

# RE22R1MLMR

Asym. Flashing Timing Relay - 0.05s...300h -  
24...240V AC/DC - 1C/O



Price\* : 65.61 GBP



## 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 contact, cadmium free                                                                                                                                                            |
| Time delay type               | Li<br>Lit<br>L<br>Lt                                                                                                                                                                         |
| Time delay range              | 0.05...1 s<br>30...300 min<br>30...300 h<br>30...300 s<br>3...30 h<br>0.3...3 s<br>3...30 min<br>3...30 s<br>10...100 s<br>1...10 s                                                          |
| Control type                  | Rotary knob<br>Diagnostic button<br>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 <sup>2</sup> (AWG 20...AWG 12) solid without cable end<br>Screw terminals, 2 x 0.5...2 x 2.5 mm <sup>2</sup> (AWG 20...AWG 14) solid without cable end |

|                                 |                                                                                                                                                                                                                                                                               |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | Screw terminals, 1 x 0.2...1 x 2.5 mm <sup>2</sup> (AWG 24...AWG 14) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) flexible with 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      | 100 ms with load in parallel<br>30 ms                                                                                                                                                                                                                                         |
| 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 at 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<br>100000 cycles, 2 A at 24 V, DC-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                                                                                                                                                                                                                                                 |
| Safety reliability data         | MTTFd = 194 years<br>B10d = 180000                                                                                                                                                                                                                                            |
| Mounting position               | Any position                                                                                                                                                                                                                                                                  |
| Mounting support                | 35 mm DIN rail conforming to EN/IEC 60715                                                                                                                                                                                                                                     |
| Status LED                      | LED backlight green (steady) for dial pointer indication<br>LED yellow (steady) for output relay energised<br>LED yellow (fast flashing) for timing in progress and output relay de-energised<br>LED yellow (slow flashing) for timing in progress and output relay energised |
| Width                           | 22.5 mm                                                                                                                                                                                                                                                                       |
| Product weight                  | 0.1 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<br>UL 508                                                                                                        |
| Directives                            | 2004/108/EC - electromagnetic compatibility<br>2006/95/EC - low voltage directive                                            |
| Product certifications                | EAC<br>UL<br>GL<br>China RoHS<br>CSA<br>RCM<br>CCC<br>CE                                                                     |
| Ambient air temperature for operation | -20...60 °C                                                                                                                  |
| Ambient air temperature for storage   | -40...70 °C                                                                                                                  |
| IP degree of protection               | IP40 housing: conforming to IEC 60529<br>IP50 front face: conforming to IEC 60529<br>IP20 terminals: conforming to IEC 60529 |
| Pollution degree                      | 3 conforming to IEC 60664-1                                                                                                  |

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Vibration resistance          | 20 m/s <sup>2</sup> (f= 10...150 Hz) conforming to IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Shock resistance              | 15 gn not operating for 11 ms conforming to IEC 60068-2-27<br>5 gn in operation for 11 ms conforming to IEC 60068-2-27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Relative humidity             | 95 % at 25...55 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Electromagnetic compatibility | Fast transients immunity test - test level: 1 kV level 3 (capacitive connecting clip) conforming to IEC 61000-4-4<br>Surge immunity test - test level: 1 kV level 3 (differential mode) conforming to IEC 61000-4-5<br>Surge immunity test - test level: 2 kV level 3 (common mode) conforming to IEC 61000-4-2<br>Electrostatic discharge - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2<br>Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2<br>Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m level 3 (80 MHz...1 GHz) conforming to IEC 61000-4-3<br>Conducted RF disturbances - test level: 10 V level 3 (0.15...80 MHz) conforming to IEC 61000-4-6<br>Fast transient bursts - test level: 2 kV level 3 (direct contact) conforming to IEC 61000-4-4<br>Immunity to microbreaks and voltage drops - test level: 30 % (500 ms) conforming to IEC 61000-4-11<br>Immunity to microbreaks and voltage drops - test level: 100 % (20 ms) conforming to IEC 61000-4-11 |

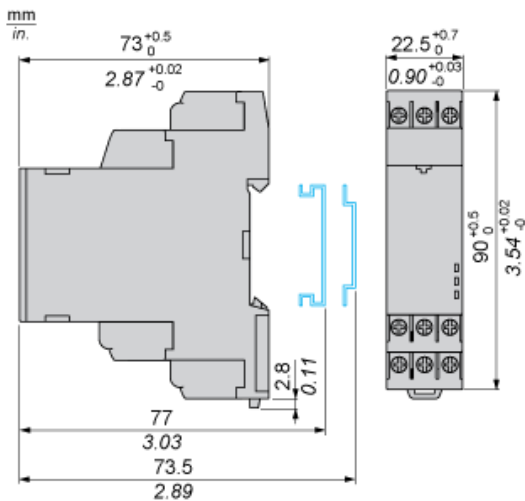
### Offer Sustainability

|                            |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                             |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                               |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>                                                            |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>                                                     |
| Circularity Profile        | <a href="#">End of Life Information</a>                                                           |

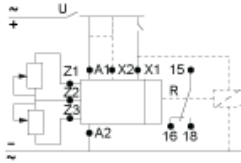
### Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Dimensions



## Wiring Diagram



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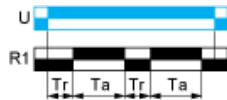
Function L: Asymmetrical Flashing Relay (Starting Pulse Off)

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Description

On energisation of power supply, output(s) R starts at its/their initial state for timing duration  $T_r$  then change(s) to output(s) R close(s) for the another timing duration  $T_a$ . This cycle is repeated indefinitely until power supply removal.

Function: 1 Output



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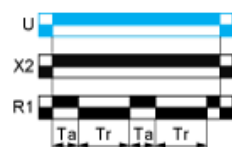
## Function Li: Asymmetrical Flashing Relay (Starting Pulse On)

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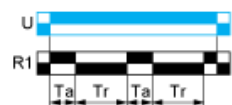
### Description

On energisation of power supply, output(s) R starts at output(s) R close(s) for timing duration  $T_a$  then change(s) to its/their initial state for timing duration  $T_r$ . This cycle is repeated indefinitely until power supply removal. Specially for RE22R1MLMR, this Li function can only be initiated by energizing X2 permanently.

### Function: 1 Output with Function Selection



### Function: 1 Output



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Function Lt: Asymmetrical Flashing Relay (Starting Pulse Off) & with Pause / Summation Control

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Description

On energisation of power supply, output(s) R starts at its/their initial state for timing duration  $T_r$  and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value  $T_r$ , then changes to output(s) R close(s). The output(s) R close state will remain for the same timing duration  $T_a$  and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value  $T_a$ , the output(s) R revert(s) to its/their initial state. This cycle is repeated indefinitely until power supply removal.

Function: 1 Output



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

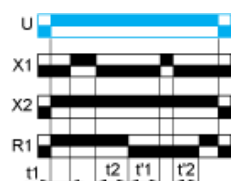
$$T = t'_1 + t'_2 + \dots$$

## Function Lit: Asymmetrical Flashing Relay (Starting Pulse On) & Pause / Summation Control

### Description

On energisation of power supply, output(s) R starts at output(s) R close(s) for timing duration  $T_a$  and the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value  $T_a$ , the output(s) R revert(s) to its/their initial state. The output(s) R at initial state will remain for timing duration  $T_r$  the timing can be interrupted / paused each time X1 energizes. When the cumulative total of time periods elapsed reaches the pre-set value  $T_r$ , then changes to output(s) R close(s). This cycle is repeated indefinitely until power supply removal. Specially for RE22R1MLMR, this Li function can only be initiated by energizing X2 permanently.

### Function: 1 Output with Function Selection



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

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

### Legend

Relay de-energised

Relay energised

Output open

Output closed

U - Supply

R1 - Timed output

$T_a$  - Adjustable On-delay

$T_r$  - Adjustable Off-delay

X1 - Pause / Summation control

X2 - Function Selection