

# 3-phase Monitoring DUW-32

The three-phase monitoring relay DUW-32 monitors the three-phase mains for the correct phase sequence as well as for failure of a phase.

The device is supplied by the measuring circuit L1 – L2 – L3 – (N). The output relay is pulled up in normal operation. The output relay drops out if the phase sequence is violated, a phase fails or the voltage drops below 75% of the rated voltage. The error is displayed by the red LED. In order to bypass brief mains faults, the off time  $t_2$  can be delayed by 0.1 to 10 seconds with the potentiometer

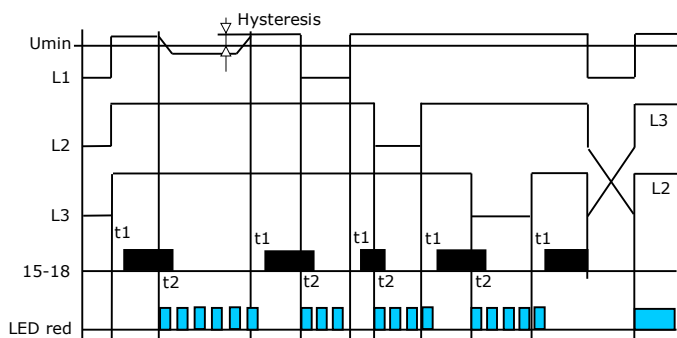
- **3 / 4 monitoring ranges**
  - Phase sequence
  - Failure of a phase
  - Neutral conductor monitoring (version N)
  - Undervoltage < 75% of rated voltage
- **DIN 45 mm housing**

The voltage monitoring relay can be installed with its standardised housing behind the cover panel through a 45-mm cutout. The function and switching status indicators (LED) are clearly visible, with the connections located in a protected position behind the cover panel.
- **Extremely compact size**

It only requires a width of 17.5 mm in the switching cabinet.
- **8 A Changeover contact**

The output contact is capable of switching an output of 2,500 VA (8 A / 250 V AC1 ).

## Functional diagram



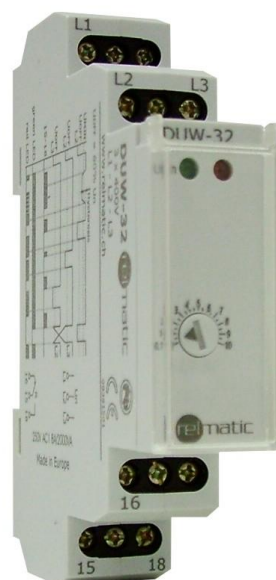
## Function display

### Normal status

Green LED shining: All 3 phases are connected correctly and have a voltage of >75% of the rated voltage.

### Fault display

Red LED flashing: Failure of a phase or dropping below 75% of the rated voltage



## Technical data

### DUW-32

### DUW-32/N

#### Input side

|                                |              |                    |
|--------------------------------|--------------|--------------------|
| Supply and measuring terminals | L1 - L2 - L3 | L1 - L2 - L3 - N   |
| Supply and measuring voltage   | 3 x 400 V AC | 3 x 400 / 230 V AC |
| max. continuous voltage        | 3 x 460 V AC | 3 x 265 V AC       |
| Maximum overvoltage < 1 ms     | 3 x 500 V AC | 3 x 288 V AC       |
| Power consumption              | max. 2 VA    |                    |

#### Setting and accuracy

|                   |                       |
|-------------------|-----------------------|
| Low range (Umin.) | 75 % Un               |
| Hysteresis        | 5 %                   |
| Time delay t1     | max. 500 ms           |
| Time delay t2     | adjustable 0.1 - 10 s |

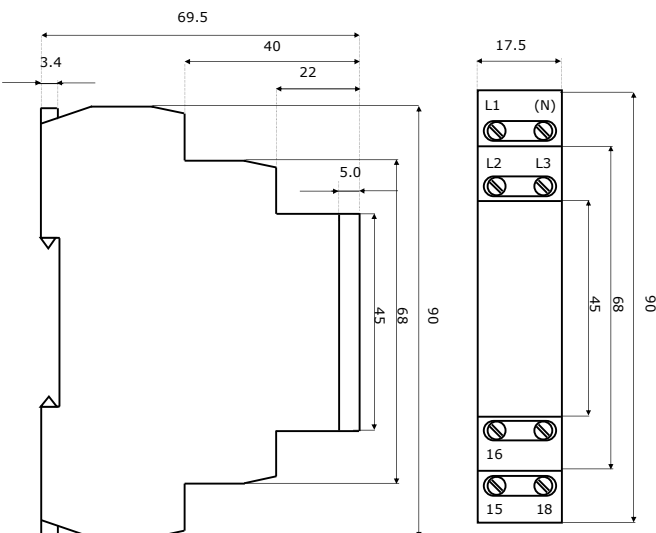
#### Output side

|                                      |                           |
|--------------------------------------|---------------------------|
| Number of contacts                   | 1 changeover contact      |
| Switching voltage                    | 250 V AC1 / 24 V DC       |
| Switching current / contact material | 8 A / AC1 / AgNi          |
| max. peak current                    | 10 A                      |
| Switching capacity                   | 2000 VA / AC1, 240 W / DC |
| min. DC switching capacity           | 500 mW                    |
| Output display                       | red / green LED           |

#### General data

|                             |  |
|-----------------------------|--|
| Mechanical life             | 1 x 10 <sup>7</sup>  |
| Electric life at 12 A       | 1 x 10 <sup>5</sup>  |
| Ambient temperature         | -20°C ... +55°C  |
| Storage temperature         | -30°C ... +70°C  |
| Test voltage coil / contact | 4 kV   |
| Mounting position           | Any  |
| Fixing DIN rail             | EN 50022-35  |
| Protection class of front   | IP 40  |
| Voltage limitation class    | III  |
| Degree of contamination     | 2  |
| Connection cross-section    | Wire max 2x2.5 mm <sup>2</sup> or 1x4 mm <sup>2</sup><br>with sleeve max. 1x2.5 mm <sup>2</sup> or 2x1.5 mm <sup>2</sup> |
| Weight                      | 67 g66g  |
| Standards                   | EN 60255-6, EN 61010-1   |

## Dimensional drawing



| Device           |   | Order no. |
|------------------|---|-----------|
| Monitoring relay | Phase sequence, phase failure and undervoltage monitoring <75% Un           | DUW-32    |
| Monitoring relay | Phase sequence, phase + neutral failure and undervoltage monitoring <75% Un | DUW-32/N  |