

MRU11

1 phase | 1 CO | voltage monitoring

Power supply

| | | |
|---------------------------|----------------|------------------|
| Nominal voltage | 12 ... 48 V UC | 110 ... 240 V UC |
| Operating voltage range | 10 ... 60 V | 85 ... 250 V |
| Power consumption AC / DC | 3.2 VA / 1.6 W | 2.6 VA / 1.5 W |
| Rated frequency | 16 ... 63 Hz | 16 ... 63 Hz |

Measuring circuit

| | |
|--|----------------------------------|
| Measured parameters | U, f |
| Min. setting step, resolution | 0.1 V / 1 Hz |
| Monitoring functions | Under, over, inside, outside |
| Number of voltage measurement inputs | 1 |
| Rated AC voltage L-N / L-L | 230 V / - |
| AC voltage measurement range L-N / L-L | 0.1 ... 480 V |
| Rated DC voltage U+ / U- | 300 V |
| DC voltage measurement range U+ / U- | +0.1 ... +690 V, -0.1 ... -690 V |
| Undervoltage setting range | +0.1 ... +700 V, -0.1 ... -700 V |
| Overtoltage setting range | +0.1 ... +700 V, -0.1 ... -700 V |
| Alarm delay | 0.5 ... 999.9 s |
| Alarm reset delay | 0.5 ... 999.9 s |

Main circuit

| | |
|---|-------------|
| Number of contacts | 1 CO |
| Contact material | AgNi |
| Rated voltage | 250 V AC |
| Rated current | 6 A |
| Minimum load | 10 mA, 10 V |
| Inrush current | 10 A, 10 ms |
| Rated load DC | fig. 2 |
| Rated load AC-1 | 1250 VA |
| Mechanical endurance (cycles) | 30 000 000 |
| Electrical endurance at rated load AC-1 | fig. 3 |

Insulation

| | |
|---|--------------------|
| Rated test voltage measuring / measuring circuit | 1.5 kV rms / 1 min |
| Rated test voltage measuring circuit / power supply | 2 kV rms / 1 min |
| Rated test voltage measuring circuit / main circuit | 2 kV rms / 1 min |
| Rated test voltage main circuit / power supply | 2 kV rms / 1 min |
| Rated test voltage open contact | 1.5 kV rms / 1 min |
| Pollution degree | 2 |
| Overtoltage category | III |

General data

| | |
|--------------------------------------|---------------------|
| Ambient temperature storage (no ice) | -40 ... 85 °C |
| Ambient temperature operation | -40 ... 60 °C |
| Conductor cross section | 2.5 mm ² |
| Nominal screw torque | 0.6 Nm |
| Dimension | fig. 4 |
| Weight | 107 g |
| Protection degree | IP 20 |
| Housing material | PC |

Product reference

| Description | Type | 12-48 | 110-240 |
|-------------------------|--------------|-------|---------|
| Single phase monitoring | MRU11/UC...V | ✓ | ✓ |

Other voltages on request. Please contact support@comatreleco.com.
 "... " list control circuit voltage to complete product references.

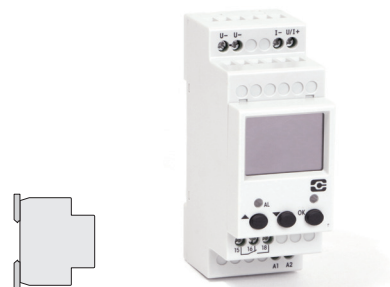


fig. 1. Wiring diagram

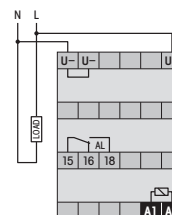


fig. 2. DC load limit curve

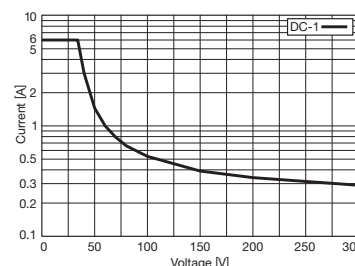


fig. 3. AC voltage endurance

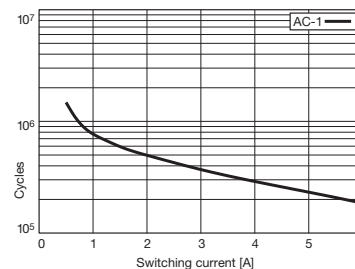
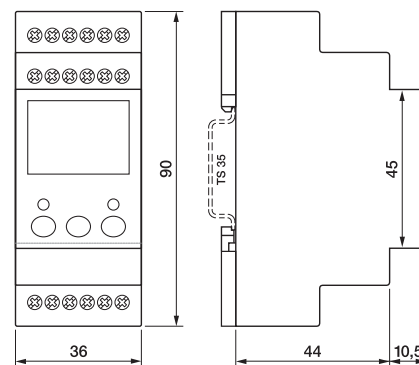


fig. 4. Dimension (mm)



Standards and approvals

Standards EN 60947; EN 60730-1; EN 61000-6-3; EN 61000-6-2

Approvals

| | Description | MRM11 | MRM11R | MRM32 | MRM32R | MRU11 | MRU32 | MV53 | SSU34 | SSU31 | SSU33L | MRI11 | MRI32 | TSR19 | ESU-D2R | CT515R | CT524R |
|--------------------------|---|-------|--------|-------|--------|-------|-------|------|-------|-------|--------|-------|-------|-------|---------|--------|--------|
| Monitoring | One phase voltage monitoring | ● | ● | | | ● | | ● | | | | | | | | | |
| | Three phase voltage monitoring | | | ● | ● | | ● | | ● | | ● | | | | | | |
| | Four channel voltage measuring | | | | | | | | | | | | | | | | |
| | DC Voltage monitoring | ● | ● | ● | ● | ● | ● | | | | | | | | | | ● |
| | One phase current monitoring | ● | ● | | | | | | | | | ● | | | | | |
| | Three phase current monitoring | | | ● | ● | | | | | | | | ● | | | | |
| | Four channel current measuring | | | | | | | | | | | | | | | | |
| | DC current monitoring | ● | ● | ● | ● | | | | | | | ● | ● | | | | ● |
| | Phase failure | | | ● | ● | | ● | | ● | ● | ● | | | | | | |
| | Phase sequence monitoring | | | ● | ● | | ● | | ● | ● | ● | | | | | | |
| | Phase angle monitoring / measuring* | | | ● | ● | | ● | | ● | | ● | | | | | | |
| | Differential voltage monitoring / measuring* | | | | | | | | ● | | ● | | | | | | |
| | Neutral failure monitoring | | | | | | | | ● | | ● | | | | | | |
| | Frequency monitoring / measuring* | ● | ● | ● | ● | ● | ● | | ● | | ● | ● | | | | | |
| | Apparent power monitoring / measuring* | ● | ● | ● | ● | | | | | | | | | | | | |
| | Active power monitoring / measuring* | ● | ● | ● | ● | | | | | | | | | | | | |
| | Power factor monitoring / measuring* | ● | ● | ● | ● | | | | | | | | | | | | |
| | Active energy measuring | | | | | | | | | | | | | | | | |
| | THDI / THDU measuring | | | | | | | | | | | | | | | | |
| | PTC monitoring | | | | | | | | | | | | | | ● | | |
| Earth failure monitoring | | | | | | | | | | | | | | | ● | | |
| Functions | Threshold „over“ exceeded fig. 3. | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | ● | | ● | ● |
| | Theshold „under“ exceeded fig. 4. | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | „Inside“ band entered fig. 2. | ● | ● | ● | ● | ● | ● | | | | | ● | ● | | | ● | ● |
| | „Outside“ band entered fig. 1. | ● | ● | ● | ● | ● | ● | | | | | ● | ● | | | ● | ● |
| | Alarm on-delay | ● | ● | ● | ● | ● | ● | ● | ● | | ● | ● | ● | | ● | ● | ● |
| | Alarm off-delay | ● | ● | ● | ● | ● | ● | ● | | | | | ● | ● | | | |
| | Latching alarm output function | ● | ● | ● | ● | ● | ● | | | | | | ● | ● | ● | | |
| | Threshold selectable | ● | ● | ● | ● | ● | ● | ● | ● | | | | ● | ● | ● | ● | ● |
| | Threshold fixed | | | | | | | | | ● | ● | | | | ● | | |
| Power supply | Supply isolated from measuring circuit | ● | ● | ● | ● | ● | ● | | | | | ● | ● | ● | ● | | |
| | Supply from measure circuit | | | | | | | ● | ● | ● | ● | | | | | ● | ● |
| Mounting | DIN rail mounting | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | | ● | | |
| | Housing according IEC/EN 43880 (electrical distribution mounting) | ● | ● | ● | ● | ● | ● | ● | | | | ● | ● | | | | |
| | Plug-in (socket mounting) | | | | | | | | | ● | ● | ● | | ● | | ● | ● |

