

BM2R

Timers

Syrline

17.5 mm - 2 Relay 8A

- › Multi-function or mono-function
- › Multi-range (12 function)
- › Multi-voltage 12 →240 V AC/DC
- › LED status indicator (relay version)
- › Possibility of external load connection in parallel to the control input
- › 3-wire PNP sensor compatible



SYR-LINE

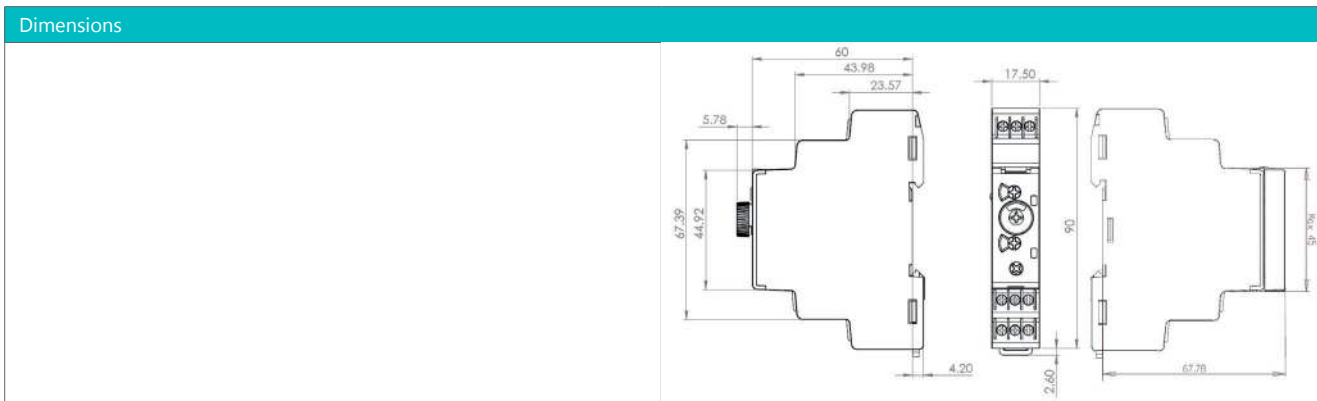
| Specifications | | | | | | |
|---|----------------|---------------------|----------------|-----------------|----------------|-----------|
| Functions | Delay | Output | Nominal rating | Connections | Supply voltage | Code |
| A - Ac - At - B - C - D - Di - H - Ht - N - TL - Tt | 0,5 s →10 days | 2 changeover relays | 2 x 8 A | Screw terminals | 12 →240 V ~/∞ | BM2R08MV1 |

| Output relay | |
|---|---|
| Contact arrangement | 2 CO (SPDT) (ChangeOver -Simple Pole Double Throw-) R1: Follow timing function R2: Follow timing function / Instantaneous |
| Maximum switching voltage | 250 VAC / 8 A resistive / 250 VDC / 0.3 A resistive |
| Switching current rate (resistive) | NO / NC : 8A 250 V AC / 8 A 30 VDC @ 25°C NO / NC : 5A 250 V AC / 5 A 30 VDC @ 60°C |
| Minimum switching contact | 10 mA / 5 VDC |
| Maximum switching power (resistive) | 2000 VA / 80 W @ 25°C |
| Electrical life | 10 ⁵ cycles min at 250 VAC/ 8 A resistive |
| Maximum rate (at max switching power) | 360 cycles /hour |
| Mechanical life | 10 x 10 ⁶ cycles |
| Rated impulse voltage | 5 kV (1.2/50µs) |
| Dielectric strength between coil / contacts | IEC 60664-1: 5 kV /1 min / 1 mA / 50 Hz |
| Dielectric strength between open contacts | 2.5 kV /1 min / 1 mA / 50 Hz |

| Timing | |
|---|--|
| Timing ranges (7 ranges) | 0.5→10s, 0.05→1min, 0.5→10min, 0.05→1h, 0.5→10h, 0.05→1day, 0.5→10days |
| Minimum pulse duration typically (relay version) | IEC 1812-1: 30 ms 100 ms with load |
| Maximum reset time by de-energisation typically (relay version) | IEC 1812-1: 120 ms |
| Repeatability | IEC 1812-1: ≤ ± 0,5 % |
| Repetition accuracy with constant parameters | IEC 1812-1: ≤ ± 10 % |
| Drift Temperature | ≤ ± 0.05% / °C |
| Voltage-dependent drift | ≤ ± 0.2% / V |

| Supply | |
|--|--|
| Multi-voltage power supply | 12→240 V \sim /V $\overline{\text{m}}$ |
| Operating range | 15 %, +10 % |
| Operating frequency (Hz) | 50 / 60 Hz \pm 5 % |
| Galvanic isolation | No |
| Max. absorbed power | Approx. 3 VA (V \sim) 1.5 W (V $\overline{\text{m}}$) |
| Immunity from micro power cuts | 10 ms |
| General characteristics | |
| Insulation voltage, IEC 60664-1 | 300 V |
| Installation category (acc. to IEC/EN 60664-1) | Overvoltage category III; pollution degree 2 |
| Impulse voltage CEI/EN 60664-1 | 4 kV (1,2 / 50 μ s) |
| Clearance / Creepage distances | IEC 60664-1: 3 mm / 3.2 mm |
| Breakdown voltage | EN-61812-1: 2,5 kV / 1 min / 1 mA / 50 Hz |
| Insulation resistance | NFC 93 050: > 500 M Ω / 250 V $\overline{\text{m}}$ / 1min |
| Status indication | Un: green LED blinks when count, continuous ON when supplied R: yellow LED continuous ON when the relay is ON |
| Casing | DIN 43880: 17,5 mm |
| Fixing: Symmetrical DIN rail | EN 50022: 35 mm |
| Mounting position | All positions |
| Housing material | Enclosure plastic type UL94 - V0 |
| Protection (IEC/EN 60529) | Housing: IP40 / Terminal block: IP20 |
| Terminal capacity Single-wire without ferrule | IEC 60947-1 1 x 0.5 →3.3 mm ² (AWG 20 →AWG 12) 2 x 0.5 →1.5 mm ² (AWG 20 →AWG 16) |
| Max. tightening torque (Nm) | IEC 60947-1: 0,5 N.m / 4,4 lbf.in |
| Operating temperature range (°C) | IEC 60068-2: -20 °C →+60 °C |
| Storage temperature range (°C) | IEC 60068-2: -40 °C →+70 °C |
| Relative humidity no condensation acc. to IEC/EN 60068-2-30 | 93 % without condensation |
| Vibration resistance according to IEC/EN 60068-2-6 | \pm 0.15 mm from 10 Hz →60 Hz 2g from 60 Hz →150 Hz |
| Impact resistance | IEC 60068-2-27 15gn - 11ms; 3 x 6 axis (output OFF) 5gn - 11ms; 3 x 6 axis (Output ON) |
| Drop to concrete floor | IEC 60068-2-32 High: 0.75m |
| Weight: casing 17,5 mm | 70 g 80 g with packaging |
| Directives | 2014/30/EU: EMC 2014/35/EU: low voltage |
| Certifications | CE - cULus Listed Industrial Control Equipment - CCC |
| Conformity to standards | CEI 60664-1: Insulation coordination for equipment within low-voltage systems CEI 61812-1/ Specified time relays for industrial use UL 60947-4-1/ Industrial Control Equipment (NRNT- Industrial Control Switches) |
| Conformity with environmental directives | 2015/863/UE: RoHS 1907/2006: Reach 2012/19/UE: WEEE |
| Electromagnetic compatibility IEC 61000-6-2, IEC 61000-6-3, IEC 61000-6-4 | Immunity for industrial environment Emission residential environment Emission industrial environment |
| Electromagnetic compatibility - Immunity to electrostatic discharges acc to IEC/EN 61000-4-2 | Level III Air \pm 8 KV / Contact \pm 6 KV |

| General characteristics | |
|--|--|
| Immunity to radiated, radio-frequency, electromagnetic field acc. IEC/EN 61000-4-3 | Level III 10 V/m (80 M Hz to 1 G Hz) 80% AM (1 k Hz) 3 V/m (1,4 →2 G Hz) 80% AM (1K Hz) 1V/m (2 →2.7 G Hz) 80% AM (1K Hz) |
| Immunity to rapid transient bursts acc. to IEC/EN 61000-4-4 | Level III direct ± 2 kV (power supply) / capacitive coupling clamp ± 1 kV (command input and outputs) |
| Immunity to shock waves on power supply acc. to IEC/EN 61000-4-5 | Level III line-to-earth ± 2 kV / line-to-line ± 1kV |
| Immunity to radio frequency in common mode acc. to IEC/EN 61000-4-6 | Level III 10 Vrms (0,15 →80 M Hz) 80% AM (1 k Hz) |
| Immunity to voltage dips and breaks acc. to IEC/EN 61000-4-11 | Industrial Class II: 0% residual voltage during 1cycle a.c. power ports 70% residual voltage during 25/30 cycles a.c. power ports 0% residual voltage, 250/300 cycles a.c. power ports Residential: 0% residual voltage during 10 cycle a.c.power ports 40% residual voltage during 10 cycles a.c. power ports 70% residual voltage during 10 cycles a.c. power ports 0% residual voltage, 250/300 cycles a.c. power ports |
| Mains-borne and radiated emissions acc. to EN 55022 (CISPR22), EN55011 (CISPR11) | EN 55022 / CISPR22 Class B (IT equipment) EN 55011 / CISPR11 Class B, Group 1 (Medical equipment) |



| Curves | |
|---|--|
| Function A Delay on energisation R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function Ac Timing after closing and opening of control contact R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function At Timing on energisation with memory R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function B Timing on impulse one shot R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function C Timing after impulse R1: Follow timing function R2: Follow timing function / Instantaneous | |

| Curves | |
|---|--|
| Function D Flip-flop Pause start R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function Di Flip-flop Pulse start R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function H Timing on energisation R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function Ht Delay on energisation with memory R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function N Watchdog R1: Follow timing function R2: Follow timing function / Instantaneous | |
| Function TL Impulse relay R1: Follow timing function R2: Follow timing function | |

| Connections | |
|---------------------------|--|
| 2 changeover relay output | |