

# Product datasheet

Specifications



## Modular multifunction 3-phase supply control relay, 5 A, 1 CO, 208...480 V AC

Local distributor code: 393519017    RM17TA00

### Main

|                               |                                                         |
|-------------------------------|---------------------------------------------------------|
| Range of product              | Harmony Control Relays                                  |
| Product or component type     | 3-phase control relay                                   |
| Relay type                    | Multifunction control relay                             |
| Product specific application  | For 3-phase supply                                      |
| Relay name                    | RM17TA                                                  |
| Relay monitored parameters    | Asymmetry<br>Phase sequence<br>Phase failure detection  |
| Time delay                    | Adjustable 0.1...10 s, +/- 10 % of the full scale value |
| Switching capacity in VA      | 1250 VA                                                 |
| Measurement range             | 208...480 V voltage AC                                  |
| Contacts type and composition | 1 C/O                                                   |
| [Uc] control circuit voltage  | 208...480 V                                             |

### Complementary

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Reset time                     | 1500 ms time delay                         |
| Maximum switching voltage      | 250 V AC<br>250 V DC                       |
| Minimum switching current      | 10 mA at 5 V DC                            |
| Maximum switching current      | 5 A AC<br>5 A DC                           |
| Supply voltage limits          | 183...528 V AC                             |
| Control circuit voltage limits | - 12 % + 10 % Un                           |
| Power consumption in VA        | 0...22 VA at 400 V AC 50 Hz                |
| Control circuit frequency      | 50...60 Hz +/- 10 %                        |
| Output contacts                | 1 C/O                                      |
| Nominal output current         | 5 A                                        |
| Measurement voltage limits     | 183...528 V AC                             |
| Hysteresis                     | 2 %                                        |
| Delay at power up              | 650 ms                                     |
| Maximum measuring cycle        | 150 ms measurement cycle as true rms value |

|                                   |                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Threshold adjustment voltage      | +2...+17 % in the range 480 V AC<br>2...20 % of Un selected<br>-2...-17 % in the range 220 V AC<br>-2...-12 % in the range 208 V AC                                                                                                                                                                                                        |
| Voltage range                     | 208...480 V phase to phase                                                                                                                                                                                                                                                                                                                 |
| Adjustment of asymmetry threshold | 5...15 % of Un selected                                                                                                                                                                                                                                                                                                                    |
| Repeat accuracy                   | 0.5 % for input and measurement circuit<br>3 % for time delay                                                                                                                                                                                                                                                                              |
| Measurement error                 | < 0.05 %/°C with temperature variation<br>< 1 % over the whole range with voltage variation                                                                                                                                                                                                                                                |
| Phase failure sensitivity         | 0.7 Un                                                                                                                                                                                                                                                                                                                                     |
| Response time                     | < 200 ms (in the event of a fault)                                                                                                                                                                                                                                                                                                         |
| Marking                           | CE                                                                                                                                                                                                                                                                                                                                         |
| Overvoltage category              | III conforming to IEC 60664-1                                                                                                                                                                                                                                                                                                              |
| Insulation resistance             | > 500 MOhm at 500 V DC conforming to IEC 60255-5<br>> 500 MOhm at 500 V DC conforming to IEC 60664-1                                                                                                                                                                                                                                       |
| [Ui] rated insulation voltage     | 400 V conforming to IEC 60664-1                                                                                                                                                                                                                                                                                                            |
| Supply frequency                  | 50/60 Hz +/- 10 %                                                                                                                                                                                                                                                                                                                          |
| Operating position                | Any position without derating                                                                                                                                                                                                                                                                                                              |
| Connections - terminals           | Screw terminals, 1 x 0.5...1 x 4 mm² (AWG 20...AWG 11) solid without cable end<br>Screw terminals, 2 x 0.5...2 x 2.5 mm² (AWG 20...AWG 14) solid without cable end<br>Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm² (AWG 24...AWG 16) flexible with cable end |
| Tightening torque                 | 0.6...1 N.m conforming to IEC 60947-1                                                                                                                                                                                                                                                                                                      |
| Housing material                  | Self-extinguishing plastic                                                                                                                                                                                                                                                                                                                 |
| Local signalling                  | LED (green) for power ON<br>LED (yellow) for relay ON                                                                                                                                                                                                                                                                                      |
| Mounting support                  | 35 mm symmetrical DIN rail conforming to EN/IEC 60715                                                                                                                                                                                                                                                                                      |
| Electrical durability             | 100000 cycles                                                                                                                                                                                                                                                                                                                              |
| Mechanical durability             | 30000000 cycles                                                                                                                                                                                                                                                                                                                            |
| Operating rate                    | <= 360 operations/hour full load                                                                                                                                                                                                                                                                                                           |
| Utilisation category              | AC-12 conforming to IEC 60947-5-1<br>AC-13 conforming to IEC 60947-5-1<br>AC-14 conforming to IEC 60947-5-1<br>AC-15 conforming to IEC 60947-5-1<br>DC-12 conforming to IEC 60947-5-1<br>DC-13 conforming to IEC 60947-5-1                                                                                                                 |
| Safety reliability data           | MTTFd = 502.2 years<br>B10d = 470000                                                                                                                                                                                                                                                                                                       |
| Width                             | 17.5 mm                                                                                                                                                                                                                                                                                                                                    |
| Net weight                        | 0.13 kg                                                                                                                                                                                                                                                                                                                                    |

## Environment

|                               |                                                                                                                                                                                                                                                                       |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electromagnetic compatibility | Emission standard for industrial environments conforming to EN/IEC 61000-6-4<br>Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3<br>Immunity for industrial environments conforming to EN/IEC 61000-6-2 |
| Standards                     | EN/IEC 60255-1                                                                                                                                                                                                                                                        |
| Product certifications        | GOST<br>CSA<br>GL<br>C-Tick<br>UL                                                                                                                                                                                                                                     |
| Directives                    | 89/336/EEC - electromagnetic compatibility<br>73/23/EEC - low voltage directive                                                                                                                                                                                       |

|                                       |                                                                                                              |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Ambient air temperature for storage   | -40...70 °C                                                                                                  |
| Ambient air temperature for operation | -20...50 °C                                                                                                  |
| Relative humidity                     | 95 % at 55 °C conforming to IEC 60068-2-30                                                                   |
| Vibration resistance                  | 0.35 mm (f= 5...57.6 Hz) conforming to IEC 60068-2-6<br>1 gn (f= 57.6...150 Hz) conforming to IEC 60255-21-1 |
| Shock resistance                      | 15 gn for 11 ms conforming to IEC 60255-21-1                                                                 |
| IP degree of protection               | IP20 (terminals) conforming to IEC 60529<br>IP30 (casing) conforming to IEC 60529                            |
| Pollution degree                      | 3 conforming to IEC 60664-1                                                                                  |
| Dielectric test voltage               | 2 kV, 1 min AC 50 Hz conforming to IEC 60255-5<br>2 kV, 1 min AC 50 Hz conforming to IEC 60664-1             |
| Non-dissipating shock wave            | 4 kV conforming to IEC 60255-5<br>4 kV conforming to IEC 60664-1<br>4 kV conforming to IEC 61000-4-5         |

### Packing Units

|                              |          |
|------------------------------|----------|
| Unit Type of Package 1       | PCE      |
| Number of Units in Package 1 | 1        |
| Package 1 Weight             | 89.0 g   |
| Package 1 Height             | 2.8 cm   |
| Package 1 width              | 7.8 cm   |
| Package 1 Length             | 9.6 cm   |
| Unit Type of Package 2       | S02      |
| Number of Units in Package 2 | 48       |
| Package 2 Weight             | 4.685 kg |
| Package 2 Height             | 15 cm    |
| Package 2 width              | 30 cm    |
| Package 2 Length             | 40 cm    |

### Offer Sustainability

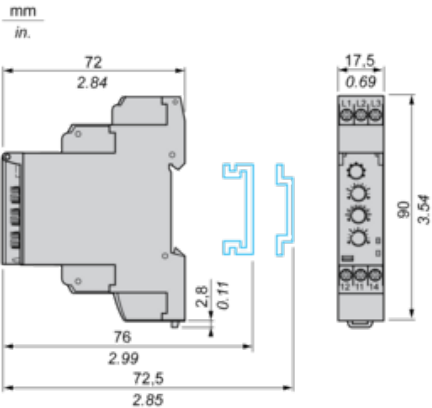
|                            |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                             |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                 |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                               |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>                                                            |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                     |
| Circularity Profile        | <a href="#">End of Life Information</a>                                                           |

### Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

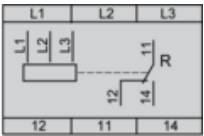
Multifunction 3-Phase Supply Control Relays

Dimensions and Mounting



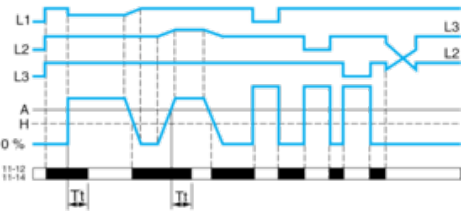
Multifunction 3-Phase Supply Control Relays

Wiring Diagram



Function Diagram

Phase Sequence Control, Phase Failure Detection (U measured < 0.7 x nominal supply voltage), and Asymmetry Detection



Legend

- Tt Time delay after crossing of threshold
- L1, L2, L3 Phases of the supply voltage monitored
- A Asymmetry threshold
- H Hysteresis
- 11-12, 11-14 Output relay connections
- Relay status: black color = energized.