Product data sheet
Characteristics

RE22R2MJU
Multifunction Timer Relay - 12V AC/DC - 2 C/O

Main

Range of product	Harmony Timer Relays
Product or component type	Power on-delay relay On-delay and off-delay relay Interval relay Off-delay relay Symmetrical flashing 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	A Ac At B Bw C D Di H Ht
Time delay range	1...10 min 6...60 min 0.1...1 s 6...60 s 1...10 s 1...10 h 10...100 h
Control type	Rotary knob front panel
[Us] rated supply voltage	12 V AC/DC
Voltage range	0.9...1.2 Us
Supply frequency	50...60 Hz +/- 5 %
Connections - terminals	Screw terminals, 2 x 1.5 mm² with cable end Screw terminals, 2 x 2.5 mm² 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	1.2 VA at 12 V AC
Power consumption in W	0.5 W at 12 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 = 190000 MTTFd = 205.4 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	EN 61000-6-1 IEC 61812-1 EN 61000-6-4 EN 61000-6-3 EN 61000-6-2
Directives	2006/95/EC - low voltage directive 2004/108/EC - electromagnetic compatibility
Product certifications	CSA CULus CE EAC GL CCC 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 IP20 terminal block: conforming to IEC 60529 IP40 front face: conforming to IEC 60529
Vibration resistance	20 m/s² (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 Conducted and radiated emissions class B conforming to EN 55022

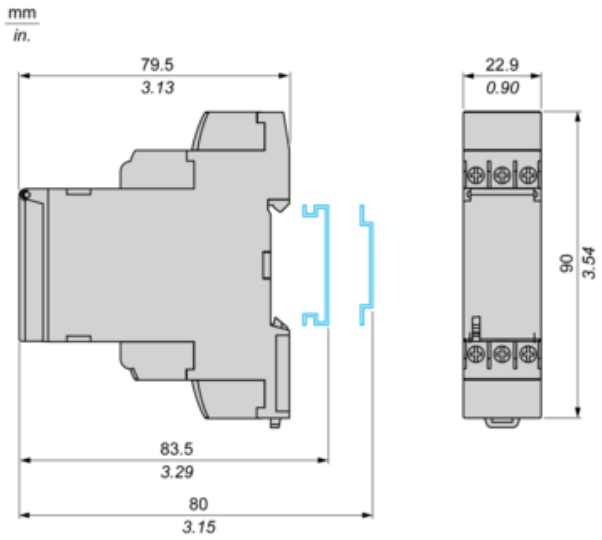
Packing Units

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

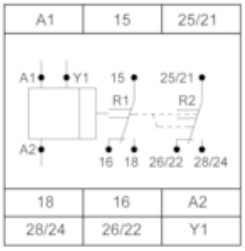
Offer Sustainability

Sustainable offer status	Green Premium product
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information

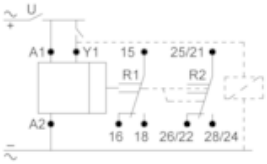
Dimensions



Internal Wiring Diagram



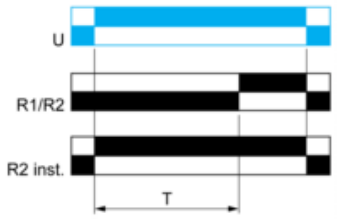
Wiring Diagram



Function A : Power on Delay Relay

Description

The timing period T begins on energization. After timing, the output(s) relay close(s).



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

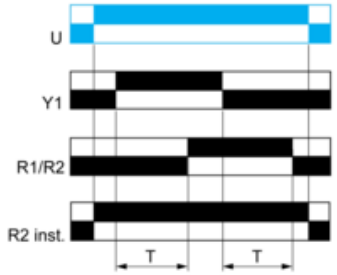
Function Ac : On- and Off-Delay Relay with Control Signal

Description

After power-up, closing of the control contact Y1 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 Y1 re-opens, the timing T starts.At the end of this timing period T

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).

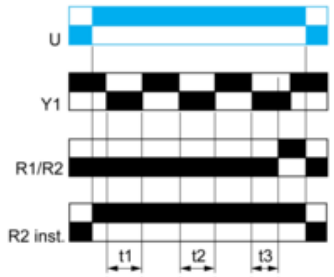


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function At : Power on Delay Relay (Summation) with Control Signal

Description

After power-up, the first opening of control contact Y1 starts the timing. Timing can be interrupted each time control contact closes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output relay closes.

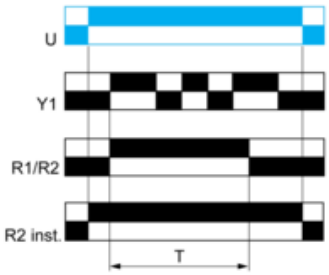


T = t1+t2+t3

Function B : Interval Relay with Control Signal

Description

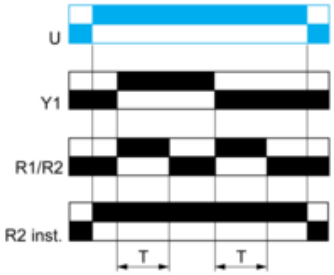
After power-up, pulsing or maintaining control contact Y1 starts the timing T. The output relay closes for the duration of the timing period T then reverts to its initial state.



Function Bw : Double Interval Relay with Control Signal

Description

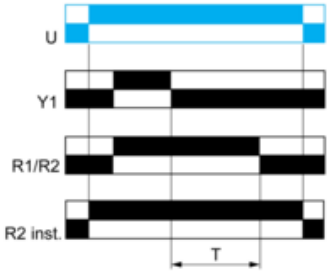
On closing and opening of control contact Y1, the output relay closes for the duration of the timing period T.



Function C : Off-Delay Relay with Control Signal

Description

After power-up and closing of the control contact Y1, the output relay closes. When control contact Y1 re-opens, timing T starts. At the end of the timing period, the output(s) relay revert(s) to its/their initial state.

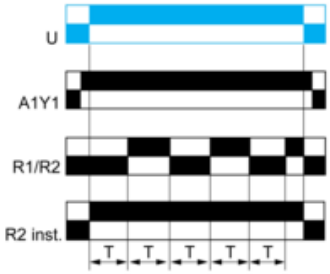


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function D : Symmetrical Flasher Relay (Starting Pulse Off)

Description

Repetitive cycle with two timing periods T of equal duration, with output(s) relay changing state at the end of each timing period T.



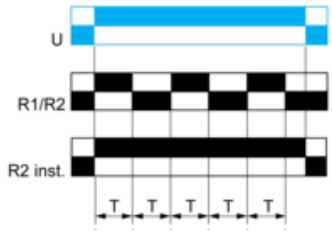
Before power-up Y1 should be permanently connected to A1.

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

Function D : Symmetrical Flasher Relay (Starting Pulse On)

Description

Repetitive cycle with two timing periods T of equal duration, with output(s) relay changing state at the end of each timing period T.

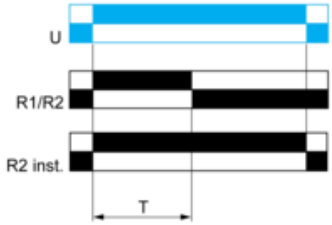


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

Function H : Interval Relay

Description

On energization of the relay, timing period T starts and the output(s) relay close(s). At the end of the timing period T, the output(s) relay 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

Function Ht: Interval Relay & With Pause / Summation Control

Description

On energisation of power supply, output(s) R close(s) and timing period T starts.

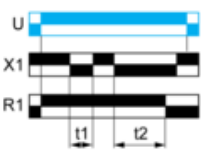
The timing can be interrupted / paused each time X1 energizes.

When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state Reenergization of X1 will also cause output(s) R close(s) if the time has elapsed and restart the same operation as described at the beginning.

Except for RE17*, RE22R2MMW, RENF22R2MMW, RE22R2MMU and RE22R2MJU, timing can be interrupted / paused each time Y1 energizes.

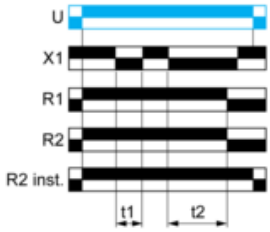
The second output (R2) can be either timed (when set to “TIMED” or instantaneous (when set to “INST”).

Function: 1 Output



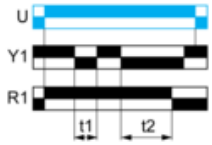
T = t1 + t2 +...

Function: 2 Outputs



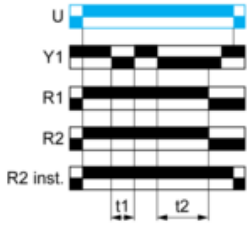
T = t1 + t2 +...

Function: 1 Output with Retrigger / Restart Control



T = t1 + t2 +...

Function: 2 Outputs with Retrigger / Restart Control



T = t1 + t2 +...