



## General characteristics

### Description

Medium-voltage system. Dual threshold minimum and maximum voltage and frequency protection

### Power supply

Operating voltage range 90...440VAC / 93.5...300VDC

Rated frequency Hz 45...55

### Control circuit

Rated current (Ie) A CT /5A /1A

### Auxiliary supply

|                                   |     |     |     |
|-----------------------------------|-----|-----|-----|
| Rated auxiliary supply voltage Us |     |     |     |
| AC                                | min | VAC | 100 |
|                                   | Max | VAC | 400 |
| DC                                | min | VDC | 110 |
|                                   | Max | VDC | 250 |

### Power consumption

|          |    |                                                       |
|----------|----|-------------------------------------------------------|
| AC (Max) | VA | 7.5VA at 110VAC;<br>10VA at 230VAC;<br>14VA at 400VAC |
|          |    |                                                       |
| DC (Max) | VA | 35mA at 110VDC; 14mA at 250VDC                        |
|          |    |                                                       |

### Power dissipation

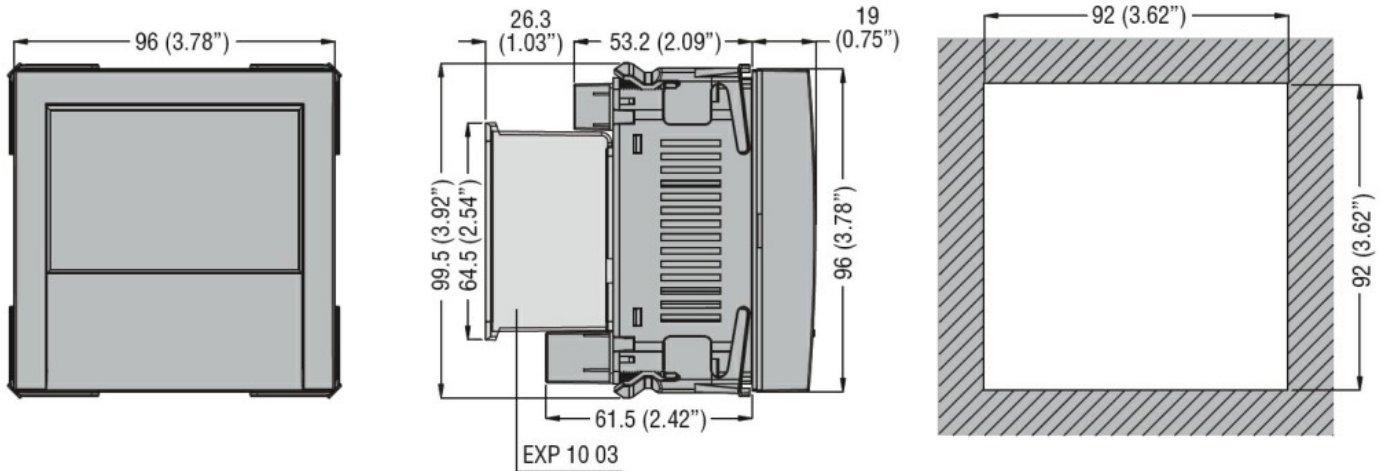
|          |   |                                            |
|----------|---|--------------------------------------------|
| AC (Max) | W | 4W at 110VAC; 4.2W at 220VAC; 5W at 400VAC |
|          |   |                                            |
| DC (Max) | W | 3.8W at 110VDC; 4W at 250VDC               |
|          |   |                                            |

Immunity time for microbreakings ms ≤30ms at 110VAC; ≤140ms at 230VDC

### Voltage inputs

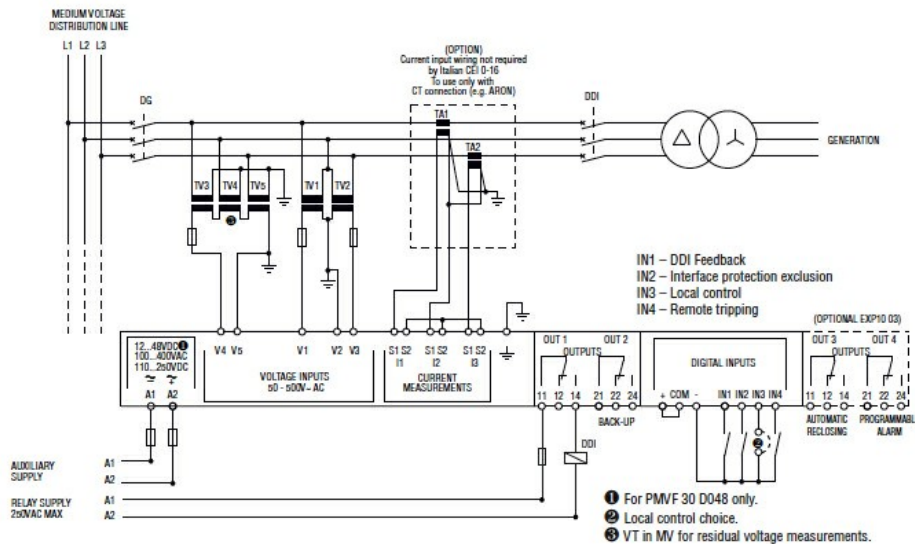
|                                         |           |     |                 |                                                                                     |
|-----------------------------------------|-----------|-----|-----------------|-------------------------------------------------------------------------------------|
| Maximum rated operational voltage       |           |     |                 | 50...500VAC (for voltages/frequency / 50...150V (for residual voltage measurement)) |
| Measurement range                       |           | V   |                 | 400-150000V (VT primary)                                                            |
| Frequency range                         |           | Hz  |                 | 45...55                                                                             |
| <b>Current inputs</b>                   |           |     |                 |                                                                                     |
| Measurement range                       |           |     |                 | For 1A scale: 0.01...1.2A; for 5A scale: 0.01...6A                                  |
| Type of input                           |           |     |                 | Shunts powered by external current transformer (low voltage) 5A max                 |
| Measurement method                      |           |     |                 | RMS                                                                                 |
| Overload peak                           |           | A   |                 | 50A for 1 second                                                                    |
| Burden per phase                        |           | W   |                 | ≤0.3W                                                                               |
| <b>Relay outputs</b>                    |           |     |                 |                                                                                     |
| Number of relays                        |           | Nr. |                 | 2                                                                                   |
| Contact arrangement                     |           |     |                 | 1 changeover contact/SPDT each                                                      |
| Rated operational voltage AC (IEC)      |           | VAC |                 | 250                                                                                 |
| UL/CSA and IEC/EN 60947-5-1 designation |           |     |                 | 5A 250VAC AC1/B300; 5A 30VDC                                                        |
| <b>Digital inputs</b>                   |           |     |                 |                                                                                     |
| Number and type of inputs               |           |     |                 | 4 negative (NPN)                                                                    |
| Input voltage                           |           |     |                 | 24VDC isolated                                                                      |
| Input current                           |           | mA  |                 | 7                                                                                   |
| <b>Connections</b>                      |           |     |                 |                                                                                     |
| Terminals type                          |           |     |                 | Screw - removable                                                                   |
| Tightening torque for terminals         |           | max | Nm              | 0.5                                                                                 |
|                                         |           | max | lbin            | 4.5                                                                                 |
| Conductor cross section                 | AWG/Kcmil | min | AWG             | 24                                                                                  |
|                                         |           | Max | AWG             | 12                                                                                  |
|                                         | IEC       | min | mm <sup>2</sup> | 0.2                                                                                 |
|                                         |           | Max | mm <sup>2</sup> | 2.5                                                                                 |
| <b>Housing</b>                          |           |     |                 |                                                                                     |
| Material                                |           |     |                 | Polyamide                                                                           |
| Mounting                                |           |     |                 | Flush mount 96x96mm / 3.78x3.78"                                                    |
| IEC degree of protection                |           |     |                 | IP65 on front; IP20 at terminals                                                    |
| Dimensions (W x H x D)                  |           | mm  |                 | 96 x 96 x 53.2                                                                      |
| Weight                                  |           | g   |                 | 566                                                                                 |

## Dimensions

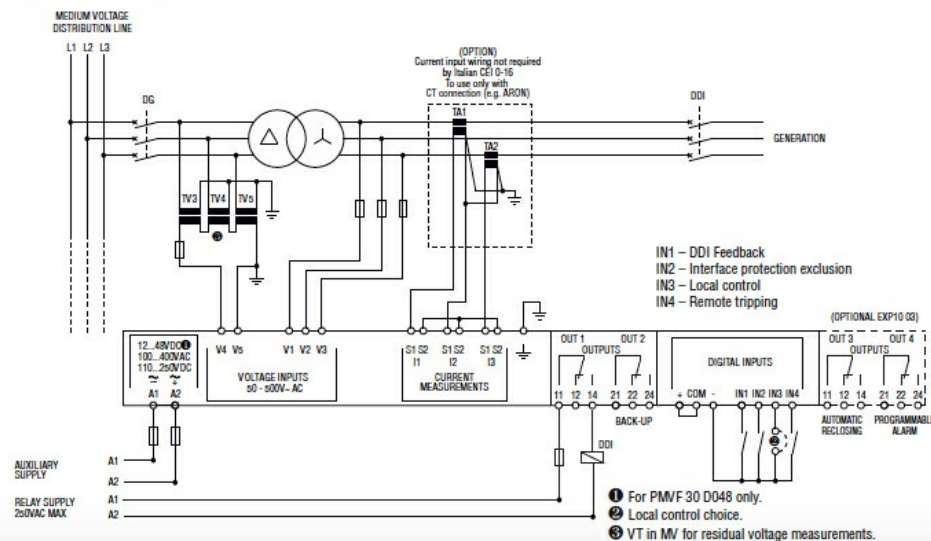


## Wiring diagrams

### Connection through VTs in Medium Voltage Three-phase connection



### Direct connection in Low Voltage Three-phase connection



## Certifications and compliance

### Compliance

INTERFACE PROTECTION SYSTEM UNIT COMPLIANT WITH ITALIAN STANDARD CEI 0-16,  
FOR MV SYSTEM, DUAL THRESHOLD MINIMUM AND MAXIMUM VOLTAGE AND FREQUENCY  
PROTECTION, MEASUREMENTS VIA VTS IN MV OR DIRECT IN LV

IEC/EN 60255-5

IEC/EN 61000-6-2

IEC/EN 61000-6-3

IEC/EN 61010-1

#### Certificates

CEI 0-16

#### ETIM classification

ETIM 8.0

EC001438 -  
Voltage  
monitoring relay