



Presentazione

Gamma prodotto	Harmony Timer Relays
Tipo prodotto	Multifunction relay
Tipo uscita digitale	Relè
Nome dispositivo	RE22
Corrente di uscita nominale	8 A

Caratteristiche tecniche

Composizione e tipo di contatti	1 C/O contatto temporizzato o istantaneo, senza cadmio 2 OC contatto temporizzato, senza cadmio
Tipo temporizzazione	Power on-delay Ritardo alla diseccitazione Symmetrical flashing Interval Star-delta
Gamma di temporizzazione	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
Tipo di comando	Manovra rotativa Diagnostic button Potentiometer external
Tensione nominale di alimentazione [Us]	24...240 V CA/CC 50/60 Hz
Release input voltage	$\leq 2,4$ V
Intervallo di tensione	0,85...1,1 Us
Frequenza di alimentazione	50...60 Hz ± 5 %
Connessioni - morsetti	Morsetti a vite, 1 x 0,5...1 x 3,3 mm ² (AWG 20...AWG 12) solido senza estremità cavo Morsetti a vite, 2 x 0,5...2 x 2,5 mm ² (AWG 20...AWG 14) solido senza estremità cavo Morsetti a vite, 1 x 0,2...1 x 2,5 mm ² (AWG 24...AWG 14) flessibile con estremità cavo Morsetti a vite, 2 x 0,2...2 x 1,5 mm ² (AWG 24...AWG 16) flessibile con estremità cavo
Coppia di serraggio	0,6...1 Nm conforme a IEC 60947-1
Materiale involucro	Autoestinguente
Precisione ripetizione	$\pm 0,5$ % conforme a IEC 61812-1
Deriva di temperatura	$\pm 0,05$ %/°C
Deriva della tensione	$\pm 0,2$ %/V
Accuratezza regolazione temporizzazione	± 10 % fondo scala a 25 °C conforme a IEC 61812-1
Control signal pulse width	100 Ms con carico in parallelo 30 ms
Resistenza di isolamento	100 M Ω a 500 V CC conforme a IEC 60664-1

Recovery time	120 ms alla disattivazione
Immunità alle microinterruzioni	10 ms
Potenza assorbita in VA	3 VA a 240 V CA
Potenza assorbita in W	1,5 W a 240 V DC
Capacità di commutazione in VA	2000 VA
Minima corrente di commutazione	10 mA a 5 V CC
Corrente massima di commutazione	8 A
Massima tensione di commutazione	250 V CA
Durata elettrica	100000 Cicli, 8 A a 250 V, AC-1 100000 cicli, 2 A a 24 V, DC-1
Durata meccanica	10000000 cicli
Rated impulse withstand voltage	5 kV per 1,2...50 µs conforme a IEC 60664-1
Power on delay	100 ms
Linea di fuga	4 kV/3 conforme a IEC 60664-1
Categoria di sovratensione	Acti9 VigiARC iC40 conforme a IEC 60664-1
Dati di affidabilità sicurezza	B10d = 160000 MTTFd = 171,2 anni
Posizione di montaggio	Qualunque posizione
Supporto per montaggio	Guida DIN 35 mm conforme a EN/IEC 60715
LED di stato	Verde Retroilluminazione a LED (fisso) per dial pointer indication Giallo LED (fisso) per output relay energised Giallo LED (Lampeggio veloce) per timing in progress and output relay de-energised Giallo LED (Lampeggio lento) per timing in progress and output relay energised
Funzione disponibile	A- Power on-delay relay-2 OC At- Power on-delay relay w/ pause/summation (X1)-2 OC Aw- Power on-delay relay w/ retrigger/restart-2 OC C- Off-delay relay w/ control signal-2 OC Ct- Off-delay relay w/ control signal and pause/summation-2 OC D- Symmetrical flashing relay (starting pulse-off)-2 OC Dt- Symmetrical flashing relay (starting pulse-off) w/ pause/summation (X1)-2 OC Dw- Symmetrical flashing relay (starting pulse-off) w/ retrigger/restart-2 OC Di- Symmetrical flashing relay (starting pulse-on)-2 OC Dit- Symmetrical flashing relay (starting pulse-on) w/ pause/summation (X1)-2 OC Diw- Symmetrical flashing relay (starting pulse-on) w/ retrigger/restart-2 OC H- Interval relay-2 OC Ht- Interval relay w/ pause/summation (X1)-2 OC Hw- Interval relay w/ retrigger/restart-2 OC Qg- Star-delta relay (2 CO outputs w/ same common)-2 OC Qgt- Star-delta relay (2 CO outputs w/ same common) w/ pause/summation-2 OC Qt- Star-delta relay (2 CO outputs w/ split common)-2 OC Qtt- Star-delta relay (2 CO outputs w/ split common) w/ pause/summation (X1)-2 OC W- Interval relay w/ control signal off-2 OC Wt- Interval relay w/ control signal off and pause/summation-2 OC
Larghezza	22,5 mm
Peso prodotto	0,105 kg

Ambiente

Resistenza dielettrica	2,5 kV per 1 mA/1 minuto a 50 Hz between relay output and power supply con basic insulation conforme a IEC 61812-1
Standard	UL 508 IEC 61812-1
Comandi	2004/108/EC - compatibilità elettromagnetica 2006/95/EC - direttiva bassa tensione
Certificazioni prodotto	RCM CE EAC CSA CCC UL GL
Temperatura ambiente	-20...60 °C
Temperatura di stoccaggio	-40...70 °C

Grado di protezione IP	IP40 housing: conforme a IEC 60529 IP20 morsetti: conforme a IEC 60529 IP50 pannello frontale: conforme a IEC 60529
Grado di inquinamento	3 conforme a IEC 60664-1
Resistenza alle vibrazioni	20 m/s ² (F= 10...150 Hz) conforme a IEC 60068-2-6
Resistenza agli shock	15 gn non funzionante per 11 ms conforme a IEC 60068-2-27 5 gn in funzionamento per 11 ms conforme a IEC 60068-2-27
Umidità relativa	95 % a 25...55 °C
Compatibilità elettromagnetica	Test d'immunità ai transienti rapidi 1 kV (clip collegamento capacitivo)livello 3 conforme a IEC 61000-4-4 Test di immunità alle sovratensioni 1 kV (modo differenziale)livello 3 conforme a IEC 61000-4-5 Test di immunità alle sovratensioni 2 kV (modo comune)livello 3 conforme a IEC 61000-4-5 Scarica elettrostatica 6 kV (scarica contatto)livello 3 conforme a IEC 61000-4-2 Scarica elettrostatica 8 kV (scarico aria)livello 3 conforme a IEC 61000-4-2 Test immunità ai campi elettromagnetici irradiati a radiofrequenza 10 V/m (80 MHz...1 GHz)livello 3 conforme a IEC 61000-4-3 Disturbi RF condotti 10 V (0,15...80 MHz)livello 3 conforme a IEC 61000-4-6 Transitori veloci "burst" 2 kV (contatto diretto)livello 3 conforme a IEC 61000-4-4 Immunità alle microrotture e alle cadute di tensione 0.3 (500 ms) conforme a IEC 61000-4-11 Immunità alle microrotture e alle cadute di tensione 1 (20 ms) conforme a IEC 61000-4-11

Confezionamenti

Unità di misura confezione 1	PCE
Numero di unità per confezione 1	1
Confezione 1: altezza	2,6 cm
Confezione 1: larghezza	8,2 cm
Confezione 1: profondità	9,5 cm
Confezione 1: peso	116,0 g
Unità di misura confezione 2	S02
Numero di unità per confezione 2	40
Confezione 2: altezza	15,0 cm
Confezione 2: larghezza	30,0 cm
Confezione 2: profondità	40,0 cm
Confezione 2: peso	5,153 kg
Unità di misura confezione 3	P06
Numero di unità per confezione 3	640
Confezione 3: altezza	75,0 cm
Confezione 3: larghezza	60,0 cm
Confezione 3: profondità	80,0 cm
Confezione 3: peso	74,24 kg

Sostenibilità dell'offerta

Stato offerta sostenibile	Prodotto Green Premium
Regolamento REACH	 Dichiarazione REACH
Direttiva RoHS UE	Conformità proattiva (prodotto al di fuori dell'ambito legale di RoHS Unione europea)  EU RoHS Dichiarazione
Senza mercurio	Sì
Regolamento RoHS della Cina	 Dichiarazione RoHS Della Cina
Informazioni esenzioni RoHS	 Sì
Informazioni ambientali	 Profilo Ambientale Del Prodotto
Profilo di circolarità	 Informazioni Sulla Fine Della Vita

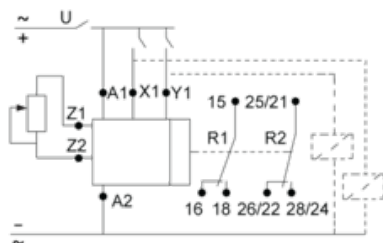
Garanzia contrattuale

Garanzia	18 mesi
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Dimensions



Wiring Diagram

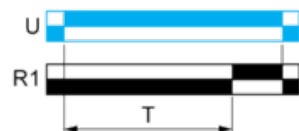


Function A: Power On-Delay

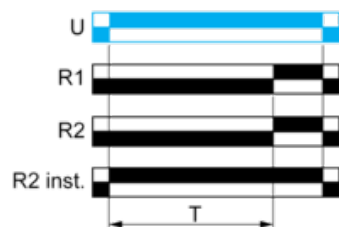
Description

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

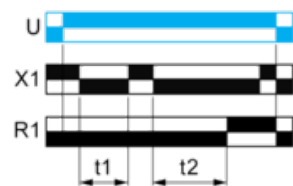


Function At: Power On-Delay with Pause / Summation Control

Description

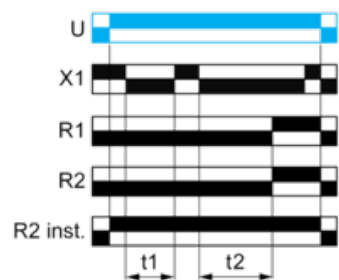
On energisation of power supply, the timing period T starts. Timing can be interrupted / paused each time X1 energizes. Except for RE17*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU, timing can be interrupted / paused each time Y1 energizes. When the cumulative total of time periods elapsed reaches the 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



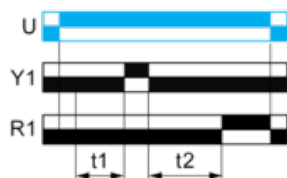
$$T = t1 + t2 + \dots$$

Function: 2 Outputs with Pause / Summation Control



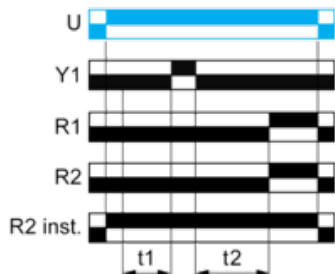
$$T = t1 + t2 + \dots$$

Function: 1 Output with Retrigger / Restart Control



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

Function: 2 Outputs with Retrigger / Restart Control



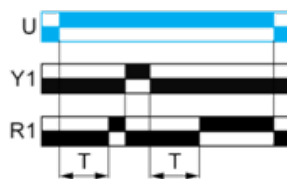
$$T = t1 + t2 + \dots$$

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

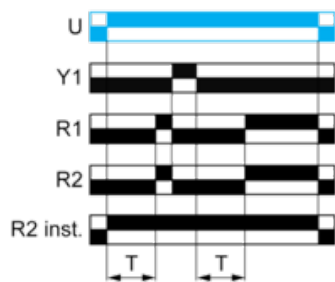
Description

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

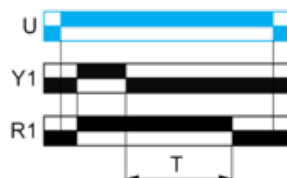


Function C: Off-Delay Relay with Control Signal

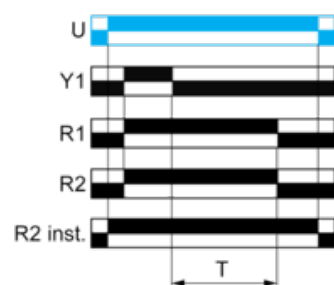
Description

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

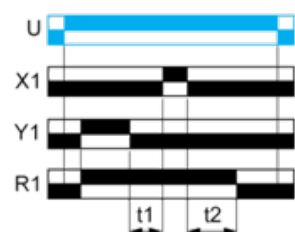


Function Ct: Off-Delay Relay with Control Signal & With Pause / Summation Control

Description

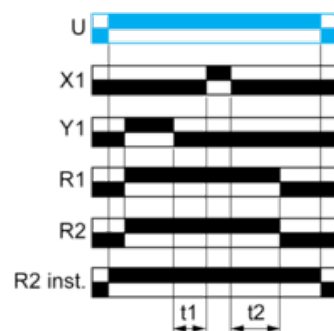
After energisation of power supply and energization of Y1 cause output(s) R close(s). When Y1 deenergizes, timing starts and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their 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



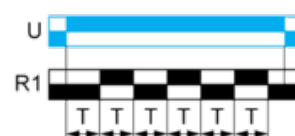
$$T = t1 + t2 + \dots$$

Function D: Symmetrical Flashing Relay (Starting Pulse Off)

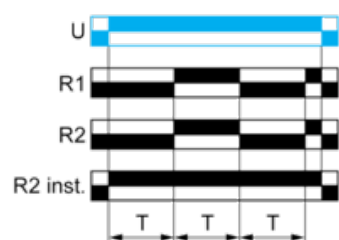
Description

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").

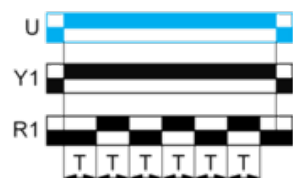
Function: 1 Output



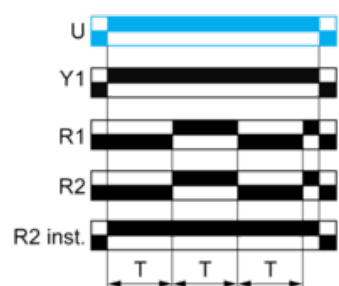
Function: 2 Outputs



Function: 1 Output with Retrigger / Restart Control



Function: 2 Output with Retrigger / Restart Control

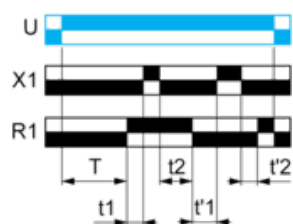


Function Dt: Symmetrical Flashing Relay (Starting Pulse Off) & With Pause / Summation Control

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").

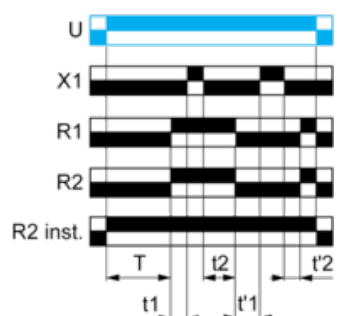
Function: 1 Output



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

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

Function: 2 Outputs



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

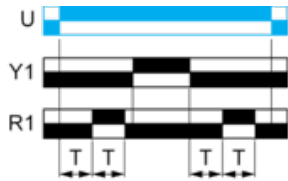
$$T = t'1 + t'2 + \dots$$

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

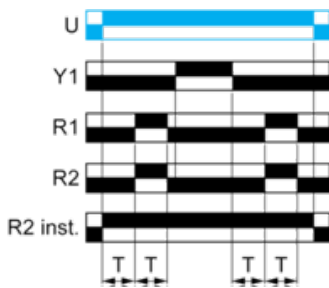
Description

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

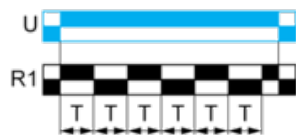


Function Di: Symmetrical Flashing Relay (Starting Pulse On)

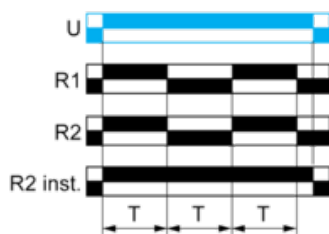
Description

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

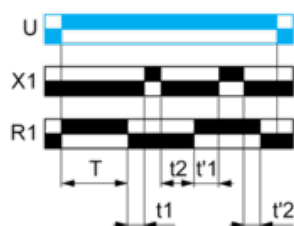


Function Dit: Symmetrical Flashing Relay (Starting Pulse On) & With Pause / Summation Control

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").

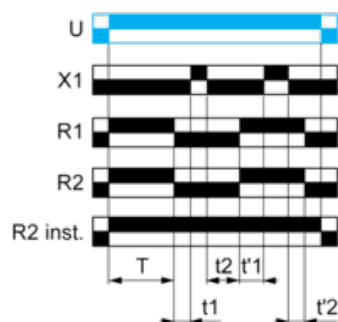
Function: 1 Output



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

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

Function: 2 Outputs



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

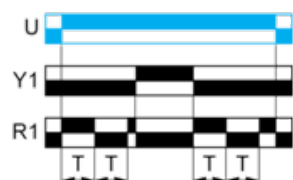
$$T = t'_1 + t'_2 + \dots$$

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

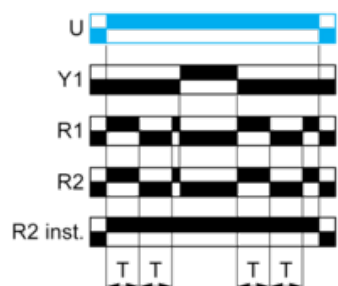
Description

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

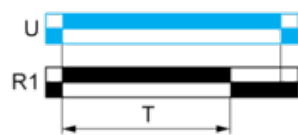


Function H: Interval Relay

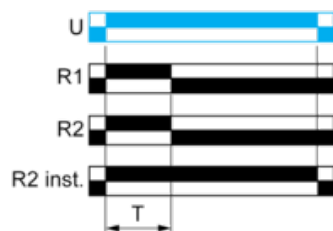
Description

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.

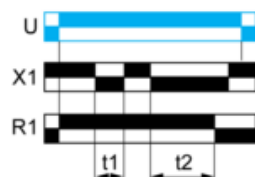
The timing can be interrupted / paused each time X1 energizes.

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.

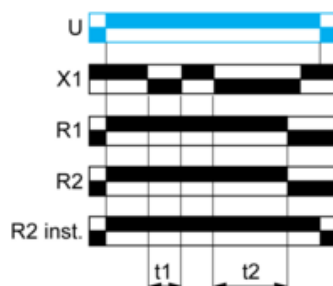
The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

Function: 1 Output



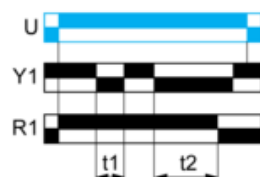
$$T = t1 + t2 + \dots$$

Function: 2 Outputs



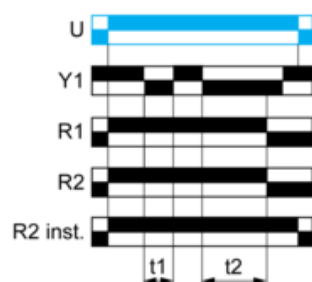
$$T = t1 + t2 + \dots$$

Function: 1 Output with Retrigger / Restart Control



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

Function: 2 Outputs with Retrigger / Restart Control



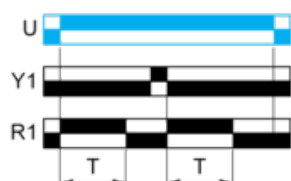
$$T = t1 + t2 + \dots$$

Function Hw: Interval Relay & with Retrigger / Restart Control

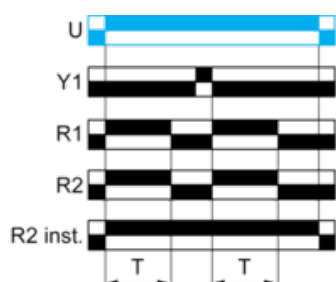
Description

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

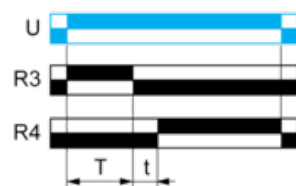


Function Qg: Star-Delta Relay (2 CO with same Common)

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

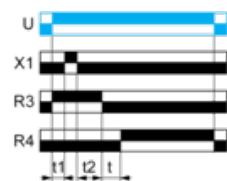
Function Qgt: Star-Delta Relay (2 CO with same common) with Pause / Summation Control

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



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

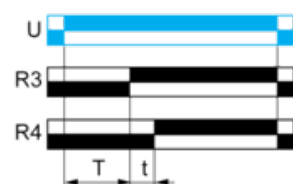
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

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



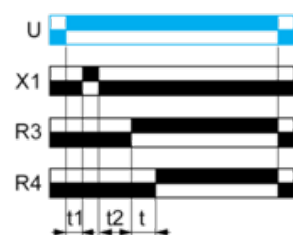
t : 20, 40, 60, 80, 100, 120, 140 ms

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



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

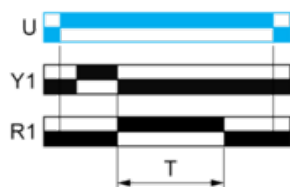
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

Function W: Interval Relay with Control Signal Off

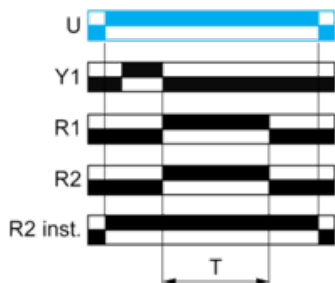
Description

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

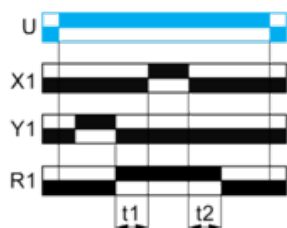


Function Wt: Interval Relay with Control Signal Off & with Pause / Summation Control

Description

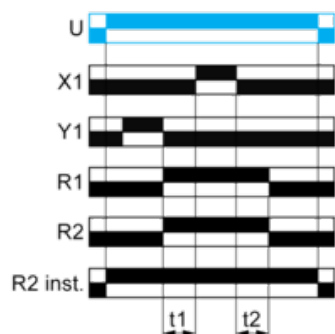
After energisation of power supply and on energization of Y1, the output(s) R close(s) and starts the timing T. Timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state.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