# Product datasheet

Specifications

## Modular timing relay, 8 A, 1 CO, 1 s..100 h, time delay, 12...240 V AC/DC

**Local distributor code: 397857403** RE17RMMW

## 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<br>On-delay and off-delay<br>Interval<br>Off-delay<br>Symmetrical flashing |
| **Time delay range** | 1...10 h<br>0.1...1 s<br>6...60 s<br>10...100 h<br>6...60 min<br>1...10 s<br>1...10 min |
| **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** | 12...240 V AC/DC 50/60 Hz |
| **Voltage range** | 0.85...1.1 Us |
| **Supply frequency** | 50...60 Hz +/- 5 % |
| **Release of input voltage** | 5 V |
| **Connections - terminals** | Screw terminals, 1 x 0.5...1 x 3.3 mm² (AWG 20...AWG 12) solid without cable end<br>Screw terminals, 2 x 0.5...2 x 2.5 mm² (AWG 20...AWG 14) solid without cable end<br>Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 14) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm² (AWG 24...AWG 16) flexible with cable end |
| **Tightening torque** | 0.6…1 N.m conforming to IEC 60947-1 |
| **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<br>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…3 VA at 240 V AC |
| **Maximum power consumption in W** | 1.5 W at 240 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** | MTTFd = 296.8 years<br>B10d = 270000 |
| **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<br>LED indicator for flashing: timing in progress 80 % ON and 20 % OFF<br>LED indicator for pulsing: relay de-energised, no timing in progress (except function Di-D, Li-L) 5 % ON and 95 % OFF |
| **Net weight** | 0.07 kg |
| **Time delay type** | A, Ac, At, B, Bw, C, D, Di, H, Ht |
| **Functionality** | Multifunction |
| **Compatibility code** | RE17 |

## Environment

| | |
|---|---|
| **Immunity to microbreaks** | 20 ms |
| **Standards** | 2006/95/EC<br>EN 61000-6-3<br>IEC 61812-1<br>EN 61000-6-2<br>EN 61000-6-1<br>2004/108/EC<br>EN 61000-6-4 |
| **Product certifications** | CSA<br>GL<br>cULus |
| **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<br>IP40 (housing) conforming to IEC 60529<br>IP50 (front panel) conforming to IEC 60529 |
| **Vibration resistance** | 20 m/s² (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<br>Electrostatic discharge immunity test: (in air), level 3, 8 kV, conforming to IEC 61000-4-2<br>Susceptibility to electromagnetic fields: (80 MHz to 1 GHz), level 3, 10 V/m, conforming to IEC 61000-4-3<br>Electrical fast transient/burst immunity test: (capacitive connecting clip), level 3, 1 kV, conforming to IEC 61000-4-4<br>Electrical fast transient/burst immunity test: (direct), level 3, 2 kV, conforming to IEC 61000-4-4<br>1.2/50 µs shock waves immunity test: (differential mode), level 3, 1 kV, conforming to IEC 61000-4-5<br>1.2/50 µs shock waves immunity test: (common mode), level 3, 2 kV, conforming to IEC 61000-4-5<br>Conducted RF disturbances: (0.15...80 MHz), level 3, 10 V, conforming to IEC 61000-4-6<br>Voltage dips and interruptions immunity test: (1 cycle), 0 %, conforming to IEC 61000-4-11<br>Voltage dips and interruptions immunity test: (25/30 cycles), 70 %, conforming to IEC 61000-4-11<br>Conducted and radiated emissions: , class B, conforming to EN 55022 |

## Packing Units

| | |
|---|---|
| **Unit Type of Package 1** | PCE |
| **Number of Units in Package 1** | 1 |
| **Package 1 Weight** | 80.0 g |
| **Package 1 Height** | 2.7 cm |
| **Package 1 width** | 8 cm |
| **Package 1 Length** | 9.5 cm |
| **Unit Type of Package 2** | S02 |
| **Number of Units in Package 2** | 40 |
| **Package 2 Weight** | 3.743 kg |
| **Package 2 Height** | 15 cm |
| **Package 2 width** | 30 cm |
| **Package 2 Length** | 40 cm |
| **Unit Type of Package 3** | P06 |
| **Number of Units in Package 3** | 640 |
| **Package 3 Weight** | 70.0 kg |
| **Package 3 Height** | 75 cm |
| **Package 3 width** | 60 cm |
| **Package 3 Length** | 80 cm |

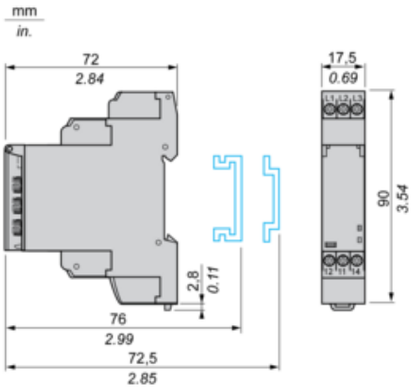
## Offer Sustainability

| | |
|---|---|
| **Sustainable offer status** | Green Premium product |
| **REACh Regulation** | REACh Declaration |
| **EU RoHS Directive** | Pro-active compliance (Product out of EU RoHS legal scope)<br>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 |

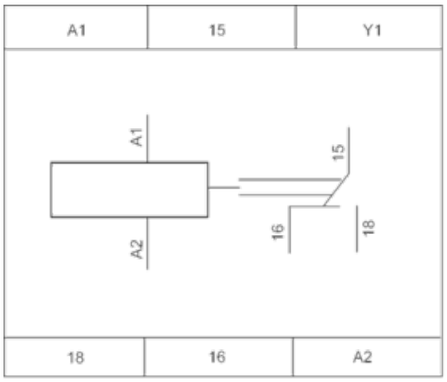
## Contractual warranty

| | |
|---|---|
| **Warranty** | 18 months |

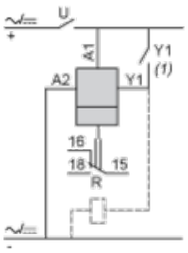
### Width 17.5 mm



## 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.

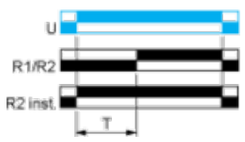
## Function A : Power on Delay Relay

### 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



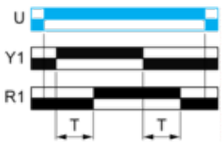

2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

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

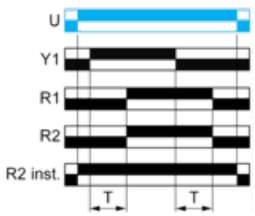
### Description

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

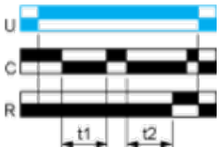


## Function At : Power on Delay Relay (Summation) with Control Signal

### 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 = t1 + t2 +...

## 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.

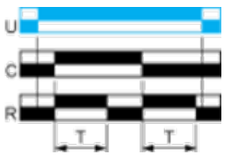
### Function: 1 Output

## 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

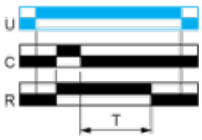


## Function C : Off-Delay Relay with Control Signal

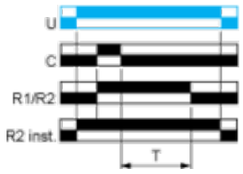
### Description

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.)

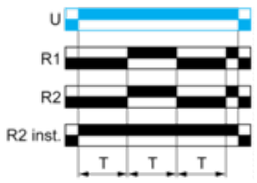
## Function D: Symmetrical Flashing Relay (Starting Pulse Off)

### 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 indefintely 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").

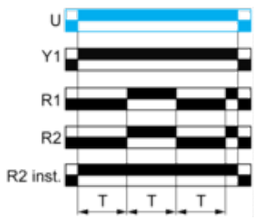
### Function: 1 Output


### 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.)

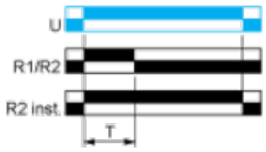
## Function H : Interval Relay

### 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.

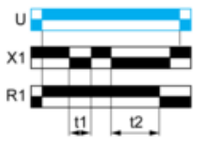
The timing can be interrupted / paused each time X1 energizes.

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.

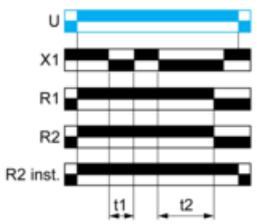
The second output (R2) can be either timed (when set to “TIMED” or instantaneous (when set to “INST”).

### Function: 1 Output



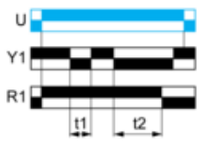

T = t1 + t2 +...

### Function: 2 Outputs



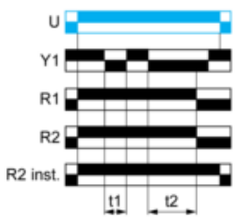

T = t1 + t2 +...

### Function: 1 Output with Retrigger / Restart Control




T = t1 + t2 +...

### Function: 2 Outputs with Retrigger / Restart Control




T = t1 + t2 +...

## Legend

Relay de-energised

Relay energised

Output open

Output closed

| | |
|---|---|
| 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 |