



### Main

Range of product	Harmony Timer Relays
Product or component type	Pulse delayed relay Safe-guard relay Bistable relay Interval relay
Discrete output type	Relay
Device short name	RE22
Nominal output current	8 A

### Complementary

Contacts type and composition	1 C/O timed contact 1 C/O timed or instantaneous contact
Time delay type	Ad Ah N O P Pt TI Tt W
Time delay range	0.1...1 s 1...10 h 1...10 s 6...60 min 10...100 h 6...60 s 1...10 min
Control type	Rotary knob front panel
[Us] rated supply voltage	24...240 V AC 24 V DC
Voltage range	0.85...1.1 Us
Supply frequency	50...60 Hz +/- 5 %
Connections - terminals	Screw terminals, 2 x 1.5 mm <sup>2</sup> with cable end Screw terminals, 2 x 2.5 mm <sup>2</sup> without cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing
Repeat accuracy	+/- 0.5 % conforming to IEC 61812-1
Temperature drift	+/- 0.05 %/°C
Voltage drift	+/- 0.2 %/V
Setting accuracy of time delay	+/- 10 % of full scale at 25 °C conforming to IEC 61812-1
Control signal pulse width	30 Ms 100 ms under load
Insulation resistance	100 MOhm at 500 V DC conforming to IEC 60664-1
Recovery time	120 ms on de-energisation
Immunity to microbreaks	10 ms
Power consumption in VA	50 VA at 240 V AC
Power consumption in W	0.7 W at 24 V DC
Breaking capacity	2000 VA

Minimum switching current	10 mA at 5 V
Maximum switching current	8 mA
Maximum switching voltage	250 V
Electrical durability	100000 cycles for resistive load, 8 A at 250 V, AC
Mechanical durability	10000000 cycles
Rated impulse withstand voltage	5 kV for 1.2...50 µs conforming to IEC 60664-1 5 kV conforming to IEC 61812-1
Power on delay	100 ms
Safety reliability data	B10d = 170000 MTTFd = 182.6 years
Mounting position	Any position in relation to normal vertical mounting plane
Mounting support	35 mm DIN rail conforming to EN/IEC 60715
Status LED	LED green (flashing) for timing in progress LED green (steady) for power ON LED yellow for relay energised
Width	22.5 mm
Net weight	0.09 kg

## Environment

Dielectric strength	2.5 kV for 1 mA/1 minute at 50 Hz conforming to IEC 61812-1
Standards	IEC 61812-1 EN 61000-6-1 EN 61000-6-3 EN 61000-6-4 EN 61000-6-2
Directives	2006/95/EC - low voltage directive 2004/108/EC - electromagnetic compatibility
Product certifications	CSA CCC GL CULus EAC CE RCM
Ambient air temperature for operation	-20...60 °C
Ambient air temperature for storage	-30...60 °C
IP degree of protection	IP40 housing: conforming to IEC 60529 IP50 front face: conforming to IEC 60529 IP20 terminal block: conforming to IEC 60529
Vibration resistance	20 m/s <sup>2</sup> (f= 10...150 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
Relative humidity	93 %, without condensation conforming to IEC 60068-2-30
Electromagnetic compatibility	Electrostatic discharge immunity test - test level: 6 kV level 3 (contact discharge) conforming to EN/IEC 61000-4-2 Electrostatic discharge immunity test - test level: 8 kV level 3 (air discharge) conforming to EN/IEC 61000-4-2 Fast transients immunity test - test level: 1 kV level 3 (capacitive connecting clip) conforming to IEC 61000-4-4 Fast transients immunity test - test level: 2 kV level 3 (direct contact) conforming to IEC 61000-4-4 Surge immunity test - test level: 1 kV level 3 (differential mode) conforming to IEC 61000-4-5 Surge immunity test - test level: 2 kV level 3 (common mode) conforming to IEC 61000-4-5 Radiated radio-frequency electromagnetic field immunity test - test level: 10 V level 3 (0.15...80 MHz) conforming to IEC 61000-4-6 Electromagnetic field immunity test - test level: 10 V/m level 3 (80 MHz...1 GHz) conforming to IEC 61000-4-3 Immunity to microbreaks and voltage drops - test level: 30 % (500 ms) conforming to IEC 61000-4-11 Immunity to microbreaks and voltage drops - test level: 100 % (20 ms) conforming to IEC 61000-4-11

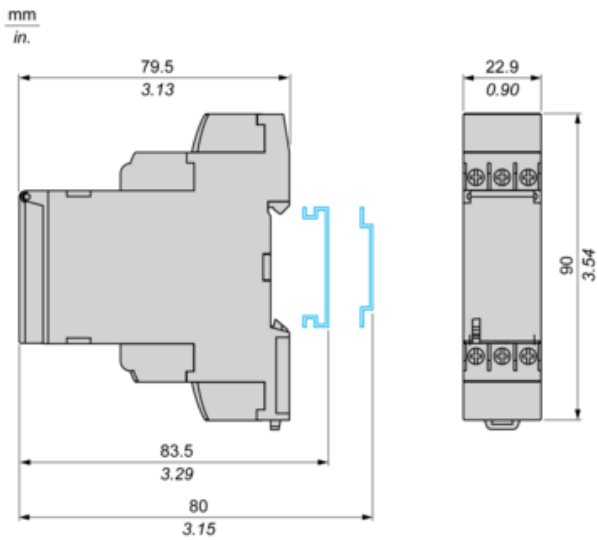
## Packing Units

Package 1 Weight	90.550 g
Package 1 Height	90.000 mm
Package 1 width	22.500 mm
Package 1 Length	79.500 mm

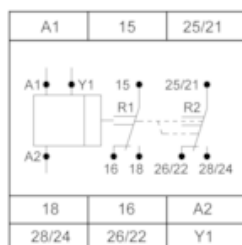
## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>

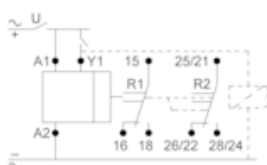
Dimensions



## Internal Wiring Diagram



## Wiring Diagram



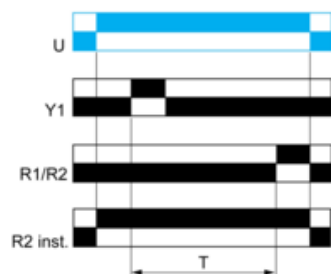
## Function Ad : Pulse Delayed Relay with Control Signal

### Description

After power-up, pulsing or maintaining of control contact Y1 starts the timing T.

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

The output relay will be reset the next time control contact Y1 is pulsed or maintained.



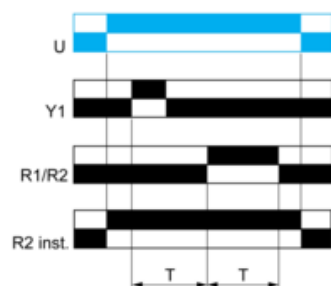
## Function Ah : Pulse Delayed Relay (Single Cycle) with Control Signal

### Description

After power-up, pulsing or maintaining of control contact Y1 starts the timing T. A single cycle then starts with 2 timing periods T of equal duration (start with output in rest position).

Output relay closes 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 Y1 must be reset in order to re-start the single flashing cycle.

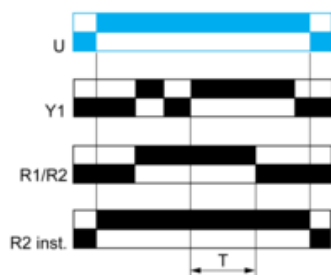


## Function N : Retriggerable Interval Relay with Control Signal On

### Description

After power-up and an initial control pulse C, the output relay closes.

If the interval between two control pulses C is greater than the set timing period T, timing elapses normally and the output relay closes at the end of the timing period. If the interval is not greater than the set timing period, the output relay remains closed until this condition is met.

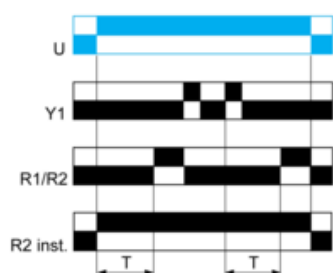


## Function O : Retriggerable Interval Delayed Relay with Control Signal On

## Description

An initial timing period T begins on energization. At the end of this timing period, the output relay closes.

As soon as there is a control pulse C, the output relay reverts to its initial state until the interval between two control pulses is less than the value of the set timing period T. Otherwise, the output relay closes at the end of the timing period T.

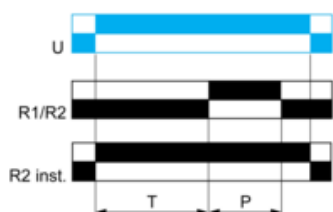


## Function P : Pulse Delayed Relay with Fixed Pulse Length

### Description

The timing period T begins on energization.

At the end of this period, the output relay closes for a fixed time P.

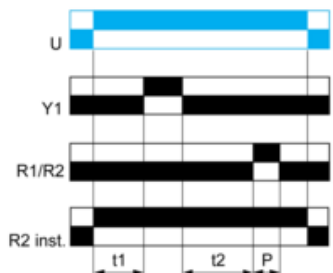


## Function Pt : Pulse Delayed Relay (Summation and Fixed Pulse Length) with Control Signal Off

### Description

On energization, timing period T starts (it can be interrupted by operating the Gate control contact G).

At the end of this period, the output relay closes for a fixed time P.



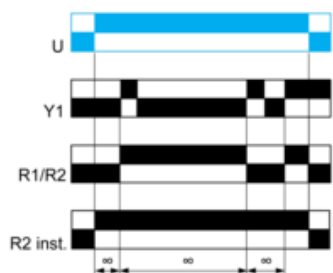
$$T = t1 + t2 \quad P = 500ms$$

## Function TL : Bistable Relay with Control Signal On

### Description

After power-up, pulsing or maintaining of control contact Y1 switches the output on.

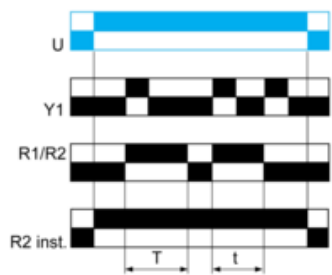
A second pulse on the control contact Y1 switches the output relay off.



Function Tt :Retriggerable Bistable Relay with Control Signal On

Description

After power-up, pulsing or maintaining of control contact Y1 switches output relay on and starts timing T.  
The output switches off at the end of the timing period T or following a second pulse on the control contact Y1.

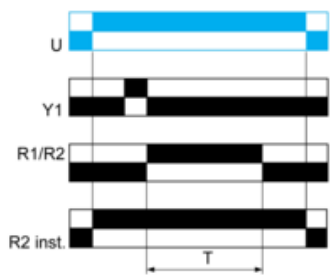


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).

Function W :Interval Relay with Control Signal Off

Description

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(s) to its/their initial state.



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

Legend

- Relay de-energised
- Relay energised
- Output open
- Output closed

Y1 :	Control contact
R1/R2 :	2 timed outputs
R2 inst. :	The second output is instantaneous if the right position is selected
T :	Timing period
U :	Supply