

- › **MAR1**
- › **Timers**
- › **DIN rail mount**
- › **17.5 mm - 1 Relay 8A**

- › Multi-function or mono-function
- › Multi-range
- › Multi-voltage
- › Screw or spring terminals
- › LED status indicator (relay version)
- › Possibility of external load connection in parallel to the control input
- › 3-wire PNP sensor compatible



| Specifications | | | | | | |
|----------------|--------------|--------------------|----------------|-----------------|------------------------|----------|
| Functions | Timing | Output | Nominal rating | Connections | Supply voltage | Code |
| A - At | 0,1 s →100 h | 1 changeover relay | 8 A | Screw terminals | 24 V DC / 24 →240 V AC | 88827115 |

| Timing | |
|---|--|
| Timing ranges (7 ranges) | 1 s - 10 s - 1 min - 10 min - 1 h - 10 h - 100 h |
| Repetition accuracy with constant parameters | ± 0.5% (IEC/EN 61812-1) |
| Drift Temperature | ± 0,05% / °C |
| Drift Voltage | ± 0,2% / V |
| Display accuracy according to IEC/EN 61812-1 | ± 10% / 25 °C |
| Immunity from micro power cuts : typical | < 10 ms |
| 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) | 120 ms |
| Maximum reset time by de-energisation typically (solid state version) | 350 ms |

| Supply | |
|----------------------------|---|
| Multi-voltage power supply | Depending on version |
| Frequency (Hz) | 50 / 60 |
| Operating factor | 100% |
| Operating range | 85 →110% Un 85 →120% Un for 12 V AC / DC |
| Max. absorbed power | 32 VA (240 VAC) 1,5 W (240 VDC) 0,6 W (24 VDC) 0,7 VA (12 VAC) 0,7 W (12 VDC) |

| Output specification | |
|----------------------|--------------|
| Rated power | 2000 VA/80 W |

| Output specification | |
|--|---|
| Maximum breaking current | 8 AAC 250 VAC resistive 8 ADC 30 VDC resistive |
| Minimum breaking current | 10 mA / 5 VDC |
| Voltage breaking capacity | 250 VAC / 8 AAC resistive 250 VDC / 0,3 A resistive |
| Electrical life (operations) | 10 ⁵ 8 A 250 VAC resistive |
| Mechanical life (operations) | 10 x 10 ⁶ |
| 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 |
| 1 or 2 changeover relays, AgNi (cadmium-free) | 1 C/O |
| General characteristics | |
| Conformity to standards | IEC/EN 61812-1 IEC/EN 61000-6-1 IEC/EN 61000-6-2 IEC/EN 61000-6-3 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 (acc. to IEC/EN 60664-1) | Voltage surge category III |
| Creepage distance and clearance acc. to IEC/EN 60664-1 | 4 kV / 3 mm |
| Protection (IEC/EN 60529) | IP20 IP40 |
| Degree of protection acc. to IEC/EN 60529 Front face | IP50 |
| Vibration resistance acc. to IEC/EN 60068-2-6 | 20 m/s ² 10 Hz →150 Hz |
| Relative humidity no condensation acc. to IEC/EN 60068-2-30 | 93 % non-condensing |
| 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 I (1 V/m : 2,0 G Hz →2,7 G Hz) Level II (3 V/m : 1,4 G Hz →2,0 G Hz) Level III (10 V/m : 80 M Hz →1 G Hz) |
| Immunity to rapid transient bursts acc. to IEC/EN 61000-4-4 | Level III (direct 2 kV / 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 1 kV) |
| 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 | 0% residual voltage, 1 cycle 70% residual voltage, 25/30 cycles |
| Mains-borne and radiated emissions acc. to EN 55022 (CISPR22), EN55011 (CISPR11) | Class B |
| Fixing : Symmetrical DIN rail | 35 mm |
| Terminal capacity Single-wire without ferrule | 1 x 0,5 →3,3 mm ² (AWG 20 →AWG 12) 2 x 0,5 →2,5 mm ² (AWG 20 →AWG 14) |
| Terminal capacity Multi-wire with ferrule | 1 x 0,5 →2,5 mm ² (AWG 20 →AWG 14) 2 x 0,5 →1,5 mm ² (AWG 20 →AWG 16) |
| Housing material | Self-extinguishing |
| Shock test IEC/EN 60068-2-27 | 15 g - 11 ms |
| Short interruption on power line acc to IEC/EN 61000-4-11 | 0% residual voltage, 250/300 cycles |
| Spring terminals, 2 terminals per connection point - flexible wire | 2 x 0,5 →1,5 mm ² (AWG 20 →AWG 16) |
| Spring terminals, 2 terminals per connection point - rigid wire | 2 x 0,5 →1,5 mm ² (AWG 20 →AWG 16) |

| General characteristics | |
|---|---|
| Weight : casing 17,5 mm | 88827105 (MUR1) : 63 g 88827115 (MAR1) : 63 g 88827125 (MBR1) : 63 g 88827135 (MCR1) : 62 g 88827145 (MHR1) : 63 g 88827150 (MLR4) : 63 g 88827155 (MLR1) : 64 g 88827100 (MUR4) : 62 g 88827103 (MUR3) : 66 g 88827503 (MURc3) : 59 g 88827150 (MLR4) : 63 g 88827185 (MXR1) : 63 g 88827004 (MUS2) : 55 g 88827014 (MAS5) : 53 g 88827044 (MHS2) : 53 g 88827054 (MLS2) : 56 g |
| Insulation resistance according to IEC/EN 60664-1 | 100 MOhm(s) (500 V DC) |

| Dimensions | |
|------------|--|
| | |

| Curves | |
|---|--|
| Function A Delay on energisation 1 relay | |
| Function At Timing on energisation with memory 1 relay | |

| Connections | |
|---------------------------|--|
| 1 changeover relay output | |

