submenu displays the phase-to-phase voltage values. Use the ⌄ and ⌃ keys to switch from one screen to another and display all the metering screens in the **V L-L V L-N** submenu. Use the ☰ key to modify the display mode and to switch to bar graph mode.	

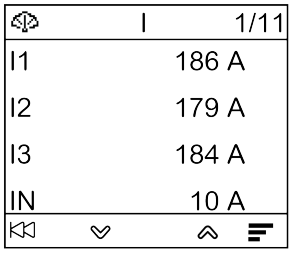
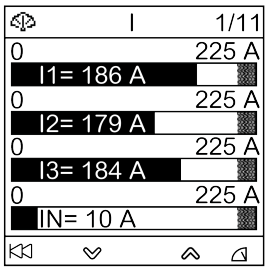
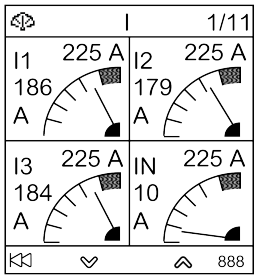
NOTE: Use the ⏮ key to return to the **Metering** menu.

Measurement Display Modes

The current, voltage, and power measurements can be displayed in three different ways, by using the context-sensitive key to switch from one display mode to another:

- The icon represents bargraph mode display.
- The icon represents dial mode display.
- The 888 icon represents numeric mode display.

The table below shows an example display for current in the three modes.

Numeric mode	Bargraph mode	Dial mode
		
Press the key to switch the display to bargraph mode.	Press the key to switch the display to dial mode.	Press the 888 key to switch the display to numeric mode.

Control Menu

Presentation

Use the **Control** menu to control the following from the FDM121 display:

- Circuit breaker
- Light and load application managed by the IO module

⚠⚠DANGER

RISK OF ELECTROCUTION, ELECTRIC ARC, OR BURNS

Do not execute any commands from the FDM121 display before returning the IMU to nominal operating mode when the FDM121 display is flashing.

Failure to follow these instructions will result in death or serious injury.

Flashing of the FDM121 display indicates that the IMU is operating in degraded mode. It may be an architecture problem. For more information, refer to the provided in the section DOCA0093•• *ULP (Universal Logic Plug) System - User Guide*, page 6.

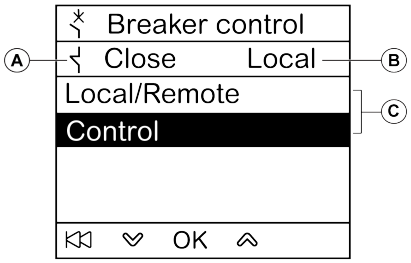
If the IMU operating in degraded mode includes an FDM121 display with firmware version earlier than 2.1.3, there is a risk of controlling a device other than the one intended.

Devices Compatible with Circuit Breaker Control

The table presents the minimum hardware configuration required to control each range of circuit breakers.

Range	Minimum hardware configuration required
MasterPacT MTZ	• Fixed or drawout circuit breaker with MicroLogic Active control unit + BCIM module + ULP port module or COM terminal block + MX and XF communicating voltage releases or communicating motor mechanism • Fixed or drawout circuit breaker + Isolation module + ULP port module + MX and XF communicating voltage releases or communicating motor mechanism
• MasterPacT NT • MasterPacT NW • ComPacT NS 630-1600 • PowerPacT P-frame	• Fixed or drawout circuit breaker + BCM ULP module + MX and XF communicating voltage releases or communicating motor mechanism • Fixed or drawout switch-disconnector + BCM ULP module + MX and XF communicating voltage releases or communicating motor mechanism
• ComPacT NSX • PowerPacT H-, J-, and L-Frame	• Fixed or drawout circuit breaker + BSCM module with firmware version 2.1.7 and later + communicating motor mechanism in automatic mode • Fixed or drawout switch-disconnector + BSCM module with firmware version 2.1.7 and later + communicating motor mechanism in automatic mode
• ComPacT NSX • PowerPacT H-, J-, and L-Frame	• Fixed or drawout circuit breaker + BSCM Modbus SL/ULP module with firmware version 1.2.0 and later + communicating motor mechanism in automatic mode • Fixed or drawout switch-disconnector + BSCM Modbus SL/ULP module with firmware version 1.2.0 and later + communicating motor mechanism in automatic mode

Breaker Control Screen



A Circuit breaker status

B Current control mode of the circuit breaker

C Selection of the breaker control commands

Circuit Breaker Status

Depending on the devices connected, the FDM121 display displays the following status of the circuit breaker:

Range	Status
MasterPacT MTZ	• **Open** : The circuit breaker is open. • **Close** : The circuit breaker is closed. • **TripSDE** : The circuit breaker is tripped on detected electrical error. • **NA** : The status of the circuit breaker is not available (no communication between the circuit breaker and the FDM121 display).
• MasterPacT NT • MasterPacT NW • ComPacT NS 630-1600 • PowerPacT P-frame	• **Open** : The circuit breaker is open. • **Close** : The circuit breaker is closed. • **TripSDE** : The circuit breaker is tripped on detected electrical error. • **NA** : The status of the circuit breaker is not available (no communication between the circuit breaker and the FDM121 display).
• ComPacT NSX • PowerPacT H-, J-, and L-Frame	• **Open** : The circuit breaker is open. • **Close** : The circuit breaker is closed. • **TripSDE** : The circuit breaker is tripped on detected electrical error. • **Trip** : The circuit breaker is tripped. • **NA** : The status of the circuit breaker is not available (no communication between the circuit breaker and the FDM121 display).

Circuit Breaker Control Mode Selection

The FDM121 display can select the local or remote control mode of the circuit breaker, except when an IO module configured for circuit breaker operation is in the IMU, or when the circuit breaker hardware configuration is not compatible.

Local and **Remote** modes are mutually exclusive.

The circuit breaker control mode selection is password protected. If the level 3 default password of the circuit breaker was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.

You are not prompted to confirm the selection when selecting the circuit breaker control mode (Local or Remote).

Circuit Breaker Control Commands

The FDM121 display can control the circuit breaker only in local control mode. In remote control mode, the **Control** function is not available.

The circuit breaker control commands are password protected. If the level 3 default password of the circuit breaker was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.

After selection of a command, you are prompted to confirm it.

The control commands depend on the type of circuit breaker.

Range	Control commands
MasterPacT MTZ	• **Open**: Command to open the circuit breaker without delay • **Close**: Command to close the circuit breaker without delay • **Close self-timer**: Command to close the circuit breaker with a 15-second delay **NOTE:** No **Reset** command from the FDM121 display. It is only possible to use an electrical reset or to push the reset button on front face of the circuit breaker.
• MasterPacT NT • MasterPacT NW • ComPacT NS 630-1600 • PowerPacT P-frame	• **Open**: Command to open the circuit breaker without delay • **Close**: Command to close the circuit breaker without delay • **Close self-timer**: Command to close the circuit breaker with a 15-second delay **NOTE:** No **Reset** command from the FDM121 display. It is only possible to use an electrical reset or to push the reset button on front face of the circuit breaker.
• ComPacT NSX • PowerPacT H-, J-, and L-Frame	• **Open**: Command to open the circuit breaker without delay • **Close**: Command to close the circuit breaker without delay • **Close self-timer**: Command to close the circuit breaker with a 15-seconds delay • **Reset**: Command to reset the circuit breaker after a trip.

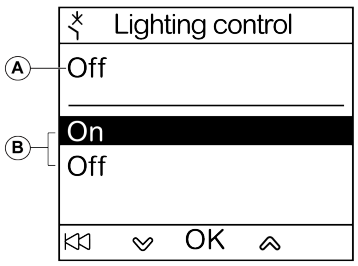
NOTE: The **Close** command and **Close self-timer** command are not allowed when the close order is inhibited.

Light and Load Control

The FDM121 display can control the light and load pre-defined application (application 4) performed by an IO module connected to the IMU.

The FDM121 display can control the light and load application only in local control mode. In remote control mode, the **Lighting control** and **Load control** functions are not available.

The **Lighting control** screen and the **Load control** screen present the same information:



A Current application status
- **On**: Lighting or load is on.
- **Off**: Lighting or load is off.

B Application control orders
- **On** : Command to switch on the light or the load.
- **Off**: Command to switch off the light or the load.

The light control and load control commands are password protected. If the level 3 default password of the IO module was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.

After selection of a command, you are prompted to confirm it.

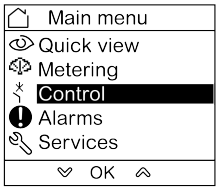
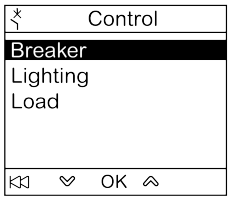
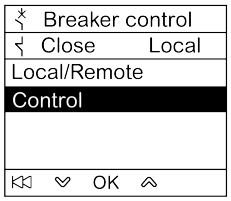
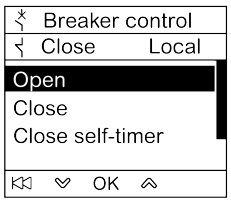
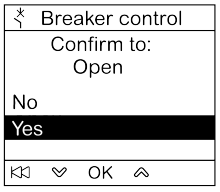
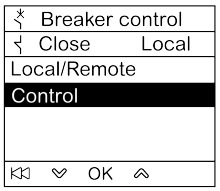
The light and load commands issued from the local FDM121 display are used as follows:

- To switch the lights on and off. The lights are controlled by an impulse relay. The switch order can be either delayed or not.
- To switch the loads on and off. The loads are controlled by a contactor. The switch order can be either delayed or not.

For more information, refer to the DOCA0055•• *Enerlin'X IO - Input/Output Application Module for One Circuit Breaker - User Guide*, page 6.

Navigation Through the Breaker Control Screens

The procedure for controlling a MasterPacT NW circuit breaker in local mode is as follows:

Step	Action	Display
1	Select the **Control** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Control** menu by pressing the **OK** key.	
2	Select the **Breaker** submenu in the **Control** menu by using the ⌄ and ⌃ keys. Confirm selection of the **Breaker** submenu by pressing the **OK** key.	
3	Select **Control** (2) to control the circuit breaker. Confirm your selection by pressing the **OK** key.	
4	Select one of the three possible actions to control the MasterPacT NW circuit breaker: • **Open** • **Close** • **Close self-timer** Confirm the selected action by pressing the **OK** key. **NOTE:** Circuit breaker control commands are password protected. If the level 3 default password of the circuit breaker was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.	
5	A screen confirming the action to be carried out is displayed. Select **Yes** to confirm opening the circuit breaker. **NOTE:** If you select **Close self-timer** , a 15-second timer starts before a close command is sent. Pressing the ⌧ key before the end of the countdown returns to the **Breaker control** submenu without sending any command to the circuit breaker.	
6	The new circuit breaker status is displayed on the screen.	

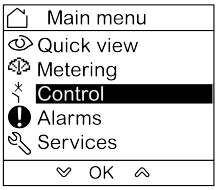
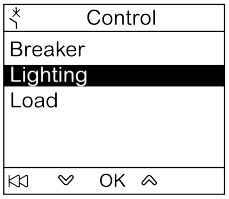
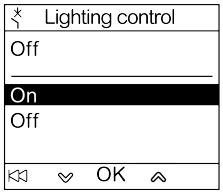
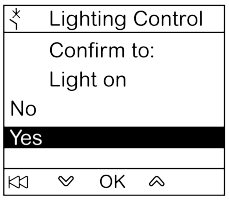
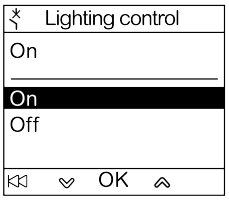
NOTE: Use the ⌧ key to return to the **Breaker control** menu.

(2) Submenu available only when the hardware is compatible with the function, the control mode is local, and there is no conflict on ULP bus.

Navigation Through the Lighting or Load Control Screens

Navigation through the **Lighting control** and **Load control** screens is similar.

The procedure for controlling the **Lighting** application is as follows:

Step	Action	Display
1	Select the **Control** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Control** menu by pressing the **OK** key.	
2	Select the **Lighting** submenu (3) in the **Control** menu by using the ⌄ and ⌃ keys. Confirm selection of the submenu by pressing the **OK** key.	
3	Select **On** from the menu to turn on the light. Confirm your selection by pressing the **OK** key. **NOTE:** Light control and load control commands are password protected. If the level 3 default password of the IO module was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.	
4	A screen confirming the action to be carried out is displayed. Select **Yes** to confirm turning on the light.	
5	The new lighting status is displayed on the screen.	

(3) Submenu available only when:

- The FDM121 display is connected to an IO module configured for the pre-defined application 4 Light and load control,
- The control mode is local,
- There is no conflict on ULP bus.

Alarms Menu

Definitions

An event is a digital data changing state or any incident detected by the modules of the IMU. Events are time-stamped and logged in the module event history.

An alarm is a type of event that requires a specific attention.

You can associate an alarm with any measurement or event in the IMU.

Each alarm is given a pre-defined priority level:

- High priority
- Medium priority
- Low priority
- No priority

You can set the alarm parameters and assign priorities with EcoStruxure Power Commission software.

For more information about alarm setup and priorities, refer to the *MicroLogic Trip Units User Guides* provided in the section Related Documents, page 6.

Presentation

Events and alarms are displayed in the **Alarms** menu of the FDM121 display, where you have the choice between two submenus:

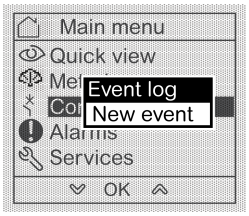
- **Event log** displays the 40 last events from the connected devices. The events are recorded by the FDM121 display. The event log file is lost in case of FDM121 power loss.
- **Alarm History** displays the alarms detected by the connected devices. They are not lost in case of FDM121 power loss. The alarms are sorted by types which availability depends on the devices connected to the FDM121 display:

Range	Alarm History Options
MasterPacT MTZ circuit breakers with MicroLogic Active control unit	• Trip • Alarms from IO module 1 • Alarms from IO module 2
MasterPacT MTZ circuit breakers with MicroLogic X control unit	• Alarms • Trip • Maintenance operations • Device status and control • Alarms from IO module 1 • Alarms from IO module 2
• MasterPacT NT • MasterPacT NW • ComPacT NS 630-1600 • PowerPacT P-frame	• Trip • Alarms from IO module 1 • Alarms from IO module 2
• ComPacT NSX • PowerPacT H-, J-, and L-Frame	• Alarms • Trip • Maintenance operations • Device status and control • Alarms from IO module 1 • Alarms from IO module 2

NOTE: Events and alarms are displayed in the reverse chronological order on the **Event log** and **Alarm History** screens.

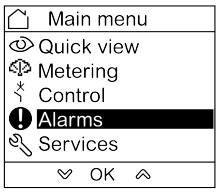
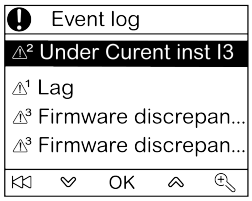
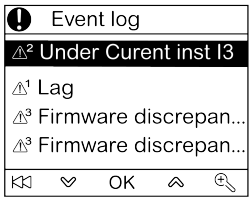
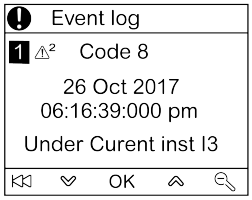
Alarm Real-Time Indication and Acknowledgment

The high-priority and medium-priority alarm are indicated in real time on the FDM121 display on a different way. They must be acknowledged also in a different way.

<table>
<tr><th>Priority</th><th>Indication in real time</th><th>Clearing of alarms</th></tr>
<tr><td>High</td><td>• New event message
• Alarm indicator LED flashing</td><td>
<table>
<tr><td>1</td><td>Press the OK key to clear the New event message.
 
</td></tr>
<tr><td>2</td><td>Select the new event in the Event log screen and press the OK key.</td></tr>
<tr><td>3</td><td>The LED turns off after every high-priority alarm is acknowledged.</td></tr>
</table>
</td></tr>
<tr><td>Medium</td><td>• Alarm indicator LED steady ON</td><td>
<table>
<tr><td>1</td><td>Select New event in the Event log screen and press the OK key.</td></tr>
<tr><td>2</td><td>The LED turns off after every medium-priority alarm is acknowledged and no high-priority alarm is present.</td></tr>
</table>
</td></tr>
</table>

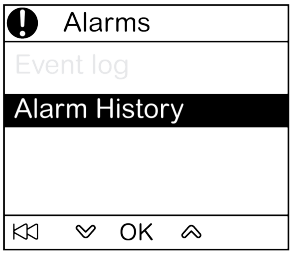
Navigation Through the Event Log Screens

The procedure for navigating through the **Event log** screens is as follows:

Step	Action	Display
1	Select the **Alarms** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Alarms** menu by pressing the **OK** key.	
2	Select the **Event log** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Event log** submenu by pressing the **OK** key.	
3	The **Event log** screen is displayed: • The events are listed in a reverse chronological order from which they occurred. • The description of a new event is written in bold font. • The alarm priority level is indicated at top right of the alert pictogram. Press the **OK** key to clear a new event: the description of the cleared events is written in normal font.	
4	Press the ⌄ and ⌃ keys to switch from one event to another. Press the 🔍+ key to display detailed information about an event.	
5	Press the ⌄ and ⌃ keys to display detailed information about a previous or subsequent event in the event log. Press the 🔍− key to return to the event log.	

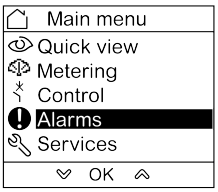
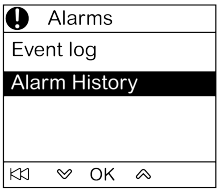
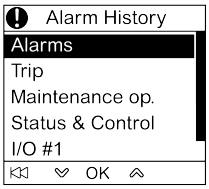
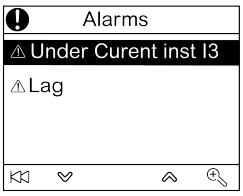
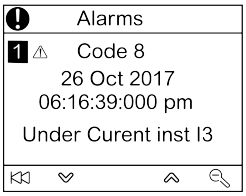
Pressing the ⏮ key in any **Event log** screen returns to the screen displayed before the **New event** message was appeared.

NOTE: If no event has occurred since the FDM121 display was powered up, the **Event log** submenu displays the screen below. Press the **OK** key to return to the **Alarms** menu.



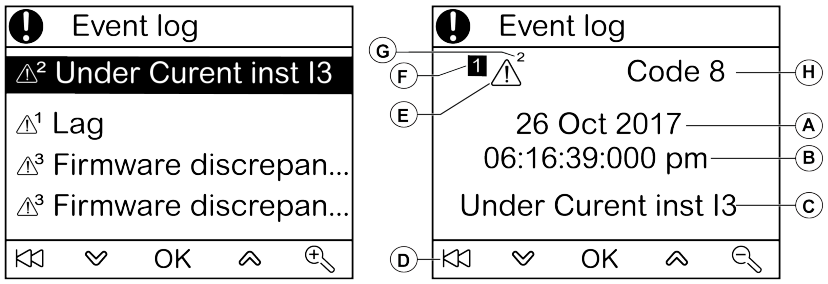
Navigation Through the Alarm History Submenu

The procedure for navigating through the **Alarm History** screens is as follows:

Step	Action	Display
1	Select the **Alarms** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Alarms** menu by pressing the **OK** key.	
2	Select the **Alarm History** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Alarm History** submenu by pressing the **OK** key.	
3	Select one of the type of alarms in the **Alarm History** submenu: • **Alarms** • **Trip** • **Maintenance op.** (maintenance operations) • **Status & Control** (device status and control) • **I/O #1** • **I/O #2** **NOTE: Alarms**, **Maintenance op.**, and **Status & Control** options are available only for: • MasterPacT MTZ circuit breakers with MicroLogic X control unit • ComPacT NSX circuit breakers • PowerPacT H-, J-, and L-Frame circuit breakers Select the **Alarms** submenu by using the ⌄ and ⌃ keys. Confirm your selection by pressing the **OK** key.	
4	The alarm history is displayed, with the alarms listed in a reverse chronological order from which they were triggered. Press the ⌄ and ⌃ keys to switch from one alarm to another. Press the 🔍+ key to display detailed information about an alarm.	
5	Press the ⌄ and ⌃ keys to display detailed information about a previous or subsequent alarm in the history. Press the 🔍− key to return to the alarm history.	

Event or Alarm Screen

Event and alarm screens are similar. The general and detailed screens are respectively as follows:



A Event or alarm occurrence date

B Event or alarm occurrence time:

- In hours and minutes in the general screen
- In hours, minutes, seconds, and milliseconds in the detailed screen

C Event or alarm name

D Key to return to the event log or alarm history

E Event or alarm type:

- ⚠ indicates the occurrence of the event or alarm
- ⚠ indicates completion of the event or alarm

F Screen number

G Alarm priority level (indicated in the event log only)

H Event or alarm code

Services Menu

Presentation

The **Services** menu provides access to the following functions:

- Reset energy meters and minimum and maximum metering values
- Date and time settings from the FDM121 display
- FDM121 display contrast and brightness settings
- Maintenance indicators (operation counters, load profile, and so on)
- IMU product identification information
- Language selection for the FDM121 screens
- Units for temperature and volume settings
- Monitoring and controlling the IO modules (status, forcing command, and counters)
- IFE IP address setting for the IFE Ethernet interface for one circuit breaker connected to FDM121 display
- Setting up Modbus device address and serial communication parameters for the BSCM Modbus SL/ULP module
- Display a QR code to get device information

Based on the devices connected to the FDM121 display, the following submenus appear under the **Services** menu:

Submenu	Connected Devices
Reset	• MicroLogic trip unit with BCM ULP module • MicroLogic control unit with BCIM module
Maintenance	MicroLogic trip unit or control unit with BSCM module, BSCM Modbus SL/ULP module,, BCIM module or BCM ULP module
I/O #1	IO module
I/O #2	IO module
IFE IP address	IFE Ethernet interface for one circuit breaker
BSCM MBSLULP	• Enabled when the BSCM Modbus SL/ULP module is connected in a serial Modbus configuration. • Disabled when the BSCM Modbus SL/ULP module is connected under IFE or IFM.

Settings Retained in the Event of a Power Loss

If the FDM121 power supply is lost, the FDM121 display retains the following settings:

- Language setting
- Contrast setting
- Brightness setting

If the FDM121 power supply is lost, the date and time are lost.

Resetting

Use the **Reset** submenu to reset:

- All energy meters and minimum and maximum measurement values in a single operation.

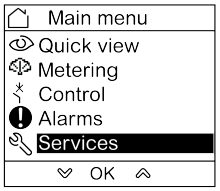
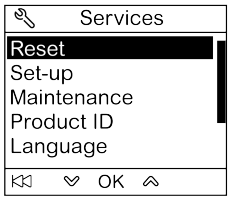
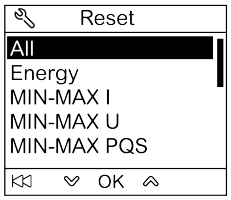
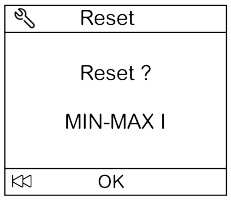
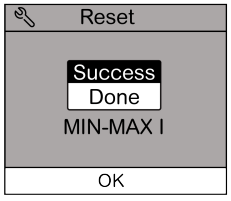
- The energy meters only: active energy (**Ep**), reactive energy (**Eq**), and apparent energy (**Es**) meters.
- A group of minimum and maximum measurement values only.

For the group of currents, for example, the following minimum and maximum values are reset simultaneously:

- Phase currents and neutral current (if present)
- Unbalance currents
- Demand current

Availability of submenu items depends on the devices supported.

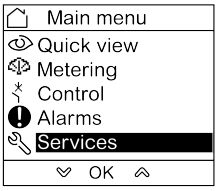
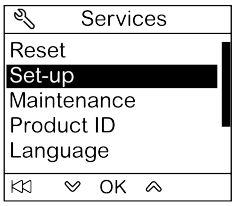
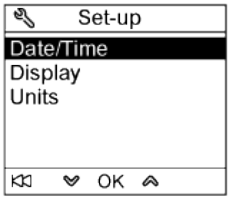
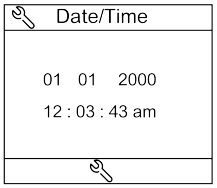
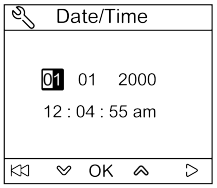
The procedure for resetting the metering groups of a MasterPacT NW circuit breaker in the **Services** menu is as follows:

Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **Reset** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Reset** submenu by pressing the **OK** key.	
3	The **Reset** submenu is displayed, with the choice of metering groups that can be reset (three screens). Select **MIN-MAX I** by using the ⌄ and ⌃ keys to reset all of the minimum and maximum values of the currents. Confirm selection of resetting the **MIN-MAX I** group by pressing the **OK** key. **NOTE: Reset** command is password protected. If the level 3 default password of the BCM ULP was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.	
4	A reset request confirmation message is displayed. Confirm resetting the **MIN-MAX I** group by pressing the **OK** key.	
5	A confirmation message is displayed whichever **Reset** submenu is selected. Press the **OK** key to return to the **Reset** submenu.	

NOTE: Pressing the ⌧ key returns to the **Services** menu.

Setting the Date and Time on the FDM121 Display

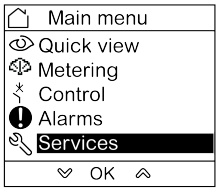
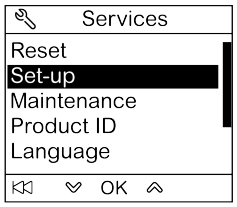
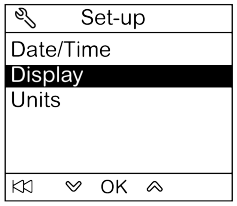
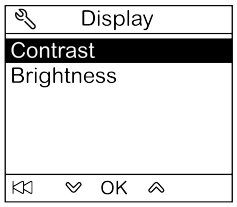
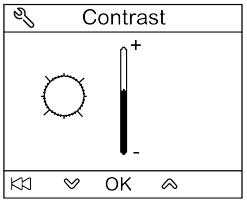
The procedure for setting date and time on the FDM121 display from the **Services** menu is as follows:

Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **Set-up** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Set-up** submenu by pressing the **OK** key.	
3	The **Set-up** submenu is displayed. Confirm selection of the **Date/Time** submenu by pressing the **OK** key.	
4	The **Date/Time** submenu is displayed. Press the 🔧 key to set the system date and time.	
5	Select the field to set by using the ▷ key. The display of the selected field switches to reverse video. Use the ⌄ and ⌃ keys to adjust the content of the selected field. Press the **OK** key to confirm your settings.	

Setting the Contrast and Brightness on the FDM121 Display

Navigation for setting the contrast and brightness is similar.

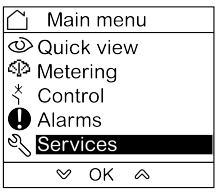
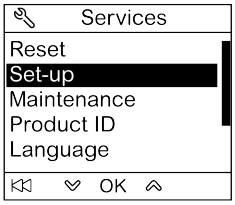
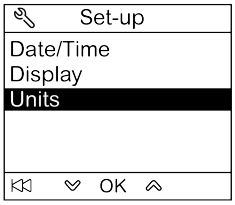
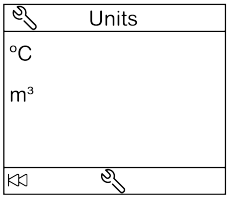
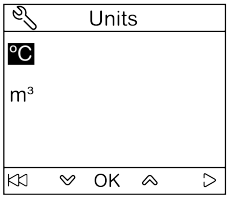
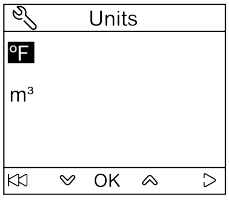
The procedure for setting contrast on the FDM121 display from the **Services** menu is as follows:

Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **Set-up** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Set-up** submenu by pressing the **OK** key.	
3	The **Set-up** submenu is displayed. Confirm selection of the **Display** submenu by pressing the **OK** key.	
4	The **Display** submenu is used to set the display of the FDM121 display. Select the **Contrast** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Contrast** submenu by pressing the **OK** key.	
5	The **Contrast** submenu is displayed. Adjust the contrast by using the ⌄ and ⌃ keys. Confirm the contrast setting by pressing the **OK** key.	

Setting the Units for Temperature and Volume on the FDM121 Display

Navigation for setting the physical unit for the display of temperature (°C or °F) and volume (m^3, US gallon **galUS**, or imperial gallon **galGB**) is similar.

The procedure for setting the temperature from the **Services** menu is as follows:

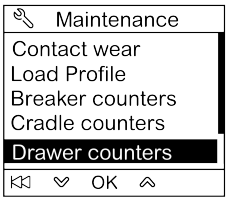
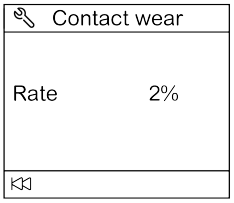
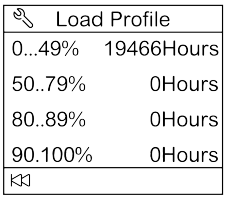
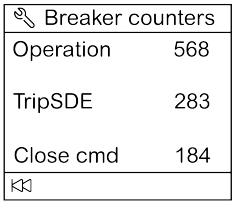
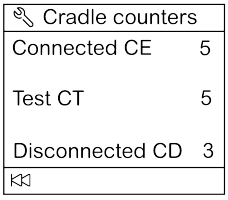
Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **Set-up** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Set-up** submenu by pressing the **OK** key.	
3	The **Set-up** submenu is displayed. Select the **Units** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Units** submenu by pressing the **OK** key.	
4	Press the 🔧 key to edit the current temperature or volume unit.	
5	Select the field to set by using the ▷ key. The display of the selected field switches to reverse video. Confirm selection of the unit to edit by pressing the **OK** key.	
6	Use the ⌄ and ⌃ keys to adjust the content of the selected field. Confirm the new unit setting by pressing the **OK** key.	

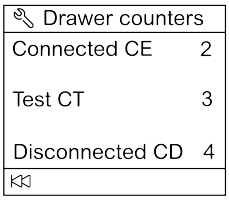
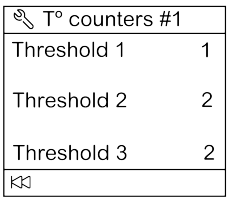
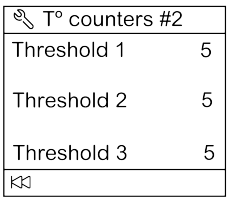
Maintenance Submenu Screens

Availability of submenu items depends on the connected devices:

- **Contact wear** submenu is available when a MicroLogic trip unit is connected.
- **Load Profile** submenu is available when a MicroLogic trip unit is connected.
- **Breaker counters** submenu is available when a BSCM, BSCM Modbus SL/ULP, BCIM, or BCM ULP module is connected.
- **Cradle counters** submenu is available when an IO module configured for cradle management application is connected.
- **Drawer counters** submenu is available when an IO module configured for drawer management application is connected.
- **T° counters #1** submenu is available when the analog input of IO module 1 is assigned to Pt100 sensor.
- **T° counters #2** submenu is available when the analog input of IO module 2 is assigned to Pt100 sensor.

The table below presents the screens in the **Maintenance** submenu available on the FDM121 display connected to a ComPacT NSX circuit breaker. The **Maintenance** submenu is accessible from the **Services** menu in the **Main menu**.

Screens	Description
	Select the maintenance screen in the **Maintenance** submenu by using the ⌄ and ⌃ keys. Confirm selection of the maintenance screen by pressing the **OK** key.
	The **Contact wear** screen in the **Maintenance** submenu displays the amount of wear on the circuit breaker contacts.
	The **Load Profile** screen in the **Maintenance** submenu displays four circuit breaker operating hours counters for four loading sections.
	The **Breaker counters** screen in the **Maintenance** submenu displays the values of the counters: • **Operations**: OF counter (open to close position counter, resettable) • **TripSDE**: SDE counter (close to SDE position counter) • **Close cmd**: Counter of close commands by using the communicating motor mechanism
	The **Cradle counters** screen in the **Maintenance** submenu displays: • The cradle connected position counter (CE) • The cradle test position counter (CT) • The cradle disconnected position counter (CD)

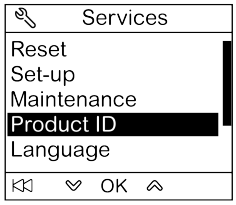
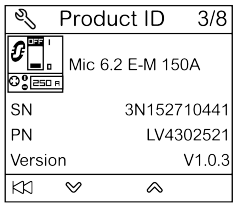
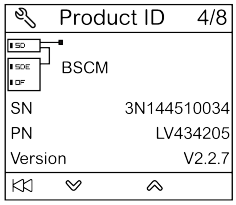
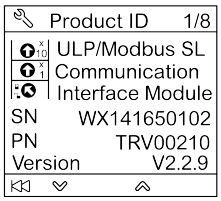
Screens	Description
	The **Drawer counters** screen in the **Maintenance** submenu displays: • The drawer connected position counter (CE) • The drawer test position counter (CT) • The drawer disconnected position counter (CD)
	The **T° counters #1** screen in the **Maintenance** submenu displays: • The number of times the switchboard temperature measured by IO module 1 exceeds threshold 1 • The number of times the switchboard temperature measured by IO module 1 exceeds threshold 2 • The number of times the switchboard temperature measured by IO module 1 exceeds threshold 3
	The **T° counters #2** screen in the **Maintenance** submenu displays: • The number of times the switchboard temperature measured by IO module 2 exceeds threshold 1 • The number of times the switchboard temperature measured by IO module 2 exceeds threshold 2 • The number of times the switchboard temperature measured by IO module 2 exceeds threshold 3

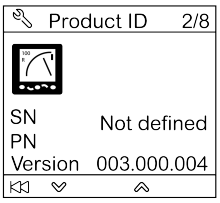
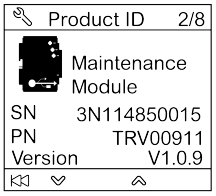
Getting the Product Identification

The FDM121 display displays the serial number, the part number, and the version of every module of the IMU.

The procedure below describes an example of access to the module identification for an IMU consisting of:

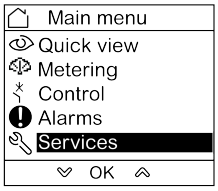
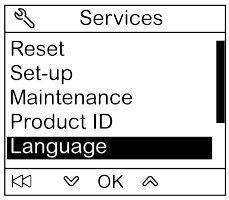
- ComPacT NSX circuit breaker equipped with a MicroLogic 5.2 E trip unit and a BSCM module or BSCM Modbus SL/ULP module
- IFM interface
- FDM121 display
- USB maintenance interface

Step	Action	Display
1	Select the **Services** menu in the **Main menu**, then select the **Product ID** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Product ID** submenu by pressing the **OK** key.	
2	The first screen displays the identifying information for the MicroLogic trip unit: • Type of MicroLogic trip unit • **SN** = Serial number • **PN** = MicroLogic trip unit part number • **Version** = Firmware version Pressing the ⌄ key switches to the next screen. Pressing the ⌃ key switches back to the previous screen.	
3	The next screen displays the identifying information for the BSCM module or BSCM Modbus SL/ULP module: • **BSCM** or **BSCM MBSLULP** • **SN** = Serial number • **PN** = BSCM or BSCM Modbus SL/ULP part number • **Version** = Firmware version	
4	The next screen displays the identifying information for the IFM Modbus-SL interface for one circuit breaker: • IFM interface description • **SN** = Serial number • **PN** = IFM interface part number • **Version** = Firmware version	

Step	Action	Display
5	The next screen displays the identifying information for the FDM121 display: • **FDM121** • **SN** = Serial number • **PN** = FDM121 part number • **Version** = Firmware version	
6	The next screen displays the identifying information for the USB maintenance interface: • **Maintenance module** • **SN** = Serial number • **PN** = USB maintenance interface part number • **Version** = Firmware version	

Select the Language on the FDM121 Display

The procedure for choosing the language on the FDM121 display from the **Services** menu is as follows:

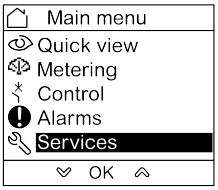
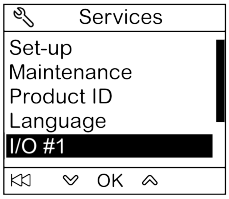
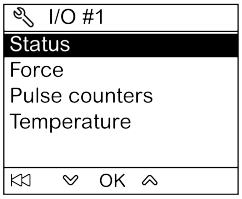
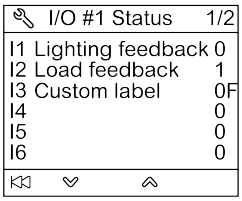
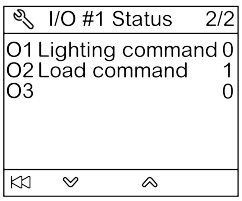
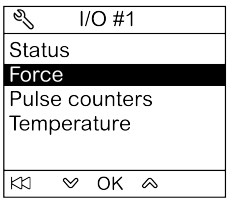
Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **Language** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Language** submenu by pressing the **OK** key. **NOTE:** In order to be able to change language easily, whichever language is selected, the **Language** submenu label is only in English.	
3	The **Language** submenu is displayed. Select the desired display language by using the ⌄ and ⌃ keys. Confirm selection of the language by pressing the **OK** key.	

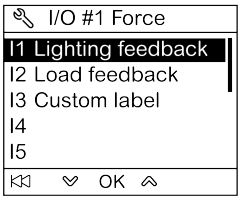
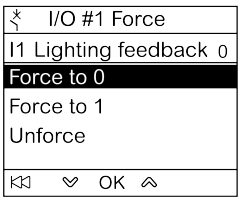
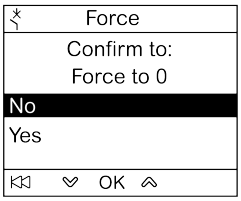
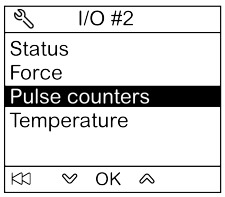
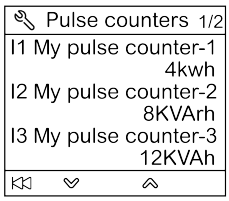
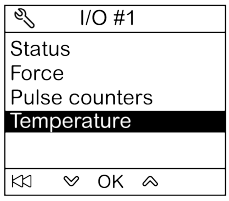
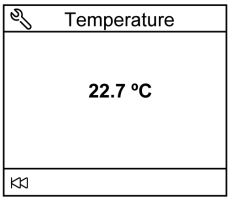
Navigation Through the IO Module Screens

The **I/O #•** submenus provide access to four submenus for monitoring and controlling the IO modules connected to the FDM121 display:

- **Status** submenu displays the I/Os of the IO module
- **Force** submenu is used to force or unforce a command
- **Pulse counters** submenu displays the counters
- **Temperature** submenu displays the switchboard temperature provided by the given IO module

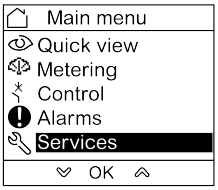
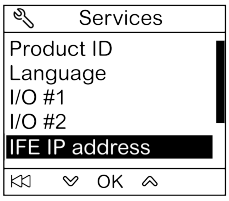
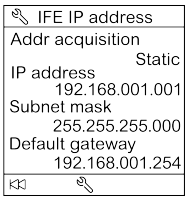
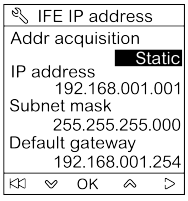
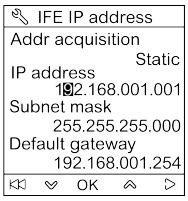
The procedure for navigating through the IO module screens is as follows:

Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **I/O #•** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **I/O #•** submenu by pressing the **OK** key.	
3	The **I/O #•** submenu is displayed. Select the **Status** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Status** submenu by pressing the **OK** key.	
4	The first **I/O #• Status** screen in the **I/O #•** submenu displays the inputs of the given IO module with the following information for each line, from left to right: • Input number • Input label • Input state: **0** or **1** • Input forcing status: **F** means that the input state is forced. Use the ⌄ and ⌃ keys to navigate between the screens.	
5	The second **I/O #• Status** screen in the **I/O #•** submenu displays the outputs of the given IO module with the following information for each line, from left to right: • Output number • Output label • Output state: **0** or **1** • Output forcing status: **F** means that the output state is forced. Use the ⌄ and ⌃ keys to navigate between the screens.	
6	In the **I/O #•** submenu, select the **Force** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Force** submenu by pressing the **OK** key.	

Step	Action	Display
7	The **I/O #• Force** screen displays all the I/Os of the given IO module. Select an input or output by using the ⌄ and ⌃ keys. Confirm selection by pressing the **OK** key.	
8	The **I/O #• Force** screen of a selected input or output is divided into two parts: • The part at the top indicates the current command setting right of the label. • The part at the bottom indicates the possible actions which can be carried out on the I/O in the form of a menu: ◦ **Force to 0** ◦ **Force to 1** ◦ **Unforce** Select the action you want to carry out by using the ⌄ and ⌃ keys. Confirm selection of the action you want to carry out by pressing the **OK** key. **NOTE: I/O #• Force** commands are password protected. If the level 3 default password of the IO module was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.	
9	A screen confirming the action to be carried out is displayed. Select **Yes** to confirm the action to be carried out.	
10	In the **I/O #•** submenu, select the **Pulse counters** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Pulse counters** submenu by pressing the **OK** key.	
11	The **Pulse counters** screen displays all the inputs assigned to pulse counter function of a given IO module. The pulse meter label, value, and unit are indicated for each input of the IO module. Use the ⌄ and ⌃ keys to navigate between the screens. To edit the volume unit, refer to the **Units** screen, page 55.	
12	In the **I/O #•** submenu, select the **Temperature** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **Temperature** submenu by pressing the **OK** key.	
13	The **Temperature** screen displays the switchboard temperature measured by Pt100 sensor connected to the analog input of the IO module. To edit the temperature unit, refer to the **Units** screen, page 55.	

Setting the IP Address of the IFE Ethernet Interface for One Circuit Breaker

The procedure for setting the IFE IP address from the **Services** menu is as follows:

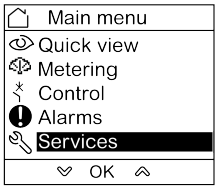
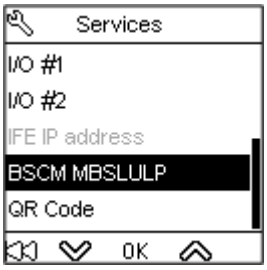
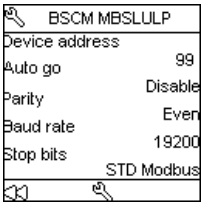
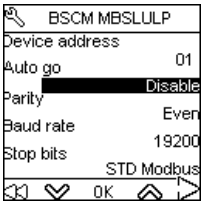
Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **IFE IP address** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **IFE IP address** submenu by pressing the **OK** key.	
3	The **IFE IP address** screen is displayed. To edit the address settings, press the 🔧 key. **NOTE: IFE IP address** command is password protected. If the level 3 default password of the circuit breaker was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32. **NOTE:** If address acquisition mode is different from **Static**, the **IP address**, **Subnet mask**, and **Default gateway** fields are not displayed.	
4	Select the field to set by using the ▷ key. The selected field is displayed in reverse video.	
5	Edit digits when necessary: • Use the ⌄ and ⌃ keys to adjust the digit of the selected field. • Go to the next digit by using the ▷ key.	
6	Press the **OK** key to confirm the IFE IP address.	

NOTE: Pressing the ⏮ key returns to the **Services** menu and IP address edition is canceled.

Setting the Modbus Device address and Serial Communication Parameters for BSCM Modbus SL/ULP Module

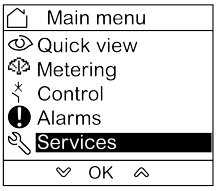
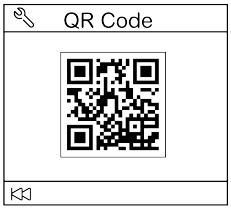
The procedure for setting the Modbus device address and serial communication parameters for BSCM Modbus SL/ULP module from the **Services** menu is as follows:

NOTE: This feature is available with FDM121 firmware version 004.000.029 or later and BSCM Modbus SL/ULP module firmware version 001.002.000 or later.

Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **BSCM MBSLULP** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **BSCM MBSLULP** submenu by pressing the **OK** key.	
3	The **BSCM MBSLULP** submenu is displayed. Select the field to set by using the 🔧 key. **NOTE: BSCM MBSLULP** configuration is password protected. If the level 3 default password of the circuit breaker was modified, then a screen asking for the password is displayed. For more information, refer section Password Screen, page 32.	
4	Edit the values as necessary: • Use the ⌄ and ⌃ keys to adjust the values of the selected field. • Go to the next field by using the ▷ key. **NOTE:** • Device address modification is not allowed when the BSCM Modbus SL/ULP module physical dial is set between 1 and D. • **Parity**, **Baud rate**, and **Stop bits** modifications are not allowed when **Auto go** is enabled.	
5	Press **OK** key to confirm the settings and a confirmation message is displayed. Press **OK** key to return to **BSCM MBSLULP** menu.	

Displaying the QR Code on the FDM121 Display

The procedure for displaying the QR Code on the FDM121 display from the **Services** menu is as follows:

Step	Action	Display
1	Select the **Services** menu in the **Main menu** by using the ⌄ and ⌃ keys. Confirm selection of the **Services** menu by pressing the **OK** key.	
2	The **Services** menu is displayed. Select the **QR Code** submenu by using the ⌄ and ⌃ keys. Confirm selection of the **QR Code** submenu by pressing the **OK** key.	
3	The **QR Code** submenu is displayed. Scan the QR code to get additional information about the device from the Schneider Electric website. To scan the QR code, use a smartphone that is equipped with a camera and installed with a QR code reader.	

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