

## DIN rail mounted relays



RE17

RE7, RE8, RE9

REXL

## Panel mounted relays



RE48A

## Presentation

A timing relay is a component which is designed to time events in industrial automation systems by closing or opening contacts before, during or after a set timing period.

There are two main 'families' of timing relays:

- "DIN rail mounted" relays (**RE7, RE8, RE9, RE17, REXL...**) designed for mounting on DIN rails in an enclosure,

- "Panel mounted" relays type **RE48A** designed for mounting on the front of a panel to give users easy access to the settings.

These relays have one, two or four outputs. Sometimes the second output can be either timed or instantaneous.

If the power is switched off during the timing period, the relay reverts to its initial position.

Application examples:

- opening of automatic doors,
- alarm,
- lighting in toilets,
- car park barriers ...

## Definitions

The following definitions will assist in understanding the operation of these relays:

### ■ Relay output:

This is the most common type of output. When the relay is energized, the moving armature is attracted by the coil and so actuates the contacts, which change state. When the relay is de-energized, both the armature and the contacts revert to their initial position.

This type of output allows complete isolation between the supply and the output.

There are three types of output:

|                                                                                                                                                                                                                                            |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>C/O</b> : changeover contact, i.e. when the relay is de-energized, the circuit between the common point C and N/C is closed and when the relay is operating (coil energized), it closes the circuit between the common point C and N/O. |  |
| <b>N/C</b> : a contact that is closed without being actuated is called a <b>Normally Closed (N/C)</b> contact.                                                                                                                             |  |
| <b>N/O</b> : a contact that closes when actuated is called a <b>Normally Open (N/O)</b> contact.                                                                                                                                           |  |

### ■ Solid state output:

These outputs are entirely electronic and involve no moving parts; service life is therefore increased.

### ■ Breaking capacity:

The current value that a contact is capable of breaking in specified conditions.

### ■ Mechanical durability:

The number of mechanical operating cycles of the contact or contacts.

### ■ Minimum switching capacity (or minimum breaking capacity):

corresponds to the minimum required current which can flow through the contacts of a relay.

### ■ G (Gate) Input:

Gate input allows timing in progress to be interrupted without resetting it.

## Definitions (continued)

## Functions

Timing functions are identified by letters.

| Main timing functions | Complementary functions (1) | Definitions                                                                    |
|-----------------------|-----------------------------|--------------------------------------------------------------------------------|
| <b>A (2)</b>          |                             | Power on delay relay                                                           |
|                       | <b>Ac</b>                   | On-delay and off-delay relay with control signal                               |
|                       | <b>Ad</b>                   | Pulse delayed relay with control signal                                        |
|                       | <b>Ah</b>                   | Pulse delayed relay (single cycle) with control signal                         |
|                       | <b>Ak</b>                   | Asymmetrical On-delay and Off-delay with external control                      |
|                       | <b>At</b>                   | Power on delay relay (summation) with control signal                           |
|                       | <b>Aw</b>                   | Off-delay on energization or on opening of control contact                     |
| <b>B (2)</b>          |                             | Interval relay with control signal                                             |
|                       | <b>Bw</b>                   | Double interval relay with control signal                                      |
| <b>C (2)</b>          |                             | Off-delay relay with control signal                                            |
| <b>D (2)</b>          |                             | Symmetrical flasher relay (starting pulse off)                                 |
|                       | <b>Di (2)</b>               | Symmetrical flasher relay (starting pulse on)                                  |
| <b>H (2)</b>          |                             | Interval relay                                                                 |
|                       | <b>He</b>                   | Pulse-on de-energization                                                       |
|                       | <b>Ht</b>                   | Interval relay (summation) with control signal                                 |
| <b>K</b>              |                             | Delay on de-energization (without auxiliary supply)                            |
| <b>L (2)</b>          |                             | Asymmetrical flasher relay (starting pulse off)                                |
|                       | <b>Li (2)</b>               | Asymmetrical flasher relay (starting pulse on)                                 |
|                       | <b>Lt</b>                   | Asymmetrical flashing with partial stop of timing                              |
| <b>N</b>              |                             | Retriggerable interval relay with control signal on                            |
| <b>O</b>              |                             | Retriggerable interval delayed relay with control signal on                    |
| <b>P</b>              |                             | Pulse delayed relay with fixed pulse length                                    |
|                       | <b>Pt</b>                   | Pulse delayed relay (summation and fixed pulse length) with control signal off |
|                       | <b>Qc</b>                   | Star-delta timing                                                              |
|                       | <b>Qe</b>                   | Star-delta timing                                                              |
|                       | <b>Qg</b>                   | Star-delta timing                                                              |
|                       | <b>Qt</b>                   | Star-delta timing                                                              |
| <b>T</b>              |                             | Bistable relay with control signal on                                          |
|                       | <b>Tt</b>                   | Retriggerable bistable relay with control signal on                            |
| <b>W</b>              |                             | Interval relay with control signal off                                         |

(1) Complementary functions enhance the main timing functions.

Example: **Ac**: timing after closing and opening of control contact.

(2) The most commonly used timing functions.

## Selection table

## Selection criteria

- **Functions** (On-delay or Off-delay, counter, flashing...)
  - **Supply voltage** (example:  $\sim/\text{---}$  12 V...240 V).
  - **Timing range** for a timing relay (example: 0.05 s...100 h)
  - **Type of output** (contact or solid state) and required **Number of contacts**.
  - **Breaking capacity** or **Rated current** of contacts, expressed in Amperes.
- This is the maximum current which may flow through the contacts.

| Functions                         | Timing range                 | Supply voltage                                                          | Type of output       | Rated current | Relay       |
|-----------------------------------|------------------------------|-------------------------------------------------------------------------|----------------------|---------------|-------------|
| A                                 | 0.1 s...100 h                | $\text{---}$ 12 V                                                       | 2 C/O contacts       | 5 A           | REXL2TMJD   |
|                                   |                              |                                                                         | 4 C/O contacts       | 3 A           | REXL4TMJD   |
|                                   | 0.1 s...100 h                | $\text{---}$ 24 V                                                       | 2 C/O contacts       | 5 A           | REXL2TMBD   |
|                                   |                              |                                                                         | 4 C/O contacts       | 3 A           | REXL4TMBD   |
|                                   | 0.1 s...100 h                | $\sim$ 24 V                                                             | 2 C/O contacts       | 5 A           | REXL2TMB7   |
|                                   |                              |                                                                         | 4 C/O contacts       | 3 A           | REXL4TMB7   |
|                                   | 0.1 s...100 h                | $\sim$ 120 V                                                            | 2 C/O contacts       | 5 A           | REXL2TMF7   |
|                                   |                              |                                                                         | 4 C/O contacts       | 3 A           | REXL4TMF7   |
|                                   | 0.1 s...100 h                | $\sim$ 230 V                                                            | 2 C/O contacts       | 5 A           | REXL2TMP7   |
|                                   |                              |                                                                         | 4 C/O contacts       | 3 A           | REXL4TMP7   |
|                                   | 0.1 s...10 s                 | $\sim/\text{---}$ 24...240 V                                            | 1 solid state output | 0.7 A         | RE9TA11MW   |
|                                   | 0.3 s...30 s                 |                                                                         |                      | 0.7 A         | RE9TA31MW   |
|                                   | 3 s...300 s                  |                                                                         |                      | 0.7 A         | RE9TA21MW   |
|                                   | 40 s...60 min                |                                                                         |                      | 0.7 A         | RE9TA51MW   |
|                                   | 1 s...100 h                  |                                                                         |                      | 0.7 A         | RE17LAMW    |
|                                   | 0.02 s...300 h               |                                                                         |                      | 0.7 A         | RE17LAMW    |
|                                   | 0.05 s...300 h               | $\sim/\text{---}$ 24 V, $\sim$ 110...240 V                              | 2 timed C/O contacts | 5 A           | RE48ATM12MW |
|                                   |                              |                                                                         |                      | 5 A           | RE48ATM12MW |
|                                   | 0.05 s...300 h               | $\sim/\text{---}$ 24 V, $\sim$ 110...240 V                              | 1 C/O contact        | 8 A           | RE7TL11BU   |
|                                   | 0.1 s...3 s                  |                                                                         |                      | 8 A           | RE8TA61BUTQ |
|                                   | 0.1 s...10 s                 |                                                                         |                      | 8 A           | RE8TA11BUTQ |
|                                   | 0.3 s...30 s                 |                                                                         |                      | 8 A           | RE8TA31BUTQ |
|                                   | 3 s...300 s                  |                                                                         |                      | 8 A           | RE8TA21BUTQ |
|                                   | 20...30 min                  |                                                                         |                      | 8 A           | RE8TA41BUTQ |
|                                   | 0.05 s...300 h               | $\sim/\text{---}$ 24 V, $\sim$ 110...240 V, $\sim/\text{---}$ 42...48 V | 2 C/O contacts       | 8 A           | RE7TP13BU   |
| A, Ac, At, B, Bw, C, D, Di, H, Ht | 1 s...100 h                  | $\sim$ 24...240 V                                                       | 1 solid state output | 0.7 A         | RE17LMBM    |
|                                   | 1 s...100 h                  | $\sim/\text{---}$ 12 V                                                  | 1 C/O contact        | 8 A           | RE17RMJU    |
|                                   | 1 s...100 h                  | $\sim/\text{---}$ 12...240 V                                            | 1 C/O contact        | 8 A           | RE17RMMW    |
|                                   | 1 s...100 h                  | $\sim/\text{---}$ 12...240 V                                            | 1 C/O contact        | 8 A           | RE17RMMWS   |
| A, At                             | 1 s...100 h                  | $\text{---}$ 24 V, $\sim$ 24...240 V                                    | 1 C/O contact        | 8 A           | RE17RMMU    |
|                                   | 1 s...100 h                  | $\text{---}$ 24 V, $\sim$ 24...240 V                                    | 1 C/O contact        | 8 A           | RE17RAMU    |
| A, At, Aw                         | 0.05 s...300 h               | $\sim$ 110...240 V, $\sim/\text{---}$ 24 V, $\sim/\text{---}$ 42...48 V | 1 C/O contact        | 8 A           | RE7TM11BU   |
| A, At, B, C, D, Di, H, Ht         | 1 s...10 h                   | $\text{---}$ 24 V, $\sim$ 24...240 V                                    | 1 C/O contact        | 8 A           | RE17RMEMU   |
| A, B, C, Di                       | 0.02 s...300 h               | $\sim/\text{---}$ 24...240 V                                            | 2 C/O contacts       | 5 A           | RE48AML12MW |
| A, C, D, Di, H, Qg, Qt, W         | 0.05 s...300 h               | $\sim$ 110...240 V, $\sim/\text{---}$ 24 V, $\sim/\text{---}$ 42...48 V | 2 C/O contacts       | 8 A           | RE7MY13BU   |
|                                   | 0.05 s...300 h               | $\sim/\text{---}$ 24...240 V                                            | 2 C/O contacts       | 8 A           | RE7MY13MW   |
| A, C, D, Di, H, W                 | 0.05 s...300 h               | $\sim$ 110...240 V, $\sim/\text{---}$ 24 V, $\sim/\text{---}$ 42...48 V | 1 C/O contact        | 8 A           | RE7ML11BU   |
| A, D, Di, H                       | 0.1 s...10 s and 3 s...300 s | $\sim/\text{---}$ 24...240 V<br>$\sim$ 24...240 V                       | 1 solid state output | 0.7 A         | RE9MS21MW   |
| A1, A2, H1, H2                    | 0.02 s...300 h               | $\sim/\text{---}$ 24...240 V                                            | 2 C/O contacts       | 5 A           | RE48AMH13MW |
| Ac                                | 0.05 s...300 h               | $\sim$ 110...240 V, $\sim/\text{---}$ 24 V, $\sim/\text{---}$ 42...48 V | 1 C/O contact        | 8 A           | RE7MA11BU   |
|                                   |                              |                                                                         | 2 C/O contacts       | 8 A           | RE7MA13BU   |
| Ad, Ah, N, O, P, Pt, T, Tt, W     | 1 s...100 h                  | $\text{---}$ 24 V, $\sim$ 24...240 V                                    | 1 C/O contact        | 8 A           | RE17RMXMU   |
| Ak                                | 0.05 s...300 h               | $\sim$ 110...240 V, $\sim/\text{---}$ 24 V, $\sim/\text{---}$ 42...48 V | 1 C/O contact        | 8 A           | RE7MV11BU   |

| Selection table (continued) |                 |                                           |                      |               |             |
|-----------------------------|-----------------|-------------------------------------------|----------------------|---------------|-------------|
| Functions                   | Timing range    | Supply voltage                            | Type of output       | Rated current | Relay       |
| <b>B</b>                    | 1 s...100 h     | — 24 V, ~ 24...240 V                      | 1 C/O contact        | 8 A           | RE17RBMU    |
| <b>C</b>                    | 0.1 s...10 s    | ~/— 24 V                                  | 1 C/O contact        | 8 A           | RE8RA11BTQ  |
|                             | 0.3 s...30 s    |                                           |                      | 8 A           | RE8RA31BTQ  |
|                             | 3 s...300 s     |                                           |                      | 8 A           | RE8RA21BTQ  |
|                             | 1 s...100 h     | — 24 V, ~ 24...240 V                      | 1 C/O contact        | 8 A           | RE17RCMU    |
|                             | 0.1 s...10 s    | ~ 110...240 V                             | 1 C/O contact        | 8 A           | RE8RA11FUTQ |
|                             | 0.3 s...30 s    |                                           |                      | 8 A           | RE8RA31FUTQ |
|                             | 3 s...300 s     |                                           |                      | 8 A           | RE8RA21FUTQ |
|                             | 20 s...30 min   |                                           |                      | 8 A           | RE8RA41FUTQ |
|                             | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V,<br>~/— 42...48 V | 1 C/O contact        | 8 A           | RE7RA11BU   |
|                             |                 |                                           |                      | 8 A           | RE7RM11BU   |
|                             |                 |                                           | 2 C/O contacts       | 8 A           | RE7RL13BU   |
|                             | 0.1 s...10 s    | ~ 24...240 V                              | 1 solid state output | 0.7 A         | RE9RA11MW7  |
|                             | 0.3 s...30 s    |                                           |                      | 0.7 A         | RE9RA31MW7  |
|                             | 3 s...300 s     |                                           |                      | 0.7 A         | RE9RA21MW7  |
|                             | 40 s...60 min   |                                           |                      | 0.7 A         | RE9RA51MW7  |
|                             | 1 s...100 h     |                                           |                      | 0.7 A         | RE17LCBM    |
| <b>D</b>                    | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V                   | 1 C/O contact        | 8 A           | RE7CL11BU   |
|                             | 0.1 s...10 s    |                                           |                      | 8 A           | RE8CL11BUTQ |
|                             | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V,<br>~/— 42...48 V | 2 C/O contacts       | 8 A           | RE7CP13BU   |
| <b>H</b>                    | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V                   | 1 C/O contact        | 8 A           | RE7PE11BU   |
|                             | 0.1 s...10 s    |                                           |                      | 8 A           | RE8PE11BUTQ |
|                             | 0.3 s...30 s    |                                           |                      | 8 A           | RE8PE31BUTQ |
|                             | 3 s...300 s     |                                           |                      | 8 A           | RE8PE21BUTQ |
|                             | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V,<br>~/— 42...48 V | 2 C/O contacts       | 8 A           | RE7PP13BU   |
|                             | 1 s...100 h     | ~ 24...240 V                              | 1 solid state output | 0.7 A         | RE17LHBM    |
| <b>H, Ht</b>                | 1 s...100 h     | — 24 V, ~ 24...240 V                      | 1 C/O contact        | 8 A           | RE17RHMU    |
| <b>He</b>                   | 0.05 s...0.5 s  | ~/— 24 V, ~ 110...240 V                   | 1 C/O contact        | 8 A           | RE8PT01BUTQ |
| <b>K</b>                    | 0.05 s...10 min | ~/— 24...240 V                            | 1 C/O contact        | 5 A           | RE7RB11MW   |
|                             | 0.05 s...0.5 s  | ~/— 24 V, ~ 110...240 V                   | 1 C/O contact        | 8 A           | RE8RB51BUTQ |
|                             | 0.1 s...10 s    |                                           |                      | 8 A           | RE8RB11BUTQ |
|                             | 0.3 s...30 s    |                                           |                      | 8 A           | RE8RB31BUTQ |
|                             | 0.05 s...10 min | ~/— 24...240 V                            | 2 C/O contacts       | 5 A           | RE7RB13MW   |
|                             | 1 s...100 h     | — 24 V, ~ 24...240 V                      | 1 C/O contact        | 8 A           | RE17RLMU    |
| <b>L, Li</b>                | 1 s...100 h     | ~ 24...240 V                              | 1 solid state output | 0.7 A         | RE17LLBM    |
|                             | 1 s...100 h     | ~/— 12 V                                  | 1 C/O contact        | 8 A           | RE17RLJU    |
|                             | 0.02 s...300 h  | ~/— 24...240 V                            | 2 timed C/O contacts | 5 A           | RE48ACV12MW |
|                             |                 |                                           |                      |               |             |
| <b>L, Li, Lt</b>            | 0.05 s...300 h  | ~ 110...240 V, ~/— 24 V,<br>~/— 42...48 V | 1 C/O contact        | 8 A           | RE7CV11BU   |
| <b>Qc</b>                   | 0.1 s...10 s    | ~/— 24 V, ~ 110...240 V                   | 1 C/O contact        | 8 A           | RE8YG11BUTQ |
|                             | 0.3 s...30 s    |                                           |                      | 8 A           | RE8YG31BUTQ |
|                             | 3 s...300 s     |                                           |                      | 8 A           | RE8YG21BUTQ |
| <b>Qe</b>                   | 0.3 s...30 s    | ~/— 24 V                                  | 1 NO + 1 NC          | 8 A           | RE8YA32BTQ  |
|                             | 0.3 s...30 s    | ~ 110...240 V                             | 1 NO + 1 NC          | 8 A           | RE8YA32FUTQ |
|                             | 0.3 s...30 s    | ~ 380...415 V                             | 1 NO + 1 NC          | 8 A           | RE8YA32QTQ  |
| <b>Qg</b>                   | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V,<br>~/— 42...48 V | 1 NO + 1 NC          | 8 A           | RE7YR12BU   |
| <b>Qt</b>                   | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V,<br>~/— 42...48 V | 2 C/O contacts       | 8 A           | RE7YA12BUè+ |
| <b>W</b>                    | 0.1 s...10 s    | ~/— 24 V                                  | 1 C/O contact        | 8 A           | RE8PD11BTQ  |
|                             | 0.3 s...30 s    |                                           |                      | 8 A           | RE8PD31BTQ  |
|                             | 3 s...300 s     |                                           |                      | 8 A           | RE8PD21BTQ  |
|                             | 0.1 s...10 s    | ~ 110...240 V                             | 1 C/O contact        | 8 A           | RE8PD11FUTQ |
|                             | 0.3 s...30 s    |                                           |                      | 8 A           | RE8PD31FUTQ |
|                             | 3 s...300 s     |                                           |                      | 8 A           | RE8PD21FUTQ |
|                             | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V,<br>~/— 42...48 V | 2 C/O contacts       | 8 A           | RE7PD13BU   |
|                             |                 |                                           |                      |               |             |
| <b>W, Ht</b>                | 0.05 s...300 h  | ~/— 24 V, ~ 110...240 V,<br>~/— 42...48 V | 1 C/O contact        | 8 A           | RE7PM11BU   |

## Functions

**U:** Supply

**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

**C:** Control contact

**G:** Gate

**Ta:** Adjustable On-delay

**Tr:** Adjustable Off-delay

### Function diagram :

 Relay de-energized

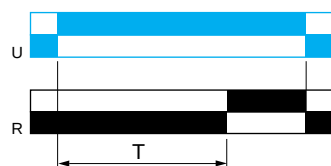
 Relay energized

 Output open

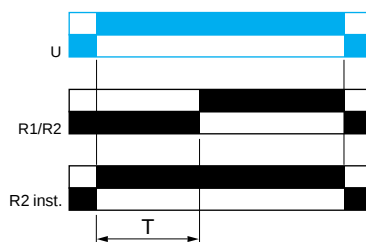
 Output closed

### Function A: Power on delay relay

#### 1 output



#### 2 outputs



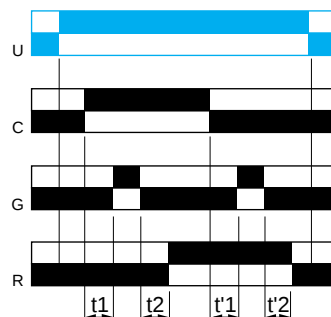
The timing period T begins on energization.

After timing, the output(s) R close(s). The second output can be either timed or instantaneous.

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

### Function Ac: On-delay and off-delay relay with control signal

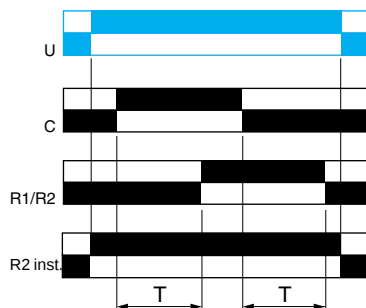
#### 1 output



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

$$T = t'1 + t'2 + \dots$$

#### 2 outputs



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.

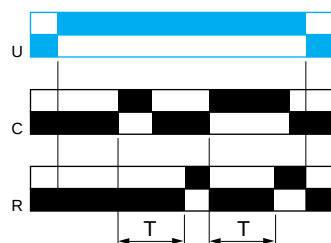
When control contact C re-opens, the timing T starts.

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.

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

### Function Ad: Pulse delayed relay with control signal

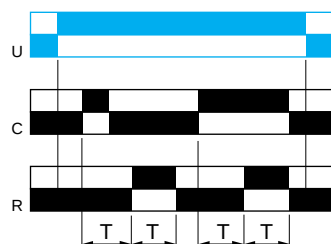


After power-up, pulsing or maintaining control contact C starts the timing T.

At the end of this timing period T, the output R closes.

The output R will be reset the next time control contact C is pulsed or maintained.

### Function Ah: Pulse delayed relay (single cycle) with control signal



After power-up, pulsing or maintaining control contact C starts the timing T.

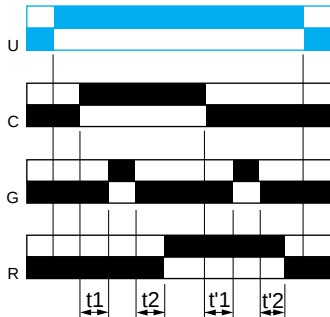
A single cycle then starts with 2 timing periods T of equal duration (start with output in rest position).

Output R changes state at the end of the first timing period T and reverts to its initial position at the end of the second timing period T.

Control contact C must be reset in order to re-start the single flashing cycle.

## Functions (continued)

### Function Ak: Asymmetrical On-delay and Off-delay with external control

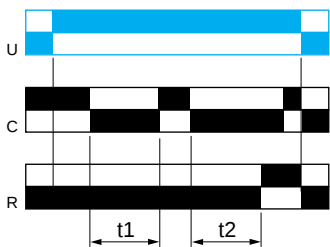


After power-up and closing of the control contact C, timing starts for a period  $T_a$  (timing can be interrupted by operating the Gate control contact G).  
At the end of this timing period  $T_a$ , the output R closes.  
Opening of control contact C causes a second timing period  $T_r$  to start (timing can be interrupted by operating the Gate control contact G).  
At the end of this timing period  $T_r$ , the output R reverts to its initial state.

$$T_a = t_1 + t_2 + \dots$$

$$T_r = t'_1 + t'_2 + \dots$$

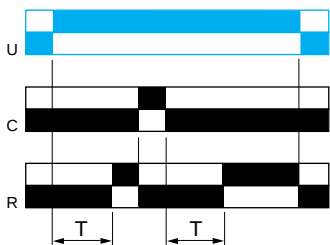
### Function At: Power on delay relay (summation) with control signal



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

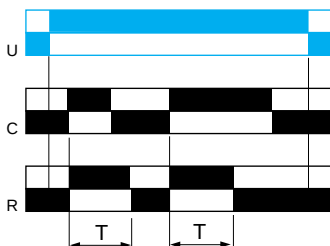
$$T = t_1 + t_2 + \dots$$

### Function Aw: Off-delay on energization or on opening of control contact



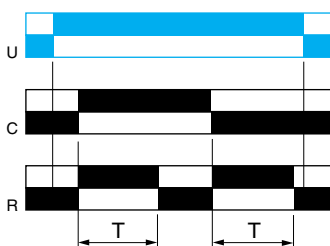
The timing period T starts on energization.  
At the end of the timing period T, the output R closes.  
Closing of the control contact C makes the output R open.  
Opening of control contact C restarts timing period T.  
At the end of the timing period T, the output R closes.

### Function B: Interval relay with control signal



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 Bw: Double interval relay with control signal

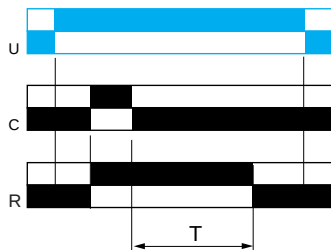


On closing and opening of control contact C, the output R closes for the duration of the timing period T.

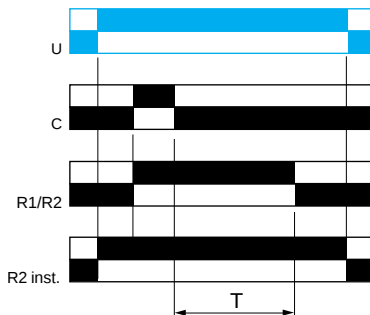
## Functions (continued)

### Function C: Off-delay relay with control signal

1 output



2 outputs

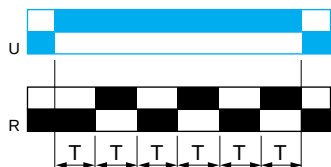


After power-up and closing of the control contact C, the output R closes. When control contact C re-opens, timing T starts. At the end of the timing period, output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

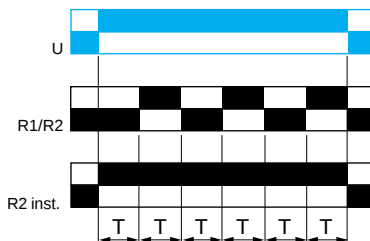
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

### Function D: Symmetrical flasher relay (starting pulse off)

1 output



2 outputs



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.

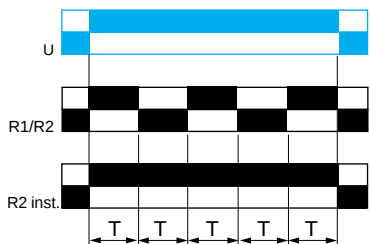
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

### Function Di: Symmetrical flasher relay (starting pulse on)

1 output



2 outputs

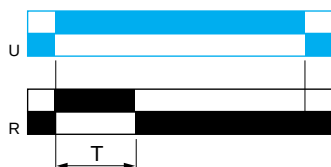


Repetitive cycle with two timing periods T of equal duration, with output(s) R changing state at the end of each timing period T. The second output can be either timed or instantaneous.

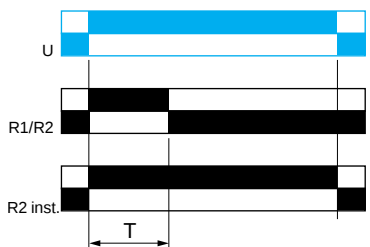
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

### Function H: Interval relay

1 output



2 outputs

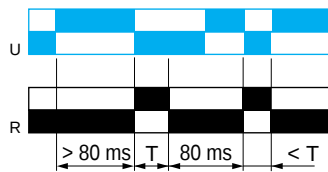


On energization of the relay, timing period T starts and the output(s) R close(s). At the end of the timing period T, output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

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

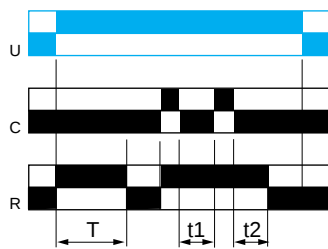
## Functions (continued)

### Function He: Pulse-on de-energization



On de-energization, the output R closes for the duration of a timing period T.

### Function Ht: Interval relay (summation) with control signal



On energization, 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, output R reverts to its initial state.

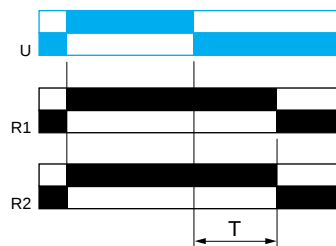
$T = t_1 + t_2 + \dots$

### Function K: Delay on de-energization (without auxiliary supply)

#### 1 output

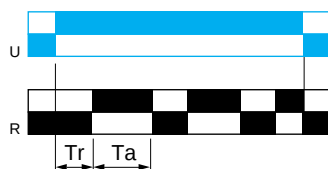


#### 2 outputs



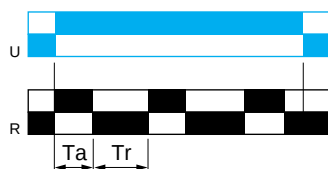
On energization, the output(s) R close(s).  
On de-energization, timing period T starts and, at the end of this period, the output(s) R revert to its/their initial state.

### Function L: Asymmetrical flasher relay (starting pulse off)



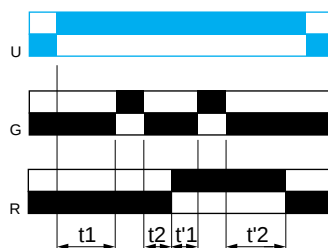
Repetitive cycle consisting of two, independently adjustable timing periods  $T_a$  and  $T_r$ .  
Each timing period corresponds to a different state of the output R.

### Function Li: Asymmetrical flasher relay (starting pulse on)



Repetitive cycle consisting of two, independently adjustable timing periods  $T_a$  and  $T_r$ .  
Each timing period corresponds to a different state of the output R.

### Function Lt: Asymmetrical flashing with partial stop of timing



Repetitive cycle comprises of two, independently adjustable timing periods  $T_a$  and  $T_r$ .  
Each timing period corresponds to a different state of the output R.

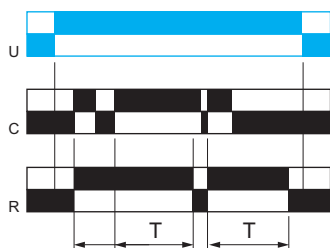
Gate control contact G can be operated to partially stop timing periods  $T_a$  and  $T_r$ .

$T_r = t_1 + t_2 + \dots$

$T_a = t'_1 + t'_2 + \dots$

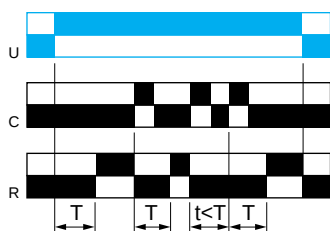
## Functions (continued)

### Function N: Retriggerable interval relay with control signal on



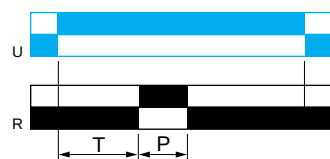
After power-up and an initial control pulse C, the output R closes.  
If the interval between two control pulses C is greater than the set timing period T, timing elapses normally and the output R opens at the end of the timing period. If the interval is not greater than the set timing period, the output R remains closed until this condition is met.

### Function O: Retriggerable interval delayed relay with control signal on



An initial timing period T begins on energization. At the end of this timing period, the output R closes.  
As soon as there is a control pulse C, the output R reverts to its initial state and remains in that state until the interval between two control pulses is less than the value of the set timing period T. Otherwise, the output R closes at the end of the timing period T.

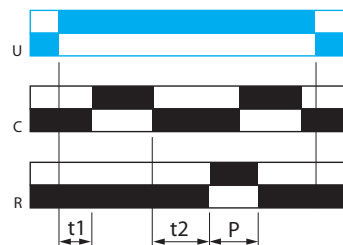
### Function P: Pulse delayed relay with fixed pulse length



The timing period T starts on energization.  
At the end of this period, the output R closes for a fixed time P.

P = 500 ms

### Function Pt: Pulse delayed relay (summation and fixed pulse length) with control signal off

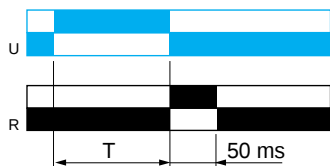


On energization, timing period T starts (it can be interrupted by operating control contact C).  
At the end of this period, the output R closes for a fixed time P.

$T = t_1 + t_2 + \dots$

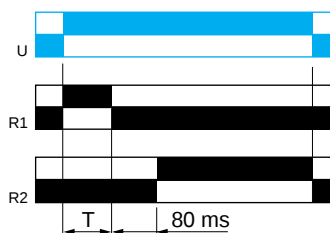
P = 500 ms

### Function Qc: Star-delta timing



Timing for star delta starter with contact for switching to star connection.

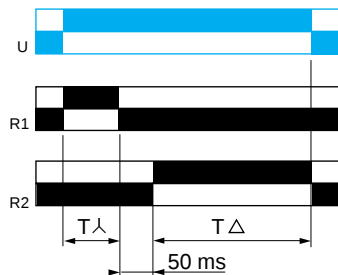
### Function Qe: Star-delta timing



On energization, the star contact closes instantly and timing starts.  
At the end of the timing period, the star contact opens.  
After a 80 ms pause, the delta contact closes and remains in this position.

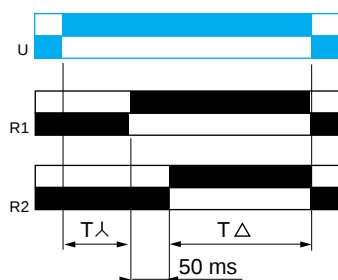
## Functions (continued)

### Function Qg: Star-delta timing



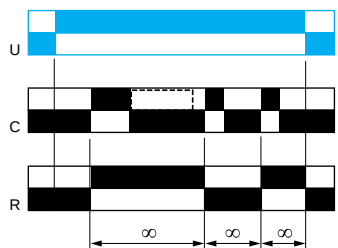
Timing for star delta starter with contact for switching to star connection.

### Function Qt: Star-delta timing



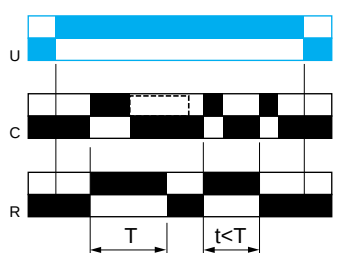
Timing for star-delta starter with double On-delay period.

### Function T: Bistable relay with control signal on



After power-up, pulsing or maintaining of control contact C switches the output on. A second pulse on the control contact C switches the output R off.

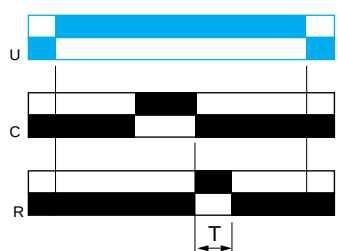
### Function Tt: Retriggerable bistable relay with control signal on



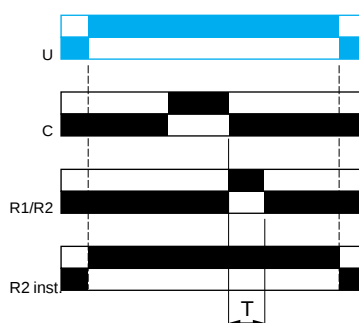
After power-up, pulsing or maintaining control contact C switches output R on and starts timing. The output switches off at the end of the timing period T or following a second pulse on the control contact C.

### Function W: Interval relay with control signal off

#### 1 output



#### 2 outputs

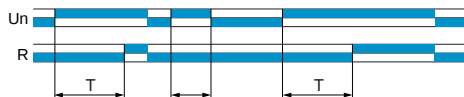


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

After power-up and opening of the control contact, the output(s) close(s) for a timing period T. At the end of this timing period the output(s) revert to its/their initial state. The second output can be either timed or instantaneous.

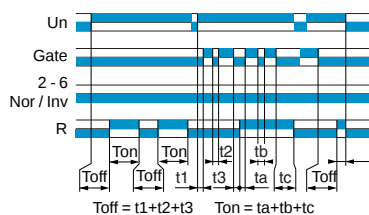
## RE48ATM12MW

### Function A: Delay on energization

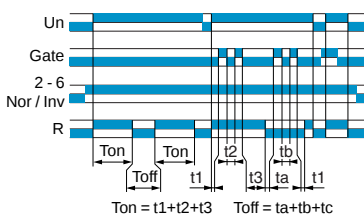


## RE48ACV12MW

### Function L: Asymmetrical flashing, start with output in rest position

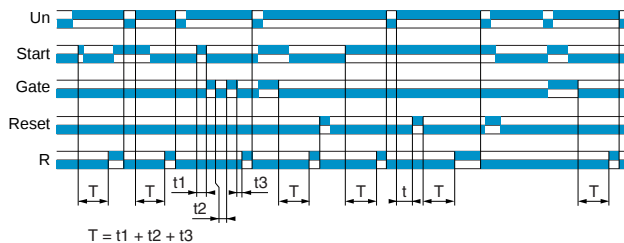


### Function Li: Asymmetrical flashing, start with output in operating position

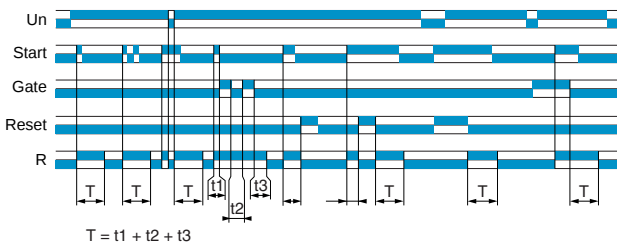


## RE48A ML12MW

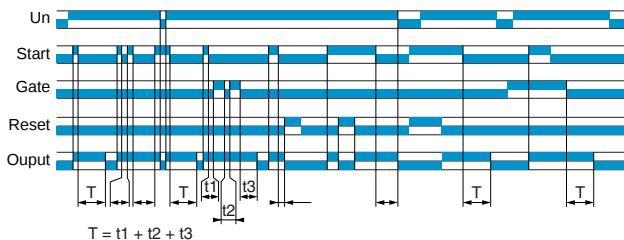
### Function A: Delay on energization



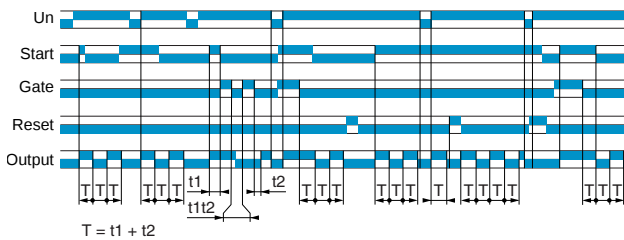
### Function B: Timing on impulse, one shot



### Function C: Timing after opening of control contact

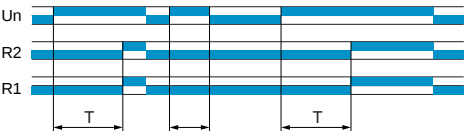


### Function Di: Symmetrical flashing, start with output in operating position

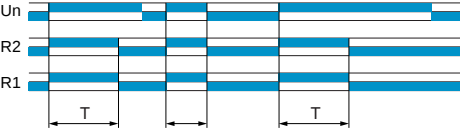


RE48AMH13MW

Functions A1, A2: Delay on energization



Functions H1, H2: Pulse-on energization



**Note:** If A1 or H1 is selected, only R2 is timed, R1 is instantaneous

# Zelio Time - timing relays

Modular relays with solid state or relay output, width 17.5 mm/0.69 in.

## Solid state output

- Multifunction, dual function or single function
- Multi-range (7 selectable ranges)
- Multivoltage
- Solid state output: 0.7 A
- Screw terminals



RE17LAMW



RE17LLBM

## Relay output, 1 C/O contact

- Dual function or single function
- Multi-range (7 selectable ranges)
- Multivoltage
- 1 relay output: 8 A
- Screw terminals
- State indication by 1 LED
- Option of supplying a load in parallel
- 3-wire sensor control option



RE17R•M•

## Modular relays with solid state output 0.7 A

### Single function

| Timing ranges                                                | Functions | Voltages<br>V      | Reference | Weight<br>kg/lb |
|--------------------------------------------------------------|-----------|--------------------|-----------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A         | $\approx$ 24...240 | RE17LAMW  | 0.060/<br>0.132 |
|                                                              | H         | $\sim$ 24...240    | RE17LHBM  | 0.060/<br>0.132 |
|                                                              | C         | $\sim$ 24...240    | RE17LCBM  | 0.060/<br>0.132 |

### Dual function

|                                                              |          |                 |          |                 |
|--------------------------------------------------------------|----------|-----------------|----------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | L,<br>Li | $\sim$ 24...240 | RE17LLBM | 0.060/<br>0.132 |
|--------------------------------------------------------------|----------|-----------------|----------|-----------------|

### Multifunction

|                                                              |                                                              |                 |          |                 |
|--------------------------------------------------------------|--------------------------------------------------------------|-----------------|----------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At,<br>B,<br>C,<br>H,<br>Ht,<br>D,<br>Di,<br>Ac,<br>Bw | $\sim$ 24...240 | RE17LMBM | 0.060/<br>0.132 |
|--------------------------------------------------------------|--------------------------------------------------------------|-----------------|----------|-----------------|

## Modular relays with relay output, 1 C/O contact

### Single function

| Timing ranges                                                | Functions | Voltages<br>V                  | Reference | Weight<br>kg/lb |
|--------------------------------------------------------------|-----------|--------------------------------|-----------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | B         | $\approx$ 24 / $\sim$ 24...240 | RE17RBMU  | 0.070/<br>0.154 |
|                                                              | C         | $\approx$ 24 / $\sim$ 24...240 | RE17RCMU  | 0.070/<br>0.154 |

### Dual function

|                                                              |          |                                |          |                 |
|--------------------------------------------------------------|----------|--------------------------------|----------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At | $\approx$ 24 / $\sim$ 24...240 | RE17RAMU | 0.070/<br>0.154 |
|                                                              | H,<br>Ht | $\approx$ 24 / $\sim$ 24...240 | RE17RHMU | 0.070/<br>0.154 |
|                                                              | L,<br>Li | $\approx$ 24 / $\sim$ 24...240 | RE17RLMU | 0.070/<br>0.154 |
|                                                              |          | $\sim$ 12                      | RE17RLJU | 0.070/<br>0.154 |

### Multifunction

|                                                              |                                                              |                                |           |                 |
|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------|-----------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At,<br>B,<br>C,<br>H,<br>Ht,<br>D,<br>Di,<br>Ac,<br>Bw | $\approx$ 12                   | RE17RMJU  | 0.070/<br>0.154 |
|                                                              |                                                              | $\approx$ 24 / $\sim$ 24...240 | RE17RMMU  | 0.070/<br>0.154 |
|                                                              |                                                              | $\approx$ 12...240             | RE17RMMW  | 0.070/<br>0.154 |
|                                                              |                                                              |                                | RE17RMMWS | 0.070/<br>0.154 |
|                                                              | Ad,<br>Ah,<br>N,<br>O,<br>P,<br>Pt,<br>T,<br>Tt,<br>W        | $\approx$ 24 / $\sim$ 24...240 | RE17RMXMU | 0.070/<br>0.154 |
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h           | A,<br>At,<br>B,<br>C,<br>H,<br>Ht,<br>D,<br>Di               | $\approx$ 24 / $\sim$ 24...240 | RE17RMEMU | 0.070/<br>0.154 |

### Solid state output

- Multifunction or single function
- Multivoltage
- Screw terminals
- Transparent, hinged and sealable flap on front panel



RE9A1MW



RE9MS21MW

| References                    |                |               |            |                 |
|-------------------------------|----------------|---------------|------------|-----------------|
| Single function               |                |               |            |                 |
| Timing ranges                 | Functions      | Voltages      | Reference  | Weight          |
|                               |                | V             |            | kg/lb           |
| 0.1 s...10 s                  | A              | ~ 24... 240 V | RE9TA11MW  | 0.110/<br>0.243 |
|                               | C              | ~ 24... 240 V | RE9RA11MW7 | 0.110/<br>0.243 |
| 0.3 s...30 s                  | A              | ~ 24... 240 V | RE9TA31MW  | 0.110/<br>0.243 |
|                               | C              | ~ 24... 240 V | RE9RA31MW7 | 0.110/<br>0.243 |
| 3 s...300 s                   | A              | ~ 24... 240 V | RE9TA21MW  | 0.110/<br>0.243 |
|                               | C              | ~ 24... 240 V | RE9RA21MW7 | 0.110/<br>0.243 |
| 40 s...60 min                 | A              | ~ 24... 240 V | RE9TA51MW  | 0.110/<br>0.243 |
|                               | C              | ~ 24... 240 V | RE9RA51MW7 | 0.110/<br>0.243 |
| Multifunction                 |                |               |            |                 |
| 0.1 s...10 s,<br>0.3 s...30 s | A              | ~ 24... 240 V | RE9MS21MW  | 0.110/<br>0.243 |
|                               | H,<br>D,<br>Di | ~ 24... 240 V |            |                 |

## Zelio time - timing relays

Industrial single, dual or multifunction relays,  
relay output, width 22.5 mm/0.89 in.

**Output 1 C/O and 2 C/O contacts**

- Multifunction, dual function or single function
- Multiple timing ranges (7 switchable ranges)
- Multivoltage
- 1 and 2 relay outputs: 8 A - 250 V (10 A UL)
- Screw or spring terminals
- State indication by 1 LED
- Option of supplying a load in parallel
- 3-wire sensor control option



RE88865125



RE88865155

**References****Single function**

| Timing ranges                                                | Functions | No. of relay outputs | Voltages   | Reference         | Weight          |
|--------------------------------------------------------------|-----------|----------------------|------------|-------------------|-----------------|
|                                                              |           |                      | V          |                   | kg/lb           |
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | B         | 1                    | ≈ 24...240 | RE88865125<br>(1) | 0.090/<br>0.198 |
|                                                              | C         | 1                    | ≈ 24...240 | RE88865135<br>(1) | 0.090/<br>0.198 |

|                                    |   |   |            |                   |                 |
|------------------------------------|---|---|------------|-------------------|-----------------|
| 0.6 s,<br>2.5 s,<br>20 s,<br>160 s | K | 2 | ≈ 24...240 | RE88865265<br>(1) | 0.090/<br>0.198 |
|------------------------------------|---|---|------------|-------------------|-----------------|

| Selectable interswitching time | Functions | No. of relay outputs | Voltages | Reference | Weight |
|--------------------------------|-----------|----------------------|----------|-----------|--------|
|                                |           |                      |          |           | kg/lb  |

|                                                                      |   |   |                           |                                        |                                    |
|----------------------------------------------------------------------|---|---|---------------------------|----------------------------------------|------------------------------------|
| 20 ms,<br>40 ms,<br>60 ms,<br>80 ms,<br>100 ms,<br>120 ms,<br>140 ms | Q | 1 | ≈ 24...240<br>~ 230 / 380 | RE88865175<br>(1)<br>RE88865176<br>(1) | 0.090/<br>0.198<br>0.090/<br>0.198 |
|----------------------------------------------------------------------|---|---|---------------------------|----------------------------------------|------------------------------------|

**Dual function**

| Timing ranges                                                | Functions | No. of relay outputs | Voltages   | Reference         | Weight          |
|--------------------------------------------------------------|-----------|----------------------|------------|-------------------|-----------------|
|                                                              |           |                      |            |                   | kg/lb           |
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At  | 2                    | ≈ 24...240 | RE88865215<br>(1) | 0.090/<br>0.198 |
|                                                              |           | 1                    | ≈ 24...240 | RE88865115<br>(1) | 0.090/<br>0.198 |
|                                                              | H,<br>Ht  | 1                    | ≈ 24...240 | RE88865145<br>(1) | 0.090/<br>0.198 |
|                                                              | L,<br>Li  | 1                    | ≈ 24...240 | RE88865155<br>(1) | 0.090/<br>0.198 |

**Multifunction**

|                                                              |                                                              |                                           |            |                   |                 |
|--------------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------|------------|-------------------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At,<br>B,<br>C,<br>H,<br>Ht,<br>Di,<br>D,<br>Ac,<br>Bw | 1                                         | ≈ 24...240 | RE88865105<br>(1) | 0.090/<br>0.198 |
|                                                              |                                                              | 1                                         | ≈ 12       | RE88865100<br>(1) | 0.090/<br>0.198 |
|                                                              |                                                              | 1                                         | ≈ 12...240 | RE88865103<br>(1) | 0.090/<br>0.198 |
|                                                              |                                                              |                                           |            | RE88865503<br>(2) | 0.090/<br>0.198 |
|                                                              |                                                              | 2 of which 1 convertible to instantaneous | ≈ 24...240 | RE88865305<br>(1) | 0.090/<br>0.198 |
|                                                              |                                                              |                                           | ≈ 12       | RE88865300<br>(1) | 0.090/<br>0.198 |
|                                                              |                                                              |                                           | ≈ 12...240 | RE88865303<br>(1) | 0.090/<br>0.198 |
|                                                              | Ad,<br>Ah,<br>N,<br>O,<br>P,<br>Pt,<br>Ti,<br>Tt,<br>W       | 1                                         | ≈ 24...240 | RE88865185<br>(1) | 0.090/<br>0.198 |
|                                                              |                                                              | 2                                         | ≈ 24...240 | RE88865385<br>(1) | 0.090/<br>0.198 |

(1) Connection by screw terminals.

(2) Connection by spring terminals.

## Zelio time - timing relays

Industrial single, dual or multifunction relays,  
relay output, width 22.5 mm/0.89 in.

## Output 1 C/O and 2 C/O contacts

- Multifunction, dual function or single function
- Multiple timing ranges
- Multivoltage
- Transparent, hinged and sealable flap on front panel



RE7TM11BU



RE7MA11BU



RE7CV11BU

## References (continued)

| Timing ranges                 | Functions                                      | No. of relay outputs | Voltages<br>V                      | Reference                        | Weight<br>kg/lb |
|-------------------------------|------------------------------------------------|----------------------|------------------------------------|----------------------------------|-----------------|
| 0.05 s...300 h<br>(10 ranges) | A,<br>Aw,<br>At                                | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7TM11BU                        | 0.150/<br>0.331 |
|                               | Ac                                             | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7MA11BU                        | 0.150/<br>0.331 |
|                               |                                                | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7MA13BU<br>(symmetrical)       | 0.150/<br>0.331 |
|                               | Ak                                             | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7MV11BU                        | 0.150/<br>0.331 |
|                               | C                                              | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7RA11BU                        | 0.150/<br>0.331 |
|                               |                                                | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7RM11BU<br>(low level contact) | 0.150/<br>0.331 |
|                               |                                                | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7RL13BU<br>(low level contact) | 0.150/<br>0.331 |
|                               | Ht,<br>W                                       | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7PM11BU                        | 0.150/<br>0.331 |
|                               | L,<br>Li,<br>Lt                                | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7CV11BU                        | 0.150/<br>0.331 |
|                               | A,<br>C,<br>H,<br>W,<br>D,<br>Di               | 1                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7ML11BU                        | 0.150/<br>0.331 |
|                               | A                                              | 1                    | ≈ 24,<br>~ 110...240               | RE7TL11BU                        | 0.150/<br>0.331 |
|                               |                                                | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7TP13BU                        | 0.150/<br>0.331 |
|                               | H                                              | 1                    | ≈ 24,<br>~ 110...240               | RE7PE11BU                        | 0.150/<br>0.331 |
|                               |                                                | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7PP13BU                        | 0.150/<br>0.331 |
|                               | D                                              | 1                    | ≈ 24,<br>~ 110...240               | RE7CL11BU                        | 0.150/<br>0.331 |
|                               |                                                | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7CP13BU                        | 0.150/<br>0.331 |
|                               | W                                              | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7PD13BU                        | 0.150/<br>0.331 |
|                               | Qt                                             | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7YA12BU                        | 0.150/<br>0.331 |
|                               | Qg                                             | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7YR12BU                        | 0.150/<br>0.331 |
|                               | A,<br>C,<br>H,<br>W,<br>D,<br>Di,<br>Qg,<br>Qt | 2                    | ≈ 24,<br>~ 110...240,<br>≈ 42...48 | RE7MY13BU                        | 0.150/<br>0.331 |
| 0.05 s...10 min<br>(7 ranges) | K                                              | 1                    | ≈ 24...240                         | RE7RB11MW                        | 0.150/<br>0.331 |
|                               |                                                | 2                    | ≈ 24...240                         | RE7RB13MW                        | 0.150/<br>0.331 |

# Zelio Time - timing relays

Industrial single function relays, optimum,  
relay output, width 22.5 mm/0.89 in.

- Single function
- Single timing range
- Output 1 C/O contact
- Transparent, hinged and sealable flap on front panel



RE8TA●●●●●●

| References     |           |                      |                    |                 |
|----------------|-----------|----------------------|--------------------|-----------------|
| Timing ranges  | Functions | Voltages             | Unit reference (1) | Weight          |
|                |           | V                    |                    | kg/lb           |
| 0.05 s...0.5 s | K         | ⎯ 24,<br>~ 110...240 | RE8RB51BUTQ        | 0.110/<br>0.243 |
|                | He        | ⎯ 24,<br>~ 110...240 | RE8PT01BUTQ        | 0.110/<br>0.243 |
| 0.1 s...3 s    | A         | ⎯ 24,<br>~ 110...240 | RE8TA61BUTQ        | 0.110/<br>0.243 |
| 0.1 s...10 s   | A         | ⎯ 24,<br>~ 110...240 | RE8TA11BUTQ        | 0.110/<br>0.243 |
|                | C         | ⎯ 24                 | RE8RA11BTQ         | 0.110/<br>0.243 |
|                |           | ~ 110...240          | RE8RA11FUTQ        | 0.110/<br>0.243 |
|                | D         | ⎯ 24,<br>~ 110...240 | RE8CL11BUTQ        | 0.110/<br>0.243 |
|                | K         | ⎯ 24,<br>~ 110...240 | RE8RB11BUTQ        | 0.110/<br>0.243 |
|                | H         | ⎯ 24,<br>~ 110...240 | RE8PE11BUTQ        | 0.110/<br>0.243 |
|                | Qc        | ⎯ 24,<br>~ 110...240 | RE8YG11BUTQ        | 0.110/<br>0.243 |
|                | W         | ⎯ 24                 | RE8PD11BTQ         | 0.110/<br>0.243 |
|                |           | ~ 110...240          | RE8PD11FUTQ        | 0.110/<br>0.243 |
|                |           |                      |                    |                 |
| 0.3 s...30 s   | A         | ⎯ 24,<br>~ 110...240 | RE8TA31BUTQ        | 0.110/<br>0.243 |
|                | C         | ⎯ 24                 | RE8RA31BTQ         | 0.110/<br>0.243 |
|                |           | ~ 110...240          | RE8RA31FUTQ        | 0.110/<br>0.243 |
|                | H         | ⎯ 24,<br>~ 110...240 | RE8PE31BUTQ        | 0.110/<br>0.243 |
|                | K         | ⎯ 24,<br>~ 110...240 | RE8RB31BUTQ        | 0.110/<br>0.243 |
|                | Qc        | ⎯ 24,<br>~ 110...240 | RE8YG31BUTQ        | 0.110/<br>0.243 |
|                | Qe        | ⎯ 24                 | RE8YA32BTQ         | 0.110/<br>0.243 |
|                |           | ~ 110...240          | RE8YA32FUTQ        | 0.110/<br>0.243 |
|                |           | ~ 380...415          | RE8YA32QTQ         | 0.110/<br>0.243 |
|                | W         | ⎯ 24                 | RE8PD31BTQ         | 0.110/<br>0.243 |
|                |           | ~ 110...240          | RE8PD31FUTQ        | 0.110/<br>0.243 |
|                |           |                      |                    |                 |
| 3 s...300 s    | A         | ⎯ 24,<br>~ 110...240 | RE8TA21BUTQ        | 0.110/<br>0.243 |
|                | C         | ⎯ 24                 | RE8RA21BTQ         | 0.110/<br>0.243 |
|                |           | ~ 110...240          | RE8RA21FUTQ        | 0.110/<br>0.243 |
|                | H         | ⎯ 24,<br>~ 110...240 | RE8PE21BUTQ        | 0.110/<br>0.243 |
|                | Qc        | ⎯ 24,<br>~ 110...240 | RE8YG21BUTQ        | 0.110/<br>0.243 |
|                | W         | ⎯ 24                 | RE8PD21BTQ         | 0.110/<br>0.243 |
|                |           | ~ 110...240          | RE8PD21FUTQ        | 0.110/<br>0.243 |
| 20 s...30 min  | A         | ⎯ 24,<br>~ 110...240 | RE8TA41BUTQ        | 0.110/<br>0.243 |
|                | C         | ~ 110...240          | RE8RA41FUTQ        | 0.110/<br>0.243 |

(1) These products are sold in packs of 10

# Zelio Time - timing relays

Universal plug-in relays, 11-pin,  
relay output, width 35 mm/1.38 in.

## Output 2 C/O contacts

- Multifunction, dual function or single function
- Multiple timing ranges (7 switchable ranges)
- Multivoltage
- 2 relay output: 8 A - 250 V (10 A UL)
- Plug-in
- State indication by 1 LED
- Option of supplying a load in parallel
- 3-wire sensor control option



RE88867415



RE88867305



RE88867300

## References

### Single function

| Timing ranges                                                | Functions | No. of relay outputs | Voltages   | Reference  | Weight          |
|--------------------------------------------------------------|-----------|----------------------|------------|------------|-----------------|
|                                                              |           |                      | V          |            | kg/lb           |
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | C         | 2                    | ≈ 24...240 | RE88867435 | 0.080/<br>0.176 |

### Dual function

|                                                              |          |   |            |            |                 |
|--------------------------------------------------------------|----------|---|------------|------------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At | 2 | ≈ 24...240 | RE88867415 | 0.080/<br>0.176 |
|                                                              | Li,<br>L | 2 | ≈ 24...240 | RE88867455 | 0.080/<br>0.176 |

### Multifunction

|                                                              |                                                              |                               |            |            |                 |
|--------------------------------------------------------------|--------------------------------------------------------------|-------------------------------|------------|------------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At,<br>B,<br>C,<br>H,<br>Ht,<br>Di,<br>D,<br>Ac,<br>Bw | 2 of which 1<br>instantaneous | ≈ 24...240 | RE88867305 | 0.080/<br>0.176 |
|                                                              |                                                              |                               | ≈ 12       | RE88867300 | 0.080/<br>0.176 |
|                                                              |                                                              |                               | ≈ 12...240 | RE88867303 | 0.080/<br>0.176 |

### Sockets for 11-pin relays

| Contact terminal arrangement | For use with relays | Connection | Unit reference (1) | Weight          |
|------------------------------|---------------------|------------|--------------------|-----------------|
|                              |                     |            |                    | kg/lb           |
| Mixed (2)                    | RE88867●●●          | Connector  | RXZE2M114          | 0.054/<br>0.119 |

(1) These products are sold in packs of 10

(2) The inputs are mixed with the relay's supply, with the outputs being located on the opposite side of the socket.

# Zelio Time - timing relays

Universal plug-in relays, 8-pin,  
relay output, width 35 mm/1.38 in.

## Output 1 C/O or 2 C/O contacts

- Multifunction, dual function or single function
- Multiple timing ranges (7 switchable ranges)
- Multivoltage
- 1 or 2 relay outputs: 8 A - 250 V (10 A UL)
- Plug-in
- State indication by 1 LED
- Option of supplying a load in parallel
- 3-wire sensor control option



RE88867215



RE88867155



RE88867105

## References

### Single function

| Timing ranges                                                | Functions | No. of relay outputs | Voltages   | Reference  | Weight          |
|--------------------------------------------------------------|-----------|----------------------|------------|------------|-----------------|
|                                                              |           |                      | V          |            | kg/lb           |
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A         | 2                    | ≈ 24...240 | RE88867215 | 0.080/<br>0.176 |
|                                                              | C         | 1                    | ≈ 24...240 | RE88867135 | 0.080/<br>0.176 |

### Dual function

|                                                              |          |   |            |            |                 |
|--------------------------------------------------------------|----------|---|------------|------------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | Li,<br>L | 1 | ≈ 24...240 | RE88867155 | 0.080/<br>0.176 |
|--------------------------------------------------------------|----------|---|------------|------------|-----------------|

### Multifunction

|                                                              |                                                              |   |            |            |                 |
|--------------------------------------------------------------|--------------------------------------------------------------|---|------------|------------|-----------------|
| 1 s,<br>10 s,<br>1 min,<br>10 min,<br>1 h,<br>10 h,<br>100 h | A,<br>At,<br>B,<br>C,<br>H,<br>Ht,<br>Di,<br>D,<br>Ac,<br>Bw | 1 | ≈ 24...240 | RE88867105 | 0.080/<br>0.176 |
|                                                              |                                                              |   | ≈ 12       | RE88867100 | 0.080/<br>0.176 |
|                                                              |                                                              |   | ≈ 12...240 | RE88867103 | 0.080/<br>0.176 |

### Sockets for 8-pin relays

| Contact terminal arrangement | For use with relays       | Unit reference (1) | Weight kg/lb    |
|------------------------------|---------------------------|--------------------|-----------------|
| Mixed (2)                    | RE888671●●,<br>RE888672●● | RUZC2M             | 0.054/<br>0.119 |

(1) These products are sold in packs of 10

(2) The inputs are mixed with the relay's supply, with the outputs being located on the opposite side of the socket.

**Output, 2 C/O and 4 C/O contacts**

- Miniature and plug-in (21 x 27 mm/0.827 x 1.062 in.)
- Single function: function A = delay on energization
- Rated current ~ 5 A
- 7 timing ranges (0.1 s to 100 h)
- Multivoltage
- Excellent immunity to interference
- Power on and relay energized indication by 2 LEDs



REXL2TM●●



REXL4TM●●

**References**
**Single function**

| Timing ranges                                                                                                                              | Functions | No. of relay outputs | Voltages               | Reference | Weight          |
|--------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|------------------------|-----------|-----------------|
|                                                                                                                                            |           |                      | V                      |           | kg/lb           |
| 0.1 s...1 s,<br>1 s...10 s,<br>0.1 min...1 min,<br>1 min...10 min,<br>0.1 h...1 h,<br>1 h...10 h,<br>10 h...100 h<br>(7 switchable ranges) | A         | 2                    | — 12                   | REXL2TMJD | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | — 24                   | REXL2TMBD | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | ~ 24 (50/60 Hz)        | REXL2TMB7 | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | ~ 120 (50/60 Hz)       | REXL2TMF7 | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | ~ 230 (50/60 Hz)       | REXL2TMP7 | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      |                        |           |                 |
|                                                                                                                                            |           | 4                    | — 12                   | REXL4TMJD | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | — 24<br>(1)            | REXL4TMBD | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | ~ 24 (50/60 Hz)<br>(1) | REXL4TMB7 | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | ~ 120 (50/60 Hz)       | REXL4TMF7 | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      | ~ 230 (50/60 Hz)       | REXL4TMP7 | 0.050/<br>0.110 |
|                                                                                                                                            |           |                      |                        |           |                 |

**Sockets for relays**

| Contact terminal arrangement | For use with relays     | Connection  | Unit reference (2) | Weight kg/lb    |
|------------------------------|-------------------------|-------------|--------------------|-----------------|
| Mixed (3)                    | REXL2TM●●,<br>REXL4TM●● | Screw clamp | RXZE2M114<br>(5)   | 0.048/<br>0.106 |
|                              | REXL2TM●●,<br>REXL4TM●● | Connector   | RXZE2M114M<br>(6)  | 0.056/<br>0.123 |
| Separate (4)                 | REXL2TM●●               | Connector   | RXZES108M          | 0.070/<br>0.154 |
|                              | REXL4TM●●               | Connector   | RXZE2S114M         | 0.058/<br>0.128 |

(1) For — 48 V supply, additional resistor 560 Ω 2 W / — 24 V.

For ~ 48 V, additional resistor 390 Ω 4 W / ~ 24 V.

(2) These products are sold in lots of 10.

(3) The inputs are mixed with the relay's supply, with the outputs being located on the opposite side of the socket.

(4) The inputs and outputs are separated from the relay supply.

(5) Thermal current I<sub>th</sub>: 10 A.

(6) Thermal current I<sub>th</sub>: 12 A.

## Zelio Time - timing relays

Analog, electronic relays,  
relay output, 48 x 48

## Output 2 C/O contacts

- ☐ Time unit selector knob
- ☐ Multifunction, single function or dual function
- ☐ Multirange
- ☐ Multivoltage
- ☐ 2 relay outputs, 5 A
- ☐ Panel-mounted or plug-in
- ☐ LED indication



RE48ATM12MW



RE48AMH13MW



RUZC3M



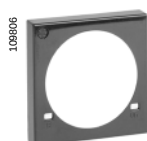
RE48ASOC11AR



RE48ASOC8SOLD



RE48ASOC11SOLD



RE48ASETCOV



RE48AIPCOV

## References

## 8-pin relay

| Timing ranges                                                                                                                           | Function                | No. of relay outputs       | Voltages   | Reference   | Weight          |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------|------------|-------------|-----------------|
|                                                                                                                                         |                         |                            | V          |             | kg/lb           |
| 1.2 s,<br>3 s,<br>12 s,<br>30 s,<br>120 s,<br>300 s,<br>12 min,<br>30 min,<br>120 min,<br>300 min,<br>12 h,<br>30 h,<br>120 h,<br>300 h | A                       | 1                          | ≈ 24...240 | RE48ATM12MW | 0.140/<br>0.309 |
|                                                                                                                                         | A1,<br>A2,<br>H1,<br>H2 | 2 of which 1 instantaneous | ≈ 24...240 | RE48AMH13MW | 0.140/<br>0.309 |

## 11-pin relay

|                                                                                                                                         |                      |   |            |             |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------|---|------------|-------------|-----------------|
| 1.2 s,<br>3 s,<br>12 s,<br>30 s,<br>120 s,<br>300 s,<br>12 min,<br>30 min,<br>120 min,<br>300 min,<br>12 h,<br>30 h,<br>120 h,<br>300 h | L,<br>Li             | 2 | ≈ 24...240 | RE48ACV12MW | 0.140/<br>0.309 |
|                                                                                                                                         | A,<br>B,<br>C,<br>Di | 2 | ≈ 24...240 | RE48AML12MW | 0.140/<br>0.309 |

## Sockets

| Description                                                                | Number of pins | For use with relays         | Sold in lots of | Unit reference | Weight kg/lb    |
|----------------------------------------------------------------------------|----------------|-----------------------------|-----------------|----------------|-----------------|
| IP 20 sockets with connection by connector and mixed contact terminals (1) | 8              | RE48ATM12MW,<br>RE48AMH13MW | 10              | RUZC2M         | 0.054/<br>0.119 |
|                                                                            | 11             | RE48ACV12MW,<br>RE48AML12MW | 10              | RUZC3M         | 0.054/<br>0.119 |
| IP20 socket with screw terminal connections on rear face                   | 11             | RE48ACV12MW,<br>RE48AML12MW | 1               | RE48ASOC11AR   | —               |

## Connectors and protective cover

|                          |    |                                                             |   |                |   |
|--------------------------|----|-------------------------------------------------------------|---|----------------|---|
| IP20 solder connectors   | 8  | RE48ATM12MW,<br>RE48AMH13MW                                 | 1 | RE48ASOC8SOLD  | — |
|                          | 11 | RE48ACV12MW,<br>RE48AML12MW                                 | 1 | RE48ASOC11SOLD | — |
| Setting protection cover | —  | RE48ATM12MW,<br>RE48ACV12MW,<br>RE48AML12MW,<br>RE48AMH13MW | 1 | RE48ASETCOV    | — |
| Protective cover IP64    | —  | RE48ATM12MW,<br>RE48ACV12MW,<br>RE48AML12MW,<br>RE48AMH13MW | 1 | RE48AIPCOV     | — |

(1) The inputs are mixed with the relay's supply terminals, with the outputs being located on the opposite side of the socket

# Zelio Time - timing relays

Panel-mounted universal, plug-in relays,  
relay output

## Output 1 C/O or 2 C/O contacts

- LCD display
- Multifunction or single function
- Multirange
- Multivoltage
- 1 8A relay or 2 relay outputs: 5 A (RE8885740●), 8 A (RE8885730●)
- Reset function on front panel (RE8885730●)
- Memory in the event of mains power failure (RE 88 857 30●)
- Locking of access to programming (RE8885710● and RE8885700●)
- Upcount or downcount mode
- Internal supply by lithium battery (10 years at 20 °C)



RE8885740●



RE8885760●

## References

### 8-pin relay

| Timing ranges                                                                                                                              | Functions                        | No. of relay outputs | Voltages                           | Reference  | Weight          |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|----------------------|------------------------------------|------------|-----------------|
|                                                                                                                                            |                                  |                      | V                                  |            | kg/lb           |
| 99.99 s,<br>999.9 s,<br>9999 s,<br>99 min 59 s,<br>99.99 min,<br>999.9 min,<br>9999 min,<br>99 h 59 min,<br>99.99 h,<br>999.9 h,<br>9999 h | A                                | 2                    | ~ 24                               | RE88857409 | 0.140/<br>0.309 |
|                                                                                                                                            |                                  |                      | ~ 110                              | RE88857406 | 0.140/<br>0.309 |
|                                                                                                                                            |                                  |                      | ~ 220...240                        | RE88857400 | 0.140/<br>0.309 |
|                                                                                                                                            | A,<br>B,<br>C,<br>D,<br>Di,<br>H | 1                    | ~ 12 and<br>~ 24...48              | RE88857003 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                      | ~ 24 and<br>~ 110...240            | RE88857005 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                      | ~ 24 and<br>~ 48                   | RE88857604 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                      | ~ 24 V and<br>~ 110, (50/60 Hz)    | RE88857607 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                      | ~ 24 and ~ 24...240,<br>(50/60 Hz) | RE88857601 | 0.100/<br>0.220 |

### 11-pin relay

|                                                                                                                                            |                                  |                               |                                   |            |                 |
|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------|-----------------------------------|------------|-----------------|
| 99.99 s,<br>999.9 s,<br>9999 s,<br>99 min 59 s,<br>99.99 min,<br>999.9 min,<br>9999 min,<br>99 h 59 min,<br>99.99 h,<br>999.9 h,<br>9999 h | A,<br>B,<br>C,<br>D,<br>Di,<br>H | 1                             | ~ 12 and<br>~ 24...48             | RE88857103 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                               | ~ 24 and<br>~ 110...240           | RE88857105 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                               | ~ 24 and<br>~ 48                  | RE88857704 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                               | ~ 24 V and<br>~ 110 (50/60 Hz)    | RE88857707 | 0.100/<br>0.220 |
|                                                                                                                                            |                                  |                               | ~ 24 and ~ 24...240<br>(50/60 Hz) | RE88857701 | 0.100/<br>0.220 |
|                                                                                                                                            | A1,<br>A2,<br>AM,<br>AMt         | 2 of which 1<br>instantaneous | ~ 12 V and<br>~ 42...48           | RE88857302 | 0.140/<br>0.309 |
|                                                                                                                                            |                                  |                               | ~ 24 and<br>~ 110                 | RE88857307 | 0.140/<br>0.309 |
|                                                                                                                                            |                                  |                               | ~ 24 V and<br>~ 220...240         | RE88857301 | 0.140/<br>0.309 |

### Sockets for relays

| Number of pins  | For use with relays                | Unit reference (1) | Weight kg/lb    |
|-----------------|------------------------------------|--------------------|-----------------|
| 8-pin connector | RE8885740●, RE8885700●, RE8885760● | RUZC2M             | 0.054/<br>0.119 |
| 11-pin          | RE8885710●, RE8885730●, RE8885770● | RUZC3M             | 0.054/<br>0.119 |

(1) These products are sold in packs of 10