

# › MWUA

## › Monitoring Relays

### › 3-Phase Monitoring Relays

### › Din Rail Mount 17.5 mm Multifunction

- › Control of 3-phase networks : phase sequence, phase failure, imbalance (asymmetry), over and undervoltage (MWU)
- › Range includes mono-function product and multi-function product
- › Multi-voltage from 3 x 208 to 3 x 480 V
- › Controls its own supply voltage
- › True RMS measurement
- › LED status indication



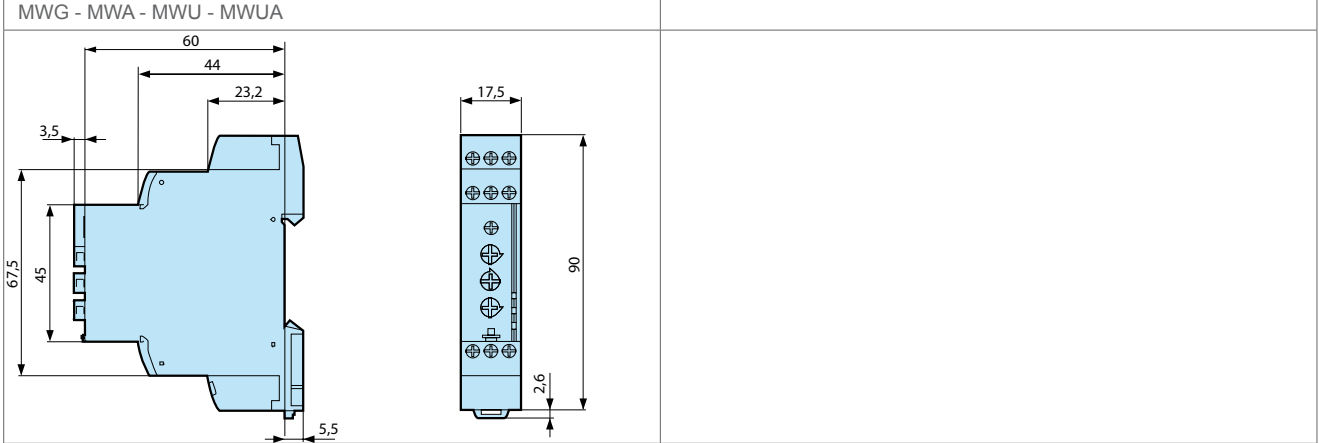
| Specifications                                                                             |                        |                                |          |
|--------------------------------------------------------------------------------------------|------------------------|--------------------------------|----------|
| Functions                                                                                  | Nominal voltage (V)    | Output                         | Code     |
| Phase sequence, phase failure, imbalance (asymmetry), over and undervoltage in window mode | 3 x 208 → 3 x 480 V AC | 1 single pole changeover relay | 84873025 |

| Power supply                                   |                          |
|------------------------------------------------|--------------------------|
| Supply voltage Un                              | 3 x 208 → 3 x 480 V AC * |
| Voltage supply tolerance                       | -12% / +10%              |
| Operating range                                | 183 → 528 V AC           |
| AC supply voltage frequency                    | 50 / 60 Hz ± 10%         |
| Galvanic isolation of power supply/measurement | No                       |
| Power consumption at Un                        | 22 VA in 400 VAC, 50 Hz  |
| Immunity from micro power cuts                 | 10 ms                    |

| Inputs and measuring circuit                 |                                                                                                                                                          |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement ranges                           | 183 → 528 V AC                                                                                                                                           |
| Selection of phase-phase nominal voltage Un  | 208 - 220 - 380 - 400 - 415 - 440 - 480 V                                                                                                                |
| Frequency of measured signal                 | 50 → 60 Hz ± 10%                                                                                                                                         |
| Max. measuring cycle time                    | 150 ms/True RMS measurement                                                                                                                              |
| Voltage threshold adjustment                 | 2 → 20% of selected Un<br>(-2 to -12% across the 3 x 208 V AC range / -2 to -17% across the 3 x 220 V AC range / 2 to 10% across the 3 x 480 V AC range) |
| Voltage threshold hysteresis                 | 2% of fixed Un                                                                                                                                           |
| Asymmetry threshold hysteresis               | 2% of fixed Un                                                                                                                                           |
| Asymmetry threshold adjustment               | 5 to 15% of selected Un                                                                                                                                  |
| Display precision                            | ± 3% of the displayed value                                                                                                                              |
| Repetition accuracy with constant parameters | ± 0,5%                                                                                                                                                   |
| Measuring error with voltage drift           | < 1% across the whole range                                                                                                                              |
| Measuring error with temperature drift       | < 0,05% / °C                                                                                                                                             |
| Maximum regeneration (phase failure)         | 70%                                                                                                                                                      |

| Time delays                                           |                                                                                                                                                                                                                 |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Delay on threshold crossing                           | 0.1 to 10 s 0 +10%                                                                                                                                                                                              |
| Repetition accuracy with constant parameters          | ± 3%                                                                                                                                                                                                            |
| Reset time                                            | 1500 ms                                                                                                                                                                                                         |
| Delay on pick-up                                      | ≤ 650 ms                                                                                                                                                                                                        |
| Alarm on delay time max.                              | < 200 ms                                                                                                                                                                                                        |
| Outputs                                               |                                                                                                                                                                                                                 |
| Type of output                                        | 1 single pole changeover relay                                                                                                                                                                                  |
| Type of contacts                                      | No cadmium                                                                                                                                                                                                      |
| Maximum breaking voltage                              | 250 V AC/DC                                                                                                                                                                                                     |
| Max. breaking current                                 | 5 A AC/DC                                                                                                                                                                                                       |
| Min. breaking current                                 | 10 mA / 5 V DC                                                                                                                                                                                                  |
| Electrical life (number of operations)                | 1 x 10 <sup>5</sup>                                                                                                                                                                                             |
| Breaking capacity (resistive)                         | 1250 VA AC                                                                                                                                                                                                      |
| Maximum rate                                          | 360 operations/hour at full load                                                                                                                                                                                |
| Operating categories acc. to IEC/EN 60947-5-1         | AC 12, AC 13, AC 14, AC 15, DC 12, DC 13, DC 14                                                                                                                                                                 |
| Mechanical life (operations)                          | 30 x 10 <sup>6</sup>                                                                                                                                                                                            |
| Insulation                                            |                                                                                                                                                                                                                 |
| Nominal insulation voltage IEC/EN 60664-1             | 400 V                                                                                                                                                                                                           |
| Insulation coordination (IEC/EN 60664-1)              | Overvoltage category III : degree of pollution 3                                                                                                                                                                |
| Rated impulse withstand voltage (IEC/EN 60664-1)      | 4 kV (1,2 / 50 µs)                                                                                                                                                                                              |
| Dielectric strength (IEC/EN 60664-1)                  | 2 kV AC 50 Hz 1 min                                                                                                                                                                                             |
| Insulation resistance (IEC/EN 60664-1)                | > 500 MOhm(s) / 500 V DC                                                                                                                                                                                        |
| General characteristics                               |                                                                                                                                                                                                                 |
| Display power supply                                  | Green LED                                                                                                                                                                                                       |
| Display relay                                         | Yellow LED - This LED flashes during the threshold delay                                                                                                                                                        |
| Casing                                                | 17,5 mm                                                                                                                                                                                                         |
| Mounting                                              | On 35 mm symmetrical DIN rail, IEC/EN 60715                                                                                                                                                                     |
| Mounting position                                     | All positions                                                                                                                                                                                                   |
| Material : enclosure plastic type VO to UL94 standard | Incandescent wire test according to IEC 60695-2-11 & NF EN 60695-2-11                                                                                                                                           |
| Protection (IEC/EN 60529)                             | Terminal block : IP20<br>Casing : IP30                                                                                                                                                                          |
| Weight                                                | 80 g                                                                                                                                                                                                            |
| Connecting capacity IEC/EN 60947-1                    | Rigid : 1 x 4 <sup>2</sup> - 2 x 2.5 <sup>2</sup> mm <sup>2</sup><br>1 x 11 AWG - 2 x 14 AWG<br>Flexible with ferrules : 1 x 2.5 <sup>2</sup> - 2 x 1.5 <sup>2</sup> mm <sup>2</sup><br>1 x 14 AWG - 2 x 16 AWG |
| Max. tightening torques IEC/EN 60947-1                | 0,6 Nm →1 / 5,3 →8,8 Lbf.In                                                                                                                                                                                     |
| Operating temperature IEC/EN 60068-2                  | -20 →+50 °C                                                                                                                                                                                                     |
| Storage temperature IEC/EN 60068-2                    | -40 →+70 °C                                                                                                                                                                                                     |
| Humidity IEC/EN 60068-2-30                            | 2 x 24 hr cycle 95% RH max. without condensation 55 °C                                                                                                                                                          |
| Vibrations according to IEC/EN60068-2-6               | 10 →150 Hz, A = 0.035 mm                                                                                                                                                                                        |
| Shocks IEC/EN 60068-2-6                               | 5 g                                                                                                                                                                                                             |
| Standards                                             |                                                                                                                                                                                                                 |
| Product standard                                      | IEC/EN 50178                                                                                                                                                                                                    |
| Electromagnetic compatibility (EMC)                   | IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4                                                                                                                                          |
| Certifications                                        | CE, UL, CSA, GL                                                                                                                                                                                                 |
| Conformity with environmental directives              | RoHS                                                                                                                                                                                                            |
| Comments                                              |                                                                                                                                                                                                                 |
|                                                       | * 3-phase mains with earth                                                                                                                                                                                      |

**Dimensions**



**Connections**

