

# Product data sheet

Specifications



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

RE11RMMWS

ⓘ Discontinued on: 29 January 2021

ⓘ Discontinued

## Main

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

## Complementary

|                                |                                                                               |
|--------------------------------|-------------------------------------------------------------------------------|
| Contacts material              | AgNi (cadmium free)                                                           |
| Width pitch dimension          | 17.5 mm                                                                       |
| Control type                   | Selector switch front panel                                                   |
| Voltage range                  | 0.85...1.1 Us                                                                 |
| Connections - terminals        | Spring terminals, 2 x 1.5 mm² flexible<br>Spring terminals, 2 x 2.5 mm² solid |
| 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                                                  |

|                                        |                                                                                                                                                                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | 30 ms                                                                                                                                                                                                                                      |
| Maximum reset time                     | 100 ms on de-energisation                                                                                                                                                                                                                  |
| On-load factor                         | 100 %                                                                                                                                                                                                                                      |
| Maximum power consumption              | 32 VA at 240 V                                                                                                                                                                                                                             |
| Maximum power consumption              | 0.6 W at 24 V<br>1.5 W at 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 at 8 A, 250 V for resistive load                                                                                                                                                                                             |
| 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) for flashing: timing in progress<br>LED indicator (green) for on steady: relay energised, no timing in progress<br>LED indicator (green) for pulsing: relay energised, no timing in progress (except functions Di-D) |
| Net weight                             | 0.06 kg                                                                                                                                                                                                                                    |

## Environment

|                                       |                                                                                                                                       |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Immunity to microbreaks               | 10 ms                                                                                                                                 |
| Dielectric strength                   | 2.5 kV for 1 mA/1 minute at 50 Hz conforming to IEC 61812-1                                                                           |
| Standards                             | EN 50081-1/2<br>73/23/EEC<br>IEC 61812-1<br>89/336/EEC<br>IEC 60669-2-3<br>EN 50082-1/2<br>93/68/EEC                                  |
| 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/<br>conducted | Class B conforming to EN 55022 (EN 55011 group 1)                                                                                  |

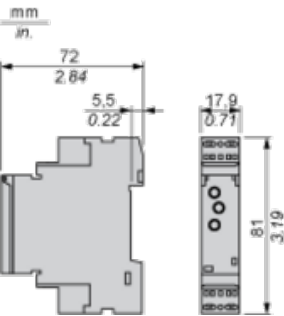
Packing Units

|                  |          |
|------------------|----------|
| Package 1 Weight | 0.072 kg |
| Package 1 Height | 0.240 dm |
| Package 1 width  | 0.800 dm |
| Package 1 Length | 0.860 dm |

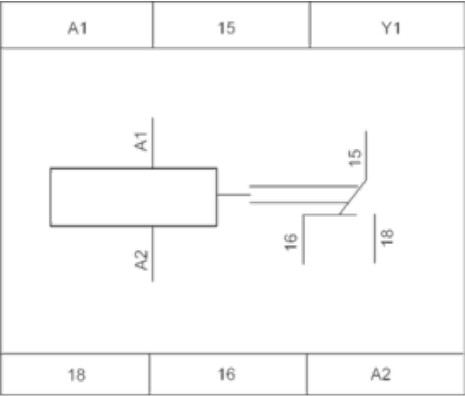
Contractual warranty

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

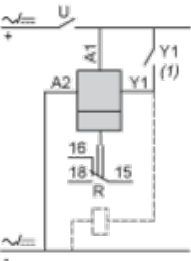
Width 17.5 mm



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

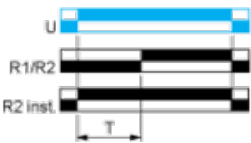
Description

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- and Off-Delay Relay with Control Signal

Description

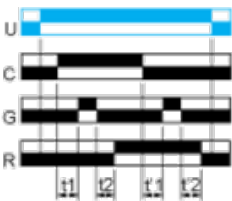
After power-up, closing of the control contact C causes the timing period T to start (timing can be interrupted by operating the Gate control contact G). At the end of this timing period, the relay closes.

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

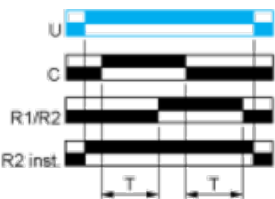
At the end of this timing period T, the output reverts to its initial position (timing can be interrupted by operating the Gate control contact G).

The second output can be either timed or instantaneous.

Function: 1 Output



Function: 2 Outputs



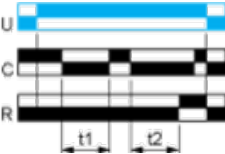
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function At : 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



$T = t1 + t2 + \dots$

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

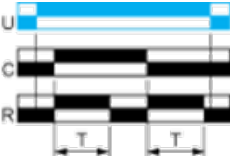


Function Bw : Double Interval Relay with Control Signal

Description

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

Function: 1 Output

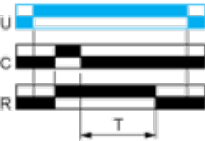


Function C : Off-Delay Relay with Control Signal

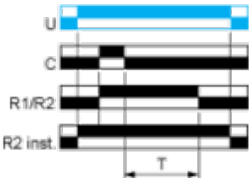
Description

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



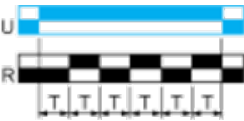
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function D : Symmetrical Flasher Relay (Starting Pulse Off)

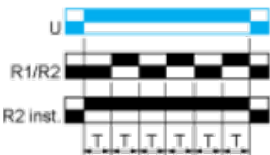
Description

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 Flasher Relay (Starting Pulse On)

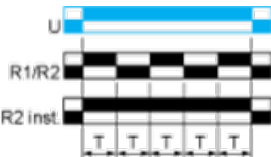
Description

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

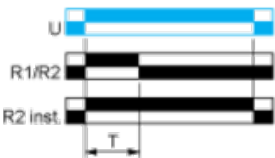
Description

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 (Summation) with Control Signal

Description

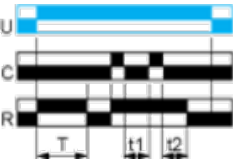
On energisation, the output R closes for the duration of a timing period T then reverts to its initial state.

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  $t_1 + t_2 + \dots$

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



$T = t_1 + t_2 + \dots$

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                                                               |

Recommended replacement(s)

RE11RMMWS is replaced by the following product range:



Harmony Timer Relays

Near Field Communication and conventional Timer Relays (formerly known as Zelio Timer Relays)

Products: 83