RE22R2MYMR
Multi-function Timing Relay - 0.05s…300h - 24…240V AC/DC - 2C/O

Main

Range of product	Zelio Time
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 1 C/O timed contact, cadmium free
Time delay type	A At Aw C D Di H Ht Qg Qt W Ct Dw Hw Wt Dt Dit Diw Qgt Qtt Qgw Qtw
Time delay range	0.3...3 s 1...10 s 0.05...1 s 3...30 s 10...100 s 30...300 s 3...30 min 30...300 min 3...30 h 30...300 h
Control type	External potentiometer Diagnostic button Rotary knob
[Us] rated supply voltage	24...240 V AC/DC at 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 : 2 x 0.2...2 x 1.5 mm², AWG 24...AWG 16 flexible cable with cable end
	Screw terminals : 1 x 0.2...1 x 2.5 mm², AWG 24...AWG 14 flexible cable with cable end
	Screw terminals : 2 x 0.5...2 x 2.5 mm², AWG 20...AWG 14 solid cable without cable end
	Screw terminals : 1 x 0.5...1 x 3.3 mm², AWG 20...AWG 12 solid cable without cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing
Repeat accuracy	+/- 0.5 % conforming to IEC 61812-1
Temperature drift	+/- 0.05 %/°C
Voltage drift	+/- 0.2 %/V
Setting accuracy of time delay	+/- 10 % of full scale at 25 °C conforming to IEC 61812-1
Control signal pulse width	30 ms
	100 ms (with load in parallel)
Insulation resistance	100 MOhm at 500 V DC conforming to IEC 60664-1
Recovery time	120 ms (on de-energisation)
Immunity to microbreaks	<= 10 ms
Power consumption in VA	3 VA at 240 V AC
Power consumption in W	1.5 W at 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 for 2 A at 24 V DC-1
	100000 cycles for 8 A at 250 V AC-1
Mechanical durability	10000000 cycles
Rated impulse withstand voltage	5 kV for 1.2...50 µs conforming to IEC 60664-1
Power on delay	< 100 ms
Creepage distance	4 kV/3 conforming to IEC 60664-1
Overvoltage category	III conforming to IEC 60664-1
Mounting position	Any position
Mounting support	35 mm DIN rail conforming to EN/IEC 60715
Status LED	Yellow LED (slow flashing) for timing in progress and output relay energised
	Yellow LED (fast flashing) for timing in progress and output relay de-energised
	Yellow LED (steady) for output relay energised
	Green LED backlight (steady) for dial pointer indication
Product weight	0.105 kg

Environment

Dielectric strength	2.5 kV for 1 mA/1 minute at 50 Hz between relay output and power supply with basic insulation conforming to IEC 61812-1
Standards	IEC 61812-1
	UL 508
Directives	2004/108/EC - electromagnetic compatibility
	2006/95/EC - low voltage directive
Product certifications	CCC
	CE
	CSA
	GL
	UL
	RCM
	EAC
	China RoHS
Ambient air temperature for operation	-20...60 °C
Ambient air temperature for storage	-40...70 °C
IP degree of protection	IP50 (front panel) conforming to IEC 60529
	IP20 (terminals) conforming to IEC 60529
	IP40 (housing) conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1
Vibration resistance	20 m/s² (f = 10...150 Hz) conforming to IEC 60068-2-6

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Shock resistance	5 gn (in operation) (duration = 11 ms) conforming to IEC 60068-2-27 15 gn (not operating) (duration = 11 ms) conforming to IEC 60068-2-27
Relative humidity	95 % at 25...55 °C
Electromagnetic compatibility	Immunity to microbreaks and voltage drops (test level: 100 % - 20 ms) conforming to IEC 61000-4-11 Immunity to microbreaks and voltage drops (test level: 30 % - 500 ms) conforming to IEC 61000-4-11 Fast transient bursts (test level: 2 kV, level 3 - direct contact) conforming to IEC 61000-4-4 Conducted RF disturbances (test level: 10 V, level 3 - 0.15...80 MHz) conforming to IEC 61000-4-6 Radiated radio-frequency electromagnetic field immunity test (test level: 10 V/m, level 3 - 80 MHz...1 GHz) conforming to IEC 61000-4-3 Electrostatic discharge (test level: 8 kV, level 3 - air discharge) conforming to IEC 61000-4-2 Electrostatic discharge (test level: 6 kV, level 3 - contact discharge) conforming to IEC 61000-4-2 Surge immunity test (test level: 2 kV, level 3 - common mode) conforming to IEC 61000-4-5 Surge immunity test (test level: 1 kV, level 3 - differential mode) conforming to IEC 61000-4-5 Fast transients immunity test (test level: 1 kV, level 3 - capacitive connecting clip) conforming to IEC 61000-4-4

RE22R2MYMR

Dimensions

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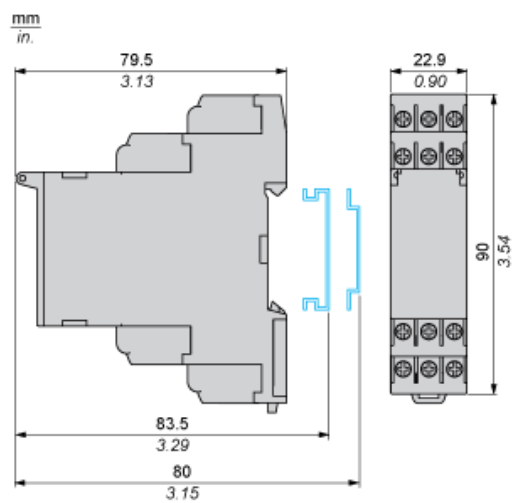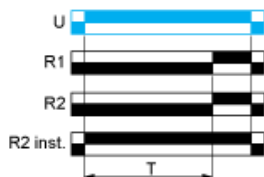
Wiring Diagram
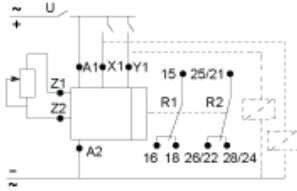
Function A: Power On-Delay

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
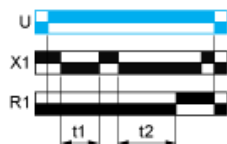

Function: 2 Outputs

## 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").
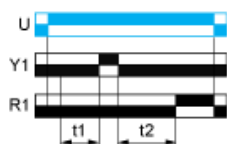
Function: 1 Output with Pause / Summation Control

T =   t1 + t2 +…
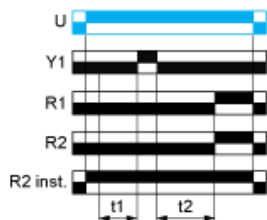
Function: 2 Outputs with Pause / Summation Control
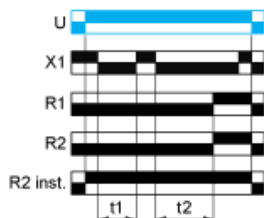
T =   t1 + t2 +…

Function: 1 Output with Retrigger / Restart Control

T =   t1 + t2 +…

Function: 2 Outputs with Retrigger / Restart Control

T =   t1 + t2 +…

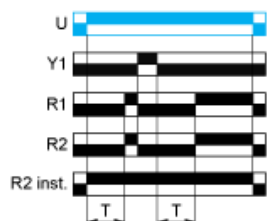## Function Aw : Power On-Delay With Retrigger / Restart Control

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
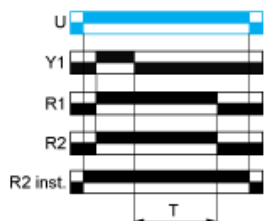

Function C: Off-Delay Relay with Control Signal

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").
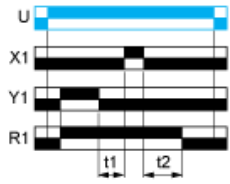
Function: 1 Output

Function: 2 Outputs

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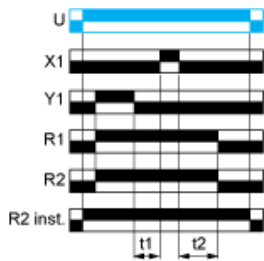
Description

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 elapsedreaches 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 +…

Function: 2 Outputs

T = t1 + t2 +…

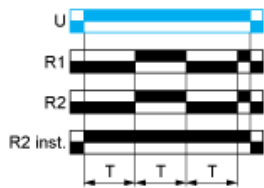## Function D: Symmetrical Flashing Relay (Starting Pulse Off)

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 indefintely 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").
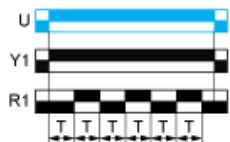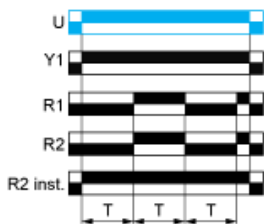
Function: 1 Output

Function: 2 Outputs

Function: 1 Output with Retrigger / Restart Control
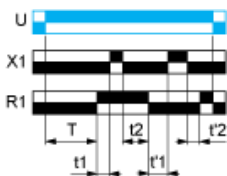
Function: 2 Output with Retrigger / Restart Control

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 indefintely until power supply removal.The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").
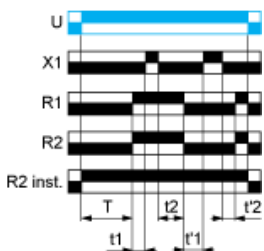
Function: 1 Output

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

Function: 2 Outputs

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

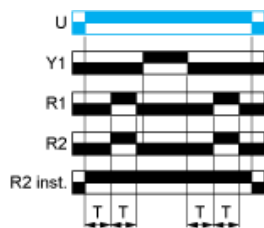## Function DW: Symmetrical Flashing Relay (Starting Pulse Off) & With Retrigger / Restart Control

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 indefintely 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

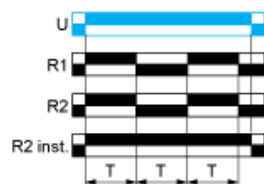## Function Di: Symmetrical Flashing Relay (Starting Pulse On)

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 indefintely until power supply removal.The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").
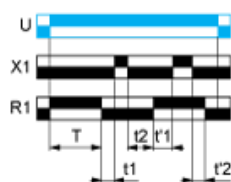
Function: 1 Output

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 indefintely until power supply removal.The second output (R2) can be either timed (when set to "TIMED") or instantaneous (when set to "INST").
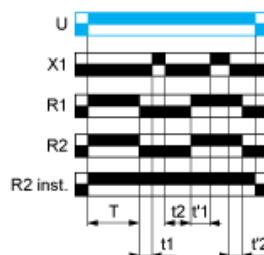
Function: 1 Output

$T = t1 + t2 + \ldots$
$T = t'1 + t'2 + \ldots$
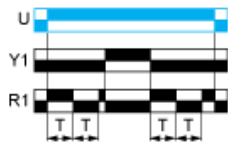
Function: 2 Outputs

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

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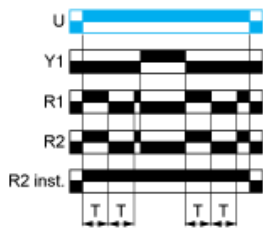
Description

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 indefintely 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
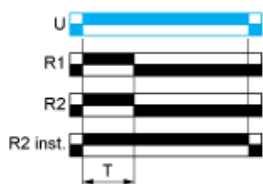
Function: 2 Outputs

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

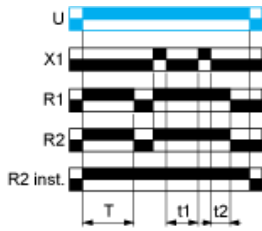## Function Ht: Interval Relay & With Pause / Summation Control

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 stateReenergization 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*, RE22R2AMU, RE22R2MMW, RE22R2MMU, 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").

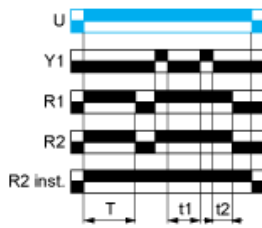### Function: 1 Output

T = t1 + t2 +…

Function: 2 Outputs

T =   t1 + t2 +…

Function: 1 Output with Retrigger / Restart Control

T =   t1 + t2 +…

Function: 2 Output with Retrigger / Restart Control

T =   t1 + t2 +…

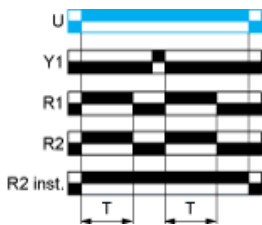## Function Hw: Interval Relay & with Retrigger / Restart Control

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.

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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.
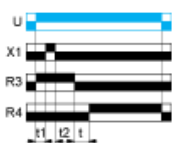
Function: 2 Outputs

T =   t1 + t2 +…

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.

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.

Function: 2 Outputs

T =   t1 + t2 +…

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

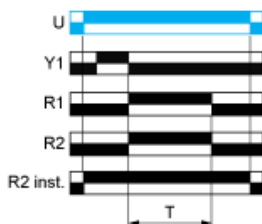## Function W: Interval Relay with Control Signal Off

Description

After energisation of power supply and on energization of Y1 following by denergization 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").

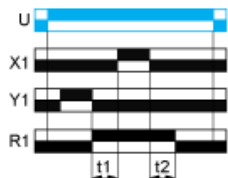### Function: 1 Output

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 following by denergization 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 +…
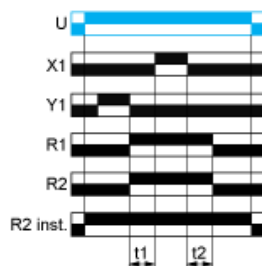
Function: 2 Outputs

T =   t1 + t2 +…

Legend

 Relay de-energised

 Relay energised

 Output open

 Output closed

U   Supply

-

R1/ 2 timed outputs
R2

-

Ta   Adjustable On-delay

-

Tr   Adjustable Off-delay

-

X1   Pause / Summation control

-

Y1   Retrigger / Restart control

-

X2   Function Selection

-

R2   The second output is instantaneous if the right position is selected
inst.

-

T   Timing period

-

R4   Delta contact output

-

t   Delay to switch ON Delta contact output

-

R3   Star-Delta contact output

-