

# > HUL

## > Monitoring Relays

### > Voltage Monitoring Relays

### > DIN Rail Mount 35 mm

- > Control of AC and DC voltages
- > Automatic recognition of AC/DC
- > Measurement ranges from 0.2 V to 600 V
- > Choice between under and overvoltage
- > True RMS measurement
- > Selectable latching (memory) function



| Specifications    |                   |                     |          |
|-------------------|-------------------|---------------------|----------|
| Functions         | Measurement range | Nominal voltage (V) | Code     |
| Under/Overvoltage | 0,2 V →60 V       | 24 →240 V AC/DC     | 84872120 |

| Power supply                                   |                          |
|------------------------------------------------|--------------------------|
| Supply voltage Un                              | 24 V →240 V AC/DC        |
| Voltage supply tolerance                       | -15 % / +10 %            |
| Operating range                                | 20,4 V →264 V AC/DC      |
| Polarity with DC voltage                       | No                       |
| AC supply voltage frequency                    | 50 / 60 Hz ±10 %         |
| Galvanic isolation of power supply/measurement | No                       |
| Power consumption at Un                        | 3.5 VA in AC/0.6 W in DC |
| Immunity from micro power cuts                 | 10 ms                    |

| Inputs and measuring circuit                 |                                                |
|----------------------------------------------|------------------------------------------------|
| Frequency of measured signal                 | 0 Hz, 40 →70 Hz                                |
| Max. measuring cycle time                    | 30 ms/True RMS measurement                     |
| Threshold adjustment                         | 10 →100 % of the range                         |
| Hysteresis                                   | Adjustable from 5 →50 % of displayed threshold |
| Display precision                            | ±10 % of full scale                            |
| 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                                  |

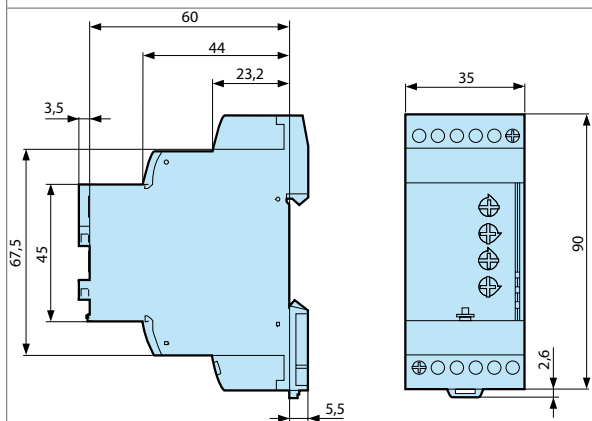
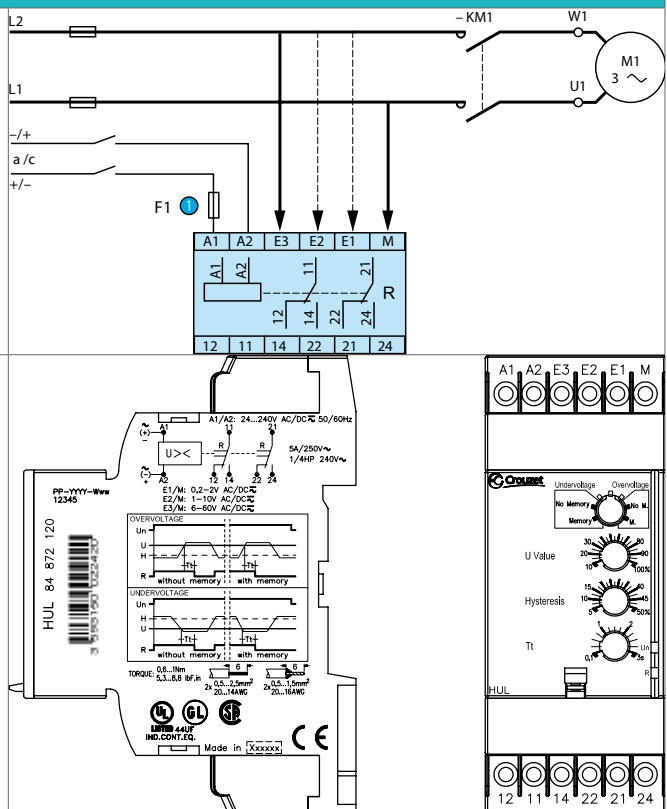
  

| Time delays                                  |                      |
|----------------------------------------------|----------------------|
| Delay on threshold crossing Tt               | 0,1 →3 s (0, + 10 %) |
| Repetition accuracy with constant parameters | ± 2 %                |
| Reset time                                   | 1500 ms              |
| Delay on pick-up                             | < 600 ms             |

| Outputs          |                           |
|------------------|---------------------------|
| Type of output   | 1 double changeover relay |
| Type of contacts | No cadmium                |

| Outputs                                               |                                                                                                                                                                                                                 |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum breaking voltage                              | 250 V AC/ DC                                                                                                                                                                                                    |
| Max. breaking current                                 | 5 A AC/DC                                                                                                                                                                                                       |
| Min. breaking current                                 | 10 mA / 5 VDC                                                                                                                                                                                                   |
| 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         | AC12, AC13, AC14, AC15, DC12, DC13, DC14                                                                                                                                                                        |
| Mechanical life (operations)                          | 30 x 10 <sup>6</sup>                                                                                                                                                                                            |
| Insulation                                            |                                                                                                                                                                                                                 |
| Nominal insulation voltage IEC/EN 60664-1             | 250 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                                                                                                                                                                                                      |
| Casing                                                | 35 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/EN 60695-2-11                                                                                                                                                           |
| Protection (IEC/EN 60529)                             | Terminal block : IP 20<br>Casing : IP 30                                                                                                                                                                        |
| Weight                                                | 130 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 → 1 Nm / 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/EN 60068-2-6              | 10 → 150 Hz, A = 0.035 mm                                                                                                                                                                                       |
| Shocks IEC/EN 60068-2-6                               | 5 g                                                                                                                                                                                                             |
| Standards                                             |                                                                                                                                                                                                                 |
| Product standard                                      | IEC/EN 60255-1                                                                                                                                                                                                  |
| Electromagnetic compatibility (EMC)                   | IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4                                                                                                                                          |
| Certifications                                        | UL, CSA                                                                                                                                                                                                         |
| Marking                                               | CE (DBT) 2006/95/EC - EMC 2004/108/EC                                                                                                                                                                           |
| Conformity with environmental directives              | RoHS                                                                                                                                                                                                            |

| Dimensions                                                                        |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| HUL-HUH                                                                           |                                                                                     |
|  |                                                                                     |
| Curves                                                                            |                                                                                     |
|                                                                                   |                                                                                     |
| Connections                                                                       |                                                                                     |
| HUL-HUH                                                                           |  |