# Product data sheet
## Characteristics

# RE22R2QEMR
Harmony, Modular timing relay, 8 A, 2 CO, 0.3 s…30 s, star delta, 24...240 V AC/DC


## Main

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|---|---|
| Range of product | Harmony Timer Relays |
| Product or component type | Single function relay |
| Discrete output type | Relay |
| Device short name | RE22 |
| Nominal output current | 8 A |

## Complementary

| | |
|---|---|
| Contacts type and composition | 2 C/O timed contact, cadmium free |
| Time delay type | Star-delta |
| Time delay range | 0.3...30 s |
| Control type | Rotary knob<br>Diagnostic button |
| [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 mm² (AWG 20...AWG 12) solid without cable end<br>Screw terminals, 2 x 0.5...2 x 2.5 mm² (AWG 20...AWG 14) solid without cable end<br>Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 14) flexible with cable end<br>Screw terminals, 2 x 0.2...2 x 1.5 mm² (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 |
| Insulation resistance | 100 MOhm at 500 V DC conforming to IEC 60664-1 |

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| 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 | B10d = 320000<br>MTTFd = 353.8 years |
| 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 |
| Net weight | 0.09 kg |

## Environment

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|---|---|
| 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 | 2006/95/EC - low voltage directive<br>2004/108/EC - electromagnetic compatibility |
| Product certifications | CE<br>CSA<br>GL<br>EAC<br>UL<br>RCM<br>CCC |
| 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>IP20 terminals: conforming to IEC 60529<br>IP50 front panel: 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 |
| 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 61000-4-5<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 |

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|---|---|
| | Immunity to microbreaks and voltage drops - test level: 100 % (20 ms) conforming to IEC 61000-4-11 |

## Packing Units

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| Package 1 Weight | 0.100 kg |
| Package 1 Height | 0.250 dm |
| Package 1 width | 0.830 dm |
| Package 1 Length | 0.960 dm |

## Offer Sustainability

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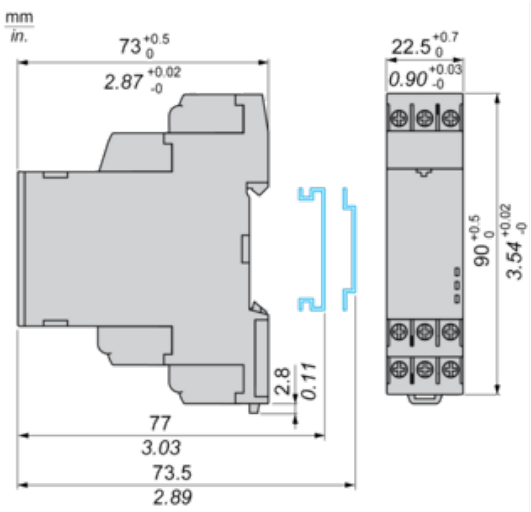
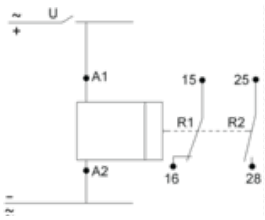
|---|---|
| Sustainable offer status | Green Premium product |
| REACh Regulation | REACh Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope)<br>EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China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

## Dimensions


mm
in.
73 +0.5 0
2.87 +0.02 -0
22.5 +0.7 0
0.90 +0.03 -0
90 +0.5 0
3.54 +0.02 -0
2.8
0.11
77
3.03
73.5
2.89

# RE22R2QEMR

## Wiring Diagram



## Function Qe: Star-Delta Relay (1 NC + 1 NO with Split Common)

### Description

On energisation of power supply, the output R1 is 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 R1 closes such that deenergizes STAR CONTACTOR and causes t transition time starts.At the end of the transition time, the output R2 closes such that energizes DELTA CONTACTOR.

### Function: 2 Outputs


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

### Legend

Relay de-energised

Relay energised

Output open

Output closed

| | |
|---|---|
| U - | Supply |
| T - | Timing period |
| t - | Delay to switch ON Delta contact output |
| R1 - | Star contact output |
| R2 - | Delta contact output |