

## DIN Rail Mount 22.5 mm TLR1 Part number 88865155



- Product with 1 relays (88 865 100/103/105/115/125/135/145/155/185/503) :  
Replaced by the 17,5 mm range  
For instance : previous part number 88 865 XXX / new part number 88 827 XXX
- Product with 2 relays (88 865 175/176/215/300/303/305/385) :  
Just one digit differentiates the new range part number from the old range's  
For instance : previous part number : 88 865 XXX / new part number : 88 866 XXX

### Part numbers

|            | Type | Functions | Timing    | Output             | Nominal rating | Connections     | Supply voltage         |
|------------|------|-----------|-----------|--------------------|----------------|-----------------|------------------------|
| 88 865 155 | TLR1 | Li - L    | 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   |
| <b>Supply</b>   |   |
| 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 discharges acc to IEC/EN 61000-4-2 | Level III (Air 8 KV / Contact 6 KV)  |
| Immunity to radiated, radio-frequency, electromagnetic 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

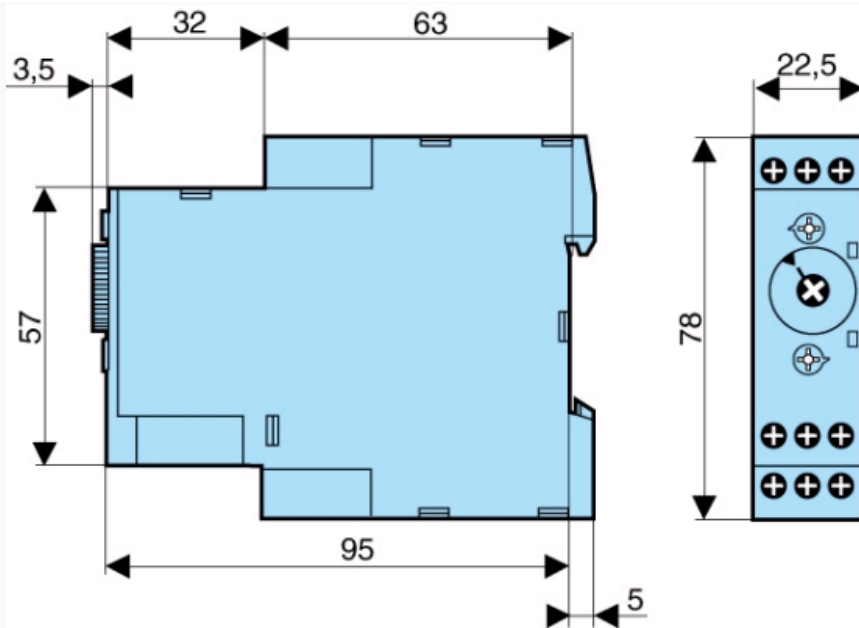
Pulsing :

- Timer on, no timing in process

Permanently lit :

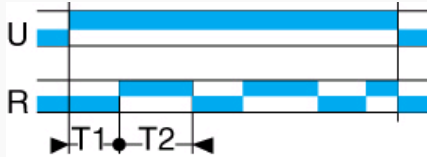
- Relay waiting, no timing in process

**Dimensions (mm)**



### Curves

#### Function L - 1 relay output



#### Function L

Asymmetrical recycler  
Pause start

### Curves

#### Function Li - 1 relay output

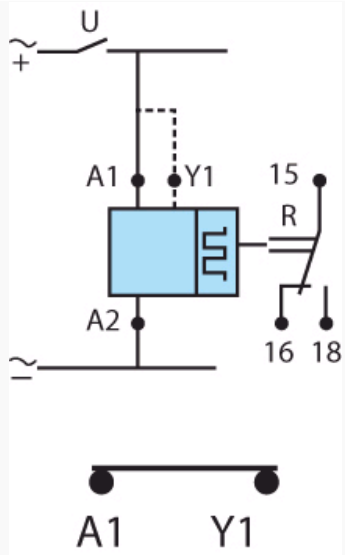


#### Function Li

Asymmetrical recycler  
Pulse start

### Connections

1 changeover relay output

**Functions**

Li - L