

RE22R2MYMR

multifunction relay, Harmony Timer Relays,
8A, 2CO, 0.05sâ€¦300h, screw connectors,
24...240V 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 or instantaneous contact, cadmium free 2 C/O timed contact, cadmium free |
| Time delay type | Power on-delay Off-delay 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 |
| Control type | Rotary knob Diagnostic button Potentiometer external |
| [Us] rated supply voltage | 24...240 V AC/DC 50/60 Hz |
| Release input voltage | ≤ 2.4 V |
| Voltage range | 0.85...1.1 Us |
| Supply frequency | 50...60 Hz +/- 5 % |
| Connections - terminals | Screw terminals, 1 x 0.5...1 x 3.3 mm ² AWG 20...AWG 12) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm ² AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² AWG 24...AWG 14) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² AWG 24...AWG 16) flexible with 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 | 100 Ms with load in parallel 30 ms |
| 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 | 3 VA 240 V AC |
| Power consumption in W | 1.5 W 240 V DC |
| Switching capacity in VA | 2000 VA |
| Minimum switching current | 10 mA 5 V DC |
| Maximum switching current | 8 A |
| Maximum switching voltage | 250 V AC |
| Electrical durability | 100000 Cycles, 8 A at 250 V, AC-1 100000 cycles, 2 A at 24 V, DC-1 |
| Mechanical durability | 10000000 cycles |
| Rated impulse withstand voltage | 5 kV 1.2...50 µs IEC 60664-1 |
| Power on delay | 100 ms |
| Creepage distance | 4 kV/3 IEC 60664-1 |
| Overvoltage category | III IEC 60664-1 |
| Safety reliability data | B10d = 160000 MTTFd = 171.2 years |
| Mounting position | Any position |
| Mounting support | 35 mm DIN rail conforming to IEC 60715 |
| Status LED | Green LED backlight steady)dial pointer indication Yellow LED steady)output relay energised Yellow LED fast flashing)timing in progress and output relay de-energised Yellow LED slow flashing)timing in progress and output relay energised |
| Function available | 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 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 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 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 |
| Width | 0.9 in (22.5 mm) |
| Net Weight | 0.231 lb(US) (0.105 kg) |
| Control Type | With test button |
| Number of functions | 22 |

Environment

| | |
|---------------------------------------|---|
| Dielectric strength | 2.5 kV 1 mA/1 minute 50 Hz between relay output and power supply basic insulation IEC 61812-1 |
| Standards | UL 508 IEC 61812-1 |
| Directives | 2004/108/EC - electromagnetic compatibility 2006/95/EC - low voltage directive |
| Product Certifications | RCM[RETURN]CE[RETURN]EAC[RETURN]CSA[RETURN]CCC[RETURN]UL[RETURN]JGL |
| Ambient Air Temperature for Operation | -4...140 °F (-20...60 °C) |
| Ambient Air Temperature for Storage | -40...158 °F (-40...70 °C) |
| IP degree of protection | IP40 housing: conforming to IEC 60529 IP20 terminals: conforming to IEC 60529 IP50 front panel: conforming to IEC 60529 |
| Pollution degree | 3 IEC 60664-1 |

| | |
|-------------------------------|--|
| Vibration resistance | 20 m/s ² 10...150 Hz IEC 60068-2-6 |
| Shock resistance | 15 gn not operating 11 ms IEC 60068-2-27 5 gn in operation 11 ms IEC 60068-2-27 |
| Relative humidity | 95 % 77...131 °F (25...55 °C) |
| Electromagnetic compatibility | Fast transients immunity test - test level: 1 kV level 3 (capacitive connecting clip) 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 Electrostatic discharge - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2 Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m level 3 (80 MHz...1 GHz) conforming to IEC 61000-4-3 Conducted RF disturbances - test level: 10 V level 3 (0.15...80 MHz) conforming to IEC 61000-4-6 Fast transient bursts - test level: 2 kV level 3 (direct contact) conforming to IEC 61000-4-4 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 |

Ordering and shipping details

| | |
|-------------------|---------------|
| Category | US10CP222376 |
| Discount Schedule | OCP2 |
| GTIN | 3606480792533 |
| Returnability | Yes |
| Country of origin | US |

Packing Units

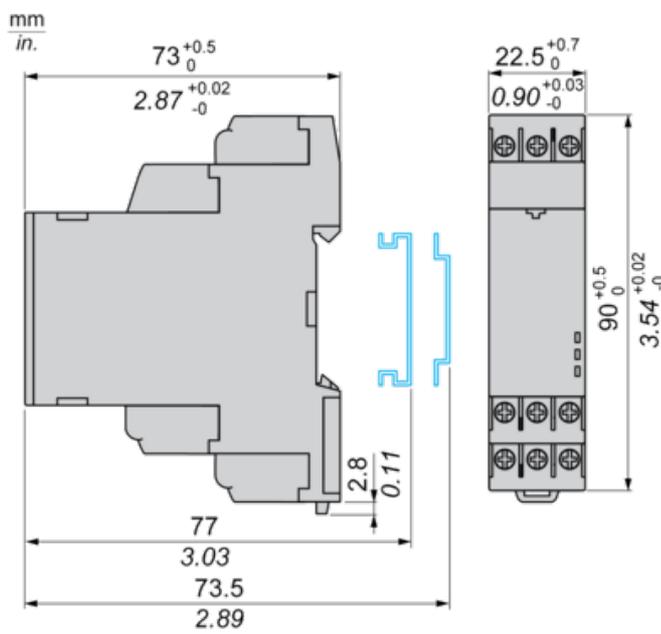
| | |
|------------------------------|--------------------------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 1.02 in (2.6 cm) |
| Package 1 Width | 3.2 in (8.2 cm) |
| Package 1 Length | 3.7 in (9.5 cm) |
| Package 1 Weight | 4.09 oz (116.0 g) |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 40 |
| Package 2 Height | 5.9 in (15.0 cm) |
| Package 2 Width | 11.8 in (30.0 cm) |
| Package 2 Length | 15.7 in (40.0 cm) |
| Package 2 Weight | 11.360 lb(US) (5.153 kg) |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 640 |
| Package 3 Height | 29.5 in (75.0 cm) |
| Package 3 Width | 23.6 in (60.0 cm) |
| Package 3 Length | 31.5 in (80.0 cm) |
| Package 3 Weight | 163.67 lb(US) (74.24 kg) |

Offer Sustainability

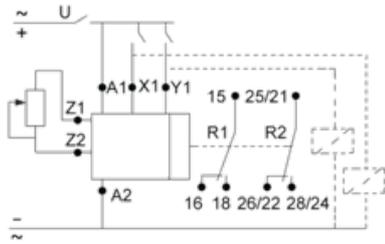
| | |
|---------------------------|---|
| Sustainable offer status | Green Premium product |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |
| REACH Regulation |  REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| Mercury free | Yes |

| | |
|----------------------------|---|
| China RoHS Regulation | China RoHS Declaration |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |

Dimensions



Wiring Diagram



Function A: Power On-Delay

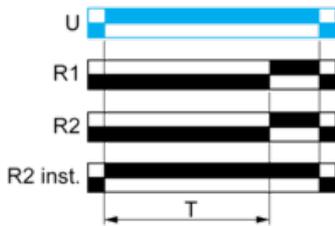
Description

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

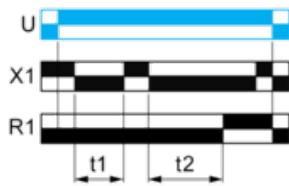


Function At: Power On-Delay with Pause / Summation Control

Description

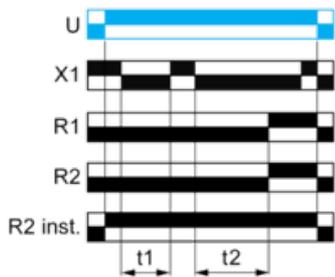
On energisation of power supply, the timing period T starts. Timing can be interrupted / paused each time X1 energizes. Except for RE17*, RE22R2AMU, RE22R2MMW, RE22R2MMU, RE22R2MJU, timing can be interrupted / paused each time Y1 energizes. When the cumulative total of time periods elapsed reaches the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



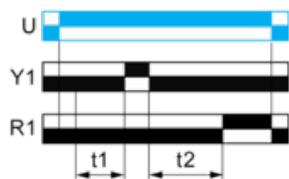
$T = t1 + t2 + \dots$

Function: 2 Outputs with Pause / Summation Control



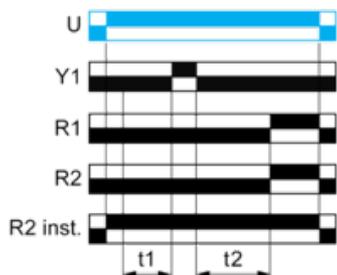
$T = t1 + t2 + \dots$

Function: 1 Output with Retrigger / Restart Control



$T = t1 + t2 + \dots$

Function: 2 Outputs with Retrigger / Restart Control



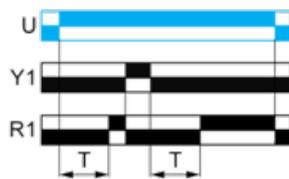
$T = t1 + t2 + \dots$

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

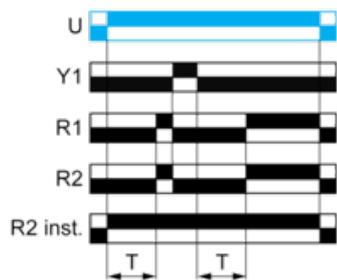
Description

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

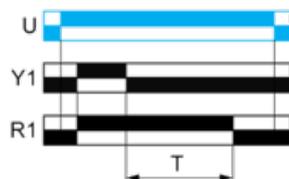


Function C: Off-Delay Relay with Control Signal

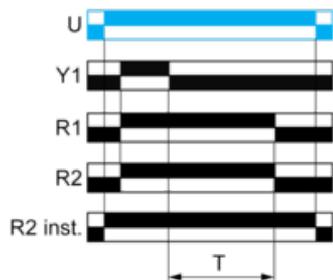
Description

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

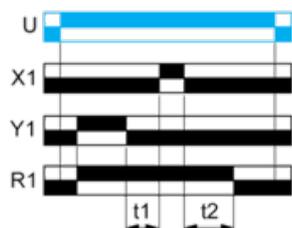


Function Ct: Off-Delay Relay with Control Signal & With Pause / Summation Control

Description

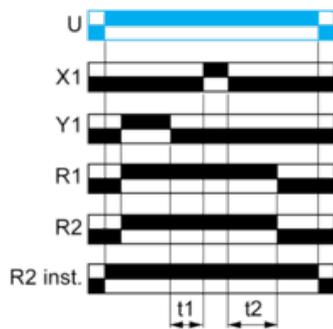
After energisation of power supply and energization of Y1 cause output(s) R close(s). When Y1 deenergizes, timing starts and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their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

Function: 1 Output



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

Function: 2 Outputs



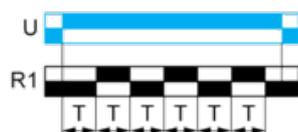
$$T = t_1 + t_2 + \dots$$

Function D: Symmetrical Flashing Relay (Starting Pulse Off)

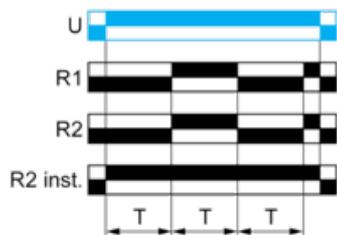
Description

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



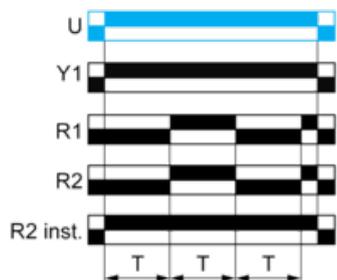
Function: 2 Outputs



Function: 1 Output with Retrigger / Restart Control



Function: 2 Output with Retrigger / Restart Control

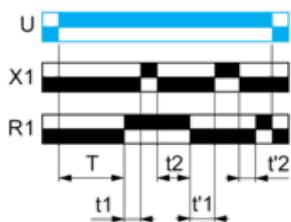


Function Dt: Symmetrical Flashing Relay (Starting Pulse Off) & With Pause / Summation Control

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").

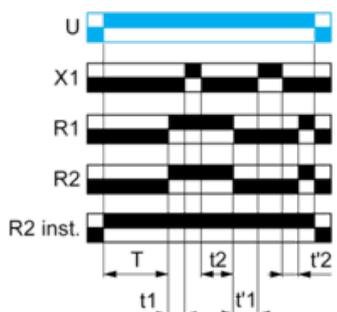
Function: 1 Output



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

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

Function: 2 Outputs



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

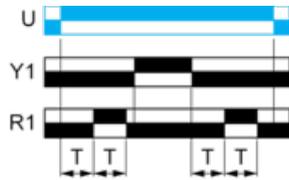
$$T = t'1 + t'2 + \dots$$

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

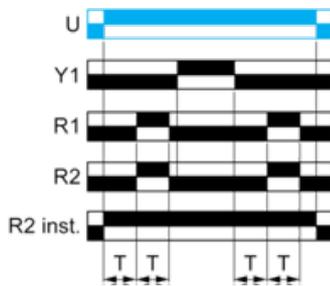
Description

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

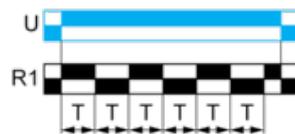


Function Di: Symmetrical Flashing Relay (Starting Pulse On)

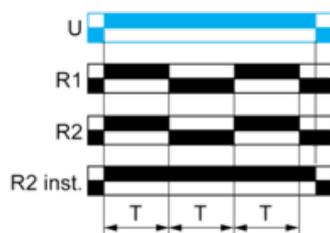
Description

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

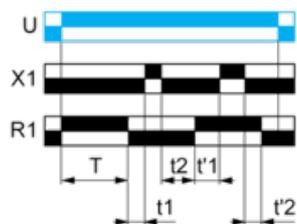


Function Dit: Symmetrical Flashing Relay (Starting Pulse On) & With Pause / Summation Control

Description

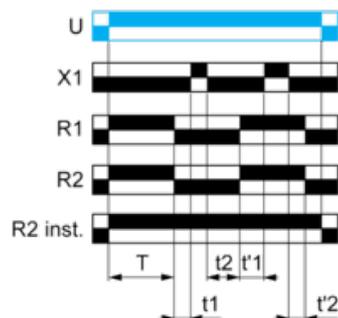
On energisation of power supply, output(s) R starts at output(s) R close(s) for timing duration T and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, then revert(s) to its/their initial state. The output(s) 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



$T = t1 + t2 + \dots$
 $T = t'1 + t'2 + \dots$

Function: 2 Outputs



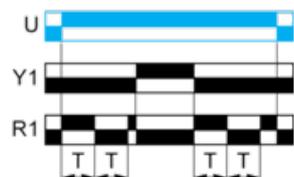
$T = t1 + t2 + \dots$
 $T = t'1 + t'2 + \dots$

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

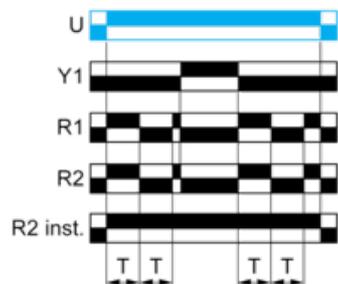
Description

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

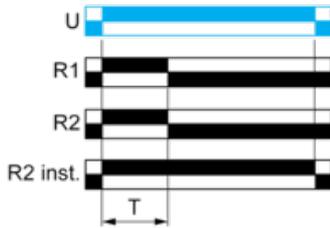
Description

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.

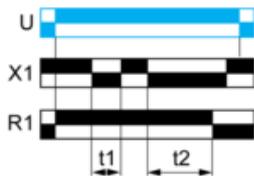
The timing can be interrupted / paused each time X1 energizes.

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.

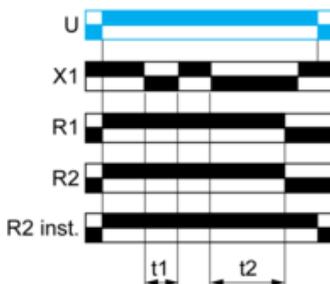
The second output (R2) can be either timed (when set to "TIMED" or instantaneous (when set to "INST").

Function: 1 Output



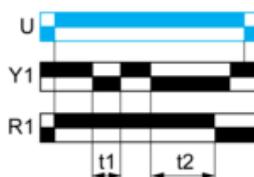
$$T = t1 + t2 + \dots$$

Function: 2 Outputs



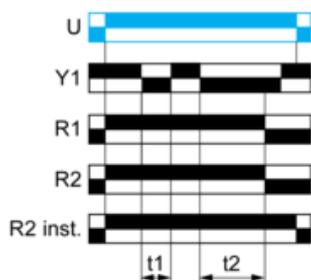
$$T = t1 + t2 + \dots$$

Function: 1 Output with Retrigger / Restart Control



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

Function: 2 Outputs with Retrigger / Restart Control



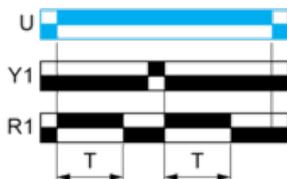
$T = t1 + t2 + \dots$

Function Hw: Interval Relay & with Retrigger / Restart Control

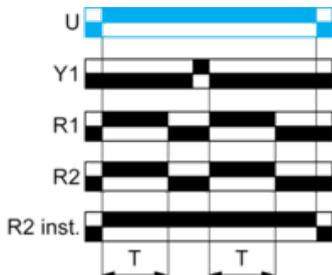
Description

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

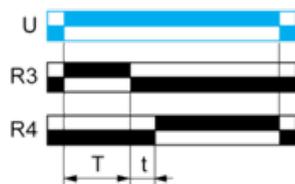


Function Qg: Star-Delta Relay (2 CO with same Common)

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

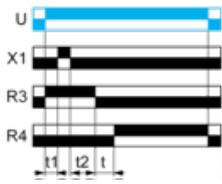
Function Qgt: Star-Delta Relay (2 CO with same common) with Pause / Summation Control

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



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

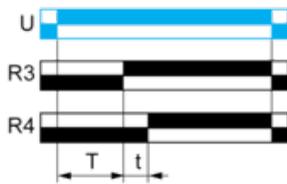
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

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



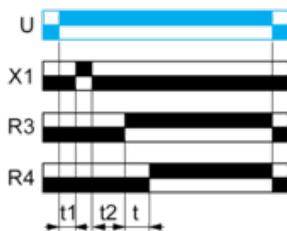
t : 20, 40, 60, 80, 100, 120, 140 ms

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



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

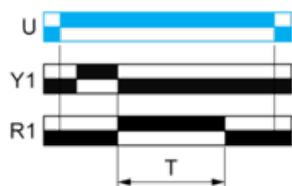
NOTE: RE22R2MYMR is with fixed transition time, t: 50ms

Function W: Interval Relay with Control Signal Off

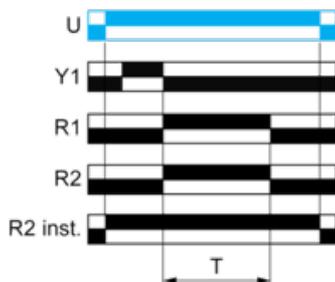
Description

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

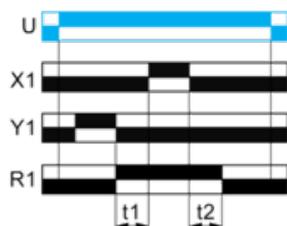


Function Wt: Interval Relay with Control Signal Off & with Pause / Summation Control

Description

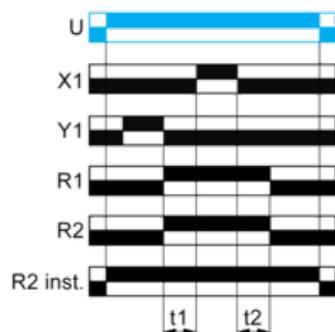
After energisation of power supply and on energization of Y1, the output(s) R close(s) and starts the timing T. Timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value T, the output(s) R revert(s) to its/their initial state.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

Function: 1 Output



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

Function: 2 Outputs



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

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 |