

Zelio Time Timing relays

Catalog

April 2014



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Applications	These timing relays enable simple automation cycles to be set up using wired logic. They can also be used to complement the functions of PLCs.	
Output	Solid state Timing relays with solid state output reduce the amount of wiring required (wired in series). The durability of these timing relays is independent of the number of operating cycles.	Relay Relay outputs provide complete isolation between the supply circuit and the output. It is possible to have several output circuits.



Type	Modular	Industrial	Modular	Industrial
Time ranges	□ 7 ranges: 1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	□ 1 or 2 ranges depending on model: 10 s, 30 s, 300 s, 60 min	Depending on model: □ 6 ranges 1 s, 10 s, 1 min, 10 min, 1 h, 10 h □ 7 ranges: 1 s, 10 s, 1 min, 10 min, 1 h, 10 h □ 10 ranges: 1 s, 3 s, 10 s, 30 s, 100 s, 300 s, 30 min, 300 min, 30 h, 300 h	Depending on model: □ 7 ranges: 1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h □ 7 ranges: 1 s, 3 s, 10 s, 30 s, 100 s, 300 s, 10 min □ 10 ranges: 1 s, 3 s, 10 s, 30 s, 100 s, 300 s, 30 min, 300 min, 30 h, 300 h
Relay type	RE17L●●●	RE9	RE17R●●●	RE22 RE7
Pages	18	19	18	20 and 21

These timing relays enable simple automation cycles to be set up using wired logic. They can also be used to complement the functions of PLCs.
Relay Relay outputs provide complete isolation between the supply circuit and the output. It is possible to have several output circuits.



Industrial	Plug-in		Panel mounted	
	Universal	Miniature	Analogue	Digital
□ 1 range depending on model: 0.5 s, 3 s, 10 s, 30 s, 300 s, 30 min	□ 7 ranges: 1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	□ 7 ranges: 0.1 s...1 s, 1 s...10 s, 0.1 min...1 min, 1 min...10 min, 0.1 h...1 h, 1 h...10 h, 10 h...100 h	14 ranges: 1.2 s, 3 s, 12 s, 30 s, 120 s, 300 s, 12 min, 30 min, 120 min, 300 min, 12 h, 30 h, 120 h, 300 h	Depending on model: □ 7 ranges: 99.99 s, 999.99 s, 99 min 59 s, 99.99 min, 999.9 min, 99 h 59 min, 999.9 h □ 11 ranges: 99.99 s, 999.99 s, 9999 s, 99 min 59 s, 99.99 min, 999.9 min, 99 h 59 min, 99.99 h, 999.9 h, 9999 h
RE8	RE88867●●●	REXL●TM●●	RE48A●●●	RE88857●●●
22	23 and 24	25	44	25

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:

C/O : 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.	
N/C : a contact that is closed without being actuated is called a Normally Closed (N/C) contact.	
N/O : a contact that closes when actuated is called a Normally Open (N/O) 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
A (2)		Power on delay relay
	Ac	On-delay and off-delay relay with control signal
	Ad	Pulse delayed relay with control signal
	Ah	Pulse delayed relay (single cycle) with control signal
	Ak	Asymmetrical On-delay and Off-delay with external control
	At	Power on delay relay (summation) with control signal
	Aw	Off-delay on energization or on opening of control contact
B (2)		Interval relay with control signal
	Bw	Double interval relay with control signal
C (2)		Off-delay relay with control signal
D (2)		Symmetrical flasher relay (starting pulse off)
	Di (2)	Symmetrical flasher relay (starting pulse on)
H (2)		Interval relay
	He	Pulse-on de-energization
	Ht	Interval relay (summation) with control signal
K		Delay on de-energization (without auxiliary supply)
L (2)		Asymmetrical flasher relay (starting pulse off)
	Li (2)	Asymmetrical flasher relay (starting pulse on)
	Lt	Asymmetrical flashing with partial stop of timing
N		Retriggerable interval relay with control signal on
O		Retriggerable interval delayed relay with control signal on
P		Pulse delayed relay with fixed pulse length
	Pt	Pulse delayed relay (summation and fixed pulse length) with control signal off
	Qc	Star-delta timing
	Qe	Star-delta timing
	Qg	Star-delta timing
	Qt	Star-delta timing
T		Bistable relay with control signal on
	Tt	Retriggerable bistable relay with control signal on
W		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	--- 12 V	2 C/O contacts	5 A	REXL2TMJD
			4 C/O contacts	3 A	REXL4TMJD
	0.1 s...100 h	--- 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		2 timed C/O contacts	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
				8 A	RE17RMMWS
A, At	1 s...100 h	--- 24 V, $\sim$ 24...240 V	1 C/O contact	8 A	RE17RMMU
	1 s...100 h	--- 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	--- 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 $\sim$ 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	--- 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	1 s...100 h	— 24 V, ~ 24...240 V	1 C/O contact	8 A	RE17RBMU
C	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, ~/— 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
D	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, ~/— 42...48 V	2 C/O contacts	8 A	RE7CP13BU
H	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, ~/— 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
H, Ht	1 s...100 h	— 24 V, ~ 24...240 V	1 C/O contact	8 A	RE17RHMU
He	0.05 s...0.5 s	~/— 24 V, ~ 110...240 V	1 C/O contact	8 A	RE8PT01BUTQ
K	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
L, Li	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
L, Li, Lt	0.05 s...300 h	~ 110...240 V, ~/— 24 V, ~/— 42...48 V	1 C/O contact	8 A	RE7CV11BU
Qc	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
Qe	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
Qg	0.05 s...300 h	~/— 24 V, ~ 110...240 V, ~/— 42...48 V	1 NO + 1 NC	8 A	RE7YR12BU
Qt	0.05 s...300 h	~/— 24 V, ~ 110...240 V, ~/— 42...48 V	2 C/O contacts	8 A	RE7YA12BU
W	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, ~/— 42...48 V	2 C/O contacts	8 A	RE7PD13BU
W, Ht	0.05 s...300 h	~/— 24 V, ~ 110...240 V, ~/— 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

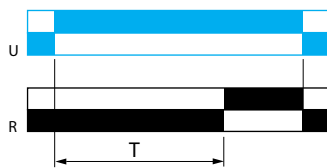
 Relay energized

 Output open

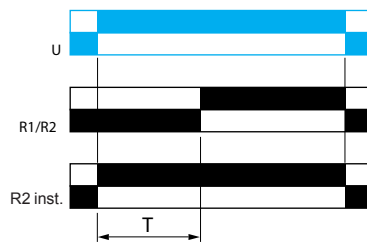
 Output closed

Function A: Power on delay relay

1 output



2 outputs

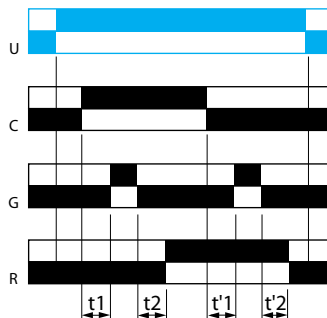


The timing period T begins on energization.
After timing, the output(s) R close(s).
The second output can be either timed or instantaneous.

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

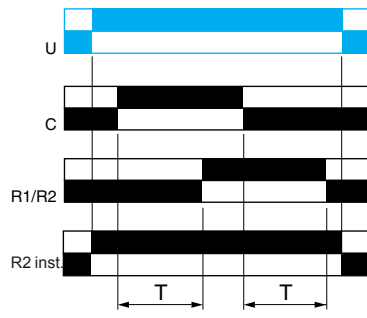
1 output



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

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

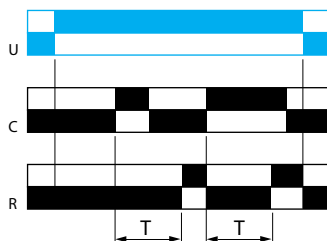
2 outputs



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

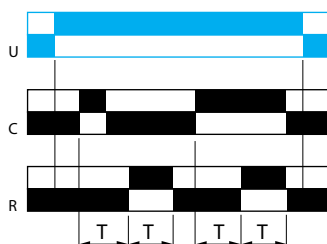


After power-up, pulsing or maintaining control contact C starts the timing T.

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.

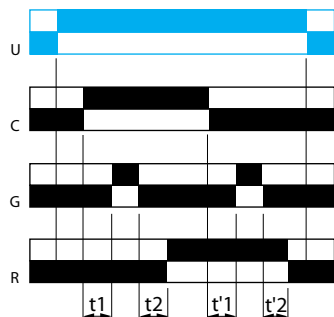
A single cycle then starts with 2 timing periods T of equal duration (start with output in rest position).

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

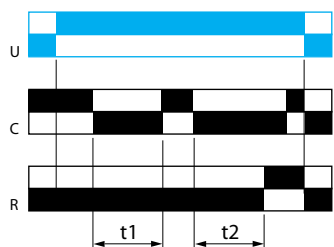


$$T_a = t_1 + t_2 + \dots$$

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

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.

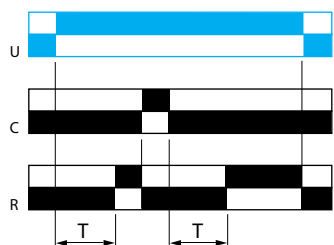
Function At: Power on delay relay (summation) with control signal



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

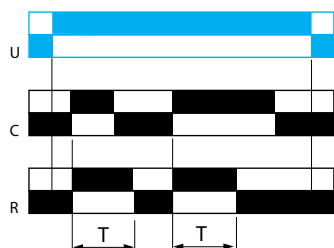
After power-up, the first opening of control contact C starts the timing. Timing can be interrupted each time control contact C closes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output relay closes.

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



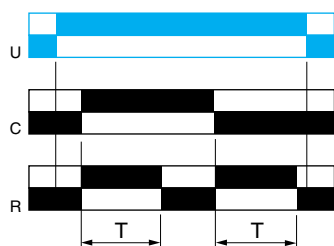
The timing period T starts on energization. At the end of the timing period T, the output R closes. Closing of the control contact C makes the output R open. Opening of control contact C restarts timing period T. At the end of the timing period T, the output R closes.

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

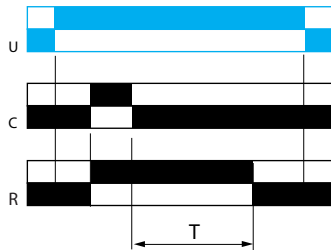


On closing and opening of control contact C, the output R closes for the duration of the timing period T.

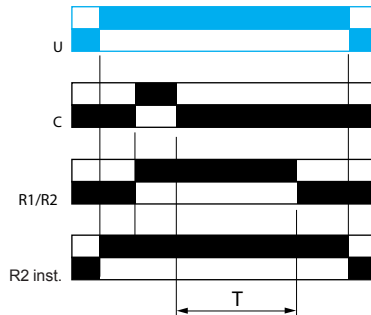
Functions (continued)

Function C: Off-delay relay with control signal

1 output



2 outputs

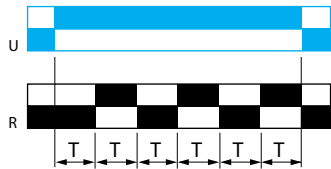


After power-up and closing of the control contact C, the output R closes. When control contact C re-opens, timing T starts. At the end of the timing period, output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

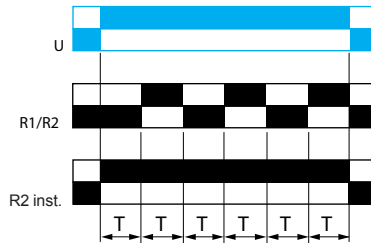
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

Function D: Symmetrical flasher relay (starting pulse off)

1 output



2 outputs

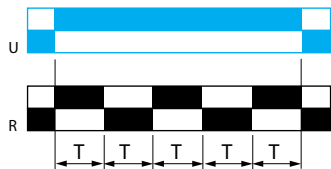


Repetitive cycle with two timing periods T of equal duration, with output(s) R changing state at the end of each timing period T. The second output can be either timed or instantaneous.

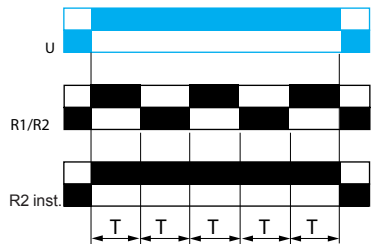
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

Function Di: Symmetrical flasher relay (starting pulse on)

1 output



2 outputs

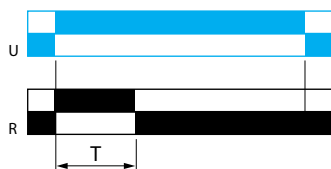


Repetitive cycle with two timing periods T of equal duration, with output(s) R changing state at the end of each timing period T. The second output can be either timed or instantaneous.

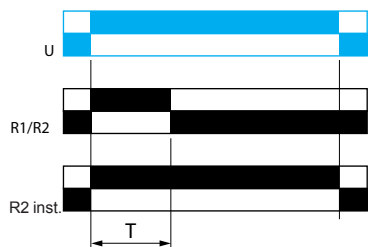
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

Function H: Interval relay

1 output



2 outputs

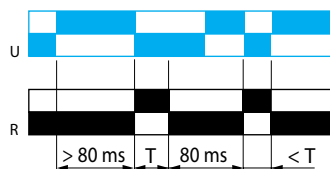


On energization of the relay, timing period T starts and the output(s) R close(s). At the end of the timing period T, output(s) R revert(s) to its/their initial state. The second output can be either timed or instantaneous.

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

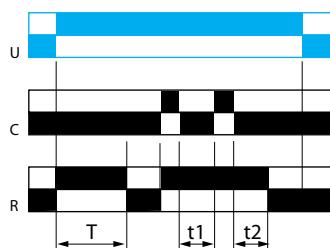
Functions (continued)

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.

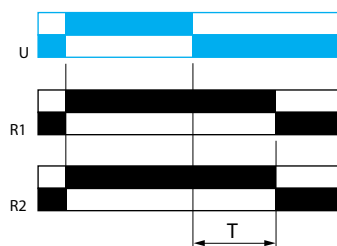
$T = t_1 + t_2 + \dots$

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

1 output

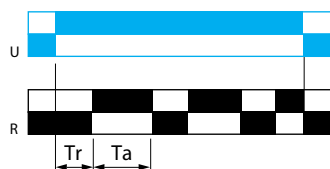


2 outputs



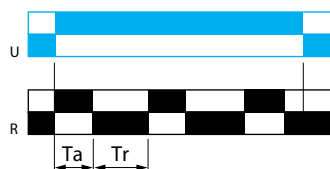
On energization, the output(s) R close(s).
On de-energization, timing period T starts and, at the end of this period, the output(s) R revert to its/their initial state.

Function L: Asymmetrical flasher relay (starting pulse off)



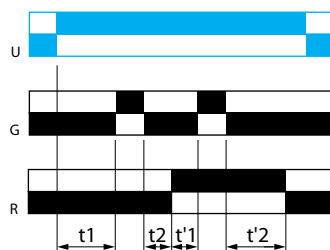
Repetitive cycle consisting of two, independently adjustable timing periods T_a and T_r . Each timing period corresponds to a different state of the output R.

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.

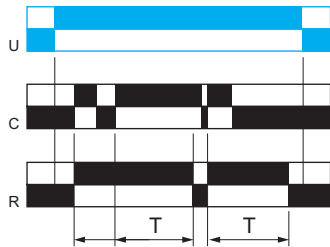
Gate control contact G can be operated to partially stop timing periods T_a and T_r .

$T_r = t_1 + t_2 + \dots$

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

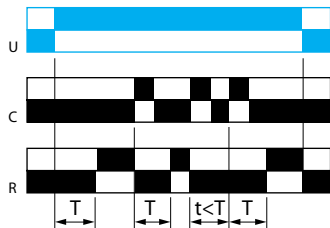
Functions (continued)

Function N: Retriggerable interval relay with control signal on



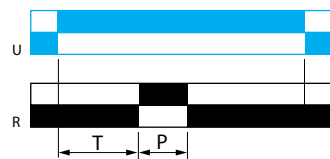
After power-up and an initial control pulse C, the output R closes.
If the interval between two control pulses C is greater than the set timing period T, timing elapses normally and the output R opens at the end of the timing period. If the interval is not greater than the set timing period, the output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

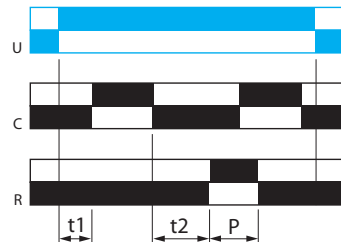
Function P: Pulse delayed relay with fixed pulse length



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

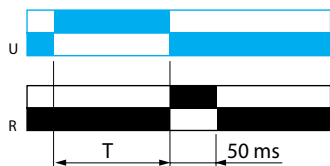
Function Pt: Pulse delayed relay (summation and fixed pulse length) with control signal off



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.

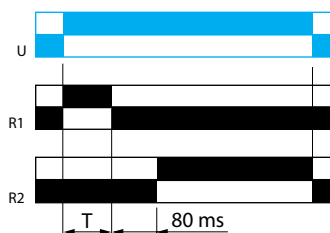
$T = t1 + t2 + \dots$
P = 500 ms

Function Qc: Star-delta timing



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

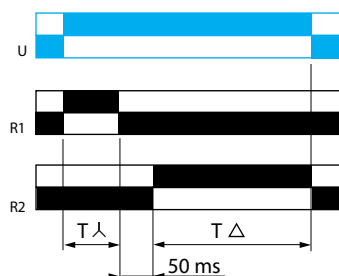
Function Qe: Star-delta timing



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.

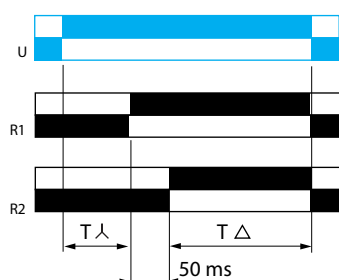
Functions (continued)

Function Qg: Star-delta timing



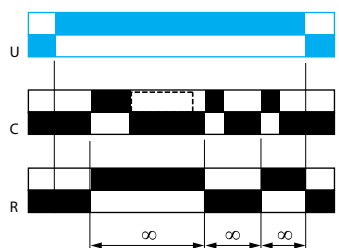
Timing for star delta starter with contact for switching to star connection.

Function Qt: Star-delta timing



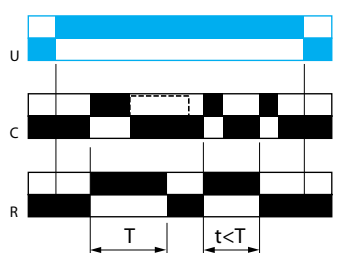
Timing for star-delta starter with double On-delay period.

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.

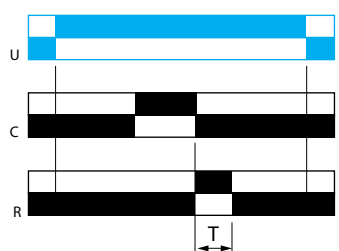
Function Tt: Retriggerable bistable relay with control signal on



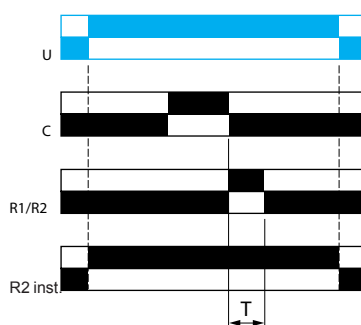
After power-up, pulsing or maintaining control contact C switches output R on and starts timing. The output switches off at the end of the timing period T or following a second pulse on the control contact C.

Function W: Interval relay with control signal off

1 output



2 outputs

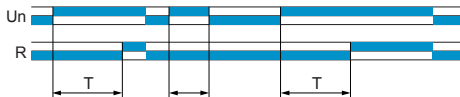


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

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.

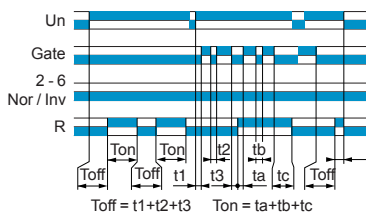
RE48ATM12MW

Function A: Delay on energization

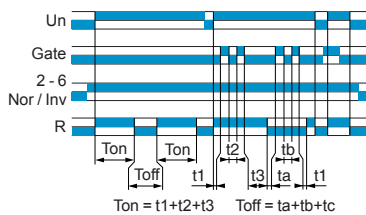


RE48ACV12MW

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

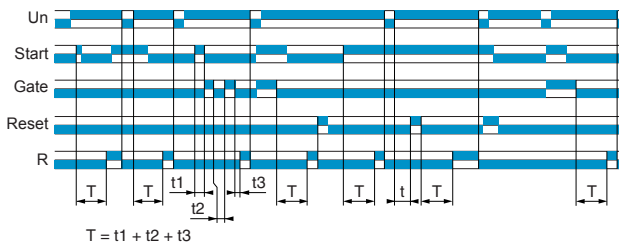


Function Li: Asymmetrical flashing, start with output in operating position

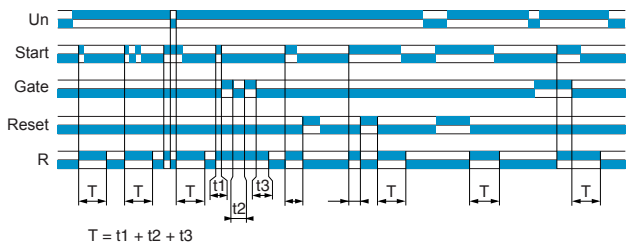


RE48AML12MW

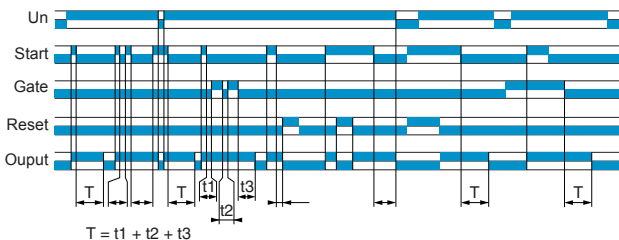
Function A: Delay on energization



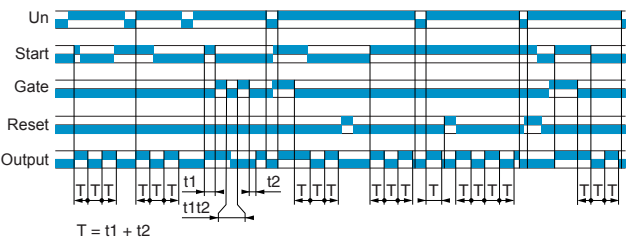
Function B: Timing on impulse, one shot



Function C: Timing after opening of control contact

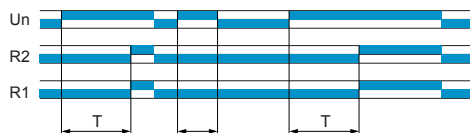


Function Di: Symmetrical flashing, start with output in operating position

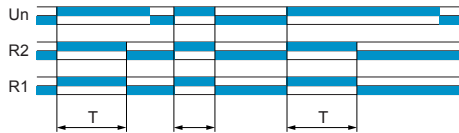


RE48AMH13MW

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/0.689 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 V	Reference	Weight kg/lb
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A	≈ 24...240	RE17LAMW	0.060/ 0.132
	H	~ 24...240	RE17LHBM	0.060/ 0.132
	C	~ 24...240	RE17LCBM	0.060/ 0.132
Dual function				
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	L, Li	~ 24...240	RE17LLBM	0.060/ 0.132
Multifunction				
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A, At, B, C, H, Ht, D, Di, Ac, Bw	~ 24...240	RE17LMBM	0.060/ 0.132

Modular relays with relay output, 1 C/O contact

Single function				
Timing ranges	Functions	Voltages V	Reference	Weight kg/lb
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	B	⇄ 24/~ 24...240	RE17RBMU	0.070/ 0.154
	C	⇄ 24/~ 24...240	RE17RCMU	0.070/ 0.154
Dual function				
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A, At	⇄ 24/~ 24...240	RE17RAMU	0.070/ 0.154
	H, Ht	⇄ 24/~ 24...240	RE17RHMU	0.070/ 0.154
	L, Li	⇄ 24/~ 24...240	RE17RLMU	0.070/ 0.154
		~ 12	RE17RLJU	0.070/ 0.154
Multifunction				
1 s, 10 s, 1 min, 10 min, 1 h, 10 h, 100 h	A, At, B, C, H, Ht, D, Di, Ac, Bw	≈ 12	RE17RMJU	0.070/ 0.154
		⇄ 24/~ 24...240	RE17RMMU	0.070/ 0.154
		≈ 12...240	RE17RMMW	0.070/ 0.154
			RE17RMMWS	0.070/ 0.154
	Ad, Ah, N, O, P, Pt, T, Tt, W	⇄ 24/~ 24...240	RE17RMXMU	0.070/ 0.154
1 s, 10 s, 1 min, 10 min, 1 h, 10 h	A, At, B, C, H, Ht, D, Di	⇄ 24/~ 24...240	RE17RMEMU	0.070/ 0.154

R			
RE7CL11BU	19	RE9RA11MW7	17
RE7CP13BU	19	RE9RA21MW7	17
RE7CV11BU	19	RE9RA31MW7	17
RE7MA11BU	19	RE9RA51MW7	17
RE7MA13BU	19	RE9TA11MW	17
RE7ML11BU	19	RE9TA21MW	17
RE7MV11BU	19	RE9TA31MW	17
RE7MY13BU	19	RE9TA51MW	17
RE7MY13MW	19	RE17LAMW	16
RE7PD13BU	19	RE17LCBM	16
RE7PE11BU	19	RE17LHBM	16
RE7PM11BU	19	RE17LLBM	16
RE7PP13BU	19	RE17LMBM	16
RE7RA11BU	19	RE17RAMU	16
RE7RB11MW	19	RE17RBMU	16
RE7RB13MW	19	RE17RCMU	16
RE7RL13BU	19	RE17RHMU	16
RE7RM11BU	19	RE17RLJU	16
RE7TL11BU	19	RE17RLMU	16
RE7TM11BU	19	RE17RMEMU	16
RE7TP13BU	19	RE17RMJU	16
RE7YA12BU	19	RE17RMMU	16
RE7YR12BU	19	RE17RMMW	16
RE8CL11BUTQ	20	RE17RMMWS	16
RE8PD11BTQ	20	RE17RMXMU	16
RE8PD11FUTQ	20	RE22R1QMQ	18
RE8PD21BTQ	20	RE22R1QMU	18
RE8PD21FUTQ	20	RE22R2AMU	18
RE8PD31BTQ	20	RE22R2MJU	18
RE8PD31FUTQ	20	RE22R2MMU	18
RE8PE11BUTQ	20	RE22R2MMW	18
RE8PE21BUTQ	20	RE22R2MXMU	18
RE8PE31BUTQ	20	RE48ACV12MW	24
RE8PT01BUTQ	20	RE48AIPCOV	24
RE8RA11BTQ	20	RE48AMH13MW	24
RE8RA11FUTQ	20	RE48AML12MW	24
RE8RA21BTQ	20	RE48ASETCOV	24
RE8RA21FUTQ	20	RE48ASOC8SOLD	24
RE8RA31BTQ	20	RE48ASOC11AR	24
RE8RA31FUTQ	20	RE48ASOC11SOLD	24
RE8RA41FUTQ	20	RE48ATM12MW	24
RE8RB11BUTQ	20	RE88857003	25
RE8RB31BUTQ	20	RE88857005	25
RE8RB51BUTQ	20	RE88857103	25
RE8TA11BUTQ	20	RE88857105	25
RE8TA21BUTQ	20	RE88857601	25
RE8TA31BUTQ	20	RE88857604	25
RE8TA41BUTQ	20	RE88857607	25
RE8TA61BUTQ	20	RE88857701	25
RE8YA32BTQ	20	RE88857704	25
RE8YA32FUTQ	20	RE88857707	25
RE8YA32QTQ	20	RE88867100	22
RE8YG11BUTQ	20	RE88867103	22
RE8YG21BUTQ	20	RE88867105	22
RE8YG31BUTQ	20	RE88867135	22
RE9MS21MW	17	RE88867155	22
		RE88867215	22
		RE88867300	21
		RE88867303	21
		RE88867305	21
		RE88867415	21
		RE88867435	21
		RE88867455	21
		REXL2TMB7	23
		REXL2TMBD	23
		REXL2TMF7	23
		REXL2TMJD	23
		REXL2TMP7	23
		REXL4TMB7	23
		REXL4TMBD	23
		REXL4TMF7	23
		REXL4TMJD	23
		REXL4TMP7	23
		RUZC2M	22
			24
			25
		RUZC3M	21
			24
			25
		RXZE2M114	23
		RXZE2M114M	23
		RXZE2S114M	23
		RXZES108M	23