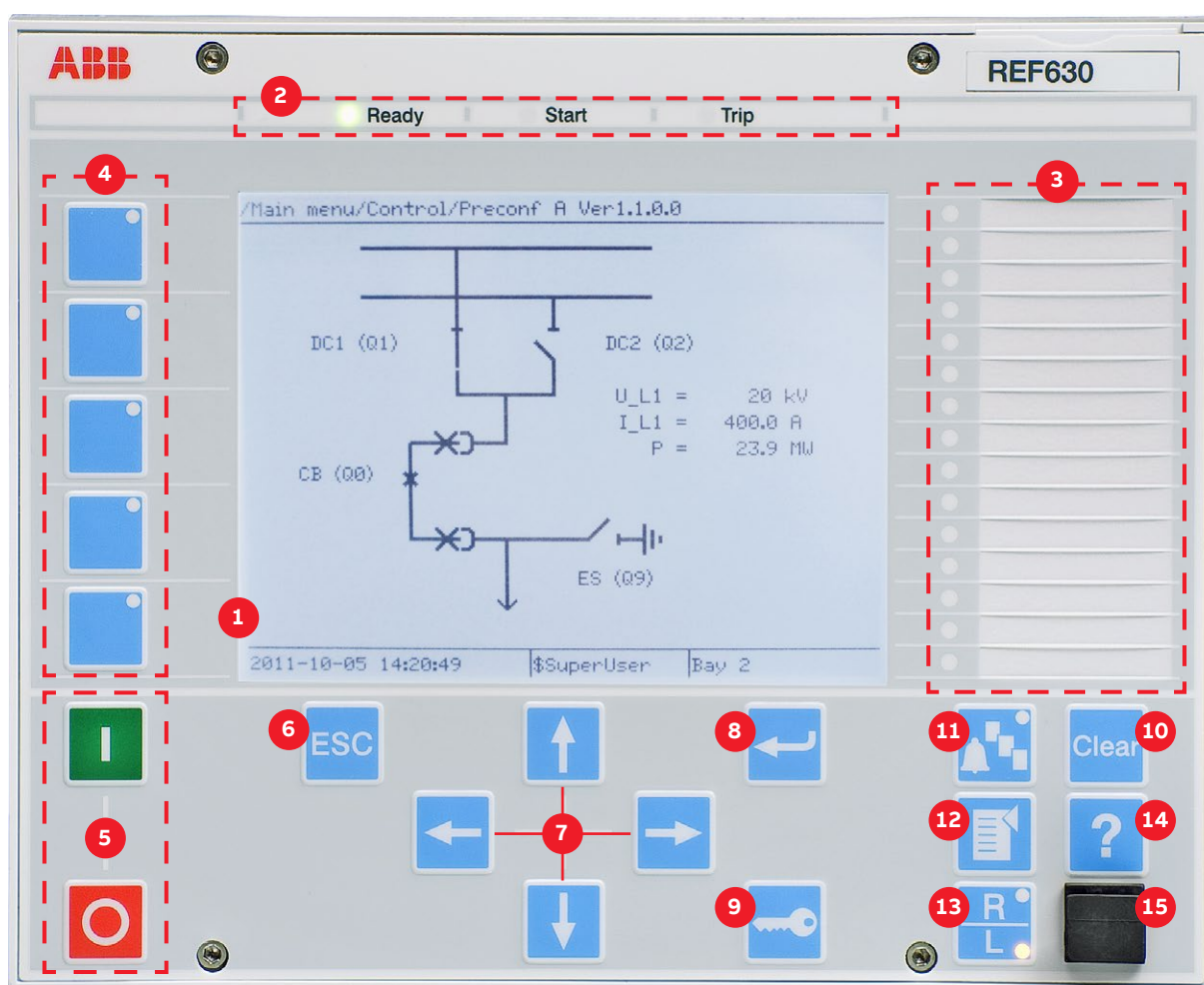


Quick Start Guide


Relion® 630 series



1	Display	Default view can be selected from e.g. single line diagram (SLD), measurement, events
2	Self-supervision and protection indicator LEDs	Ready-LED steady: OK, Ready-LED flashing: Internal Relay Fault (IRF), Start-LED steady: protection started, Start-LED flashing: protection function blocked, Trip-LED: protection operated
3	Programmable LEDs	Can be programmed for alarming and indication with latching and/or flashing features in 3 colors
4	Function buttons	Can be configured either as menu shortcuts or control buttons
5	Object control buttons	Press open/close and confirm by pressing enter. If there is more than one controllable object select the object first with navigation buttons. Note: R/L button has to be in Local mode.
6	Escape / Cancel	Used for canceling actions and leaving setting mode without saving the values. Returns back to menu.
7	Navigation buttons	Left = go back, Right = go further, Up = scroll up, Down = scroll down. Up/down can also be used when selecting controllable objects like breakers and switches in single line diagram.
8	Enter	Entering to parameter setting mode and confirming new values or selection in dialogs
9	Authorization	If authorization is used you can log in or log out using this button
10	Clear	Clearing events and indications, see next page for further details
11	LED text view	Multipage programmable LED text view. Press to see the 3 sets of 15 LED texts.
12	Menu	Switch views in between the main menu and default view
13	Remote / Lemote	Changes the control between Local/Remote
14	Help	View help menu
15	Front communication port	RJ-45 connection



Using the local HMI

Accessing main menu

Press  to navigate between main menu and default screen.

Controlling circuit breakers and disconnectors




The primary equipment can be controlled via the LHMI with the Open and Close buttons when the IED is set to local control mode and the user is authorized to access control operations.

Select **Main menu** → **Control** and the SLD will display all controllable objects. Select the object with  or .

Currently selected object is indicated with a square border.





Press  to open or  to close the object.

Changing the display contrast

Hold  and press  or  to change the display contrast.

To store a selected contrast, change the ContrastLevel parameter via **Main menu** → **Configuration** → **HMI** → **LHMI**.




Changing the language

Main menu → **Language** and press . Change the language using  or . Press  to confirm the selection. Commit the changes. All languages that are available in the firmware version loaded are visible. Most of the IED's parameters can be changed in the same way as language.






Changing the default view

The default view of the display is Main menu unless set otherwise.

Select **Main menu** → **Configuration** → **HMI** → **LHMI** → **DefaultScreen** and press  to confirm the selection.

Change the default view with  or  and press  to confirm the selection.







Clearing events and indications

Go to clear menu by pressing  or selecting Clear from the main menu. Then select what you want to clear with  and  keys. Press , select OK to confirm the selection or Cancel to cancel the selection and press .



Changing the overcurrent start value

The IED contains only one setting group by default. The number of setting groups can be selected from 1 to 4.






Main menu → **Settings** → **Settings** → select setting group, 1 and press  → **Current Protection** → **PHLPTOC1(51P-1;3I>):1** → **Start value**.

Press  and change the value by using  or  or  or  keys. Press  when the setting value is correct. You can change all settings in the same way. The most common function block names are described at the end of this document.

Saving settings

After making changes to parameters they have to be saved to get them into use. Save the settings by going back to main menu by pressing  or using the  key. When IED asks confirmation to save setting, answer "Yes". Settings will be effective as soon as you accept the "yes" except from some parameters marked with a ! require the IED to be rebooted before the changes can be taken into use.

Monitoring alarm data

Active alarms are indicated by the alarm LEDs and the LED in the Multipage button. The alarms are configured with PCM600. The alarm type and information depend on the application configuration. Press  to open the alarm view. Press  or  to move between the active alarms in the current page, or press  to switch between the three alarm pages. Press  to open a dialog box that shows more detailed information about the selected alarm.

Checking the value of currents and voltages of the last fault

Main menu → **Disturbance records** → **Select the Record** → **Trip values**

Checking IED order code, serial number, production date and product version

Main menu → **Information** → **Product Identifiers**

Checking IED status


The IED self-supervision handles internal run-time fault situations. The main indication of an internal fault is a flashing green Ready LED. More detailed information can be found from **Menu** → **Monitoring** → **IED Status**

Rebooting the IED

Reboot the IED by switching the auxiliary power off and then back on.

Using the function buttons

The function buttons can be configured either as menu shortcuts or control buttons. Configurations can be made with PCM600. The buttons are functional only when the function button panel is visible.

Press any function button to open the function button panel, no other actions will happen on the first press. After the panel is open press the wanted button to either jump to a certain menu item or hold it for at least half a second to initiate a control signal. Press  to close the function button panel.

Complete customer documentation is available in the product pages that can be accessed through abb.com/relion.

Most common function blocks

The most common function blocks are listed below, please refer to the 620 series Technical Manual for the full list. The available function blocks varies depending on the selected IED and configuration used.

Function	IEC 61850	IEC 60617
Protection		
Three-phase non-directional overcurrent, low stage	PHLPTOC	3I>
Three-phase non-directional overcurrent, high stage	PHHPTOC	3I>>
Three-phase non-directional overcurrent, instantaneous stage	PHIPTOC	3I>>>
Three-phase directional overcurrent, low stage	DPHLPDOC	3I> →
Three-phase directional overcurrent, high stage	DPHHPDOC	3I>> →
Automatic switch-onto-fault logic	CVRSOFF	CVRSOFF
Autoreclosing	DARREC	O → I
Non-directional earth-fault, low stage	EFLPTOC	Io>
Non-directional earth-fault, high stage	EFHPTOC	Io>>
Non-directional earth-fault, instantaneous	EFIPTOC	Io>>>
Directional earth-fault, low stage	DEFLPDEF	Io> →
Directional earth-fault, high stage	DEFHPDEF	Io>> →
Transient/intermittent earth-fault	INTRPTEF	Io> → IEF
Admittance-based earth-fault protection	EFPADM	Yo> →
Wattmetric earth-fault protection	WPWDE	Po> →
Rotor earth-fault protection	MREFPTOC	Io>R
Motor stall protection	JAMPTOC	Ist>
Three-phase thermal overload protection for motors	MPTR	3Ith>M
Loss of load protection	LOFLPTUC	3I<
Three-phase thermal overload protection for feeder	T1PTR	3Ith>
Phase discontinuity	PDNSPTOC	I2/I1>
Three-phase current inrush detection	INRPHAR	3I2f>
Three-phase overvoltage	PHPTOV	3U>
Three-phase undervoltage	PHPTUV	3U<
Positive-sequence overvoltage	PSPTOV	U1>
Positive-sequence undervoltage	PSPTUV	U1<
Negative-sequence overvoltage	NSPTOV	U2>
Residual overvoltage	ROVPTOV	Uo>
Frequency gradient	DAPFRC	df/dt>
Overfrequency	DAPTOF	f >
Underfrequency	DAPTUF	f <
Load shedding	LSHDPFRQ	f<, df/dt<
Circuit-breaker failure	CCBRBRF	3I>/Io>BF
Tripping logic	TRPPTRC	I → O
Multipurpose analog protection	MAPGAPC	MAP
Transformer differential protection for two-winding transformers	TR2PTDF	3dI>T
Optional functions		
Tap changer control with voltage regulator	OLATCC	COLTC
Distance protection	DSTPDIS	Z<
Fault Location	SCEFRFLO	FLOC
Synchrocheck	SYNCRSYN	SYNC

For more information, please contact

ABB Distribution Solutions

P.O. Box 699

FI-65101 Vaasa, Finland

Phone: + 358 10 22 11

abb.com/substationautomation

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB.
Copyright© 2019 ABB. All rights reserved.