INTERFACE PROTECTION SYSTEM UNIT **PMVF90**

for system requiring
3 maximum
voltage thresholds

Lovato electric

ENERGY AND AUTOMATION

INTERFACE PROTECTION SYSTEM UNIT FOR SYSTEM REQUIRING 3 MAXIMUM VOLTAGE THRESHOLDS

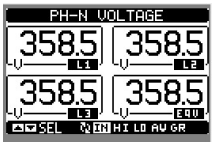
The **PMVF90** device has been designed as an Interface Protection (IP) for system requiring 3 maximum voltage thresholds.

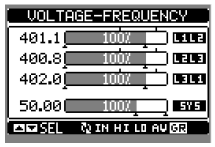
PMVF90

Order code	Rated voltage	
	Control	Auxiliary
	[V]	[V]
For systems requiring 3 maximum voltage thresholds (E.g.: Czech Republic and Slovakia).		
PMVF90	Programmable	24...240VAC/ 24...240VDC

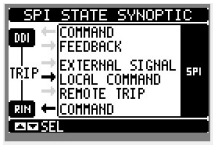
Display

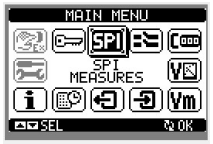
PLANT MEASURES



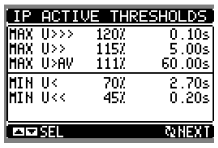


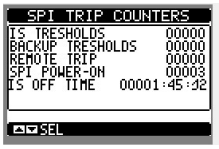
MAIN MENU - SYNOPTIC

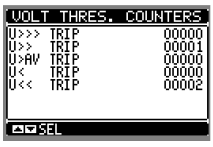


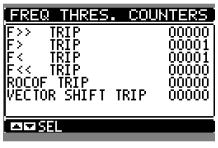


DIAGNOSTIC - COLLECTION OF STATISTICAL DATA









Accessories

Order codes	Description
Communication ports.	
EXM1010	Opto-isolated USB interface
EXM1011	Opto-isolated RS232 interface
EXM1012	Opto-isolated RS485 interface
EXM1013	Opto-isolated Ethernet interface
EXM1018❶	IEC/EN 61850 interface
Inputs and outputs.	
EXM1001	2 digital opto-isolated inputs and 2 relay outputs 5A 250VAC
Modem.	
EXCGSM01	Remote control and monitoring GSM modem via SMS

❶ **IEC/EN/BS 61850 protocol**
The EXP1018 module will be made available only when the competent authorities have established the exact terms of the supervision and control of the specific commands.

General characteristics

The controls refer to limits of voltage and frequency monitoring. In the case when either the voltage or the frequency are out of admissible limits, the Interface Protection (IP) must step in by de-energising a relay output so that the interface switch (IS) trips.
PMVF90 is equipped with 5 inputs having the following functions:
- IS status feedback
- R.O.C.O.F or Vector shift delay
- Disabling signal
- Remote tripping (forced IS opening, independent of voltage and frequency values)
- Programmable.

Also, there are 3 relay outputs for:
- IS opening and closing
- Backup (programmable)
- Programmable (default: global alarm).

The backup device consists of a signal contemporary or delayed respect to the IS opening command, transmitted only if the IS failed and did not complete the disconnection.

Operational characteristics

- Auxiliary voltage: 24...240VAC/24...240VDC
- Voltage inputs range: 100-500000VAC (via voltage transformers)
- Relay outputs:
  OUT1: 8A 250VAC, 8A 30VDC
  OUT2: 5A 250VAC, 5A 30VDC
  OUT3: 2A 250VAC, 2A 30VDC
- It can be password protected to prevent parameters being altered
- 5 digital inputs
- Programmable nominal voltage rating, voltage thresholds, frequency and delays
- Support of EXM series communications modules (USB, RS232, RS485, Ethernet)
- Modular housing: 4 modules
- Parameter configuration and remote control (only with comunication expansion module) with software Xpress and Synergy
- Degree of protection: IP40 on front; IP20 on terminals
- Predisposed for IEC/EN 61850 signal supervision using expansion or external module
- Event log (128 events with time reference):
  - interface protection trip events;
  - password interaction events;
  - commands execution;
  - system events.

Reference standards

Compliant with standards IEC/EN/BS 60255-27; IEC/EN/BS 61010-1, IEC/EN/BS 61000-6-2, IEC/EN/BS 61000-6-4.

Backup power supply

Order code	Description
PMVFUPS02	Input 230VAC. Output 230VAC with stored energy 645Ws and power 650VA

PMVFUPS02

Compatibility:
- Compatible with contactors (IS or backup function) with standard AC or electronic coil.
- Compatible with undervoltage trip releases (IS or backup function) of moulded case circuit breakers.

General characteristics

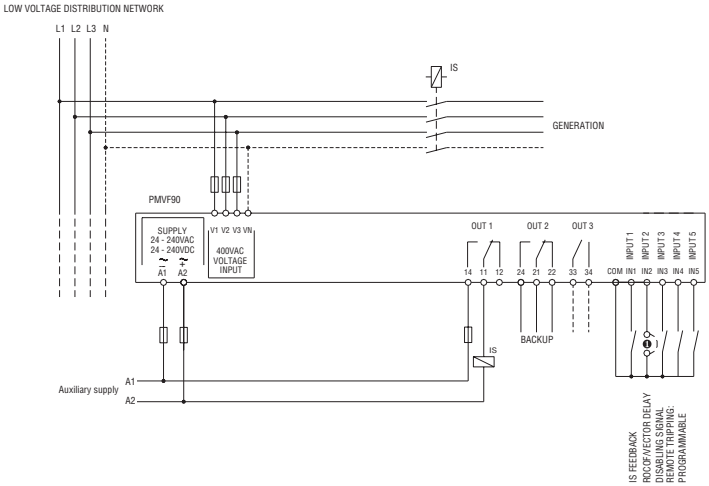
Many IP standards require an auxiliary power supply to feed the interface protection (IP), the interface switch (IS) and the backup switch for at least 5 seconds in the event of a power failure. PMVFUPS02 guarantees the necessary energy by accumulating it in capacitors, thus avoiding the use of batteries that require maintenance.
- Power supply: 230VAC, 50Hz
- Output voltage: 230VAC, 50Hz
- Output power: 650VA
- Accumulated energy: 645Ws
- Accumulation time: 60sec
- Modular housing: 9 modules
- Mounting on 35mm DIN rail (IEC/EN/BS 60715) or screw fixing via pull out tabs
- Operating temperature: -5...+ 50°C
- Degree of protection IP20 on front and terminals.

Reference standard

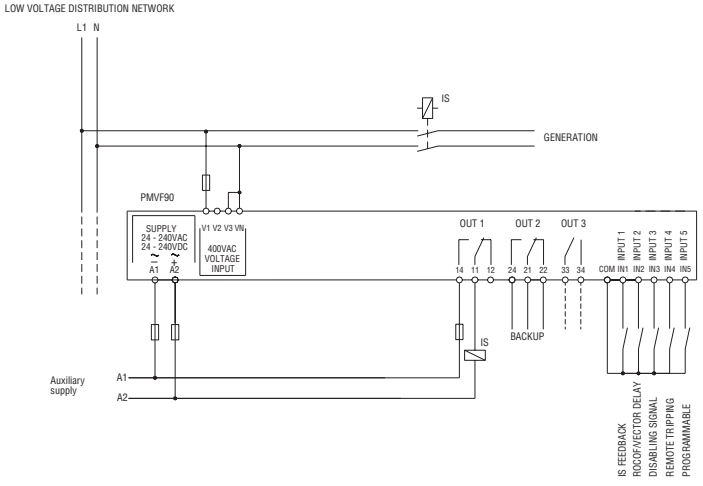
Compliant with standards: IEC/EN/BS 61010-1.

Wiring diagrams

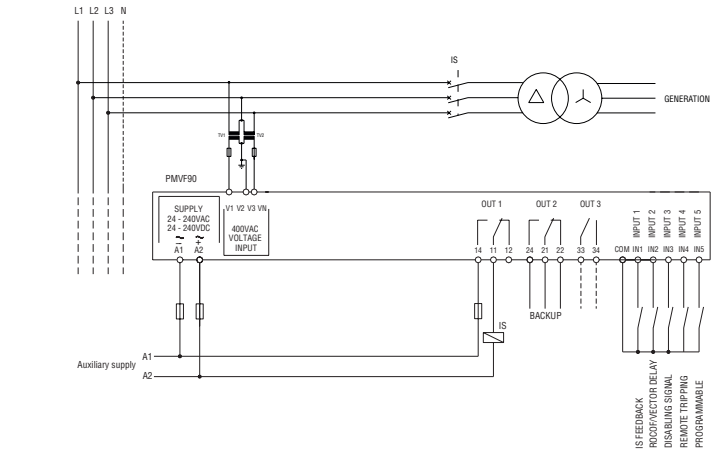
Three-phase connection



Single-phase connection

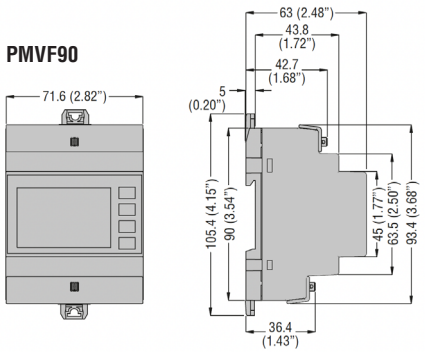


Connection through VTs in Medium/High Voltage

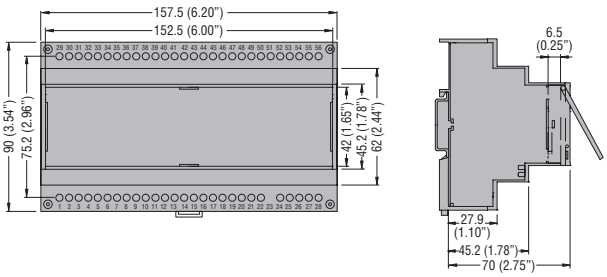


Dimensions [mm (in)]

PMVF90



PMVFUPS02



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INTERFACE PROTECTION SYSTEM UNIT
PMVF90

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