# Product data sheet
## Characteristics

# RE11RMMW
## time delay relay 10 functions - 1 s..100 h - 12..240 V AC/DC - 1 OC

### Main

| | |
|---|---|
| Range of product | Zelio Time |
| Product or component type | Modular timing relay |
| Discrete output type | Relay |
| Component name | RE11R |
| Time delay type | A<br>Ac<br>At<br>B<br>Bw<br>C<br>D<br>Di<br>H<br>Ht |
| Time delay range | 0.1...1 s<br>1...10 h<br>1...10 min<br>1...10 s<br>10...100 h<br>6...60 min<br>6...60 s |
| [Us] rated supply voltage | 12...240 V AC/DC 50/60 Hz |
| Nominal output current | 8 A |

### Complementary

| | |
|---|---|
| Contacts material | AgNi (cadmium free) |
| Width pitch dimension | 17.5 mm |
| Control type | Selector switch on front panel |
| Voltage range | 0.85...1.1 Us |
| Connections - terminals | Screw terminals, clamping capacity: 2 x 1.5 mm² without cable end<br>Screw terminals, clamping capacity: 2 x 2.5 mm² + 1 x 4 mm² with 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 |
| Minimum pulse duration | 100 ms with load in parallel<br>30 ms |
| Maximum reset time | 100 ms on de-energisation |
| On-load factor | 100 % |
| Maximum power consumption | 32 VA 240 V |
| Maximum power consumption | 0.6 W 24 V<br>1.5 W 240 V |
| Minimum switching current | 10 mA |
| Maximum switching current | 8 A |
| Maximum switching voltage | 250 V |
| Breaking capacity | 2000 VA |
| Breaking capacity | 80 W |
| Electrical durability | 100000 cycles 8 A at 250 V resistive |
| Mechanical durability | 5000000 cycles |
| [Uimp] rated impulse withstand voltage | 5 kV for 1.2...50 µs conforming to IEC 60664-1<br>5 kV for 1.2...50 µs conforming to IEC 61812-1 |

| | |
|---|---|
| Marking | CE |
| Creepage distance | 4 kV/3 conforming to IEC 60664-1 |
| Surge withstand | 1 kV (differential mode) conforming to IEC 61000-4-5 level 3<br>2 kV (common mode) conforming to IEC 61000-4-5 level 3 |
| Mounting support | 35 mm symmetrical mounting rail conforming to EN 50022 |
| Local signalling | LED indicator green flashing: timing in progress<br>LED indicator green on steady: relay energised, no timing in progress<br>LED indicator green pulsing: relay energised, no timing in progress (except functions Di-D) |
| Product weight | 0.06 kg |

## Environment

| | |
|---|---|
| Immunity to microbreaks | > 10 ms |
| Dielectric strength | 2.5 kV 1 mA/1 minute 50 Hz conforming to IEC 61812-1 |
| Standards | 73/23/EEC<br>89/336/EEC<br>93/68/EEC<br>EN 50081-1/2<br>EN 50082-1/2<br>IEC 60669-2-3<br>IEC 61812-1 |
| Product certifications | CSA<br>CULus<br>GL |
| 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 | 0.35 mm (f = 10...55 Hz) conforming to IEC 60068-2-6 |
| Relative humidity | 93 % without condensation conforming to IEC 60068-2-3 |
| Resistance to electrostatic discharge | 6 kV (in contact) conforming to IEC 61000-4-2 level 3<br>8 kV (in air) conforming to IEC 61000-4-2 level 3 |
| Resistance to electromagnetic fields | 10 V/m, 80 MHz to 1 GHz conforming to ENV 50140/204 level 3<br>10 V/m, 80 MHz to 1 GHz conforming to IEC 61000-4-3 level 3 |
| Resistance to fast transients | 1 kV, capacitive connecting clip conforming to IEC 61000-4-4 level 3<br>2 kV, direct conforming to IEC 61000-4-4 level 3 |
| Immunity to radioelectric fields | 10 V (0.15...80 MHz) conforming to ENV 50141 (IEC 61000-4-6) |
| Immunity to voltage dips | 30 %/10 ms conforming to IEC 61000-4-11<br>60 %/100 ms conforming to IEC 61000-4-11<br>95 %/5 s conforming to IEC 61000-4-11 |
| Disturbance radiated/conducted | Class B conforming to EN 55022 (EN 55011 group 1) |
| RoHS EUR status | Compliant |
| RoHS EUR conformity date | 0622 |

## Function A: Delay on Energisation

### 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: Timing After Closing and Opening of Control Contact

### Description

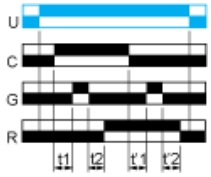
After power-up, closing of the control contact C causes the timing period T to start (timing can be interrupted by operating the Gate control contact G). At the end of this timing period, the relay closes.

When control contact C re-opens, the timing T starts.

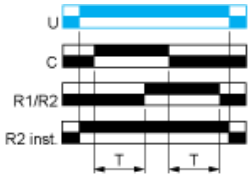
At the end of this timing period T, the output reverts to its initial position (timing can be interrupted by operating the Gate control contact G).

The second output can be either timed or instantaneous.

### Function: 1 Output




### Function: 2 Outputs



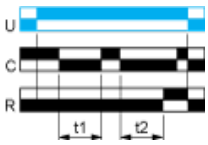

2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

## Function At: Delay on Energisation with Memory

### 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



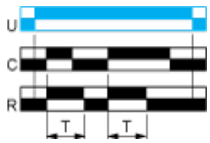

T = t1 + t2 +...

## Function B: Timing on Impulse, One Shot

### 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

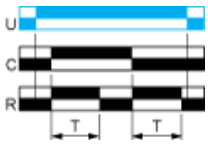



## Function Bw: Pulse Output (Width Adjustable)

### Description

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

### Function: 1 Output

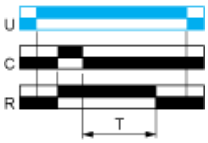



## Function C: Timing After Opening of Control Contact

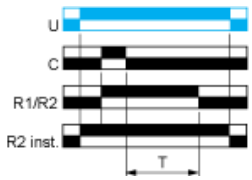
### Description

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, Start with Output in Rest Position

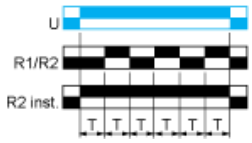
### Description

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 Di: Symmetrical Flashing, Start with Output in Operating Position

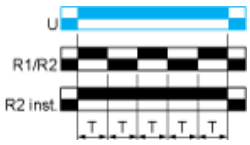
### Description

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.)

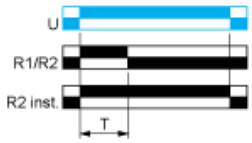
## Function H: Timing on Energisation

### 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: Timing on Energisation with Memory

### Description

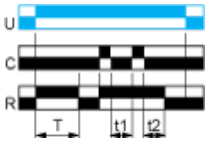
On energisation, the output R closes for the duration of a timing period T then reverts to its initial state.

Pulsing or maintaining control contact C will again close the output R.

Timing T is only active when control contact C is released and so the output R will not revert to its initial state until after a time t1 + t2 +...

The relay memorises the total, cumulative opening time of control contact C and, once the set time T is reached, the output R reverts to its initial state.

## Function: 1 Output




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

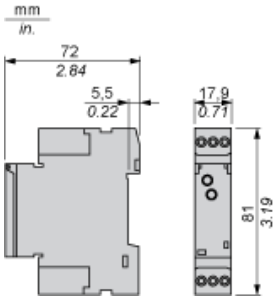
Ta Adjustable On-delay

Tr Adjustable Off-delay

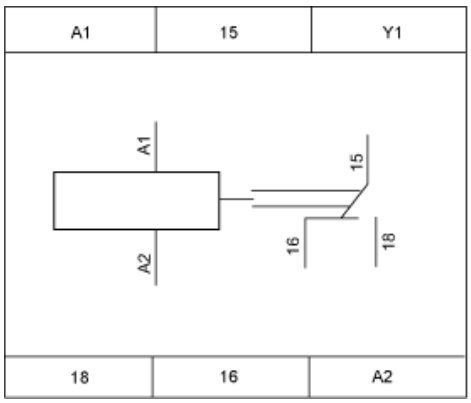
U Supply

# RE11RMMW

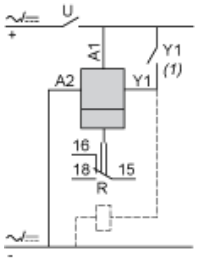
## Width 17.5 mm



## 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.