Enerlin'X
IFE/EIFE Ethernet Interface

Firmware Release Notes

Schneider Electric

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Safety Information

Cybersecurity Safety Notice

⚠ **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.

About the Book

Document Scope

This document provides the firmware version history of IFE Ethernet interface for one circuit breaker (or IFE interface) and EIFE Embedded Ethernet interface for one MasterPacT MTZ drawout circuit breaker (or EIFE interface).

Validity Note

This document is valid only for IFE and EIFE interfaces.

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/

Related Documents for IEC Devices

The following table lists the documents valid for IEC devices that are compatible with an IFE/EIFE interface with the latest firmware version:

Title of documentation	Publication date	Reference number
Enerlin'X IFE – Ethernet Switchboard Server/ Ethernet Interface for One Circuit Breaker – Instruction Sheet	03/2018	QGH13473
Enerlin'X IFE – Ethernet Interface for One Circuit Breaker – User Guide	05/2024	DOCA0142EN DOCA0142ES DOCA0142FR DOCA0142ZH
Enerlin'X EIFE – Embedded Ethernet Interface for One MasterPacT MTZ Drawout Circuit Breaker – Instruction Sheet	09/2017	NVE23550
Enerlin'X EIFE – Embedded Ethernet Interface for One MasterPacT MTZ Drawout Circuit Breaker – User Guide	05/2024	DOCA0106EN DOCA0106ES DOCA0106FR DOCA0106ZH
ULP System (IEC Standard) - User Guide	10/2023	DOCA0093EN DOCA0093ES DOCA0093FR DOCA0093ZH
MasterPacT MTZ – Modbus Communication Guide	05/2023	DOCA0105EN DOCA0105ES DOCA0105FR DOCA0105ZH
MasterPacT NT/NW, ComPact NS - Modbus Communication Guide	07/2022	DOCA0054EN DOCA0054ES

Title of documentation	Publication date	Reference number
		DOCA0054FR DOCA0054ZH
ComPacT NS - Modbus Communication Guide	07/2022	DOCA0220EN DOCA0220ES DOCA0220FR DOCA0220ZH
ComPacT NSX - Modbus Communication Guide	07/2022	DOCA0213EN DOCA0213ES DOCA0213FR DOCA0213ZH
ComPact NSX - Modbus Communication Guide	07/2022	DOCA0091EN DOCA0091ES DOCA0091FR DOCA0091ZH

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

Related Documents for UL/ANSI Devices

The following table lists the documents valid for UL/ANSI devices that are compatible with an IFE/EIFE interface with the latest firmware version:

Title of documentation	Publication date	Reference number
Enerlin'X IFE – Ethernet Switchboard Server/ Ethernet Interface for One Circuit Breaker – Instruction Sheet	03/2018	QGH13473
Enerlin'X IFE – Ethernet Interface for One Circuit Breaker – User Guide	05/2024	DOCA0142EN DOCA0142ES DOCA0142FR DOCA0142ZH
Enerlin'X EIFE – Embedded Ethernet Interface for One MasterPacT MTZ Drawout Circuit Breaker – Instruction Sheet	09/2017	NVE23550
Enerlin'X EIFE – Embedded Ethernet Interface for One MasterPacT MTZ Drawout Circuit Breaker – User Guide	05/2024	DOCA0106EN DOCA0106ES DOCA0106FR DOCA0106ZH
ULP System (UL Standard) – User Guide	10/2023	0602IB1503EN 0602IB1504ES 0602IB1505FR 0602IB1506ZH
MasterPacT MTZ – Modbus Communication Guide	05/2023	DOCA0105EN DOCA0105ES DOCA0105FR DOCA0105ZH

Title of documentation	Publication date	Reference number
MasterPacT NT/NW and PowerPact P- and R-Frame – Modbus Communication Guide	07/2022	0613IB1313EN 0613IB1314ES 0613IB1315FR 0613IB1316ZH
PowerPact H-, J-, and L-Frame Circuit Breakers – Modbus Communication Guide	07/2022	0611IB1302EN 0611IB1303ES 0611IB1304FR 0611IB1305ZH

You can download these technical publications and other technical information from the website at https://www.se.com/en/download/

Introduction

IFE Ethernet Interface for One Circuit Breaker

When an intelligent modular unit (IMU) contains a circuit breaker equipped with a communicating MicroLogic trip unit, the IFE Ethernet interface for one circuit breaker enables the IMU to be connected to an Ethernet network. Each circuit breaker has its own IFE interface and a corresponding IP address.

The IFE interface with part number LV434001 or LV434010 is an Ethernet interface for the circuit breaker in the IMU.

> **NOTE:** The IFE interface with part number LV434001 completely replaces the IFE interface with part number LV434010. The part number LV434001 comes with the real time clock (RTC) feature and allows ULP connections up to 20 m (65.6 ft) with the MasterPacT MTZ circuit breakers (LV434010 had a theoretical limitation of 5 m (16.4 ft) over the life of the IFE interface).

The IFE interface is compatible with the following ranges of circuit breakers:

- MasterPacT MTZ circuit breakers
- MasterPacT NT/NW circuit breakers
- ComPacT NS circuit breakers
- ComPacT NSX circuit breakers
- PowerPacT P- and R-frame circuit breakers
- PowerPacT H-, J-, and L-frame circuit breakers

> **NOTE:**
>
> - The information related to the new generation of ComPacT NSX and PowerPacT H-, J-, and L-frame circuit breakers in this document applies to ComPact NSX and PowerPact H-, J-, and L-frame circuit breakers also. The exceptions are mentioned wherever applicable.
>
> - The information related to the new generation of ComPacT NS and PowerPacT P- and R-frame circuit breakers in this document applies to ComPact NS and PowerPact P- and R-frame circuit breakers also. The exceptions are mentioned wherever applicable.

EIFE Embedded Ethernet Interface for One MasterPacT MTZ Drawout Circuit Breaker

The EIFE Embedded Ethernet interface for one MasterPacT MTZ drawout circuit breaker enables one MasterPacT MTZ drawout circuit breaker to be connected to an Ethernet network.

It provides:

- Digital access to all the data that is delivered by the MicroLogic X control unit of the MasterPacT MTZ circuit breaker.
- Information about the intelligent modular unit (IMU) system.

It also monitors the three positions of the circuit breaker in the cradle:

- Cradle connected
- Cradle disconnected
- Cradle test position

Firmware Release History

The following table indicates the availability of each firmware version for IFE/EIFE interface:

Date	Firmware version	Availability
May 2024	005.001.000	Release for manufacturing (LV434001 and LV851001)
July 2023	004.011.000	Obsolete
May 2023	004.010.000	Obsolete
February 2023	004.009.000	Obsolete
November 2022	004.008.000	Obsolete
July 2022	004.007.000	Obsolete
	003.016.000	Release for manufacturing (LV434010)
February 2022	004.005.000	Obsolete
	003.015.000	Obsolete
July 2021	004.004.001	Obsolete
	003.014.000	Obsolete
April 2021	004.003.000	Obsolete
	003.013.003	Obsolete
January 2021	004.002.000	Obsolete
	003.012.002	Obsolete
October 2020	004.001.000	Obsolete
	003.011.003	Obsolete
December 2019	003.010.005	Obsolete
March 2019	003.009.010	Obsolete
April 2018	003.007.024	Obsolete
July 2017	003.006.011	Obsolete
December 2016	003.005.003	Obsolete

Firmware Update Policy

Firmware update is recommended to benefit from the latest features and potential bug fixes. Do not update the firmware to the latest version, if the latest features are not required for your application and no bug fixes are provided.

Use this release note to confirm if an update to the latest version of the firmware is relevant for your application.

> **NOTE:** You can upgrade the firmware version from 003.nnn.nnn to 005.nnn.nnn and 004.nnn.nnn to 005.nnn.nnn but vice-versa is not possible.

For more information on the firmware update policy and the firmware compatibility between devices, refer to *MicroLogic Trip and Control Units - Firmware History – DOCA0155EN*.

Firmware Update with EcoStruxure Power Commission Software

Use the latest version of EcoStruxure Power Commission (EPC) software to update the device with the latest firmware version available.

Click here for the latest version of EPC software.

For more information on the use of EPC software, refer to *EcoStruxure Power Commission Online Help*.

Firmware Versions

Firmware Version 005.001.000

New Features

- Added Read Device Registers feature for EIFE/IFE interface to read Modbus registers from the selected device.
- Added BSCM Modbus SL/ULP module, compatible with IFE interface only.

Firmware Version 004.011.000

New Features

Added the following list of events with email notification:

- Events from the IDMTG ground-fault protection.
- Events indicating the change of passwords.

Firmware Version 004.010.000

Security Updates

Enhanced cybersecurity features.

New Features

- Added Device Specific Settings (DSS) feature that enables the IFE/EIFE interface configurations to be tailored for each individual device.
- Added signature verification feature to validate the security configuration files received from CAE software.

Firmware Version 004.009.000

Security Updates

Restored compatibility with EcoStruxure Cybersecurity Admin Expert software version 2.4.3 and later.

New Features

Added Role Base Access Control (RBAC) for ComPacT NSX with MicroLogic 5, 6, and 7 trip units.

Bugs Fixed

The IFE/EIFE webpage did not load on certain versions of Google Chrome.

NOTE: The above bug was observed in Google Chrome version 107.0.5304.63 (official build) (64–bit).

Firmware Version 004.008.000

Security Updates

Enhanced cybersecurity features.

Firmware Version 004.007.000

Security Updates

Enhanced cybersecurity features.

New Features

- Added the Syslog logging service feature.
- Added the Machine-to-Machine (M2M) communication for Modbus communication.
- Added Role Base Access Control (RBAC) for MasterPact MTZ with MicroLogic X control unit.

Known Issues

The **Diagnostics** page for RSTP goes blank when the RSTP service is disabled.

Firmware Version 003.016.000

New Features

Freshness timeout for ULP communication is configurable.

Firmware Version 004.005.000

Security Updates

Enhanced cybersecurity features.

New Features

Enhanced firmware upgrade feature for ComPacT NSX and PowerPacT H-, J-, and L-frame circuit breakers.

Known Issues

Lost compatibility with EcoStruxure Cybersecurity Admin Expert software.

Firmware Version 003.015.000

New Features

Enhanced firmware upgrade feature for ComPacT NSX and PowerPacT H-, J-, and L-frame circuit breakers.

Firmware Version 004.004.001

Security Updates

- Enhanced cybersecurity features.
- Included the patch for IPv6 vulnerabilities.

New Features

Added ComPacT NS and PowerPacT P- and R-frame circuit breakers. These new ranges are the evolution of existing ComPact NS and PowerPact P- and R-frame range of circuit breakers.

Bugs Fixed

The measurement values were inconsistent with the real time values after the IMU system recovered from critical discrepancy.

Firmware Version 003.014.000

Security Updates

Included the patch for IPv6 vulnerabilities.

Firmware Version 004.003.000

New Features

Added ComPacT NSX and PowerPacT H-, J,-, and L- frame circuit breakers. These new ranges are the evolution of existing ComPact NSX and PowerPact H-, J-, and L-frame range of circuit breakers.

Bugs Fixed

- Language and phone number was not updated while creating a user account.
- Location field was removed from the user account pages.
- After the firmware was upgraded from 003.xxx.xxx to 004.002.000, the HTTPS protocol was not enabled by default.
- After the firmware was upgraded from 003.xxx.xxx to 004.002.000, the FTP protocol was disabled.
- The register 12395 for freshness timeout setting was not always accessible without the installation of the Modbus Legacy Dataset Digital Module.

Firmware Version 003.013.003

New Features

Added ComPacT NSX and PowerPacT H-, J,-, and L- frame circuit breakers. These new ranges are the evolution of existing ComPact NSX and PowerPact H-, J-, and L-frame range of circuit breakers.

Bugs Fixed

New administrators were able to perform the control operations without the acceptance of the disclaimer message.

Firmware Version 004.002.000

New Features

- Added MicroLogic Xi control units. A MicroLogic Xi is a control unit without Bluetooth Low Energy (BLE) communication.
- Enhanced the following cybersecurity features:
  - Enabled the FTPS mode for file import.
  - Enabled automatic export of datalog file.

Firmware Version 003.012.002

New Features

Added MicroLogic Xi control units. A MicroLogic Xi is a control unit without Bluetooth Low Energy (BLE) communication.

Bugs Fixed

Time synchronization of IFM interface with IFE/EIFE interface did not happen when the IFE/EIFE interface was in Daylight Saving mode.

Firmware Version 004.001.000

New Features

- Improved design for the webpages interface.
- Added the IEC 61850 communication protocol, which is compatible with CET850 configuration software.
- Added the Rapid Spanning Tree Protocol (RSTP).
- Enhanced the Simple Network Time Protocol (SNTP) with the Network Time Protocol (NTP).
- Enhanced the following Cybersecurity features:
  ◦ Revised the user management configuration rules according to the Role Base Access Control (RBAC) strategy (Refer to User Management Reconfiguration after Firmware Update, page 19).
  ◦ Strengthened the policies of password security.
  ◦ Enabled the HTTPS mode for the web interface.
  ◦ Harmonized the users list of FTP server with the webpage.
  ◦ Enabled compatibility with EcoStruxure Cybersecurity Admin Expert software.
- Added the events for internal Current Power Supply (CPS) sensors, available with a MicroLogic X control unit with firmware version 004.105.000 or higher.

User Management Reconfiguration after Firmware Update

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

NOTICE
LOSS OF DATA
• Ensure that you take backup of the data log files before updating the firmware. The data log entries of the IFE/EIFE interface may be lost when the firmware is updated.
• Ensure that you take backup of data present in User Accounts and Email Events sections of IFE/EIFE webpages.
• Ensure that after firmware upgrade, you restore the User Accounts and Email Events configuration on IFE/EIFE webpages.
Failure to follow these instructions can result in permanent loss of data.

To take advantage of new security features, the reconfiguration of the IFE/EIFE-webpage users is required when an IFE/EIFE interface firmware is updated from a version 003.010.005 or lower to 004.001.000 or higher.

The management of the users of the IFE/EIFE webpages for firmware version 004.001.000 or higher is based on Role Base Access Control (RBAC). It is not compatible with the user management of the IFE/EIFE webpages for firmware version 003.010.005 or lower.

After the firmware update of an IFE/EIFE interface from a version 003.010.005 or lower to 004.001.000 or higher:

- the Guest account is removed
- the Administrator account is removed and replaced by a SecurityAdmin user:
  - with the default password: **AAAAAAAA**
  - with the email address of the Administrator account
- the first 11 configurable user accounts are maintained:
  - with the same user names. If a user name was shorter than 4 characters, then **0** are added to complete it to 4 characters.
  - with the same email addresses
  - with the default password: **Admin@123**
  - with **Viewer** role
- the last 3 configurable accounts are removed
- the export of logging data by email is disabled
- the notification of email events is reset to default values
- the email addresses for notifications are removed

Once the IFE/EIFE interface firmware is updated from a version 003.010.005 or lower to 004.001.000 or higher, the Security Administrator must edit and review the user accounts configuration on the **USER MANAGEMENT** webpage.

Firmware Version 003.011.003

New Features

- Added the events for internal Current Power Supply (CPS) sensors, available with the MicroLogic X control unit for firmware version 004.105.000 or higher.

Bugs Fixed

- Treck TCP/IP Vulnerabilities (Ripple20)

  For more information, refer to SEVD-2020-175-01 *Schneider Electric Security Notification*.

Firmware Version 003.010.005

New Features

- Added access through Modbus registers to the following data for MasterPacT MTZ circuit breakers:
  - IDMTL protection trip
  - Over/Under frequency trip
  - Directional overcurrent trip
  - Discrepancy between display and MicroLogic

Bugs Fixed

- When IP Filtering was enabled as Read only, the Modbus function *Scattered read* was blocked.

Firmware Version 003.009.010

New Features

- Added the following maintenance features, available with a MicroLogic X control unit with firmware version 003.011.000 or higher:
  - New events for contact wear ratio
  - New events for type of preventive maintenance to be performed
- Added access through Modbus registers to the following data for MasterPacT MTZ circuit breakers:
  - Average peak current demand
  - Minimum and maximum values of real-time measurements
  - Energy per phase values
  - Main settings of the active setting group of current protection functions

  NOTE: The configuration of the connection to EcoStruxure Facility Expert is not available now. You can use Enerlin'X COM'X energy servers to configure the connection to EcoStruxure Facility Expert.

Bugs Fixed

- IFE/EIFE interface lost its clock master status when SNTP server did not answer.
- IFE/EIFE interface restarted when discovery packet from Satchwell Sigma BMS platform was received.

Firmware Version 003.007.024

New Features

New features in this firmware version for IFE/EIFE interface:

Added the following features, available with a MicroLogic X control unit with firmware version 002.000.003 or higher:

- Monitoring of current and power demand values
- Reset of peak demand values
- New events for notification by email:
  - Presence of 24 Vdc power supply
  - Ground-fault alarm/ Earth-leakage alarm (available when Ground-fault Digital Module is installed on MicroLogic X control unit)
- Update of standard dataset with current and power demand values
- Availability of legacy dataset when Modbus Legacy Dataset Digital Module is installed on the MicroLogic X control unit
- Availability of individual harmonics and currents up to rank 40 when Individual Harmonics Analysis Digital Module is installed on the MicroLogic X control unit
- Introduction of new mechanism for activating Digital Modules across Enerlin'X devices
- Modification to management of multiple requests through command interface: reception of new command aborts previous command still in progress.

New features in this firmware version for IFE interface:

- Added ComPacT NSX circuit breaker with MicroLogic 7 trip unit as discoverable device that can be connected to ULP port of IFE interface.

Bugs Fixed

Bugs fixed in this firmware version for IFE interface:

- LV434001: ULP LED was blinking green instead of yellow when IFE interface was in Boot mode.

Firmware Version 003.006.011

New Features

New features in this firmware version for IFE/EIFE interface:

- Added access through Modbus registers to the trip cause data for MasterPacT MTZ circuit breakers
- Added support of alpha-numeric passwords for IFE webpages

New features in this firmware version for IFE interface:

- Added support for the internal battery that maintains the date and time settings of the real-time clock (RTC) during a power loss (reference LV434001)
- Added compatibility with ULP cables up to 20 m (65 ft) in length
- Added alarm support for the MicroLogic P and H advanced protection settings, allowing an alarm email to be sent
- Added discovery from IFE webpages of devices equipped with non-communicating trip units, through BCM or BSCM module (e.g. NSX non-communicating MicroLogic with BSCM module), for device status display only
- Added compatibility with new MicroLogic 7 trip units for ComPacT NSX circuit breakers

Bugs Fixed

Bugs fixed in this firmware version for IFE/EIFE interface:

- FTP server could not be enabled in Italian language

Bugs fixed in this firmware version for IFE interface:

- BCM firmware update was not performed when IFE device closed connection in DHCP mode.

Firmware Version 003.005.003

New Features

- Added the MasterPacT MTZ circuit breakers as discoverable devices.
- Added the integration of secure email.

Bugs Fixed

- IFE time and date were not well synchronized with the SNTP server.
- Refresh of data on IFE device stopped after a few hours of use.
- IP filtering was disabled after a firmware update of IFE devices.
- IFE device and IO module ULP communication did not share the correct cradle status when powered up with a device in disconnected position.

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