



## 22.5 mm DIN rail mounting TQR1 Part number 88865175



- Multi-function or mono-function
- Multi-range
- Multi-voltage
- Screw or spring terminals
- LED status indicator
- Option of connecting an external power supply to the control input
- 3-wire sensor control option

### Part numbers

|            | Type | Functions | Timing    | Output             | Nominal rating | Connections     | Supply voltage         |
|------------|------|-----------|-----------|--------------------|----------------|-----------------|------------------------|
| 88 865 175 | TQR1 | Q         | 0,1s→100h | 1 changeover relay | 8 A            | Screw terminals | 24 V DC / 24 →240 V AC |

### Specifications

#### Timing

|                                                                       |                                                                                       |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Timing ranges (7 ranges)                                              | 1 s - 10 s - 1 min - 10 min - 1 h - 10 h - 100 h<br>TK2R1 : 0.6s - 2.5s - 20s - 160 s |
| Repetition accuracy with constant parameters                          | ± 0.5 % (IEC/EN 1812-1)                                                               |
| Drift Temperature                                                     | ± 0,05 % / °C                                                                         |
| Drift Voltage                                                         | ± 0.2 % / V                                                                           |
| Display accuracy according to IEC/EN 61812-1                          | ± 10 % / 25 °C                                                                        |
| Minimum pulse duration typically (relay version)                      | 30 ms                                                                                 |
| Minimum pulse duration typically (solid state version)                | 50 ms                                                                                 |
| Minimum pulse duration typically (relay version under load)           | 100 ms                                                                                |
| Maximum reset time by de-energisation typically (relay version)       | 100 ms                                                                                |
| Maximum reset time by de-energisation typically (solid state version) | 350 ms                                                                                |
| Immunity from micro power cuts : typical                              | > 10 ms                                                                               |
| Supply                                                                | *** TRADUCTION MANQUANTE ***                                                          |
| Multi-voltage power supply                                            | Depending on version                                                                  |
| Frequency (Hz)                                                        | 50 / 60                                                                               |
| Operating range                                                       | 85 to 110 % Un<br>(85 to 120 % Un for 12V AC/DC)                                      |
| Operating factor                                                      | 100 %                                                                                 |
| Max. absorbed power                                                   | 0,6 W 24 V AC/DC<br>1,5 W 230 V AC<br>32 VA 230 V AC                                  |

#### Output specification

|                                                        |                                                |
|--------------------------------------------------------|------------------------------------------------|
| 1 or 2 changeover relays, AgNi (cadmium-free)          | 2000 VA/80 W                                   |
| Rated power                                            | 2000 VA/80 W                                   |
| Maximum breaking current                               | 8 A AC 8A DC                                   |
| Minimum breaking current                               | 10 mA / 5 V DC                                 |
| Voltage breaking capacity                              | 250 V AC/ DC                                   |
| Electrical life (operations)                           | 10 <sup>5</sup> operations 8 A 250 V resistive |
| Mechanical life (operations)                           | 5x10 <sup>6</sup>                              |
| Breakdown voltage acc. to IEC/EN 61812-1               | 2.5 kV / 1 min / 1 mA / 50 Hz                  |
| Impulse voltage acc. to IEC/EN 60664-1, IEC/EN 61812-1 | 5 kV, wave 1.2 / 50 µs                         |

#### Solid state output

|                                                          |                                                                                                               |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Rated power                                              | 0,7 A AC/DC<br>20 °C (0,5 A UL)                                                                               |
| Derating                                                 | 5 mA / °C                                                                                                     |
| Maximum admissible current                               | 20 A ≤ 10 ms                                                                                                  |
| Minimum breaking current                                 | 10 mA                                                                                                         |
| Leakage current                                          | < 5 mA                                                                                                        |
| Voltage breaking capacity                                | 250 V AC/ DC                                                                                                  |
| Maximum voltage drop at terminals                        | 3 wire 4V - 2 wire 8V                                                                                         |
| Electrical life (operations)                             | 10 <sup>8</sup>                                                                                               |
| Mechanical life (operations)                             | 10 <sup>8</sup>                                                                                               |
| Breakdown voltage acc. to IEC/EN 60664-1, IEC/EN 60255-5 | 2.5 kV to 1 mA / 1 min                                                                                        |
| Input type                                               | Volt-free contact<br>3-wire PNP output control option residual voltage : 0.4V whatever the timer power supply |

| General characteristics                                                                         |                                                                                                |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Conformity to standards                                                                         | IEC/EN 61812-1<br>IEC/EN 61000-6-1<br>IEC/EN 61000-6-2<br>IEC/EN 61000-6-3<br>IEC/EN 61000-6-4 |
| Certifications                                                                                  | CE, UL, cUL, CSA, GL                                                                           |
| Temperature limits use (°C)                                                                     | -20 →+60                                                                                       |
| Temperature limits stored (°C)                                                                  | -30 →+60                                                                                       |
| Installation category<br>(acc. to IEC/EN 60664-1)                                               | Voltage surge category                                                                         |
| Creepage distance and clearance acc. to IEC/EN 60664-1                                          | 4 kV / 3                                                                                       |
| Protection (IEC/EN 60529)                                                                       | IP 20<br>IP 40                                                                                 |
| Degree of protection acc. to IEC/EN 60529 Front face<br>(except Tk2R1)                          | IP 50                                                                                          |
| Vibration resistance<br>acc. to IEC/EN 60068-2-6                                                | f = 10 ■ 55 Hz<br>A = 0,35 mm                                                                  |
| Relative humidity no condensation acc. to IEC/EN 60068-2-30                                     | 93 % sans condensation                                                                         |
| Electromagnetic compatibility - Immunity to electrostatic<br>discharges acc to IEC/EN 61000-4-2 | Level III (Air 8 KV / Contact 6 KV)                                                            |
| Immunity to radiated, radio-frequency, electromagnetic<br>field acc. IEC/EN 61000-4-3           | Level III 10V/m (80 M Hz to 1 G Hz)                                                            |
| Immunity to rapid transient bursts acc. to IEC/EN 61000-4-4                                     | Level III (direct 2kV / Capacitive coupling clamp 1 KV)                                        |
| Immunity to shock waves on power supply acc. to IEC/EN 61000-4-5                                | Level III (2 KV / common mode 2 KV/residual current mode 1KV)                                  |
| Immunity to radio frequency in common mode acc. to IEC/EN 61000-4-6                             | Level III (10V rms : 0.15 M Hz to 80 M Hz)                                                     |
| Immunity to voltage dips and breaks acc. to IEC/EN 61000-4-11                                   | 30 %/10 ms<br>60 %/100 ms ><br>95 %/5 s                                                        |
| Mains-borne and radiated emissions acc. to EN 55022 (CISPR22), EN55011 (CISPR11)                | Class B                                                                                        |
| Fixing : Symmetrical DIN rail                                                                   | 35 mm                                                                                          |
| Connection capacity - without ferrule                                                           | 2 x 2,5 mm <sup>2</sup>                                                                        |
| Connection capacity - with ferrule                                                              | 2 x 1,5 mm <sup>2</sup>                                                                        |
| Spring terminals, 2 terminals per connection point - flexible wire                              | 1,5 mm <sup>2</sup>                                                                            |
| Spring terminals, 2 terminals per connection point - rigid wire                                 | 2,5 mm <sup>2</sup>                                                                            |
| Housing material                                                                                | Self-extinguishing                                                                             |
| Weight : casing 17,5 mm                                                                         | 60 g                                                                                           |
| Weight : casing 22,5 mm                                                                         | 90 g                                                                                           |
| Weight : plug-in casing                                                                         | 80 g                                                                                           |

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Display

State displayed by 2 LEDs

- Flashing green when on
- Relay LED yellow during timing

Green LED operation indicator

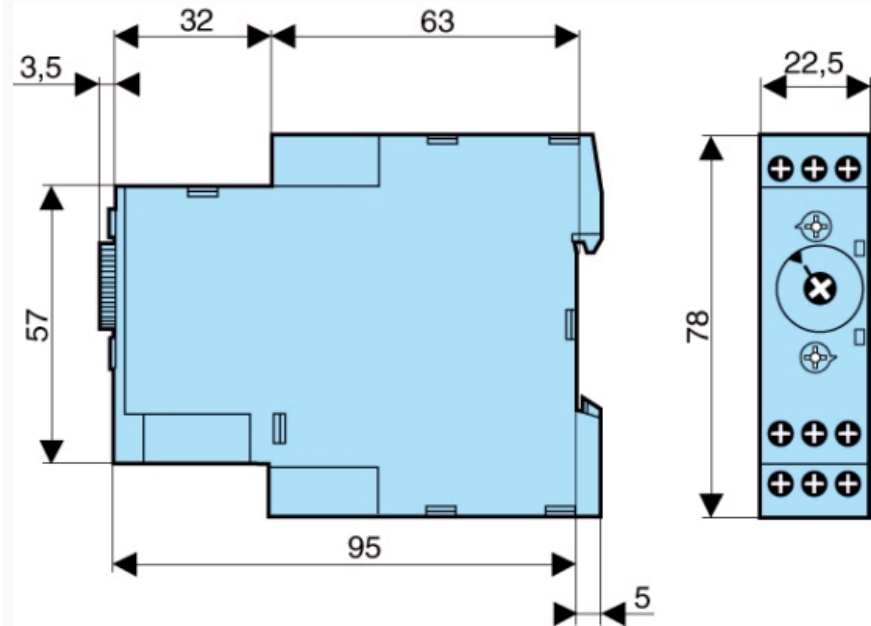
Pulsing :

- Timer on, no timing in process

Permanently lit :

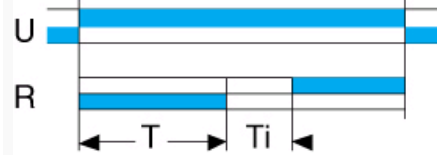
- Relay waiting, no timing in process

Dimensions (mm)



Curves

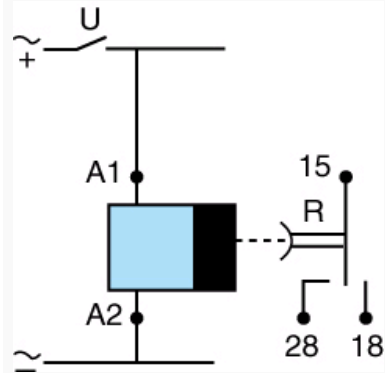
Function Q - 1 relay output



|            |
|------------|
| Function Q |
| Star-delta |

Connections

1 changeover relay output



|          |
|----------|
| Function |
| Q        |