

RM22UA22MR

Harmony, Modular 1-phase overvoltage control relay, 8 A, 2 CO, 1...100 V AC/DC measurement, 24...240 V AC/DC



Main

| | |
|-------------------------------|----------------------------------|
| Range of Product | Harmony Control Relays |
| Product or Component Type | Voltage control relay |
| Relay Type | Voltage control relay |
| Phase | 1 phase |
| Supply circuit type | DC |
| Relay name | RM22UA |
| Relay monitored parameters | Overvoltage detection |
| Time delay type | Without |
| Switching capacity in VA | 2000 VA |
| Measurement range | 1...100 V voltage AC/DC 50/60 Hz |
| Contacts type and composition | 2 C/O |

Complementary

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|--------------------------------|--|
| Reset time | 1500 ms at maximum voltage |
| Maximum switching voltage | 250 V AC |
| Minimum switching current | 10 mA 5 V DC |
| Maximum switching current | 8 A AC |
| [Us] Rated Supply Voltage | 24...240 V AC/DC 50/60 Hz |
| Supply voltage limits | 20.4...264 V AC/DC |
| Power consumption in VA | 3.5 VA AC |
| Maximum power consumption in W | 1.5 W DC |
| Supply voltage frequency | 40...70 Hz +/- 10 % |
| Resistance across terminals | 110 KOhm E2-M terminals 22 KOhm E1-M terminals 220 kOhm E3-M terminals |
| Output contacts | 2 C/O |
| Hysteresis | 5...50 % adjustable threshold setting |
| Run-up delay at power-up | 600 ms |
| Maximum measuring cycle | 100 ms measurement cycle as true rms value |
| Repeat accuracy | +/- 0.5 % input and measurement circuit |
| Measurement error | < 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation |
| Response time | <= 500 ms |
| Overvoltage category | III IEC 60664-1 |
| Insulation resistance | > 100 MOhm 500 V DC IEC 60255-27 |
| Insulation | Between supply and measurement |
| Mounting position | Any position |
| Connections - terminals | Screw terminals, 2 x 0.5...2 x 2.5 mm ² AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm ² AWG 20...AWG 12) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² AWG 24...AWG 14) flexible with cable end |
| Tightening torque | 5.31...8.85 lbf.in (0.6...1 N.m) IEC 60947-1 |
| Housing material | Self-extinguishing plastic |

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| | |
|-------------------------|--|
| Status LED | Relay ON LED Yellow) Power ON LED Green) |
| Mounting support | 35 mm DIN rail conforming to EN/IEC 60715 |
| Electrical durability | 100000 cycles |
| Mechanical durability | 10000000 cycles |
| Utilisation category | AC-15 IEC 60947-5-1 DC-13 IEC 60947-5-1 AC-1 IEC 60947-4-1 DC-1 IEC 60947-4-1 |
| Safety reliability data | B10d = 290000 MTTFd = 308.2 years |
| Contacts material | Cadmium free |
| Width | 0.89 in (22.5 mm) |
| Net Weight | 0.24 lb(US) (0.11 kg) |

Environment

| | |
|---------------------------------------|---|
| Immunity to microbreaks | 10 ms |
| Electromagnetic compatibility | Immunity for residential, commercial and light-industrial environments EN/IEC 61000-6-1 Immunity for industrial environments EN/IEC 61000-6-2 Emission standard for residential, commercial and light-industrial environments EN/IEC 61000-6-3 Emission standard for industrial environments EN/IEC 61000-6-4 Electrostatic discharge 6 kV contact discharge)level 3 IEC 61000-4-2 Electrostatic discharge 8 kV air discharge)level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test 10 V/mlevel 3 IEC 61000-4-3 Electrical fast transient/burst immunity test 4 kV direct)level 4 IEC 61000-4-4 Electrical fast transient/burst immunity test 2 kV capacitive coupling)level 4 IEC 61000-4-4 Surge immunity test 4 kV common mode)level 4 IEC 61000-4-5 Surge immunity test 2 kV differential mode)level 4 IEC 61000-4-5 Conducted and radiated emissionsclass B group 1 CISPR 11 Conducted and radiated emissionsclass B CISPR 22 |
| Standards | EN/IEC 60255-1 |
| Product Certifications | CE CCC EAC CSA RCM UL GL |
| Ambient Air Temperature for Storage | -40...158 °F (-40...70 °C) |
| Ambient air temperature for operation | -4...122 °F (-20...50 °C) 60 Hz -4...140 °F (-20...60 °C) 50 Hz AC/DC |
| Relative humidity | 93...97 % 77...131 °F (25...55 °C) IEC 60068-2-30 |
| Vibration resistance | 0.075 mm 10...58.1 Hz) not in operation IEC 60068-2-6 1 gn 10...58.1 Hz) not in operation IEC 60068-2-6 0.035 mm 58.1...150 Hz) in operation IEC 60068-2-6 0.5 gn 58.1...150 Hz) in operation IEC 60068-2-6 |
| Shock resistance | 15 gn 11 ms) not in operation IEC 60068-2-27 5 gn 11 ms) in operation IEC 60068-2-27 |
| IP degree of protection | IP20 IEC 60529 terminals) IP40 IEC 60529 housing) IP50 IEC 60529 front panel) |
| Pollution degree | 3 IEC 60664-1 |
| Dielectric test voltage | 2.5 kV AC 50 Hz, 1 min IEC 60255-27 |

Ordering and shipping details

| | |
|-----------------------|--|
| Category | 22380 - RELAYS-MEASUREMENT (RM17-RM35) |
| Discount Schedule | CP2 |
| GTIN | 3606480792212 |
| Nbr. of units in pkg. | 1 |
| Package weight(Lbs) | 4.27 oz (121 g) |
| Returnability | No |
| Country of origin | ID |

Packing Units

| | |
|------------------------------|--------------------------|
| Unit Type of Package 1 | PCE |
| Package 1 Height | 1.02 in (2.6 cm) |
| Package 1 width | 3.23 in (8.2 cm) |
| Package 1 Length | 3.74 in (9.5 cm) |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 40 |
| Package 2 Weight | 11.59 lb(US) (5.257 kg) |
| Package 2 Height | 5.91 in (15 cm) |
| Package 2 width | 11.81 in (30 cm) |
| Package 2 Length | 15.75 in (40 cm) |
| Unit Type of Package 3 | P06 |
| Number of Units in Package 3 | 640 |
| Package 3 Weight | 204.10 lb(US) (92.58 kg) |
| Package 3 Height | 19.69 in (50 cm) |
| Package 3 width | 31.50 in (80 cm) |
| Package 3 Length | 23.62 in (60 cm) |

Offer Sustainability

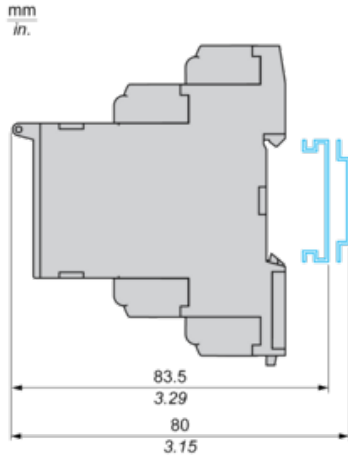
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive 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) 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 |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins. |

Dimensions



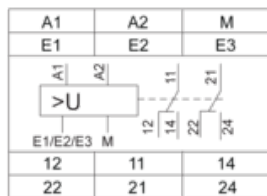
Mounting and Clearance

Rail Mounting



Overvoltage Control Relay

Wiring Diagram



A1,A2 : Supply voltage

E1,E2,E3,M : Voltages to be measured

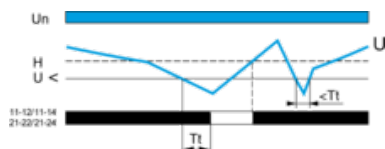
11-14,12 : 1st C/O contact of output relay

21-24,22 : 2nd C/O contact of output relay

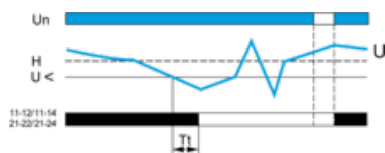
Function Diagrams

Undervoltage Control

Without memory ("No Memory" mode)



With memory ("Memory" mode)

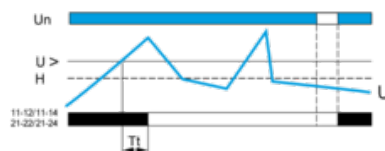


Overvoltage Control

Without memory ("No Memory" mode)



With memory ("Memory" mode)



Legend

Tt Time delay after crossing of threshold

Un Nominal supply voltage

U Monitored supply voltage

H Hysteresis

U> Overvoltage threshold

U< Undervoltage threshold

11-12/11-14, 21-22/21-24 Output relay connections

Relay status: black color = energized.

NOTE: In "Memory" mode, the relay opens when crossing of the threshold is detected and then stays in that position. The power supply voltage must be switched off to reset the product.

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