

RE17RMMUS

Harmony, Modular timing relay, 8 A, 1 CO, 1 s..100 h, multifunction, spring terminals, 24 V DC / 24...240 V AC/DC



Main

| | |
|---------------------------|---|
| Range of product | Harmony Timer Relays |
| Product or component type | Multifunction relay |
| Discrete output type | Relay |
| Width | 17.5 mm |
| Device short name | RE17R |
| Time delay type | Power on-delay On-delay and off-delay Interval Off-delay Symmetrical flashing |
| Time delay range | 6...60 min 1...10 h 0.1...1 s 1...10 s 1...10 min 10...100 h 6...60 s |
| Nominal output current | 8 A |

Complementary

| | |
|--------------------------------|---|
| Contacts type and composition | 1 C/O |
| Contacts material | Cadmium free |
| Height | 90 mm |
| Depth | 72 mm |
| Control type | Selector switch front panel |
| [Us] rated supply voltage | 24...240 V AC 50/60 Hz 24 V DC |
| Voltage range | 0.85...1.1 Us |
| Supply frequency | 50...60 Hz +/- 5 % |
| Release of input voltage | 10 V |
| Connections - terminals | Spring terminals, 2 x 0.2...2 x 1.5 mm ² (AWG 24...AWG 16) solid without cable end Spring terminals, 2 x 0.2...2 x 1.5 mm ² (AWG 24...AWG 16) flexible without cable end |
| Housing material | Self-extinguishing |
| Repeat accuracy | +/- 0.5 % conforming to IEC 61812-1 |
| Temperature drift | +/- 0.05 %/°C |
| Voltage drift | +/- 0.2 %/V |
| Setting accuracy of time delay | +/- 10 % of full scale at 25 °C conforming to IEC 61812-1 |
| Control signal pulse width | 100 ms with load in parallel typical 30 ms typical |
| Insulation resistance | 100 MOhm at 500 V DC conforming to IEC 60664-1 |
| Reset time | 120 ms on de-energisation typical |
| On-load factor | 100 % |
| Power consumption in VA | 0...32 VA at 240 V AC |
| Maximum power consumption in W | 0.6 W at 24 V DC |
| Minimum switching current | 10 mA at 5 V DC |
| Maximum switching current | 8 A AC/DC |
| Maximum switching voltage | 250 V AC |

| | |
|--|---|
| Breaking capacity | 2000 VA |
| Operating frequency | 10 Hz |
| Electrical durability | 100000 cycles (8 A at 250 V AC maximum) for resistive load |
| Mechanical durability | 10000000 cycles |
| Dielectric strength | 2.5 kV 1 mA/1 minute 50 Hz conforming to IEC 61812-1 |
| [Uimp] rated impulse withstand voltage | 5 kV during 1.2/50 µs |
| Power on delay | 100 ms |
| Marking | CE |
| Creepage distance | 4 kV/3 conforming to IEC 60664-1 |
| Safety reliability data | B10d = 270000 MTTFd = 296.8 years |
| Mounting position | Any position in relation to normal vertical mounting plane |
| Mounting support | 35 mm DIN rail conforming to EN/IEC 60715 |
| Local signalling | LED indicator for on steady: relay energised, no timing in progress LED indicator for flashing: timing in progress 80 % ON and 20 % OFF LED indicator for pulsing: relay de-energised, no timing in progress (except function Di-D, Li-L) 5 % ON and 95 % OFF |
| Net weight | 0.06 kg |
| Time delay type | A, Ac, At, B, Bw, C, D, Di, H, Ht |
| Functionality | Multifunction |
| Compatibility code | RE17 |

Environment

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|---------------------------------------|--|
| Immunity to microbreaks | 20 ms |
| Standards | 2006/95/EC 2004/108/EC IEC 61812-1 EN 61000-6-2 EN 61000-6-3 EN 61000-6-4 EN 61000-6-1 |
| Product certifications | CSA CULus DNV-GL EAC CCC |
| Ambient air temperature for storage | -30...60 °C |
| Ambient air temperature for operation | -20...60 °C |
| IP degree of protection | IP20 (terminal block) conforming to IEC 60529 IP40 (housing) conforming to IEC 60529 IP50 (front panel) conforming to IEC 60529 |
| Vibration resistance | 20 m/s ² (f= 10...150 Hz) conforming to IEC 60068-2-6 |
| Shock resistance | 15 gn for 11 ms conforming to IEC 60068-2-27 |
| Relative humidity | 93 % without condensation conforming to IEC 60068-2-30 |
| Electromagnetic compatibility | Electrostatic discharge immunity test: (in contact), level 3, 6 kV, conforming to IEC 61000-4-2 Electrostatic discharge immunity test: (in air), level 3, 8 kV, conforming to IEC 61000-4-2 Susceptibility to electromagnetic fields: (80 MHz to 1 GHz), level 3, 10 V/m, conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test: (capacitive connecting clip), level 3, 1 kV, conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test: (direct), level 3, 2 kV, conforming to IEC 61000-4-4 1.2/50 µs shock waves immunity test: (differential mode), level 3, 1 kV, conforming to IEC 61000-4-5 1.2/50 µs shock waves immunity test: (common mode), level 3, 2 kV, conforming to IEC 61000-4-5 Conducted RF disturbances: (0.15...80 MHz), level 3, 10 V, conforming to IEC 61000-4-6 Voltage dips and interruptions immunity test: (1 cycle), 0 %, conforming to IEC 61000-4-11 Voltage dips and interruptions immunity test: (25/30 cycles), 70 %, conforming to IEC 61000-4-11 Conducted and radiated emissions: , class B, conforming to EN 55022 |

Packing Units

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|------------------------------|----------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 70.0 g |
| Package 1 Height | 2.8 cm |
| Package 1 width | 7.5 cm |
| Package 1 Length | 9.5 cm |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 40 |
| Package 2 Weight | 3.408 kg |
| Package 2 Height | 15 cm |
| Package 2 width | 30 cm |
| Package 2 Length | 40 cm |

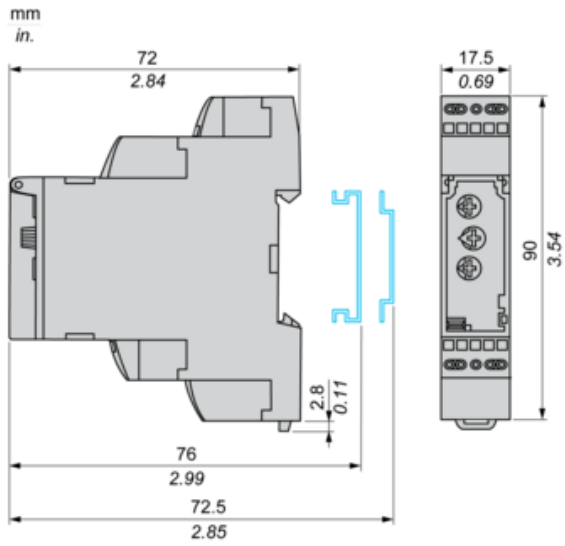
Offer Sustainability

| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS Declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

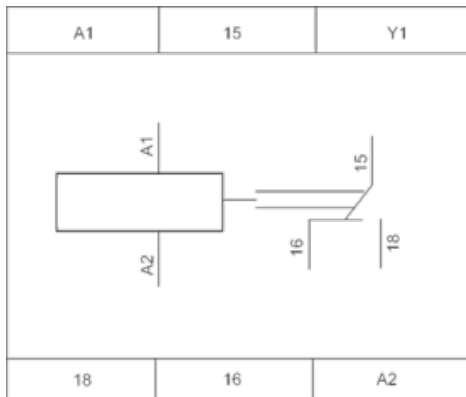
Contractual warranty

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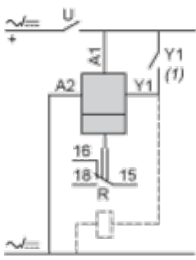
Dimensions



Internal Wiring Diagram



Wiring Diagram



1) Contact Y1:

- Control for functions B, C, Ac, Bw, Ad, Ah, N, O, W, T, Tt.
- Partial stop for functions At, Ht and Pt.
- Function D if Di selected.
- Not used for functions A, H and P.

Function A : Power on Delay Relay

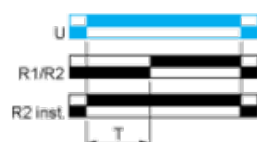
Description

The timing period T begins on energisation. After timing, the output(s) R close(s). The second output can be either timed or instantaneous.

Function: 1 Output



Function: 2 Outputs



2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function Ac: On-Delay & Off-Delay with Control Signal

Description

After energisation of power supply and energization of Y1 causes the timing period T to start.

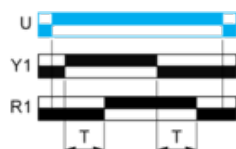
At the end of this timing period, the output(s) R close(s).

When deenergization of Y1, the timing T starts.

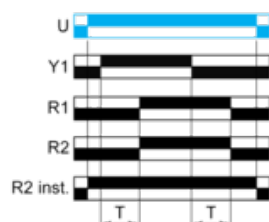
At the end of this timing period T, the output(s) R revert(s) to its/their initial position.

The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

Function: 1 Output



Function: 2 Outputs

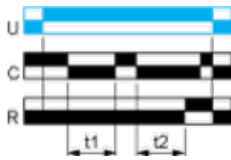


Function At : Power on Delay Relay (Summation) with Control Signal

Description

After power-up, the first opening of control contact C starts the timing. Timing can be interrupted each time control contact closes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output relay closes.

Function: 1 Output



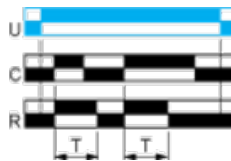
$$T = t_1 + t_2 + \dots$$

Function B : Interval Relay with Control Signal

Description

After power-up, pulsing or maintaining control contact C starts the timing T. The output R closes for the duration of the timing period T then reverts to its initial state.

Function: 1 Output



Function Bw : Double Interval Relay with Control Signal

Description

On closing and opening of control contact C, the output R closes for the duration of the timing period T.

Function: 1 Output

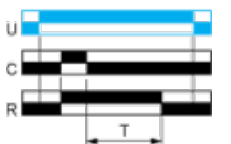


Function C : Off-Delay Relay with Control Signal

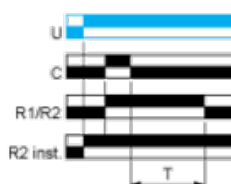
Description

After power-up and closing of the control contact C, the output R closes. When control contact C re-opens, timing T starts. At the end of the timing period, the output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

Function: 1 Output



Function: 2 Outputs



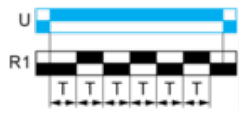
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function D: Symmetrical Flashing Relay (Starting Pulse Off)

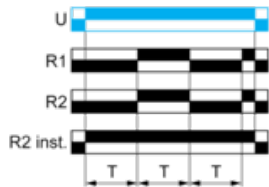
Description

On energisation of power supply, output(s) R starts at its/their initial state for timing duration T then change(s) to output(s) R close(s) for the same timing duration T. This cycle is repeated indefinitely until power supply removal. Specially for RE17*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU, this D function can only be initiated by energizing Y1 permanently. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

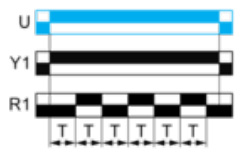
Function: 1 Output



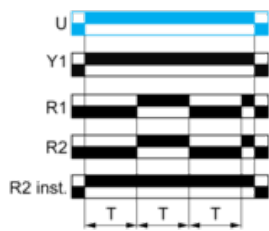
Function: 2 Outputs



Function: 1 Output with Retrigger / Restart Control



Function: 2 Output with Retrigger / Restart Control



Function Di : Symmetrical Flasher Relay (Starting Pulse On)

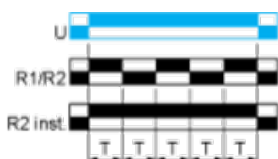
Description

Repetitive cycle with two timing periods T of equal duration, with output(s) R changing state at the end of each timing period T. The second output can be either timed or instantaneous.

Function: 1 Output



Function: 2 Outputs



2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function H : Interval Relay

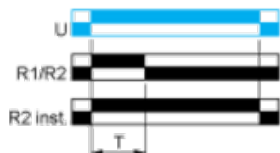
Description

On energisation of the relay, timing period T starts and the output(s) R close(s). At the end of the timing period T, the output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

Function: 1 Output



Function: 2 Outputs



2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function Ht: Interval Relay & With Pause / Summation Control

Description

On energisation of power supply, output(s) R close(s) and timing period T starts.

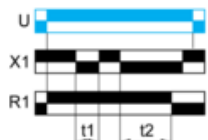
The timing can be interrupted / paused each time X1 energizes.

When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state. Reenergization of X1 will also cause output(s) R close(s) if the time has elapsed and restart the same operation as described at the beginning.

Except for RE17*, RE22R2MMW, RENF22R2MMW, RE22R2MMU and RE22R2MJU, timing can be interrupted / paused each time Y1 energizes.

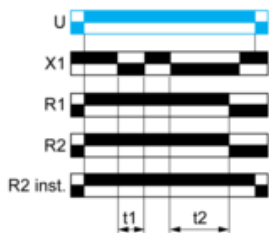
The second output (R2) can be either timed (when set to "TIMED" or instantaneous (when set to "INST").

Function: 1 Output



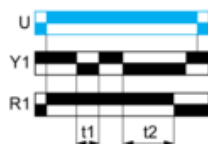
$T = t1 + t2 + \dots$

Function: 2 Outputs



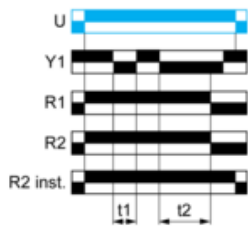
$T = t1 + t2 + \dots$

Function: 1 Output with Retrigger / Restart Control



$T = t1 + t2 + \dots$

Function: 2 Outputs with Retrigger / Restart Control



$$T = t1 + t2 + \dots$$

Legend

Relay de-energised

Relay energised

Output open

Output closed

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|----------|--|
| C | Control contact |
| G | Gate |
| R | Relay or solid state output |
| R1/R2 | 2 timed outputs |
| R2 inst. | The second output is instantaneous if the right position is selected |
| T | Timing period |
| Ta - | Adjustable On-delay |
| Tr - | Adjustable Off-delay |
| U | Supply |