



## Parametry podstawowe

Gama produktów	Harmony Timer Relays
Typ produktu lub komponentu	Multifunction relay
Typ wyjścia dyskretnego	Przełącznik
Skrócona nazwa urządzenia	RE22
Znamionowy prąd wyjściowy	8 A

## Parametry uzupełniające

Typ i ułożenie styków	1 ZAŁ/WYŁ zestyki czasowe lub bezzwłoczne, bez kadmu 2 ZAŁ/WYŁ zestyk czasowy, bez kadmu
Rodzaj opóźnienia	Power on-delay Opóźnienie wyłączenia Symmetrical flashing Interval Star-delta
Time delay range	3...30 min 30...300 min 0.3...3 s 3...30 h 10...100 s 1...10 s 0.05...1 s 30...300 s 30...300 h 3...30 s
Rodzaj sterowania	Pokrętko obrotowa Przycisk diagnostyczny Potencjometr zewnętrzny
Znamionowe napięcie zasilania [Us]	24...240 V AC/DC 50/60 Hz
Release input voltage	<= 2.4 V
Zakres napięcia	0.85...1.1 Us
Częstotliwość zasilania	50...60 Hz +/- 5 %
Przylączka - zaciski	Zaciski śrubowe, 1 x 0.5...1 x 3.3 mm <sup>2</sup> (AWG 20...AWG 12) stały bez końcówki kablowej Zaciski śrubowe, 2 x 0.5...2 x 2.5 mm <sup>2</sup> (AWG 20...AWG 14) stały bez końcówki kablowej Zaciski śrubowe, 1 x 0.2...1 x 2.5 mm <sup>2</sup> (AWG 24...AWG 14) elastyczny z końcówką kablową Zaciski śrubowe, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) elastyczny z końcówką kablową
Moment dokręcania	0,6...1 N.m zgodnie z IEC 60947-1
Materiał obudowy	Samogasnące
Powtarzalna dokładność	+/- 0,5 % zgodnie z IEC 61812-1
Dryf temperaturowy	+/- 0,05 %/°C
Dryf napięciowy	+/- 0.2 %/V
Nastawianie dokładności opóźnienia czasowego	+/- 10 % pełnego zakresu w 25 °C zgodnie z IEC 61812-1
Control signal pulse width	100 Ms z obciążeniem równoległym 30 ms
Rezystancja izolacji	100 MΩ w 500 V DC zgodnie z IEC 60664-1

Recovery time	120 ms podczas wyłączenia
Odporność na krótkie zaniki zasilania	10 ms
Pobór mocy w VA	3 VA w 240 V AC
Pobór mocy w [W]	1,5 W w 240 V prąd stały (DC)
Zdolność łączeniowa w VA	2000 VA
Minimalny prąd łączeniowy	10 mA w 5 V DC
Maksymalny prąd łączeniowy	8 A
Maksymalne napięcie łączeniowe	250 V AC
Trwałość elektryczna	100000 Cykl, 8 A w 250 V, AC-1 100000 cykl, 2 A w 24 V, DC-1
Trwałość mechaniczna	10000000 cykl
Rated impulse withstand voltage	5 kV dla 1,2...50 µs zgodnie z IEC 60664-1
Power on delay	100 ms
Odległość strony pełzającej	4 kV/3 zgodnie z IEC 60664-1
Kategoria przepięć	III zgodnie z IEC 60664-1
Bezpieczeństwo niezawodności danych	B10d = 160000 Średni czas do awarii (MTTFd) = 171.2 lat
Miejsce montażu	Każda pozycja
Pomoc do montażu	35 mm szyna DIN zgodnie z IEC 60715
Lampka led LED informująca o stanie łącznika	Zielony podświetlenie LED (Stały) dla wskazanie wskaźnika wybierania Żółty lampka LED (Stały) dla przekaźnik wyjściowy pod napięciem Żółty lampka LED (szybkie migotanie) dla trwa taktowanie i przekaźniki wyjściowy nie zasilony Żółty lampka LED (wolne migotanie) dla trwa taktowanie i przekaźniki wyjściowy zasilony
Funkcja dostępna	A- Power on-delay relay-2 ZAŁ/WYŁ At- Power on-delay relay w/ pause/summation (X1)-2 ZAŁ/WYŁ Aw- Power on-delay relay w/ retrigger/restart-2 ZAŁ/WYŁ C- Off-delay relay w/ control signal-2 ZAŁ/WYŁ Ct- Off-delay relay w/ control signal and pause/summation-2 ZAŁ/WYŁ D- Symmetrical flashing relay (starting pulse-off)-2 ZAŁ/WYŁ Dt- Symmetrical flashing relay (starting pulse-off) w/ pause/summation (X1)-2 ZAŁ/WYŁ Dw- Symmetrical flashing relay (starting pulse-off) w/ retrigger/restart-2 ZAŁ/WYŁ Di- Symmetrical flashing relay (starting pulse-on)-2 ZAŁ/WYŁ Dit- Symmetrical flashing relay (starting pulse-on) w/ pause/summation (X1)-2 ZAŁ/WYŁ Diw- Symmetrical flashing relay (starting pulse-on) w/ retrigger/restart-2 ZAŁ/WYŁ H- Interval relay-2 ZAŁ/WYŁ Ht- Interval relay w/ pause/summation (X1)-2 ZAŁ/WYŁ Hw- Interval relay w/ retrigger/restart-2 ZAŁ/WYŁ Qg- Star-delta relay (2 CO outputs w/ same common)-2 ZAŁ/WYŁ Qgt- Star-delta relay (2 CO outputs w/ same common) w/ pause/summation-2 ZAŁ/WYŁ Qt- Star-delta relay (2 CO outputs w/ split common)-2 ZAŁ/WYŁ Qtt- Star-delta relay (2 CO outputs w/ split common) w/ pause/summation (X1)-2 ZAŁ/WYŁ W- Interval relay w/ control signal off-2 ZAŁ/WYŁ Wt- Interval relay w/ control signal off and pause/summation-2 ZAŁ/WYŁ
Szerokość	22,5 mm
Masa produktu	0,105 kg

## Środowisko pracy

Wytrzymałość dielektryczna	2,5 kV dla 1 mA/1 minuta w 50 Hz pomiędzy wyjściem przekaźnika i źródłem zasilania z podstawowej izolacji zgodnie z IEC 61812-1
Normy	UL 508 IEC 61812-1
Wytyczne	2004/108/EC - kompatybilność elektromagnetyczna 2006/95/EC - dyrektywa niskonapięciowa
Certyfikaty produktu	RCM[RETURN]CE[RETURN]EAC[RETURN]CSA[RETURN]CCC[RETURN]UL[RETURN]JGL
Temperatura otoczenia dla pracy urządzenia	-20...60 °C
Temperatura otoczenia dla przechowywania	-40...70 °C
Stopień ochrony IP	Obudowa: IP40 zgodnie z IEC 60529 Zaciski: IP20 zgodnie z IEC 60529 Panel przedni: IP50 zgodnie z IEC 60529
Stopień zanieczyszczenia	3 zgodnie z IEC 60664-1

Odporność na wibracje	20 m/s <sup>2</sup> (f= 10...150 Hz) zgodnie z IEC 60068-2-6
Odporność na wstrząsy	15 gn nieczynny dla 11 ms zgodnie z IEC 60068-2-27 5 gn pracujący dla 11 ms zgodnie z IEC 60068-2-27
Wilgotność względna	95 % w 25...55 °C
Kompatybilność elektromagnetyczna	Test odporności na szybkie stany przejściowe - test level: 1 kV poziom 3 (zatrząsk łączący pojemność) conforming to IEC 61000-4-4 Badania odporności na udary - test level: 1 kV poziom 3 (tryb różnicowy) conforming to IEC 61000-4-5 Badania odporności na udary - test level: 2 kV poziom 3 (tryb wspólny) conforming to IEC 61000-4-5 Wyładowanie elektrostatyczne - test level: 6 kV poziom 3 (rozładowanie styku) conforming to IEC 61000-4-2 Wyładowanie elektrostatyczne - test level: 8 kV poziom 3 (rozładowanie powietrza) conforming to IEC 61000-4-2 Badanie odporności na pola elektromagnetyczne o częstotliwościach radiowych - test level: 10 V/m poziom 3 (80 MHz...1 GHz) conforming to IEC 61000-4-3 Przewodzone zakłócenia RF - test level: 10 V poziom 3 (0,15...80 MHz) conforming to IEC 61000-4-6 Szybkie przejściowe impulsy - test level: 2 kV poziom 3 (styk bezpośredni) conforming to IEC 61000-4-4 Odporność na krótkie zaniki zasilania i spadki napięcia - test level: 30 % (500 ms) conforming to IEC 61000-4-11 Odporność na krótkie zaniki zasilania i spadki napięcia - test level: 100 % (20 ms) conforming to IEC 61000-4-11

### Jednostka opakowania

Jednostka miary opakowania 1	PCE
Ilość jednostek w opakowaniu 1	1
Wysokość opakowania 1	2,6 cm
Szerokość opakowania 1	8,2 cm
Długość opakowania 1	9,5 cm
Waga opakowania 1	116,0 g
Jednostka miary opakowania 2	S02
Ilość jednostek w opakowaniu 2	40
Wysokość opakowania 2	15,0 cm
Szerokość opakowania 2	30,0 cm
Długość opakowania 2	40,0 cm
Waga opakowania 2	5,153 kg
Jednostka miary opakowania 3	P06
Ilość jednostek w opakowaniu 3	640
Wysokość opakowania 3	75,0 cm
Szerokość opakowania 3	60,0 cm
Długość opakowania 3	80,0 cm
Waga opakowania 3	74,24 kg

### Oferta zrównoważonego rozwoju

Stan trwałej oferty	Produkt Green Premium
Rozporządzenie REACH	 <a href="#">Deklaracja REACH</a>
Europejska dyrektywa RoHS	Zgodność z pro-active (produkt poza zakresem obowiązywania dyrektywy UE RoHS)
Bez rtęci	Tak
Norma RoHS Chiny	 <a href="#">Dyrektywa RoHS Chiny</a>
Informacje na temat zwolnienia z RoHS	 <a href="#">Tak</a>
Ujawnienie informacji o wpływie na środowisko	 <a href="#">Środowiskowy Profil Produktu</a>
Kulistość – profil	 <a href="#">Informacja O Żywności</a>

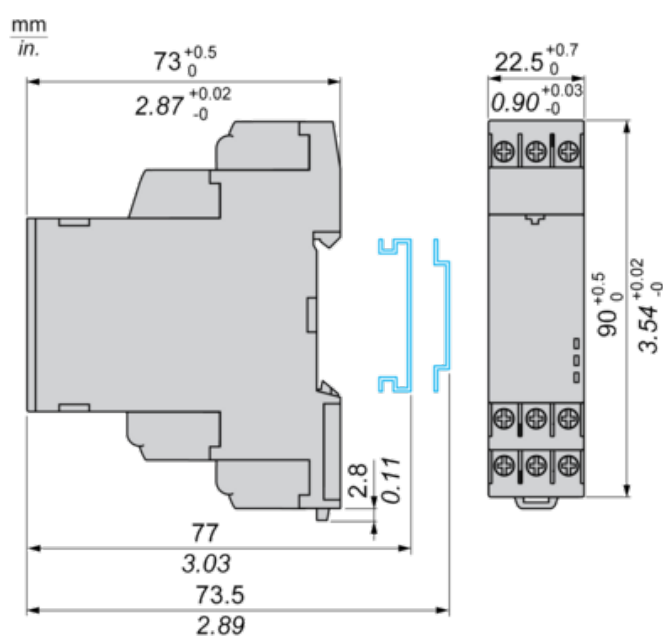
### Warunki gwarancji

Gwarancja	18 miesięcy
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# Karta danych technicznych RE22R2MYMR produktu

## Dimensions Drawings

### Dimensions



# Karta danych technicznych RE22R2MYMR

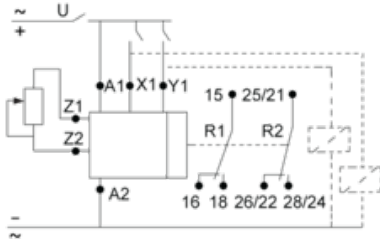
## produktu

### Connections and Schema

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#### Wiring Diagram

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# Karta danych technicznych RE22R2MYMR

## produktu

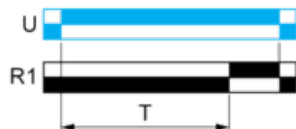
### Technical Description

#### Function A: Power On-Delay

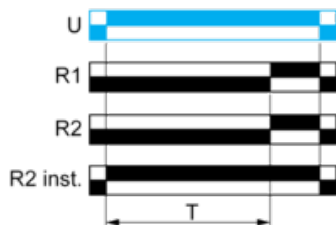
##### Description

On energisation of power supply, the timing period T starts. After timing, the output(s) R close(s). The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

##### Function: 1 Output



##### Function: 2 Outputs

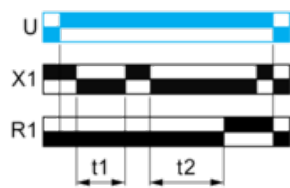


#### Function At: Power On-Delay with Pause / Summation Control

##### Description

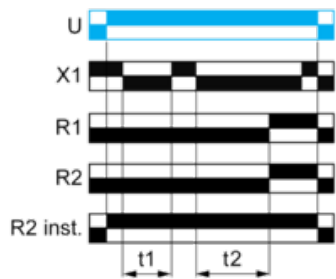
On energisation of power supply, the timing period T starts. Timing can be interrupted / paused each time X1 energizes. Except for RE17\*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU, timing can be interrupted / paused each time Y1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R close(s). The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

##### Function: 1 Output with Pause / Summation Control



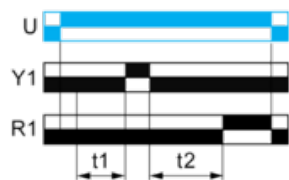
$$T = t1 + t2 + \dots$$

##### Function: 2 Outputs with Pause / Summation Control



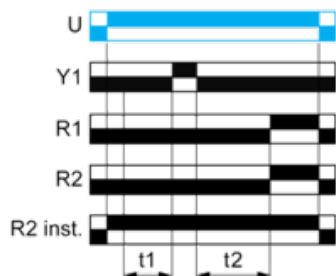
$$T = t1 + t2 + \dots$$

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



$T = t1 + t2 + \dots$

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



$T = t1 + t2 + \dots$

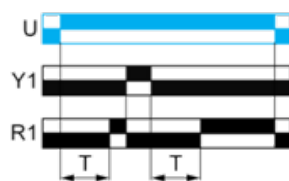
### Function Aw : Power On-Delay With Retrigger / Restart Control

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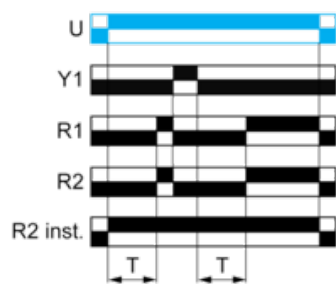
#### Description

On energisation of power supply, the timing period T starts. At the end of the timing period T, the output(s) R close(s). Energization of Y1 makes the output(s) R open(s). Deenergization of Y1 restarts timing period T. At the end of timing period T, the output(s) R close(s). The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST")

#### Function: 1 Output



#### Function: 2 Outputs



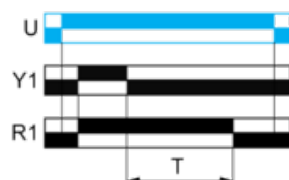
### Function C: Off-Delay Relay with Control Signal

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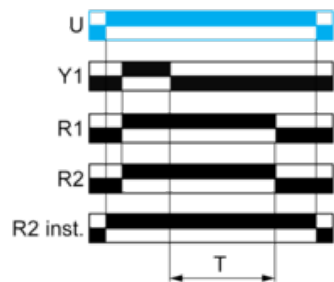
#### Description

After energisation of power supply and energization of Y1 causes output(s) R close(s). When Y1 deenergizes, timing T starts. At the end of this timing period T, the output(s) R revert(s) to its/their initial position. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

#### Function: 1 Output



### Function: 2 Outputs

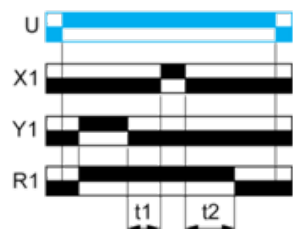


### Function Ct: Off-Delay Relay with Control Signal & With Pause / Summation Control

#### Description

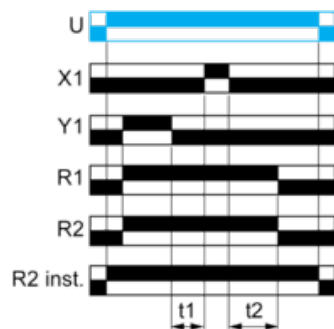
After energisation of power supply and energization of Y1 cause output(s) R close(s). When Y1 deenergizes, timing starts and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

#### Function: 1 Output



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

#### Function: 2 Outputs



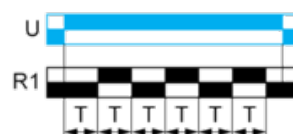
$$T = t1 + t2 + \dots$$

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

#### Description

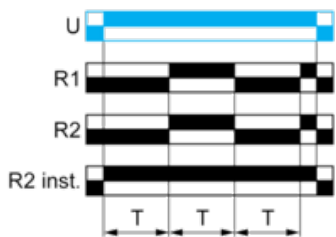
On energisation of power supply, output(s) R starts at its/their initial state for timing duration T then change(s) to output(s) R close(s) for the same timing duration T. This cycle is repeated indefinitely until power supply removal. Specially for RE17\*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU, this D function can only be initiated by energizing Y1 permanently. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

#### Function: 1 Output





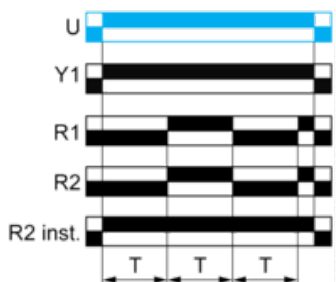
### Function: 2 Outputs



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



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

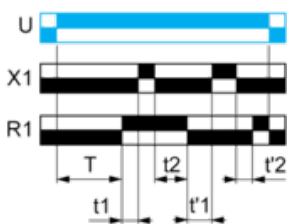


### Function Dt: Symmetrical Flashing Relay (Starting Pulse Off) & With Pause / Summation Control

#### Description

On energisation of power supply, output(s) R starts at its/their initial state for timing duration T and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, then changes to output(s) R close(s). The output(s) R close state will remain for the same timing duration T and 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. This cycle is repeated indefinitely until power supply removal. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

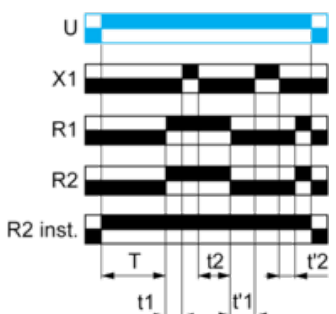
#### Function: 1 Output



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

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

#### Function: 2 Outputs



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

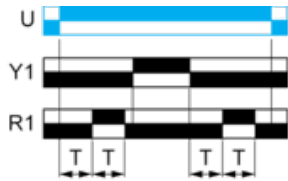
$$T = t'1 + t'2 + \dots$$

## Function DW: Symmetrical Flashing Relay (Starting Pulse Off) & With Retrigger / Restart Control

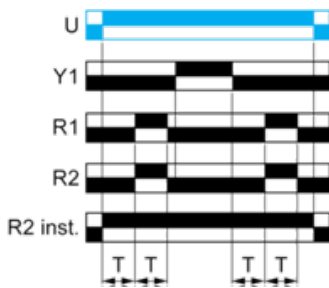
### Description

On energisation of power supply, output(s) R starts at its/their initial state for timing duration T then change(s) to output(s) R close(s) for the same timing duration T. This cycle is repeated indefinitely until power supply removal. Specially for RE17\*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU, this D function can only be initiated by energizing Y1 permanently. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

#### Function: 1 Output



#### Function: 2 Outputs

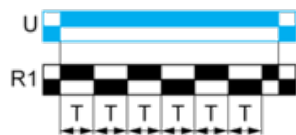


## Function Di: Symmetrical Flashing Relay (Starting Pulse On)

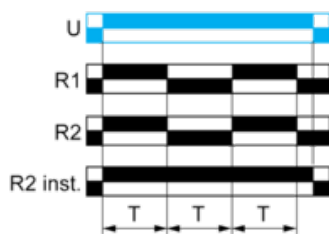
### Description

On energisation of power supply, output(s) R starts at output(s) R close(s) for timing duration T then revert(s) to its/their initial state for the same timing duration T. This cycle is repeated indefinitely until power supply removal. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

#### Function: 1 Output



#### Function: 2 Outputs

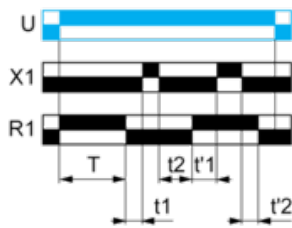


## Function Dit: Symmetrical Flashing Relay (Starting Pulse On) & With Pause / Summation Control

### Description

On energisation of power supply, output(s) R starts at output(s) R close(s) for timing duration T and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, then revert(s) to its/their initial state. The output(s) R at initial state will remain for the same timing duration T and 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 change(s) to close state. This cycle is repeated indefinitely until power supply removal. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

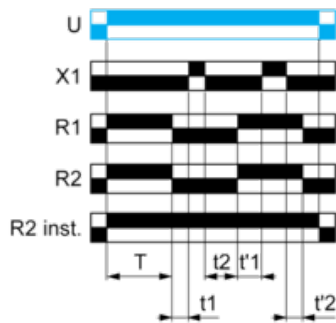
### Function: 1 Output



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

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

### Function: 2 Outputs



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

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

## Function Div: Symmetrical Flashing Relay (Starting Pulse On) & With Retrigger / Restart Control

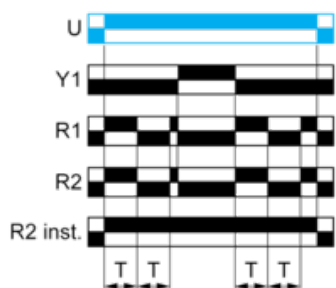
### Description

On energisation of power supply, output(s) R starts at output(s) R close(s) for timing duration T then revert(s) to its/their initial state for the same timing duration T. This cycle is repeated indefinitely until power supply removal. At any state of the output(s) R when Y1 energizes, the output(s) R will revert to its/their initial state and followed by Y1 deenergizes then restarts the same operation as described at the beginning. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

### Function: 1 Output



### Function: 2 Outputs



## Function H: Interval Relay

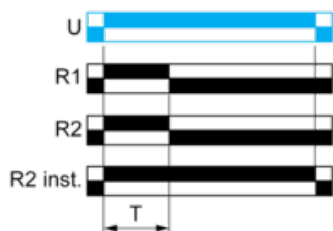
### Description

On energisation of power supply, output(s) R close(s) and timing period T starts. At the end of the timing period T, the output(s) R revert(s) to its/their initial state. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

### Function: 1 Output



### Function: 2 Outputs



## Function Ht: Interval Relay & With Pause / Summation Control

### Description

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

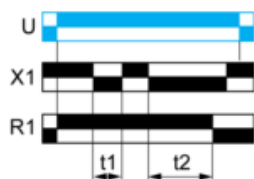
The timing can be interrupted / paused each time X1 energizes.

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.

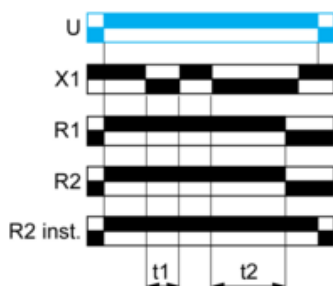
The second output (R2) can be either timed (when set to "TIMED" or instantaneous (when set to "INST").

### Function: 1 Output



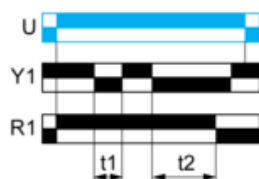
$$T = t1 + t2 + \dots$$

### Function: 2 Outputs



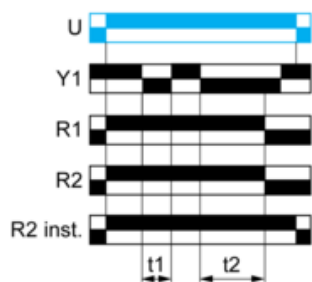
$$T = t1 + t2 + \dots$$

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



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

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



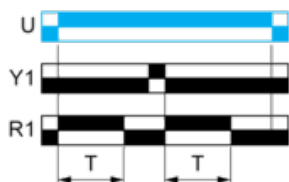
$T = t1 + t2 + \dots$

### Function Hw: Interval Relay & with Retrigger / Restart Control

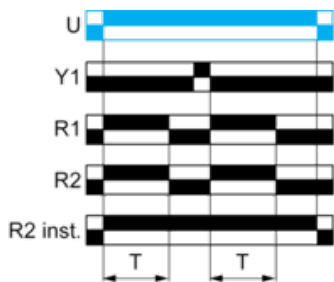
#### Description

On energisation of power supply, output(s) R close(s) and timing period T starts. At the end of the timing period T, the output(s) R revert(s) to its/their initial state. At any state of the output(s) R when Y1 energizes followed by deenergizes, the output(s) R close(s) then restarts the same operation as described at the beginning. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

#### Function: 1 Output



#### Function: 2 Outputs

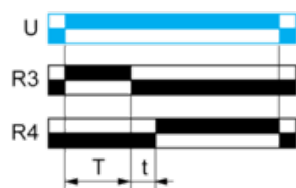


### Function Qg: Star-Delta Relay (2 CO with same Common)

#### Description

On energisation of power supply, the output R3 closes such that energizes STAR CONTACTOR + MAIN CONTACTOR and the timing T starts (STAR connection time duration starts). At the end of the timing period T, the output R3 reverts to its initial state such that deenergizes STAR CONTACTOR and causes t transition time starts. At the end of the transition time, the output R4 closes such that energizes DELTA CONTACTOR. Diagnostic feature not available.

#### Function: 2 Outputs



t : 20, 40, 60, 80, 100, 120, 140 ms

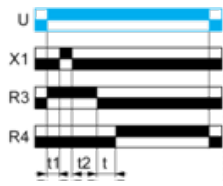
### Function Qgt: Star-Delta Relay (2 CO with same common) with Pause / Summation Control

#### Description

On energisation of power supply, the output R3 closes such that energizes STAR CONTACTOR + MAIN CONTACTOR and the timing T starts (STAR connection time duration starts). During STAR connection time, the timing can be interrupted / paused each time X1

energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, R3 reverts to its initial state such that deenergizes STAR CONTACTOR and causes t transition time starts. At the end of the transition time, the output R4 closes such that energizes DELTA CONTACTOR. Diagnostic feature not available.

### Function: 2 Outputs



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

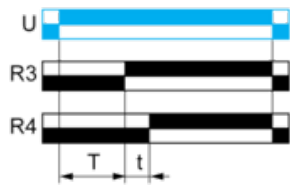
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

### Function Qt: Star-Delta Relay (2 CO with Split Common)

#### Description

On energisation of power supply, the output R3 & R4 initializes at its initial state such that energizes STAR CONTACTOR + MAIN CONTACTOR and the timing T starts (STAR connection time duration starts). At the end of the timing period T, the output R3 closes such that deenergizes STAR CONTACTOR and causes t transition time starts. At the end of the transition time, the output R4 closes such that energizes DELTA CONTACTOR. Diagnostic feature not available.

### Function: 2 Outputs



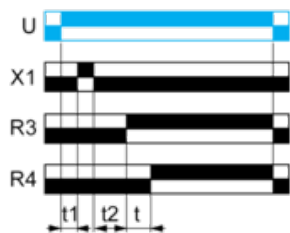
t : 20, 40, 60, 80, 100, 120, 140 ms

### Function Qtt: Star-Delta Relay (2 CO with same common) with Pause / Summation Control

#### Description

On energisation of power supply, the output R3 & R4 initializes at its initial state such that energizes STAR CONTACTOR + MAIN CONTACTOR and the timing T starts (STAR connection time duration starts). During STAR connection time, 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 R3 closes such that deenergizes STAR CONTACTOR and causes t transition time starts. At the end of the transition time, the output R4 closes such that energizes DELTA CONTACTOR. Diagnostic feature not available.

### Function: 2 Outputs



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

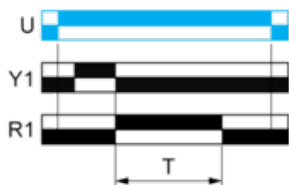
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

### Function W: Interval Relay with Control Signal Off

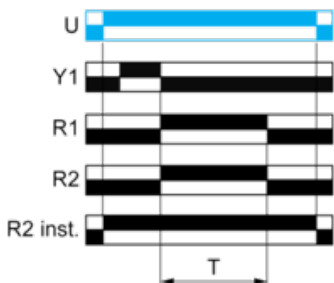
#### Description

After energisation of power supply and on energization of Y1 following by deenergization of Y1, the output(s) R close(s) and starts the timing T. At the end of the timing period, the output(s) R revert(s) to its/their initial state. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

### Function: 1 Output



### Function: 2 Outputs

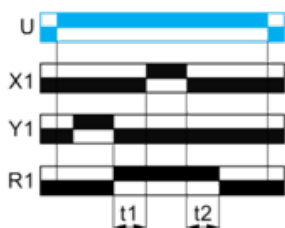


## Function Wt: Interval Relay with Control Signal Off & with Pause / Summation Control

### Description

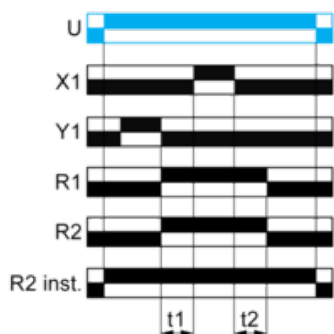
After energisation of power supply and on energization of Y1, the output(s) R close(s) and starts the timing T. Timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state. The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

### Function: 1 Output



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

### Function: 2 Outputs



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

### Legend

Relay de-energised

Relay energised

Output open

Output closed

U -	Supply
R1/R2 -	2 timed outputs

Ta -	Adjustable On-delay
Tr -	Adjustable Off-delay
X1 -	Pause / Summation control
Y1 -	Retrigger / Restart control
X2 -	Function Selection
R2 inst. -	The second output is instantaneous if the right position is selected
T -	Timing period
R4 -	Delta contact output
t -	Delay to switch ON Delta contact output
R3 -	Star-Delta contact output