PowerLogic P3

P3F30, P3L30, P3T32, P3M30, P3M32, P3G30, P3G32

Quick Start - IEC

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As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

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 publication or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

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.

The addition of either 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.

⚠ 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 must only be installed, operated, serviced, and maintained by qualified personnel. A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

Protective grounding

The user is responsible for compliance with all the existing international and national electrical codes concerning protective grounding of any device.

EU directive and UKCA regulations compliance

EU directive compliance

EMC compliance

2014/30/EU

Compliance with the European Commission's EMC Directive. Product Specific Standard was used to establish conformity:

- EN 60255-26 2013

Product safety

2014/35/EU

Compliance with the European Commission's Low Voltage Directive. Product Specific Safety Standard was used to establish conformity:

- EN 60255-27 2014

RoHS directive

2011/65/EU (inclusive of Directive (EU) 2015/863) Compliance

Compliance with the European Commission's on the restriction of the use of certain hazardous substances in electrical and electronic equipment

- EN IEC 63000:2018 / IEC 63000:2016

UKCA regulations compliance

Schneider Electric Limited
Stafford Park 5
Telford, TF3 3BL
United Kingdom

EMC compliance

SI 2016 No. 1091

The Electromagnetic Compatibility Regulations:

- BS EN 60255-26 2013

Product safety

SI 2016 No. 1101

The Electrical Equipment (Safety) Regulations:

- BS EN 60255-27 2014

RoHS regulation

SI 2012 No. 3032

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations

- BS EN IEC 63000:2018

1 About this manual

This manual contains instructions for handling, mounting and wiring PowerLogic P3 protection relays:

- P3F30 Feeder protection
- P3L30 Line protection
- P3T32 Transformer protection
- P3M30, P3M32 Motor protection
- P3G30, P3G32 Generator protection

Carefully read through the mounting instruction of this manual before undertaking any mounting or wiring work.

2 Easergy to PowerLogic renaming

Schneider Electric, driven by its “Customer First” Core Value, is fully committed to easing the customer experience with our portfolio on all fronts. With this core mission in mind, the decision to optimize the number of brands has been taken across the entire digital Schneider Electric portfolio to provide a more cohesive and consistent presentation of our offers across different Divisions, bringing a simpler and customer-centric approach that will facilitate the navigation through all the breadth and depth of our offers and that will be a key enabler for an optimized digitization experience.

This brand optimization initiative affects Protection & Control portfolio including Easergy P3 protection and control relays. The Easergy P3 has been renamed to PowerLogic P3. It is essential to emphasize that this renaming exclusively affects the brand name of the products and will have absolutely no consequence on the current performance, specifications, characteristics, and/or quality of the product, which remain totally unaffected by this brand name migration. During the brand transition project, it may happen that the application of this change to different parts of the offer becomes effective with different time schedules. There is absolutely no difference between Easergy and PowerLogic branded P3 products and accessories. Easergy accessories can be used with PowerLogic P3 product as long as the commercial reference is matching. The commercial references have not changed along with the renaming of the offer. eSetup Easergy Pro and CET850 remain the software to configure PowerLogic P3 protection and control relays.

3 General product information

⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Wear your personal protective equipment (PPE) and comply with the safe electrical work practices. For clothing, see applicable local standards.
- Only qualified personnel should install this equipment. Such work should be performed only after reading this entire set of instructions and checking the technical characteristics of the device.
- NEVER work alone.
- Turn off all power supplying this equipment before working on or inside it. Consider all sources of power, including the possibility of backfeeding.
- Always use a properly rated voltage sensing device to ensure that all power is off.
- Do not open the secondary circuit of a live current transformer.
- Always connect the polarity of the current transformer (CT) and the voltage transformer (VT) and their secondary ground wiring according to the connection diagrams presented in this document.
- Connect the device's protective ground to functional earth according to the connection diagrams presented in this document.

Failure to follow this instruction will result in death or serious injury.

3.1 Checking the consignment

- Check that the unit packaging and the seal are intact at the receipt of the delivery. Our products leave the factory in closed, sealed packaging. If the transport packaging is open or the seal is broken, the confidentiality and authenticity of the information contained in the products cannot be ensured.
- Check the device visually for possible external damage or loose parts inside the device. If you find the device to be damaged, see *3.5 Complaints*.
- Check that the device complies with the order and the Calibration and Test Report. Check:
  - relay type, serial number
  - other possible order-related structural matters

  If found incomplete, see *3.5 Complaints*.

3.2 Product identification

Each PowerLogic P3 relay is delivered in a separate package containing:

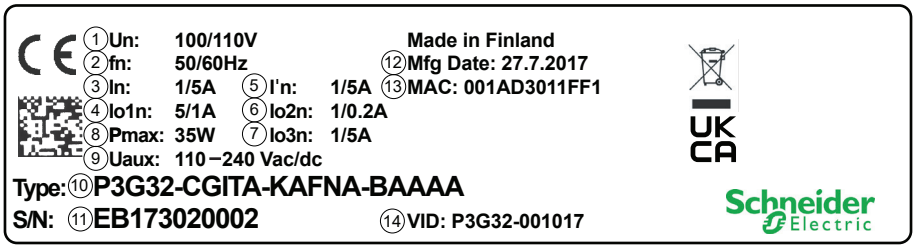
- PowerLogic P3 protection relay with the necessary terminal connectors
- Production testing certificate
- Quick Start manual

Optional accessories are delivered in separate packages.

To identify an PowerLogic P3 protection relay, see the labels on the package and on the side of the relay.

Serial number label

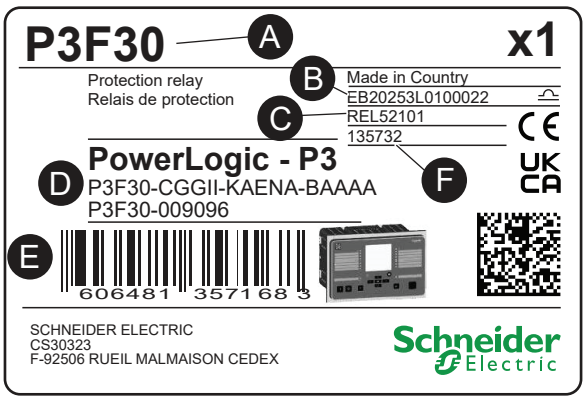
Figure 1 - P3x3x Serial number label



1. Rated voltage U_n
2. Rated frequency f_n
3. Rated phase current I_n
4. Rated earth fault current I_{01n}
5. Rated phase current I'_n *)
6. Rated earth fault current I_{02n}
7. Rated earth fault current I_{03n}[1] *)
8. Power consumption P_{max}
9. Power supply operating range U_{AUX}
10. Order code
11. Serial number
12. Manufacturing date
13. MAC address for TCP/IP communication
14. Production identification

Unit package label

Figure 2 - P3x3x Unit package label



A. Product name
B. Serial number
C. Short order code
D. Order code
E. EAN13 bar code
F. Internal product code

[1] *)Available in P3M32, P3T32 and P3G32 models only

3.3 Storage

Store the relay in its original packaging in a closed, sheltered location with the following ambient conditions:

- ambient temperature: -40 °C to +70 °C (or -40 °F to +158 °F)
- humidity < 90 %.

Check the ambient conditions and the packaging yearly.

3.4 Warranty

This product has a standard warranty of 2 years.

Ask your local Schneider Electric representative about our optional 10-year warranty. Local conditions and availability apply.

3.5 Complaints

Complaints for manufacturing faults are directed in writing to the relay manufacturer or the authorized dealer from which the product was acquired. Find more information from our customers care center (www.schneider-electric.com/ccc).

Complaints about transport damage must be sent to the accountable transport or insurance company.

4 Operational safety

⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Wear your personal protective equipment (PPE) and comply with the safe electrical work practices. For clothing, see applicable local standards.
- Only qualified personnel should install this equipment. Such work should be performed only after reading this entire set of instructions and checking the technical characteristics of the device.
- NEVER work alone.
- Turn off all power supplying this equipment before working on or inside it. Consider all sources of power, including the possibility of backfeeding.
- Always use a properly rated voltage sensing device to ensure that all power is off.
- Do not open the secondary circuit of a live current transformer.
- Always connect the polarity of the current transformer (CT) and the voltage transformer (VT) and their secondary ground wiring according to the connection diagrams presented in this document.
- Connect the device's protective ground to functional earth according to the connection diagrams presented in this document.

Failure to follow this instruction will result in death or serious injury.

4.1 Electrical safety

National electrical safety regulations must be observed when work is carried out under live conditions. The relay manufacturer cannot be held responsible for accidents caused by incorrect working or protection practices.

4.2 Device handling

The correct handling of the relays under all mounting and operating conditions forms the foundation for their correct and safe use. Observe all safety notes and warnings.

4.3 Electrostatic discharge

The devices include components that are liable to be damaged by electrostatic discharge (ESD). Do not open the devices without permission from the manufacturer.

5 Wiring

Perform the wiring work according to national standards and possible requirements from the customer.

5.1 Installing connections

NOTE: Use only single-strand wire or stranded wire with insulated crimp terminals.

1. Check that the rated values of the relay comply with those of the intended application.
   - Check that the rated values of the voltage and current transformer secondaries comply with those of the device. The rated values can be found on the serial number label.
   - Check that the load ability of the outputs is adequate.
2. Earth the relay by connecting an earthing wire using a minimum 2.5 mm^2 cross-section (AWG 14) to the device's earthing terminal.
3. Wire the relay to the rest of the system according to the wiring diagrams of the application.
4. Connect the cable shields of shielded signal cables to the device's earthing terminal.

5.2 Checking the wiring

Check the secondary wiring by visual inspection and, when needed, by measuring to eliminate possible incorrect wiring that may cause malfunction of the relay or associated devices.

- Check the wiring visually:
  - Inspect the wiring visually. Especially check the wire bunches for adequate slack where needed over the hinges.
  - Check the screw terminals for correct tightness.
  - Check that no wire strands are protruding from the terminals.
- Check the wiring by measuring:
  - Check the connections between the relay and associated devices by using a circuit indicator lamp or buzzer.
  - Check other possible connections by using recognized and reliable working practices.

6 Energizing

⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK

Before connecting the devices, disconnect the supply voltage to the unit.

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

The external auxiliary voltage U_{AUX} (110–240 V ac/dc, or optionally 24–48 V dc) of the relay is connected to the pins 1/C/1:1–2 or 1/D/1:1–2.

NOTE: When an optional 24–48 V dc power module is used, the polarity is as follows: 1/D/2:2 positive (+), 1/D/2:1 negative (-).

NOTICE

LOSS OF PROTECTION OR RISK OF NUISANCE TRIPPING

- If the relay is no longer supplied with power or is in permanent fault state, the protection functions are no longer active and all the PowerLogic P3 digital outputs are dropped out.
- Check that the operating mode and SF relay wiring are compatible with the installation.

Failure to follow these instructions can result in equipment damage and unwanted shutdown of the electrical installation.

When the device is switched on, it performs the following initialization sequence that takes approximately 5 seconds:

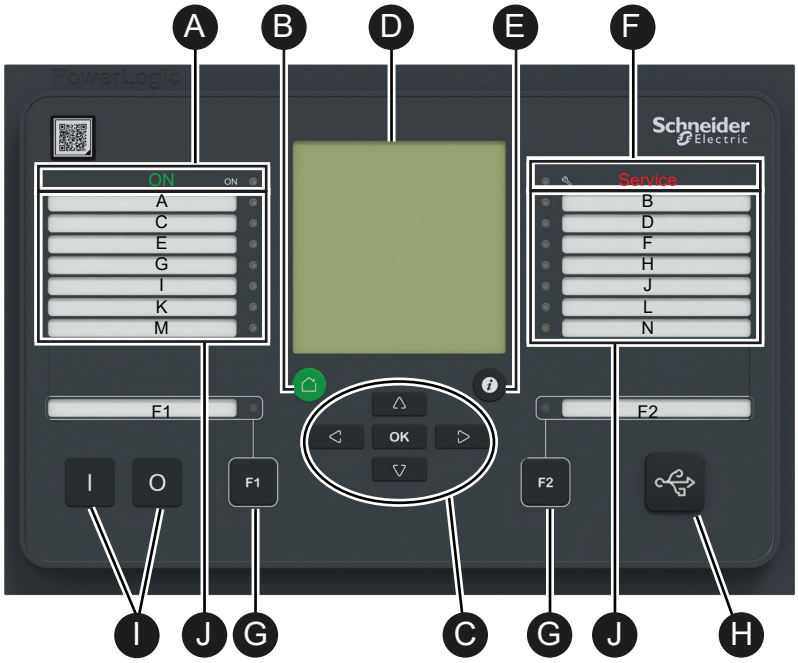
- Power LED ON, “Starting ..” on the screen.
- Watchdog contact starts.

The first screen displayed at the end of the sequence is the **Mimic** view screen.

7 Front panel

PowerLogic P3 has a 128 x 128 LCD matrix display.

Figure 3 - PowerLogic P3 front panel



A. Power LED
B. CANCEL push-button
C. Navigation push-buttons
D. LCD
E. INFO push-button
F. Service LED
G. Function push-buttons and LEDs showing their status
H. Local port
I. Object control buttons
J. User-configurable LEDs

7.1 Push-buttons

Symbol	Function
	HOME/CANCEL push-button for returning to the previous menu. To return to the first menu item in the main menu, press the button for at least 3 seconds.
	INFO push-button for viewing additional information, for entering the password view and for adjusting the LCD contrast.
	Programmable function push-button.[2)]
	Programmable function push-button.[2)]
	ENTER push-button for activating or confirming a function.
	UP navigation push-button for moving up in the menu or increasing a numerical value.

Symbol	Function
V	DOWN navigation push-button for moving down in the menu or decreasing a numerical value.
<	LEFT navigation push-button for moving backwards in a parallel menu or selecting a digit in a numerical value.
>	RIGHT navigation push-button for moving forwards in a parallel menu or selecting a digit in a numerical value.
I	Circuit breaker ON push-button
O	Circuit breaker OFF push-button

[2)] The default names of the function buttons are Function button 1 and 2. You can change the names of the buttons in the **Control > Names for function buttons** setting view.

7.2 LED indicators

The relay has 18 LEDs on the front panel:

- two LEDs for function buttons (F1 and F2)
- two LEDs represent the unit's general status (power and service)
- 14 user-configurable LEDs (A-N)

When the relay is powered, the power LED is green. During normal use, the service LED is not active, it activates only when an error occurs or the relay is not operating correctly. Should this happen, contact your local representative for further guidance. The service LED and watchdog contact are assigned to work together. Hardwire the status output into the substation's automation system for alarm purposes.

The user-configurable LEDs may be red or green. You can configure them via Easergy Pro.

To customize the LED texts on the front panel for the user-configurable LEDs, the text may be created using a template and then printed. The printed text may be placed in the pockets beside the LEDs.

You can also customize the LED texts that are shown on the screen for active LEDs via Easergy Pro.

Table 1 - LED indicators and their information

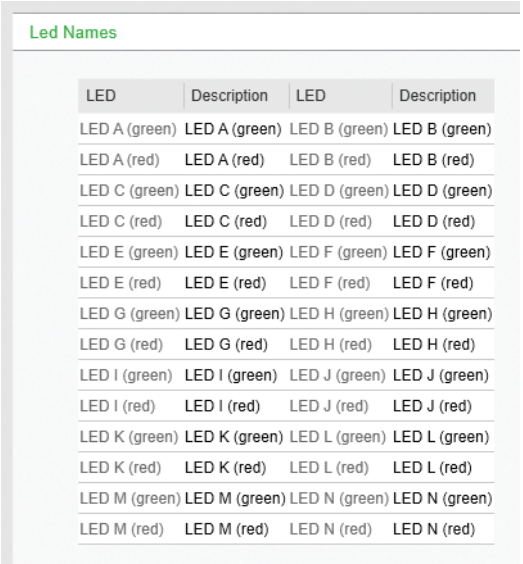
LED indicator	LED color	Meaning	Measure / Remarks
Power LED lit	Green	The auxiliary power has been switched on	Normal operation state
Service LED lit	Red	Internal fault. Operates in parallel with the self-supervision output	The relay attempts to reboot. If the service LED remains lit, call for maintenance.

LED indicator	LED color	Meaning	Measure / Remarks
A–H LED lit	Green or red	Application-related status indicators.	Configurable in the **Matrix** setting view
F1 or F2 LED lit	Green	Corresponding function key pressed / activated	Depending on the function programmed to F1 / F2

7.3 Configuring the LED names via Easergy Pro

1. Go to **General > LED names**.
2. To change a LED name, click the LED **Description** text and type a new name. To save the new name, press **Enter**.

Figure 4 - LED NAMES menu in Easergy Pro for LED configuration



7.4 Controlling the alarm screen

You can enable or disable the alarm screen either via the relay's local display or using Easergy Pro:

- On the local display, go to **Events > Alarms**.
- In Easergy Pro, go to **General > Local panel conf**.

7.5 Accessing operating levels

1. On the front panel, press and OK .
2. Enter the password, and press OK.

7.6 Adjusting the LCD contrast

Prerequisite: You have entered the correct password.

1. Press , and adjust the contrast.
   - To increase the contrast, press .
   - To decrease the contrast, press .
2. To return to the main menu, press .

   NOTE: By nature, the LCD display changes its contrast depending on the ambient temperature. The display may become dark or unreadable at low temperatures. However, this condition does not affect the proper operation of the protection or other functions.

7.7 Testing the LEDs and LCD screen

You can start the test sequence in any main menu window.

To start the LED and LCD test:

1. Press .
2. Press .

The relay tests the LCD screen and the functionality of all LEDs.

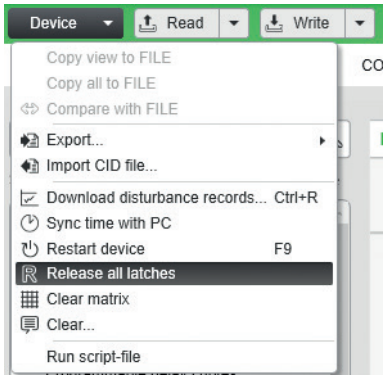
7.8 Releasing latches

You can release latches using:
- Easergy Pro
- buttons and local panel display
- F1 or F2 buttons

7.8.1 Releasing latches using Easergy Pro

1. Connect Easergy Pro to the device.
2. From the Easergy Pro toolbar, select **Device** > **Release all latches**.

Figure 5 - Releasing all latches



Alternatively, go to **Control** > **Release latches**, and click the **Release** button.

Figure 6 - Release latches

7.8.2 Releasing latches using buttons and local panel display

Prerequisite: You have entered the correct password

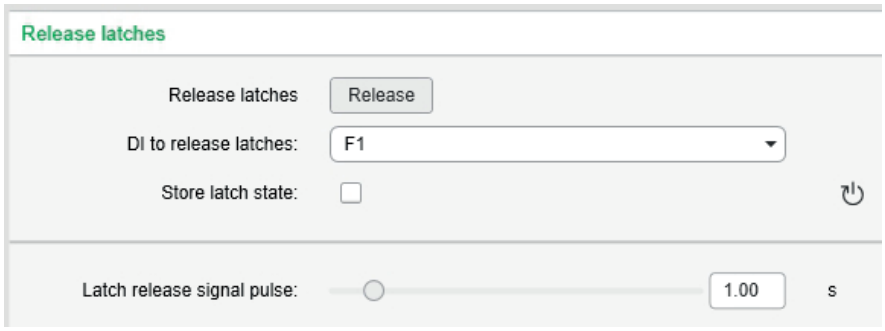
1. Press .
2. Press .
3. Select **Release**, and press OK.
   All latches are released.

7.8.3 Releasing latches using F1 or F2 buttons

You can use the function buttons F1 or F2 to release all latches after configuring this function in Easergy Pro. You can make the configuration either under **Control > Release Latches** or under **Control > Function buttons**.

- To configure F1 to release latches under **Control > Release latches**:
  a. In Easergy Pro, go to **Control > Release latches**.
  b. Under **Release latches**, select F1 from the **DI to release latches** drop-down menu.
  c. Set 1 s delay for **Latch release signal pulse**.

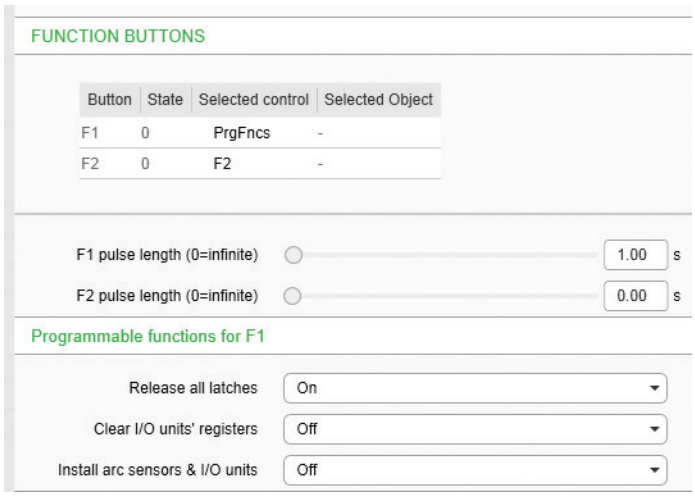
Figure 7 - **Release latches** view



After this, pressing the F1 button on the relay's front panel releases all latches.

- To configure F1 to release latches under **Control** >**Function buttons**:
  a. Under **Function buttons**, for F1, select PrgFncs from the **Selected control** drop down menu.
  b. Set 1 s delay for **F1 pulse length**.
  c. Under **Programmable functions for F1**, select "On" from the **Release all latches** drop-down menu.

Figure 8 - **Function buttons** view



After this, pressing the F1 button on the relay's front panel releases all latches.

NOTE: The latch release signal can be activated only if the latched output is active.

7.9 Controlling an object with selective control

Prerequisite: You have logged in with the correct password and enabled selective control in the **Objects** setting view.

When selective control is enabled, the control operation needs confirmation (select before operate).

- Press I to close an object.
  - Press I again to confirm.
  - Press ⌂ to cancel.
- Press O to open an object.
  - Press O again to confirm.
  - Press ⌂ to cancel.

7.10 Controlling an object with direct control

Prerequisite: You have logged in with the correct password and enabled direct control in the **Objects** setting view.

When direct control is enabled, the control operation is done without confirmation.

- Press I to close an object.
- Press O to open an object.

7.11 Menus

This section gives an overview of the menus that you can access via the device's front panel.

The main menu

Press the right arrow to access more measurements in the main menu.

Table 2 - Main menu

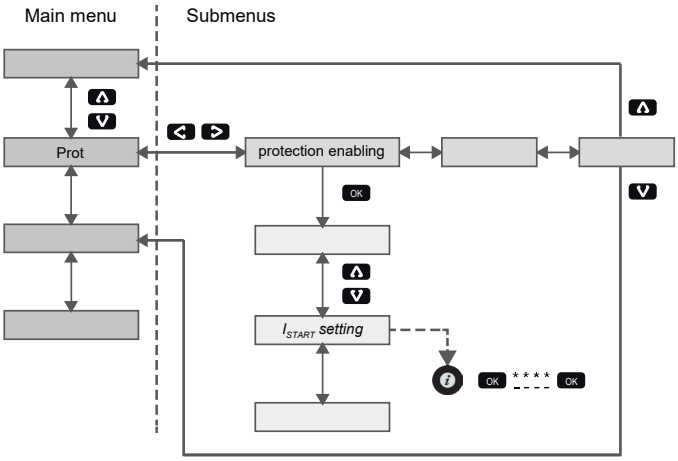
Menu name	Description
Active LEDs	User-configurable texts for active LEDs
Measurements	User-configurable measurements
Single line	Single line or Single line mimic, measurements and control view. This is a default start view. To return to this view from any location, press the HOME/ CANCELL button for at least 3 seconds.
Info	Information about the relay: relay's name, order code, date, time and firmware version
P	Power: power factor and frequency values calculated by the relay. Press the right arrow to view more measurements.

Menu name	Description
E	Energy: the amount of energy that has passed through the protected line, calculated by the relay from the currents and voltages. Press the right arrow to view more energy measurements.
I	Current: phase currents and demand values of phase currents. Press the right arrow to view more current measurements.
U	Line-to-line voltages. Press the right arrow to view other voltage measurements.
Dema	Minimum and maximum phase current and power demand values
Umax	Minimum and maximum values of voltage and frequency
Imax	Minimum and maximum current values
Pmax	Minimum and maximum power values
Month	Monthly maximum current and power values
FL	Short-circuit locator applied to incomer or feeder
Evnt	Event log: event codes and time stamps
DR	Disturbance recorder configuration settings
Runh	Running hour counter
TIMR	Timers: programmable timers that you can use to preset functions
DI	Digital input statuses and settings
DO	Digital output statuses and settings
Arc	Arc flash detection settings
Prot	Protection: settings and statuses for various protection functions
I>, I>>, etc.	Protection stage settings and statuses. The availability of the menus are depends on the activated protection stages.
AR	Auto-reclosure settings, statuses and registers

Menu name	Description
OBJ	Objects: settings related to object status data and object control (open/closed)
Lgic	Logic events and counters
CONF	General device setup: CT and VT scalings, frequency adaptation, units, device info, date, time, clock, etc.
Bus	Communication port settings
Slot	Slot info: card ID (CID) that is the name of the card used by the relay firmware
Diag	Diagnosis: various diagnostic information

7.11.1 Moving in the menus

Figure 9 - Moving in menus using the front panel



- To move in the main menu, press ∧ or ∨.
- To move in the submenus, press > or <.
- While in the submenu, press ∧ or ∨ to jump to the root.
- To enter a submenu, press OK and use ∨ or ∧ for moving down or up in the menu.
- To edit a parameter value, press i and OK.
- Enter the password, and press OK.
- To go back to the previous menu, press ⌂.
- To go back to the first menu item in the main menu, press ⌂ for at least three seconds.

NOTE: To enter the parameter edit mode, enter the password. When the value is in edit mode, its background is dark.

7.11.2 Local panel messages

Table 3 - Local panel messages

Value is not editable:	The value can not be edited or password is not given
Control disabled:	Object control disabled due to wrong operating level
Change causes autoboot:	Notification that if the parameter is changed the relay boots itself

8 Easergy Pro setting and configuration tool

⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Only qualified personnel should operate this equipment. Such work should be performed only after reading this entire set of instructions and checking the technical characteristics of the device.

Failure to follow this instruction will result in death or serious injury.

Easergy Pro is a software tool for configuring PowerLogic P3 relays. It has a graphical interface where the relay settings and parameters are grouped under seven tabs:

- General
- Measurements
- Inputs/outputs
- Protection
- Matrix
- Logs
- Communication

The contents of the tabs depend on the relay type and the selected application mode.

Easergy Pro stores the relay configuration in a setting file. The configuration of one physical relay is saved in one setting file. The configurations can be printed out and saved for later use.

For more information, see the Easergy Pro user manual.

NOTE: Download the latest version of the software from *se.com*.

NOTICE

HAZARD OF EQUIPMENT DAMAGE

After writing new settings or configurations to a device, perform a test to verify that the relay operates correctly with the new settings.

Failure to follow these instructions can result in unwanted shutdown of the electrical installation.

9 Access to device configuration

You can access the device configuration via:

- the Easergy Pro setting tool
- the device's front panel

NOTE: There is a timeout mechanism for Telnet/Serial/Http connections. When logging on via the front panel or web HMI, you are automatically logged out after 15 minutes inactivity.

9.1 User accounts

By default, the PowerLogic P3 device has five user accounts.

Table 4 - User accounts

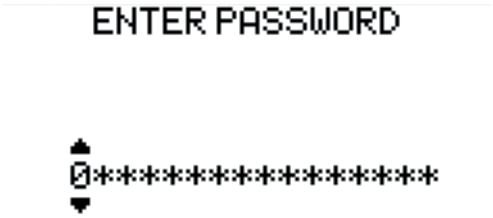
User account	User name	Default password	Use
User	user	0	Used for reading parameter values, measurements, and events, for example
Operator	operator	1	Used for controlling objects and for changing the protection stages' settings, for example
Configurator	conf	2	Needed during the device commissioning. For example, the scaling of the voltage and current transformers can be set only with this user account. Also used for logging on to the HTTP and FTP server.

9.2 Logging on via the front panel

NOTE: To log on via the front panel, you need a password that consists of letters, digits, or other characters in the scope of ASCII 0x21~0x7E.

1. Press and OK on the front panel. The **Enter password** view opens.

   Figure 10 - Enter password view

2. Enter the password for the desired access level.

Select a digit value using △, and if the password is longer than one digit, move to the next digit position using ▷.

NOTE: There are 16 digit positions in the **Enter password** view. Enter the password starting from the first digit position.

For example, if the password is 2, you can enter 2***, **2*, ***2, or 0002 to log on.

3. Press OK to confirm the password.

Related topics

9.4 Password management

9.3 HTTP and FTP logon details

You can log on to the HTTP server and FTP using these user names and passwords.

Table 5 - HTTP and FTP logon details

Protocol	User name	Password
HTTP	conf	2
FTP	conf	2

9.4 Password management

NOTICE

CYBERSECURITY HAZARD

To improve cybersecurity:

- Change all passwords from their default values when taking the protection device into use.
- Change all passwords regularly.
- Ensure a minimum level of password complexity according to common password guidelines.

Failure to follow these instructions can increase the risk of unauthorized access.

You can change the password for the operator or configurator user accounts in the **General > Device info** setting view in Easergy Pro.

The password can contain letters, digits or other characters in the scope of ASCII 0x21~0x7E. However, the new password cannot be any of the default passwords (digits 0–4 or 9999).

Follow these guidelines to improve the password complexity and thus device security:

- Use a password of minimum 8 characters.
- Use alphabetic (uppercase and lowercase) and numeric characters in addition to symbols.

- Avoid character repetition, number or letter sequences and keyboard patterns.
- Do not use any personal information, such as birthday, name, etc.
- Do not use the same password for different user accounts.
- Do not reuse old passwords.

Also, all users must be aware of the best practices concerning passwords including:

- not sharing personal passwords
- not displaying passwords during password entry
- not transmitting passwords in email or by other means
- not saving the passwords on PCs or other devices
- no written passwords on any supports
- regularly reminding users about the best practices concerning passwords

Related topics

9.2 Logging on via the front panel

9.5 Password restoring

If you have lost or forgotten all passwords, contact Schneider Electric to restore the default passwords.

10 Local port

The relay has a USB port in the front panel.

Protocol for the USB port

The front panel USB type B port is always using the command line protocol for Easergy Pro.

The speed of the interface is defined in the CONF/DEVICE SETUP menu via the front panel. The default settings for the relay are 38400/8N1.

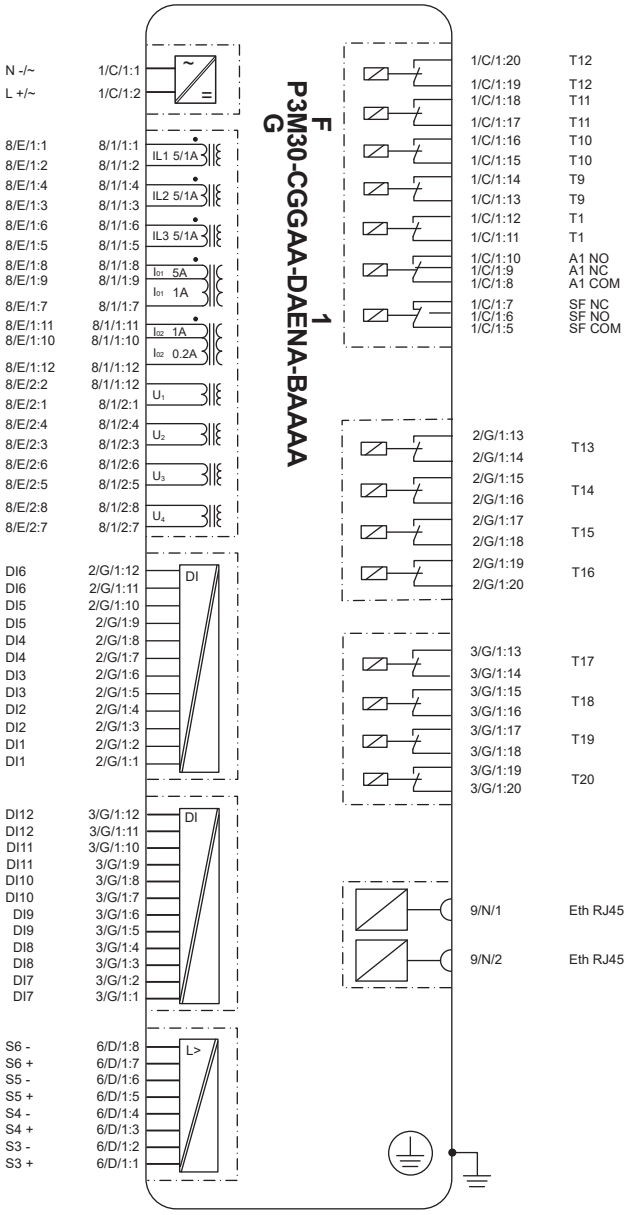
It is possible to change the front USB port's bit rate. This setting is visible only on the relay's local display. The bit rate can be set between 1200 and 187500. This changes the bit rate of the relay, and the Easergy Pro bit rate has to be set separately. If the bit rate in the setting tool is incorrect, it takes a longer time to establish the communication.

NOTE: Use the same bit rate in the relay and the Easergy Pro setting tool.

11 Block diagrams

The status of the output contacts is shown when the relay is energized but none of the protection, controlling or self-supervision elements are activated.

Figure 11 - Typical block diagram for P3F30, P3M30 and P3G30 relays



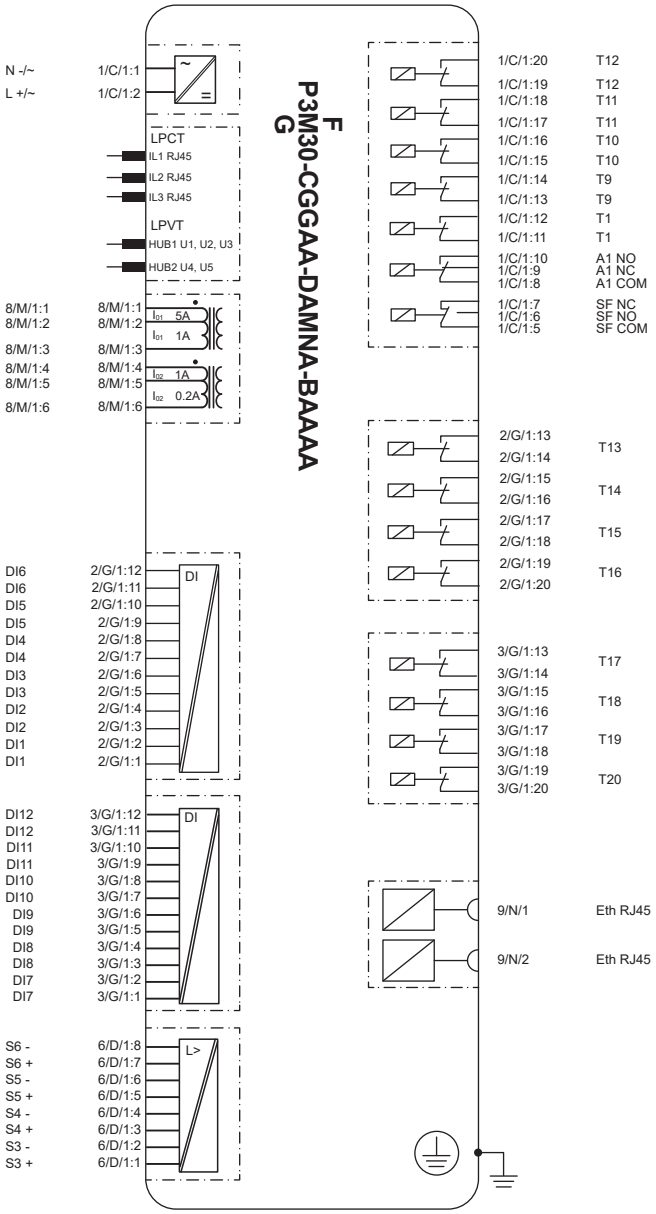
⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Connect the device's protective ground to functional earth according to the connection diagrams presented in this document.

Failure to follow this instruction will result in death or serious injury.

Figure 12 - P3F30 and P3M30 block diagram – LPIT



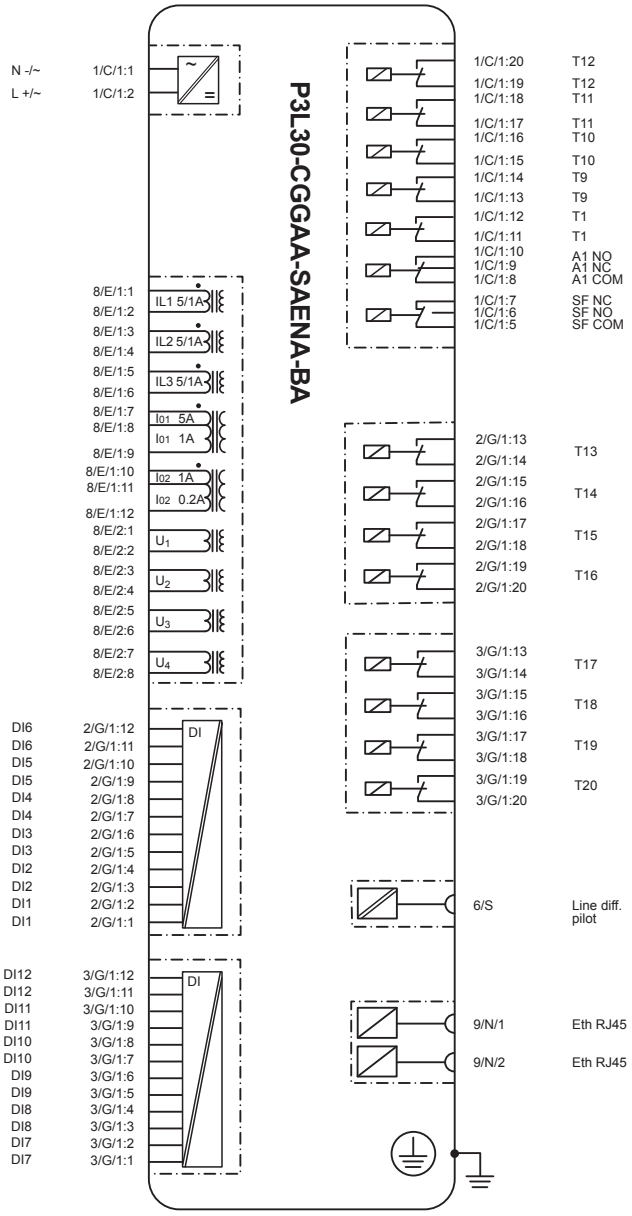
⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Connect the device's protective ground to functional earth according to the connection diagrams presented in this document.

Failure to follow this instruction will result in death or serious injury.

Figure 13 - Typical block diagram for P3L30 relay



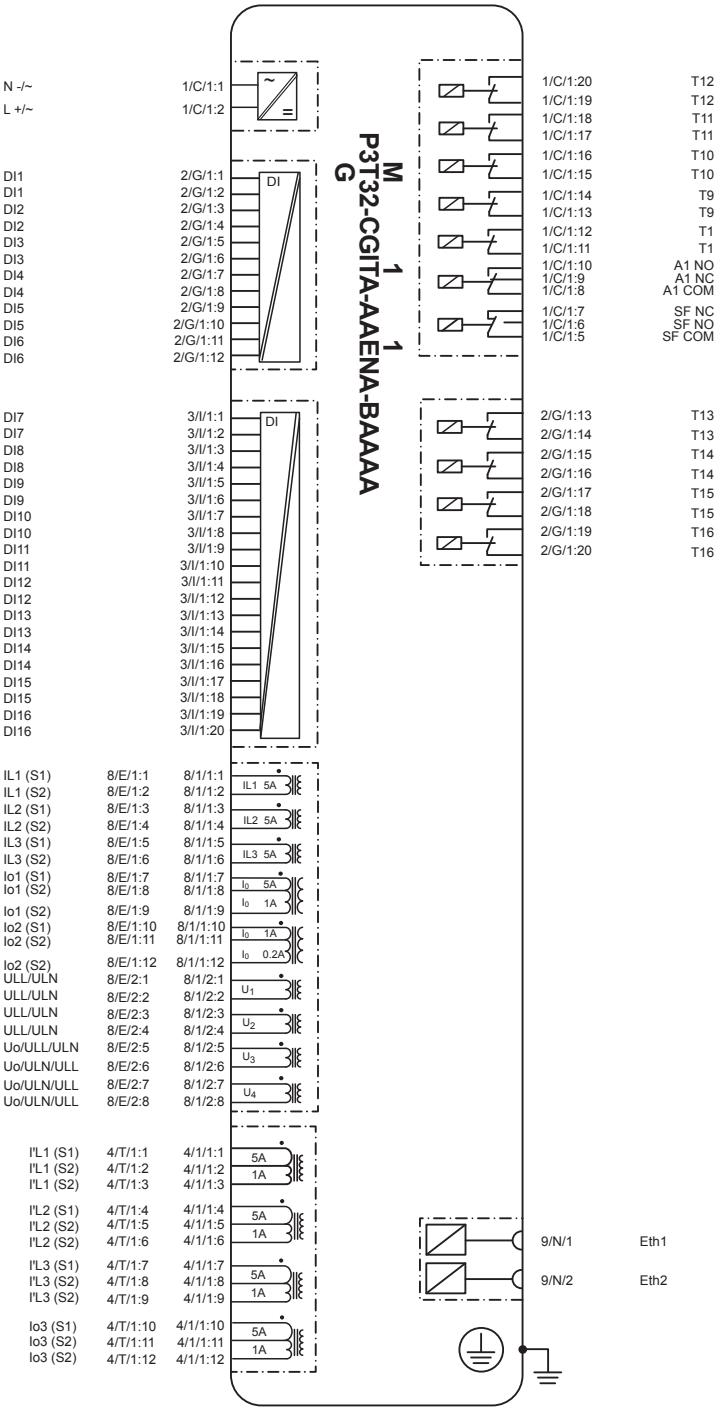
⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Connect the device's protective ground to functional earth according to the connection diagrams presented in this document.

Failure to follow this instruction will result in death or serious injury.

Figure 14 - Typical block diagram for P3M32, P3T32 and P3G32 relays



⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Connect the device's protective ground to functional earth according to the connection diagrams presented in this document.

Failure to follow this instruction will result in death or serious injury.

12 Mounting

⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Wear your personal protective equipment (PPE) and comply with the safe electrical work practices. For clothing refer applicable local standards.
- Only qualified personnel should install this equipment. Such work should be performed only after reading this entire set of instructions and checking the technical characteristics of the device.
- NEVER work alone.
- Turn off all power supplying this equipment before working on or inside it. Consider all sources of power, including the possibility of backfeeding.
- Always use a properly rated voltage sensing relay to ensure that all power is off.
- Do not open the secondary circuit of a live current transformer.
- Connect the device's protective ground to functional earth according to the connection diagrams presented in this document.

Failure to follow this instruction will result in death or serious injury.

⚠ CAUTION

HAZARD OF CUTS

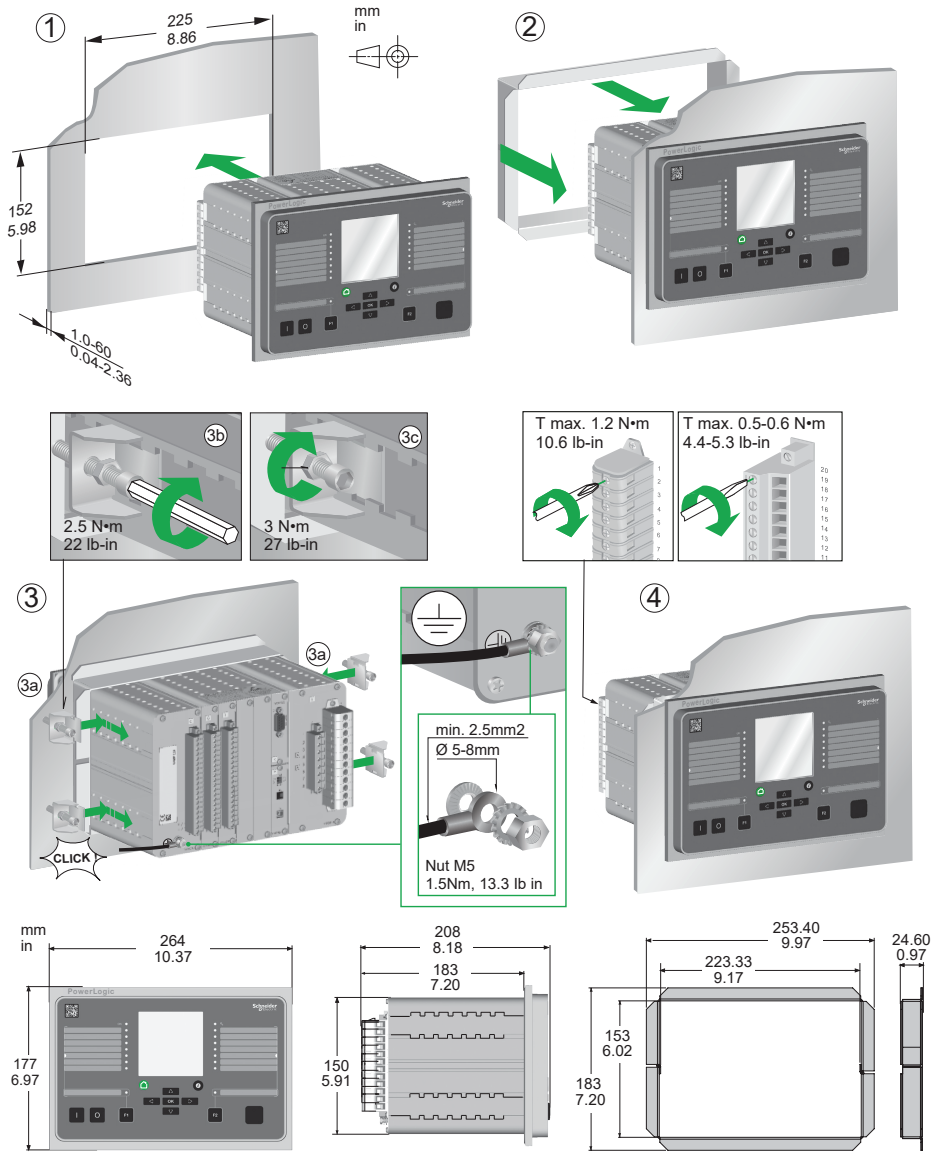
Trim the edges of the cut-out plates to remove any jagged edges.

Use protective gloves when moving and mounting the device.

Failure to follow these instructions can result in injury.

Panel mounting

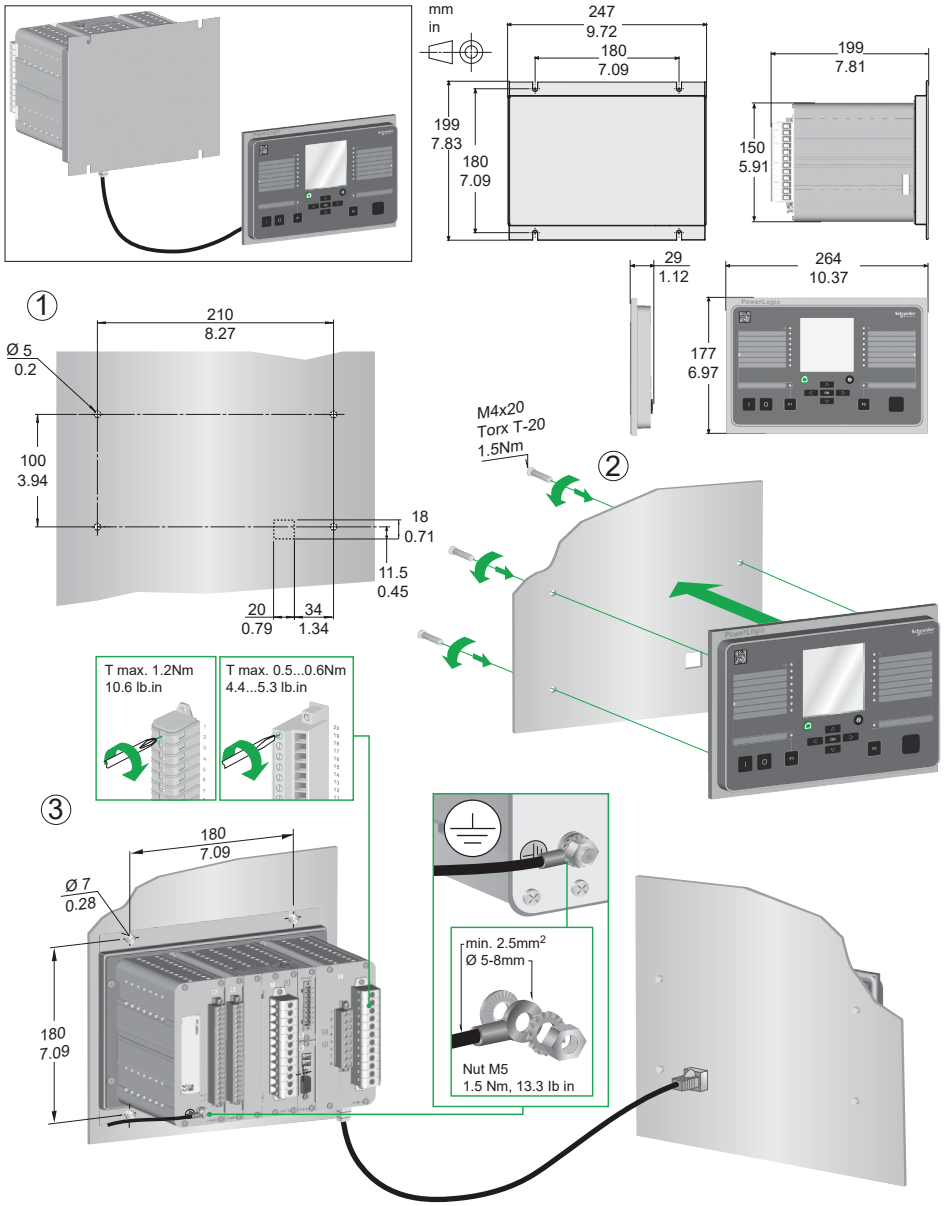
Figure 15 - Panel mounting



The conventional mounting technique has always been installing the relay on the secondary compartment's door. A limitation of this approach could be that the door construction is not strong enough for the relay's weight and wiring a large amount of secondary and communication cabling could be challenging.

Panel mounting with detachable display

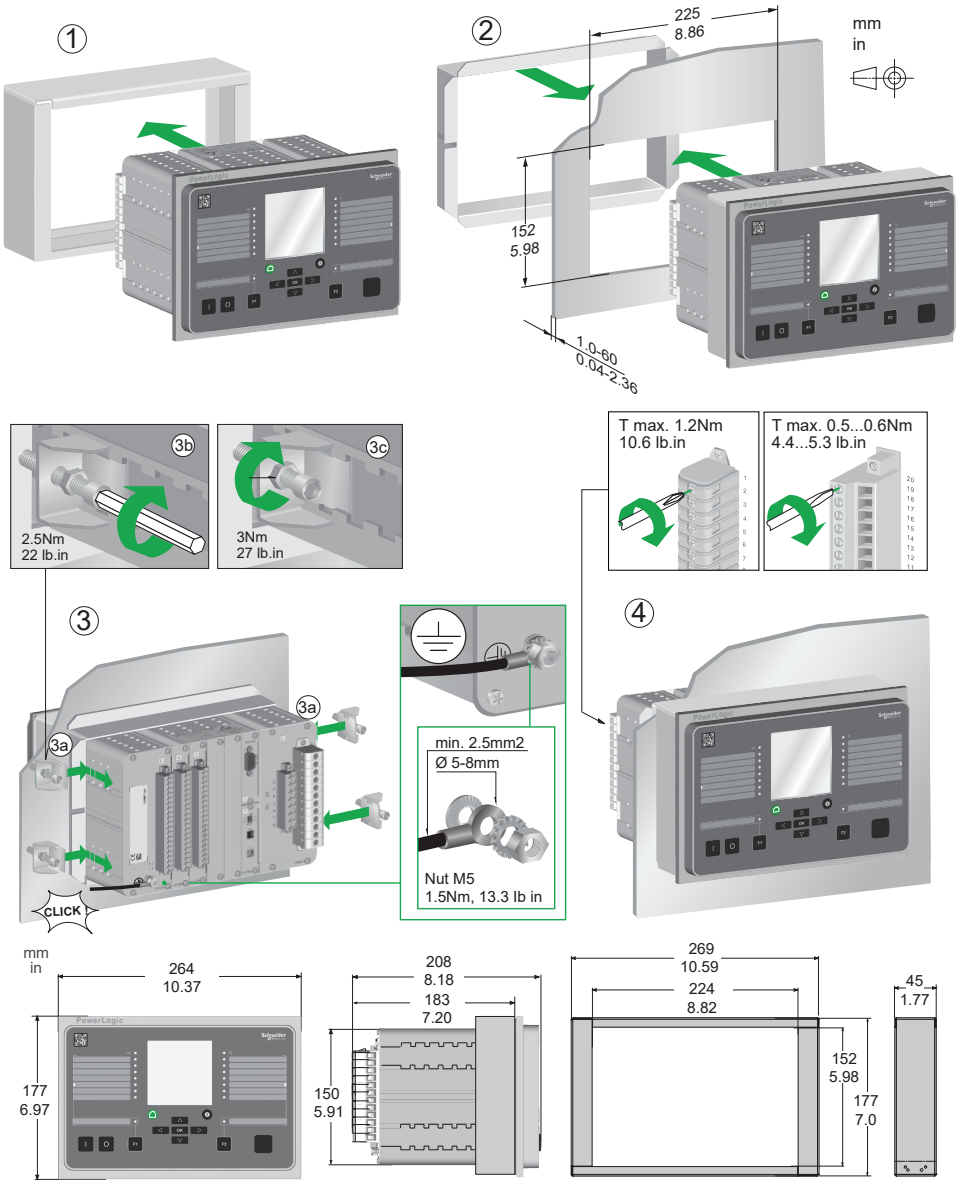
Figure 16 - Panel mounting with detachable display



This mounting technique allows the door to be lighter as the relay's frame is installed on the back of the secondary compartment. Normally, the relay is mounted by the terminal blocks, hence the secondary wiring is short. Communication cabling is easier, too, as the door movement does not need to be considered. In this case, only the communication between relay base and display have to be wired.

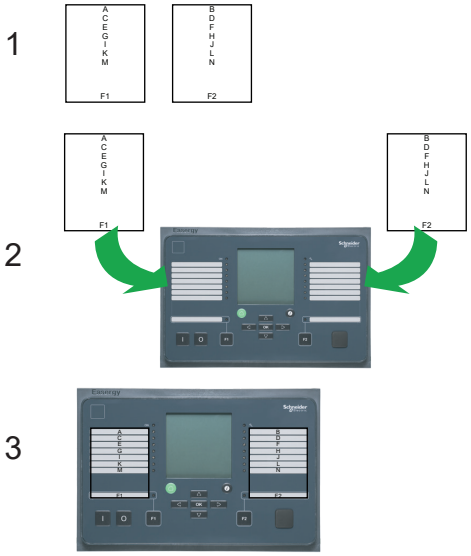
Projection mounting

Figure 17 - Projection mounting



If the depth dimension behind the compartment door is limited, the relay can be equipped with a frame around the collar. This arrangement reduces the depth inside the compartment by 45 mm.

Example of the P3 alarm facial label insertion



See "P3 Advanced Series facial label instruction" document for more information.

Protective film

NOTICE
RISK OF DESTRUCTION OF THE RELAY The protective film on the relay's display is plastic and can melt if exposed to high temperatures intensive sunlight. Remove the protective film after mounting the relay. **Failure to follow these instructions can result in equipment damage.**

13 Related documents

Table 6 - Related documents

Document	Identification[3)]
P3 Advanced User Manual	P3x/EN M/xxxx
Easergy Pro Setting and Configuration Tool User Manual	P3eSetup/EN M/xxxx
P3 Advanced Series facia label instruction	P3TDS17012EN
Principles of numerical protection techniques	P3INS17019EN

[3)] xxxx = revision number

Schneider Electric
35 rue Joseph Monier
92500 Rueil Malmaison - France
Phone: +33 (0) 1 41 29 70 00
www.schneider-electric.com

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please ask for confirmation of the information given in this publication.

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