



Teknisk informasjon

Produktspekter	Harmony Timer Relays
Produkt eller type komponent	Multifunction relay
Digitale utganger	Relé
Kortnavn utstyr	RE22
Nominell utgangsstrøm	8 A

Komplementær

Kontakttype og -sammensetning	1 C/O tidsbestemt eller øyeblikkelig kontakt, cadmium fri 2 C/O timet kontakt, cadmium fri
Tidsforsinker type	Power on-delay Forsinket av Symmetrical flashing Interval Star-delta
Tidsforsinkelsesområde	3...30 min 30...300 min 0.3...3 s 3...30 t 10...100 s 1...10 s 0.05...1 s 30...300 s 30...300 t 3...30 s
Start/stopp	Dreie knapp Diagnoseknapp Potensiometer external
[Us] matespenning	24...240 V AC/DC 50/60 Hz
Release input voltage	<= 2.4 V
Spenningsområde	0.85...1.1 Us
Nettfrekvens	50...60 Hz +/- 5 %
Tilkoblingsklemmer	Skrulklemmer, 1 x 0.5...1 x 3.3 mm ² (AWG 20...AWG 12) Solid uten endehylse Skrulklemmer, 2 x 0.5...2 x 2.5 mm ² (AWG 20...AWG 14) Solid uten endehylse Skrulklemmer, 1 x 0.2...1 x 2.5 mm ² (AWG 24...AWG 14) Fleksibel med endehylse Skrulklemmer, 2 x 0.2...2 x 1.5 mm ² (AWG 24...AWG 16) Fleksibel med endehylse
Tiltrekningsmoment	0,6...1 N.m i samsvar med IEC 60947-1
Kapslingsmateriale	Self-extinguishing
Nøyktighet	+/- 0.5 % i samsvar med IEC 61812-1
Temperature drift	+/- 0.05 %/°C
Spenningsdrift	+/- 0.2 %/V
Setting accuracy of time delay	+/- 10 % av full skala på 25 °C i samsvar med IEC 61812-1
Control signal pulse width	100 Ms med last i parallell 30 ms
Isolasjonsmotstand	100 MOhm på 500 V DC i samsvar med IEC 60664-1

Recovery time	120 ms on de-energisation
Immunitet mot mikroavbrytelser	10 ms
Strømforbruk i VA	3 VA på 240 V AC
Strømforbruk i W	1,5 W på 240 V DC
Switching capacity in VA	2000 VA
Minimum brytestrøm	10 mA på 5 V DC
Maks strøm	8 A
Maksimum brytespenning	250 V AC
Elektrisk levetid	100000 Sykluser, 8 A på 250 V, AC-1 100000 sykluser, 2 A på 24 V, DC-1
Mekanisk levetid	1000000 sykluser
Rated impulse withstand voltage	5 kV for 1,2...50 µs i samsvar med IEC 60664-1
Power on delay	100 ms
Krypavstand	4 kV/3 i samsvar med IEC 60664-1
Overspenningskategori	III i samsvar med IEC 60664-1
Sikkerhet pålitelighet data	B10d = 160000 MTTFd = 171.2 år
Monteringsposisjon	Alle posisjoner
Monteringsupport	35 mm DIN-skinne i samsvar med IEC 60715
Status LED	Grønn LED backlight (klar) for dial pointer indication Gul LED (klar) for output relay energised Gul LED (hurtig blinking) for timing in progress and output relay de-energised Gul LED (langsom blinking) for timing in progress and output relay energised
Funksjonen tilgjengelig	A- Power on-delay relay-2 C/O At- Power on-delay relay w/ pause/summation (X1)-2 C/O Aw- Power on-delay relay w/ retrigger/restart-2 C/O C- Off-delay relay w/ control signal-2 C/O Ct- Off-delay relay w/ control signal and pause/summation-2 C/O D- Symmetrical flashing relay (starting pulse-off)-2 C/O Dt- Symmetrical flashing relay (starting pulse-off) w/ pause/summation (X1)-2 C/O O Dw- Symmetrical flashing relay (starting pulse-off) w/ retrigger/restart-2 C/O Di- Symmetrical flashing relay (starting pulse-on)-2 C/O Dit- Symmetrical flashing relay (starting pulse-on) w/ pause/summation (X1)-2 C/O O Diw- Symmetrical flashing relay (starting pulse-on) w/ retrigger/restart-2 C/O H- Interval relay-2 C/O Ht- Interval relay w/ pause/summation (X1)-2 C/O Hw- Interval relay w/ retrigger/restart-2 C/O Qg- Star-delta relay (2 CO outputs w/ same common)-2 C/O Qgt- Star-delta relay (2 CO outputs w/ same common) w/ pause/summation-2 C/O O Qt- Star-delta relay (2 CO outputs w/ split common)-2 C/O Qtt- Star-delta relay (2 CO outputs w/ split common) w/ pause/summation (X1)-2 C/O W- Interval relay w/ control signal off-2 C/O Wt- Interval relay w/ control signal off and pause/summation-2 C/O
Bredde	22,5 mm
Vekt	0,105 kg
Number of functions	22

Miljø

Dielektrisk styrke	2,5 kV for 1 mA/1 minutt på 50 Hz mellom reléutgang og strømforsyning med grunnleggende isolasjon i samsvar med IEC 61812-1
Standarder	UL 508 IEC 61812-1
Direktiver	2004/108 / EC - elektromagnetisk kompatibilitet 2006/95 / EC - Lavspenningsdirektiv
Produktsertifikater	RCM[RETURN]CE[RETURN]EAC[RETURN]CSA[RETURN]CCC[RETURN]UL[RETURN]GL
Omgivelsestemperatur drift	-20...60 °C
Omgivelsestemperatur for lagring	-40...70 °C
IP-grad	IP40 kapsling: conforming to IEC 60529 IP20 Terminaler: conforming to IEC 60529 IP50 front panel: conforming to IEC 60529
Forurensningsgrad	3 i samsvar med IEC 60664-1
Vibrasjonsmotstand	20 m/s ² (f= 10...150 Hz) i samsvar med IEC 60068-2-6

Støtmotstand	15 gn ikke opererer for 11 ms i samsvar med IEC 60068-2-27 5 gn i drift for 11 ms i samsvar med IEC 60068-2-27
Relativ fuktighet	95 % på 25...55 °C
Elektromagnetisk kompatibilitet	Raske transienter immunitet test - test level: 1 kV nivå 3 (kapasitiv koble klipp) conforming to IEC 61000-4-4 Surge immunitet test - test level: 1 kV nivå 3 (differensialmodus) conforming to IEC 61000-4-5 Surge immunitet test - test level: 2 kV nivå 3 (felles modul) conforming to IEC 61000-4-5 Elektrostatisk utlading - test level: 6 kV nivå 3 (kontakt utfloed) conforming to IEC 61000-4-2 Elektrostatisk utlading - test level: 8 kV nivå 3 (luft utslipp) conforming to IEC 61000-4-2 Strålings radiofrekvente elektromagnetiske felt immunitet test - test level: 10 V/m nivå 3 (80 MHz...1 GHz) conforming to IEC 61000-4-3 Gjennomført RF-forstyrrelser - test level: 10 V nivå 3 (0.15...80 MHz) conforming to IEC 61000-4-6 Fast transient bursts - test level: 2 kV nivå 3 (direkte kontakt) conforming to IEC 61000-4-4 Immunitet mot spenningsfall - test level: 30 % (500 ms) conforming to IEC 61000-4-11 Immunitet mot spenningsfall - test level: 100 % (20 ms) conforming to IEC 61000-4-11

Forpakkingsinformasjon

Enhetstype pakke 1	PCE
Antall enheter i pakke 1	1
Pakke 1 Høyde	2,6 cm
Pakke 1 Bredde	8,2 cm
Pakke 1 Vekt	9,5 cm
Package 1 Weight	116,0 g
Enhetstype pakke 2	S02
Antall enheter i pakke 2	40
Pakke 2 Høyde	15,0 cm
Pakke 2 Bredde	30,0 cm
Pakke 2 Lengde	40,0 cm
Pakke 2 Vekt	5,153 kg
Enhetstype pakke 3	P06
Antall enheter i pakke 3	640
Pakke 3 Høyde	75,0 cm
Pakke 3 Bredde	60,0 cm
Pakke 3 Lengde	80,0 cm
Pakke 3 Vekt	74,24 kg

Bærekraftig

Produktets miljøstatus	Green Premium miljømerket produkt
REACH-regelverk	 REACH-erklæring
EU RoHS-direktiv	Proaktivt i samsvar (Produktet inngår ikke i EUs RoHS direktivet)
Kvikksølvfri	Ja
Kinas RoHS-forskrift	 Kinas RoHS-Erklæring
Informasjon om RoHS-unntak	 Ja
Miljøinformasjon	 Produktmiljøprofil
Produktets livssyklus	 Informasjon Om Levetidsslutt

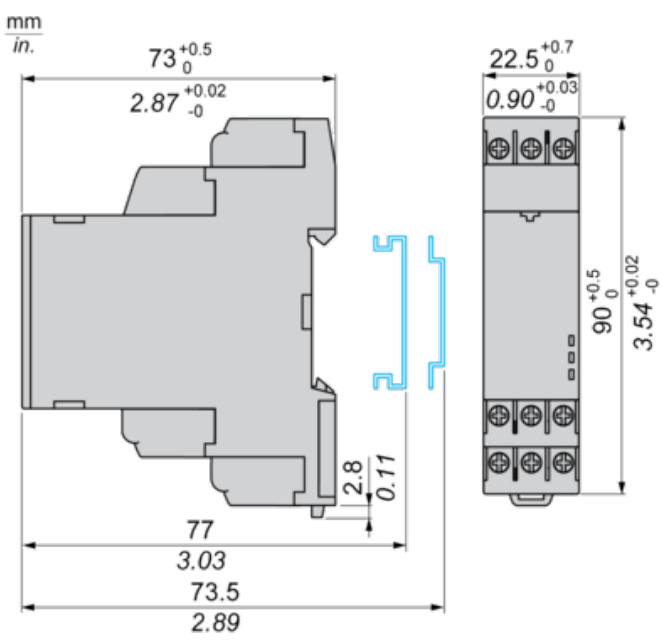
Logistisk informasjon

Opprinnelsesland	ID
------------------	----

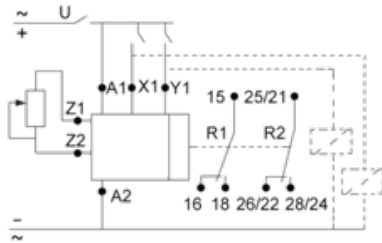
Garantiperiode

Garanti	18 måneder
---------	------------

Dimensions



Wiring Diagram

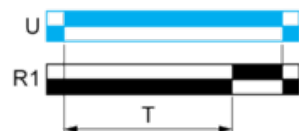


Function A: Power On-Delay

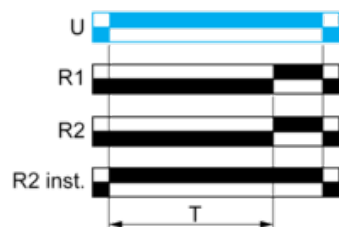
Description

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

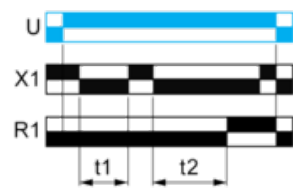


Function At: Power On-Delay with Pause / Summation Control

Description

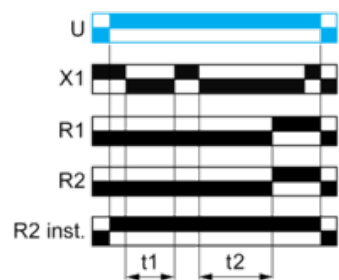
On energisation of power supply, the timing period T starts. Timing can be interrupted / paused each time X1 energizes. Except for RE17*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU, timing can be interrupted / paused each time Y1 energizes. When the cumulative total of time periods elapsed reaches the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



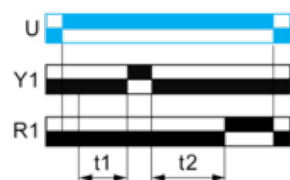
$$T = t1 + t2 + \dots$$

Function: 2 Outputs with Pause / Summation Control



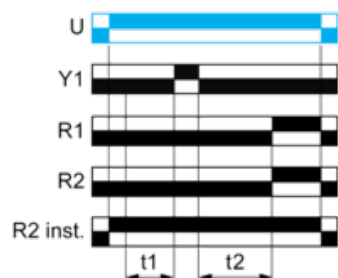
$$T = t1 + t2 + \dots$$

Function: 1 Output with Retrigger / Restart Control



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

Function: 2 Outputs with Retrigger / Restart Control



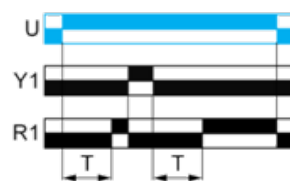
$$T = t1 + t2 + \dots$$

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

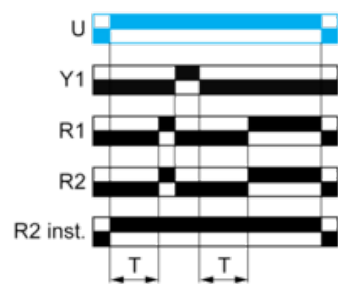
Description

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

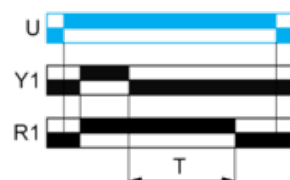


Function C: Off-Delay Relay with Control Signal

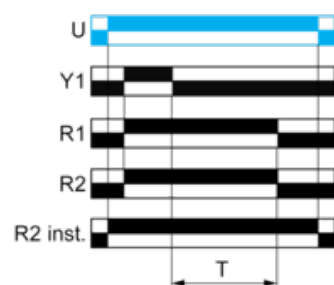
Description

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

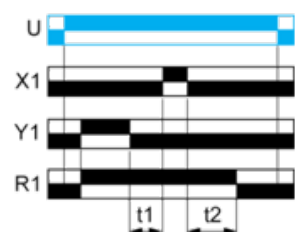


Function Ct: Off-Delay Relay with Control Signal & With Pause / Summation Control

Description

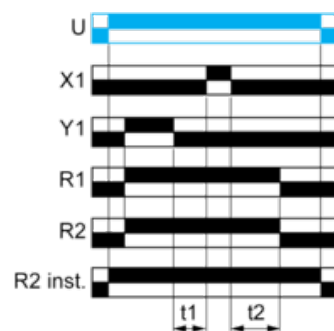
After energisation of power supply and energization of Y1 cause output(s) R close(s). When Y1 deenergizes, timing starts and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their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



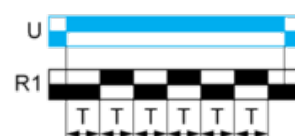
$$T = t1 + t2 + \dots$$

Function D: Symmetrical Flashing Relay (Starting Pulse Off)

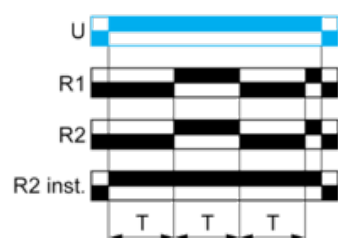
Description

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").

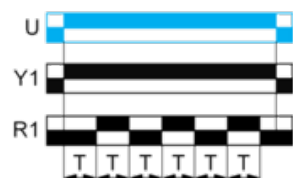
Function: 1 Output



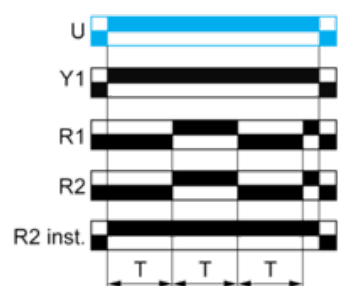
Function: 2 Outputs



Function: 1 Output with Retrigger / Restart Control



Function: 2 Output with Retrigger / Restart Control

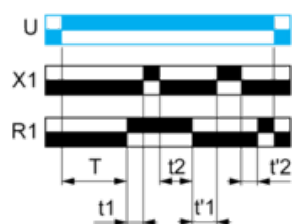


Function Dt: Symmetrical Flashing Relay (Starting Pulse Off) & With Pause / Summation Control

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").

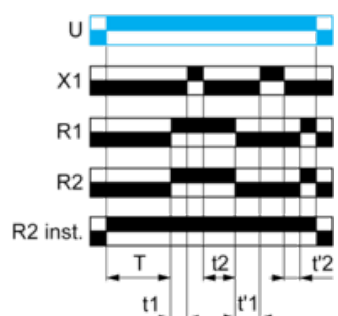
Function: 1 Output



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

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

Function: 2 Outputs



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

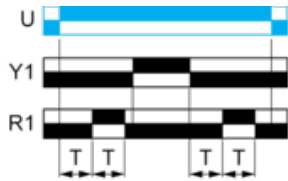
$$T = t'1 + t'2 + \dots$$

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

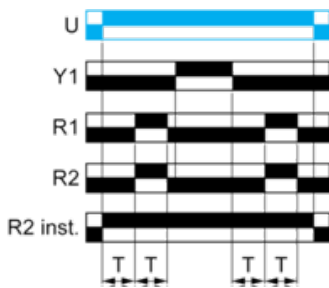
Description

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

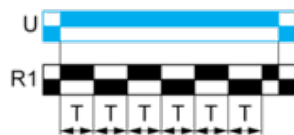


Function Di: Symmetrical Flashing Relay (Starting Pulse On)

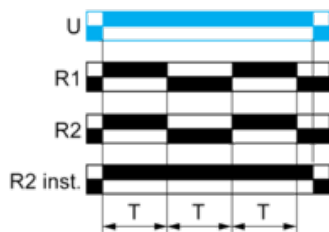
Description

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

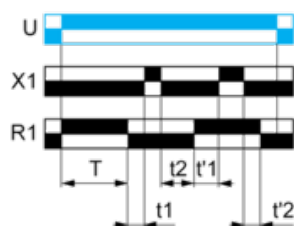


Function Dit: Symmetrical Flashing Relay (Starting Pulse On) & With Pause / Summation Control

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").

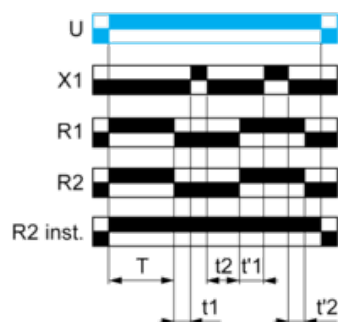
Function: 1 Output



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

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

Function: 2 Outputs



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

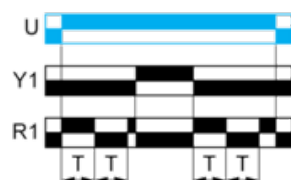
$$T = t'_1 + t'_2 + \dots$$

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

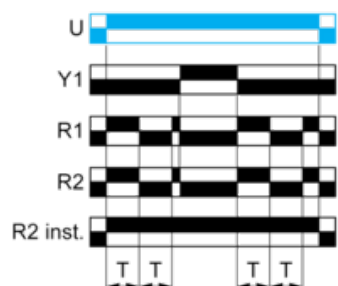
Description

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

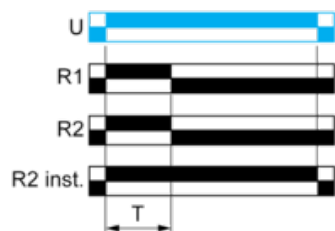
Description

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.

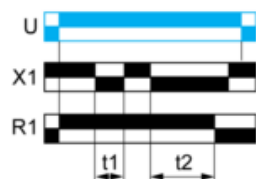
The timing can be interrupted / paused each time X1 energizes.

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.

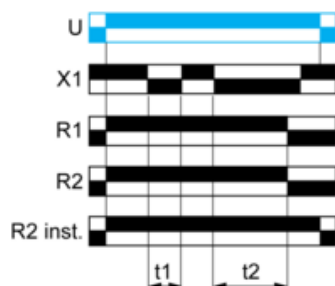
The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").

Function: 1 Output



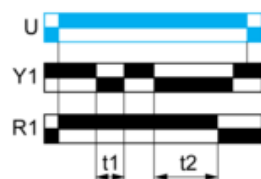
$$T = t_1 + t_2 + \dots$$

Function: 2 Outputs



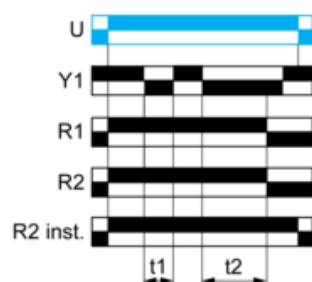
$$T = t_1 + t_2 + \dots$$

Function: 1 Output with Retrigger / Restart Control



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

Function: 2 Outputs with Retrigger / Restart Control



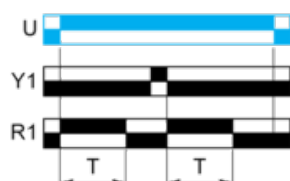
$$T = t1 + t2 + \dots$$

Function Hw: Interval Relay & with Retrigger / Restart Control

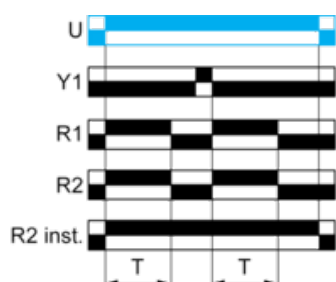
Description

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

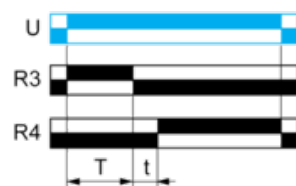


Function Qg: Star-Delta Relay (2 CO with same Common)

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

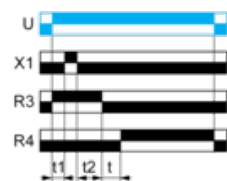
Function Qgt: Star-Delta Relay (2 CO with same common) with Pause / Summation Control

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



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

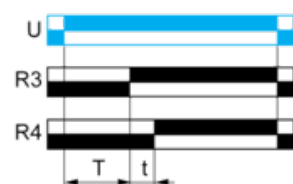
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

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



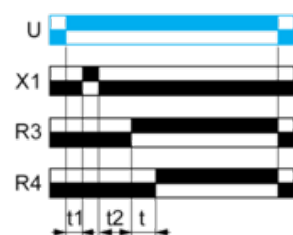
t : 20, 40, 60, 80, 100, 120, 140 ms

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



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

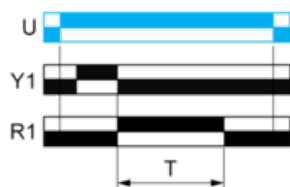
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

Function W: Interval Relay with Control Signal Off

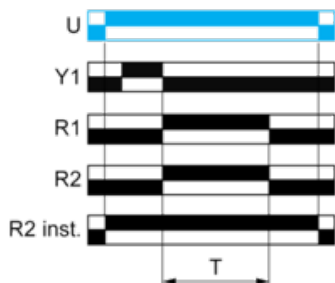
Description

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

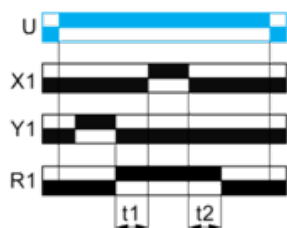


Function Wt: Interval Relay with Control Signal Off & with Pause / Summation Control

Description

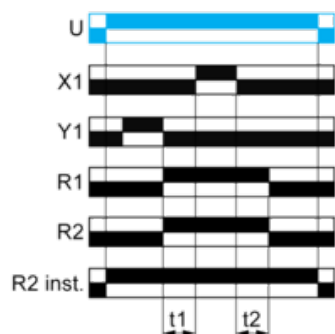
After energisation of power supply and on energization of Y1, the output(s) R close(s) and starts the timing T. Timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state.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