

# RE22R2MJU

single function relay, Harmony Timer Relays,  
8A, 2CO, 0.1s...100h, multifunction, 12V AC  
DC



## Main

Range of Product	Harmony Timer Relays
Product or Component Type	Modular timing 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	Power on-delay On-delay and off-delay Interval Off-delay Symmetrical flashing
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 mm <sup>2</sup> with cable end Screw terminals, 2 x 2.5 mm <sup>2</sup> without cable end
Tightening torque	5.3...8.9 lbf.in (0.6...1 N.m) IEC 60947-1
Housing material	Self-extinguishing
Repeat accuracy	+/- 0.5 % IEC 61812-1
Temperature Drift	+/- 0.05 %/°C
Voltage drift	+/- 0.2 %/V
Setting accuracy of time delay	+/- 10 % of full scale 25 °C IEC 61812-1
Control signal pulse width	30 Ms 100 ms under load
Insulation resistance	100 MOhm 500 V DC IEC 60664-1
Recovery time	120 ms on de-energisation
Immunity to microbreaks	10 ms
Power consumption in VA	1.2 VA 12 V AC
Power consumption in W	0.5 W 12 V DC
Breaking capacity	2000 VA
Minimum switching current	10 mA 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 1.2...50 µs IEC 60664-1 5 kV 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 IEC 60715
Status LED	Green LED flashing)timing in progress Green LED steady)power ON Yellow LEDrelay energised
Function available	A- Power on-delay relay-2 C/O Ac- On-delay and off-delay relay w/ control signal-2 C/O At- Power on-delay relay w/ pause/summation (Y1)-2 C/O B- Single interval relay w/ control signal-2 C/O Bw- Double interval relay w/ control signal-2 C/O C- Off-delay relay w/ control signal-2 C/O D- Symmetrical flashing relay (starting pulse-off)-2 C/O Di- Symmetrical flashing relay (starting pulse-on)-2 C/O H- Interval relay-2 C/O Ht- Interval relay w/ pause/summation (Y1)-2 C/O
Width	0.9 in (22.5 mm)
Net Weight	0.20 lb(US) (0.09 kg)
Control Type	With test button
Number of functions	10

## Environment

Dielectric strength	2.5 kV 1 mA/1 minute 50 Hz IEC 61812-1
Standards	IEC 61000-6-1 IEC 61812-1 IEC 61000-6-4 IEC 61000-6-3 IEC 61000-6-2
Directives	2006/95/EC - low voltage directive 2004/108/EC - electromagnetic compatibility
Product Certifications	CSA[RETURN]cULus[RETURN]CE[RETURN]EAC[RETURN]GL[RETURN]CCC[RETURN]RCM
Ambient Air Temperature for Operation	-4...140 °F (-20...60 °C)
Ambient Air Temperature for Storage	-22...140 °F (-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/s <sup>2</sup> 10...150 Hz)IEC 60068-2-6
Shock resistance	15 gn 11 ms IEC 60068-2-27
Relative humidity	93 %, without condensation IEC 60068-2-30
Electromagnetic compatibility	Electrostatic discharge immunity test - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2 Electrostatic discharge immunity test - test level: 8 kV level 3 (air discharge) conforming to 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

## Ordering and shipping details

Category	US10CP222376
Discount Schedule	0CP2
GTIN	3606480676598
Returnability	No
Country of origin	ID

## Packing Units

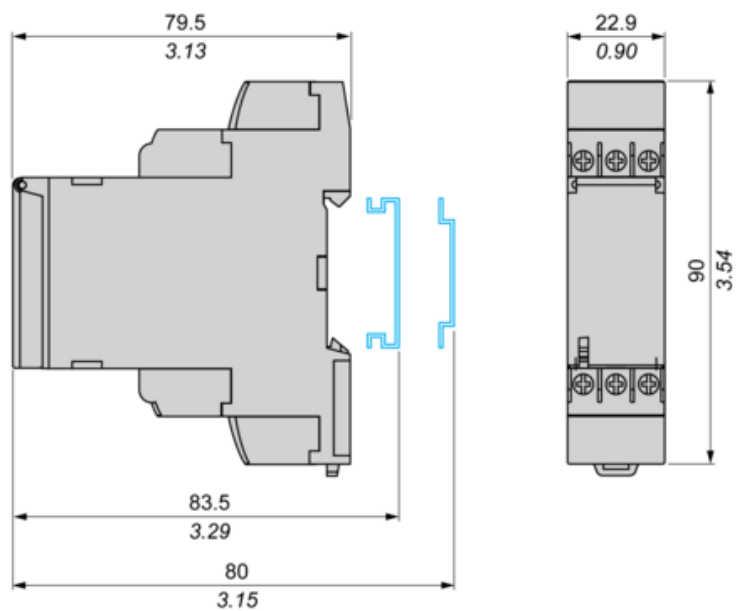
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	1.063 in (2.700 cm)
Package 1 Width	3.307 in (8.400 cm)
Package 1 Length	3.819 in (9.700 cm)
Package 1 Weight	3.633 oz (103.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 cm)
Package 2 Weight	10.225 lb(US) (4.638 kg)

## Offer Sustainability

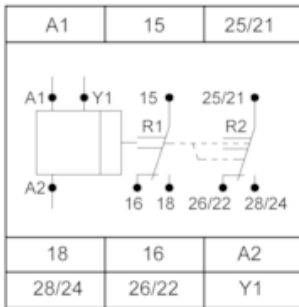
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>

Dimensions

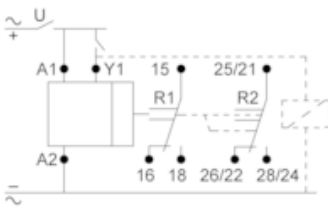
mm  
in.



Internal Wiring Diagram



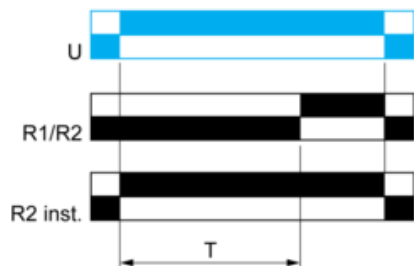
Wiring Diagram



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.)

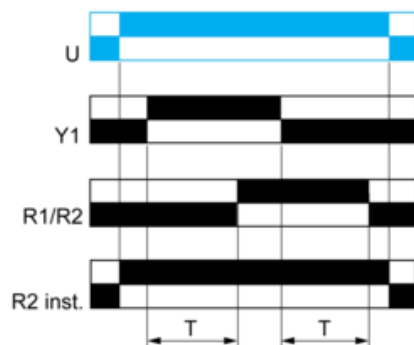
Function Ac : On- and Off-Delay Relay with Control Signal

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).

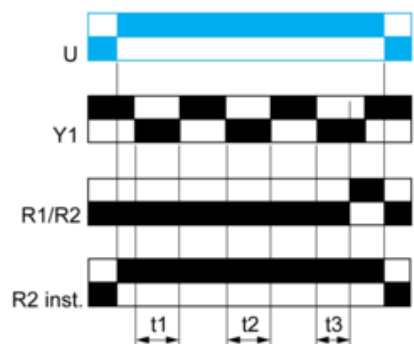


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

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.



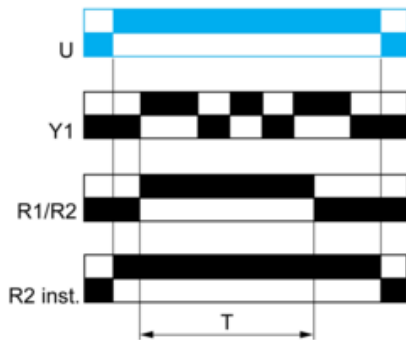
$T = t_1 + t_2 + t_3$

## Function B : Interval Relay with Control Signal

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### 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.

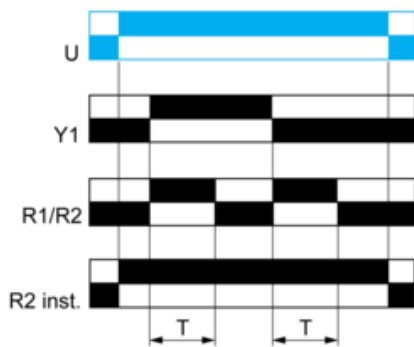


## Function Bw : Double Interval Relay with Control Signal

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### Description

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

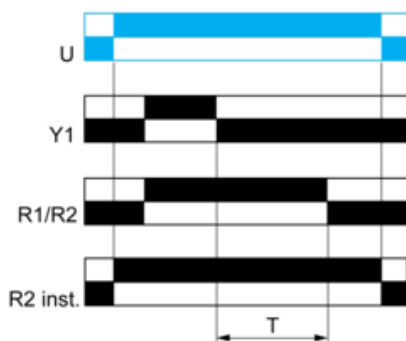


## Function C : Off-Delay Relay with Control Signal

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### 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.



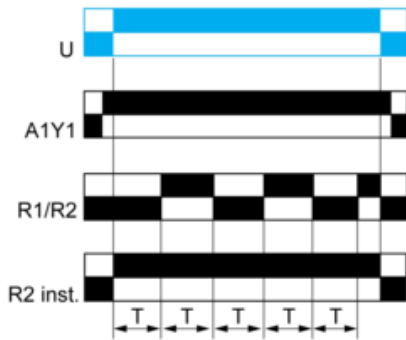
2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

## Function D : Symmetrical Flasher Relay (Starting Pulse Off)

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### 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.

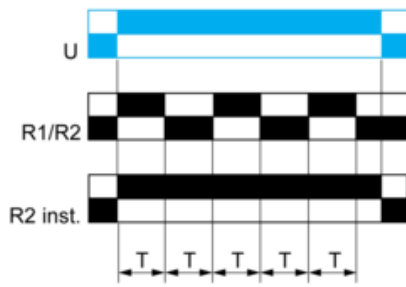


Before power-up Y1 should be permanently connected to A1.  
 2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

### 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.

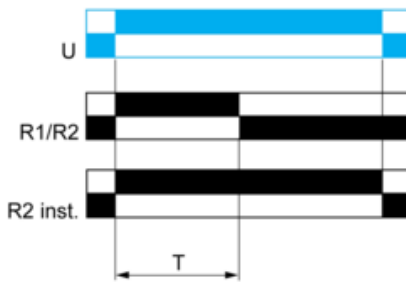


2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.)

### 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.

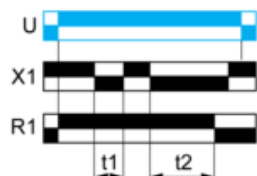
The timing can be interrupted / paused each time X1 energizes.

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.

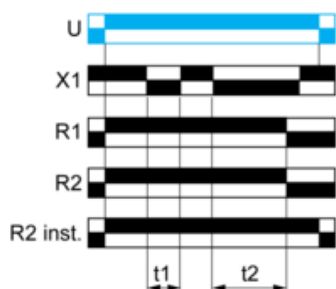
The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

### Function: 1 Output



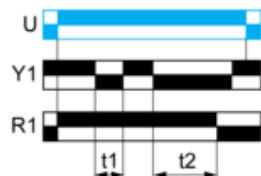
$$T = t_1 + t_2 + \dots$$

### Function: 2 Outputs



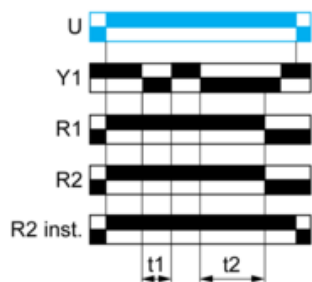
$$T = t_1 + t_2 + \dots$$

### Function: 1 Output with Retrigger / Restart Control



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

### Function: 2 Outputs with Retrigger / Restart Control



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