



### Main

Range of product	Zelio Control
Product or component type	Modular measurement and control relays
Relay type	Current control relay
Relay name	RM22JA
Relay monitored parameters	Overcurrent or undercurrent detection Overcurrent or undercurrent in window mode
Time delay type	Adjustable 0.1...30 s, +/- 10 % of the full scale value on crossing the threshold Tt
Switching capacity in VA	2000 VA
Measurement range	4...40 mA E1-M terminals 20...200 mA E2-M terminals 100...1000 mA E3-M terminals 4 mA...1 A current AC/DC 50/60 Hz

### Complementary

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 +/- 10 %
Supply voltage limits	20.4...264 V AC/DC
Operating limits	- 15 % + 10 % Un
Power consumption in VA	3.5 VA AC
Maximum power consumption in W	1.5 W DC
Supply voltage frequency	50...60 Hz +/- 10 %
Resistance across terminals	2.5 Ohm E1-M terminals 0.5 Ohm E2-M terminals 0.1 Ohm E3-M terminals
Output contacts	2 C/O
Nominal output current	8 A
Internal input resistance	0.5 Ohm 2.5 Ohm 0.1 Ohm
Setting accuracy of the switching threshold	+/- 10 % of the full scale
Switching threshold drift	<= 0.05 % per degree centigrade depending permissible ambient air temperature <= 1 % within the supply voltage range
Setting accuracy of time delay	10 P
Time delay drift	<= 0.05 % per degree centigrade depending permissible ambient air temperature <= 1 % within the supply voltage range
Hysteresis	5...50 % adjustable threshold setting overcurrent or undercurrent detection 3 % fixed full scale for window mode
Run-up delay at power-up	0.3 s
Maximum measuring cycle	100 ms measurement cycle as true rms value
Repeat accuracy	+/- 0.5 % input and measurement circuit +/- 0.2 % time delay
Measurement error	< 1 % over the whole range with voltage variation 0.05 %/°C with temperature variation
Response time	<= 500 ms
Threshold setting	10...100 %

Overvoltage category	III IEC 60664-1 III UL 508
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 <sup>2</sup> AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> AWG 24...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm <sup>2</sup> AWG 20...AWG 12) 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
Tightening torque	5.31...8.85 lbf.in (0.6...1 N.m) IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	Relay ON LED Yellow) Power ON LED Green)
Mounting support	35 mm DIN rail 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	MTTFd = 296.8 years B10d = 270000
Contacts material	Cadmium free
Maximum Width	0.89 in (22.5 mm)
Net Weight	0.24 lb(US) (0.11 kg)

## Environment

Immunity to microbreaks	50 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/m level 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 emissions class B group 1 CISPR 11 Conducted and radiated emissions class B CISPR 22
Standards	EN/IEC 60255-1
Product certifications	CSA CE EAC CCC GL RCM UL
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 gn 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 gn 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 3 UL 508
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	00785901926153
Nbr. of units in pkg.	1
Package weight(Lbs)	0.27 lb(US) (0.12 kg)
Returnability	Yes
Country of origin	ID

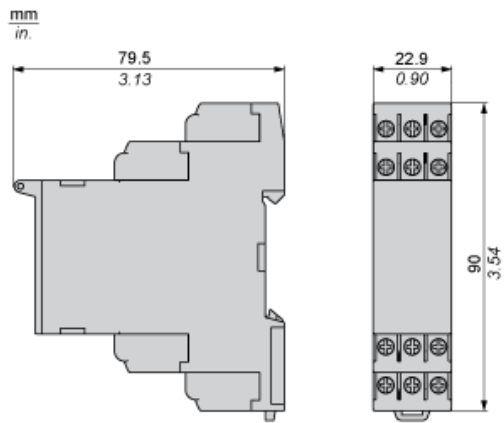
### Packing Units

Package 1 Height	0.260 dm
Package 1 width	0.820 dm
Package 1 Length	0.950 dm

### 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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <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>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Dimensions

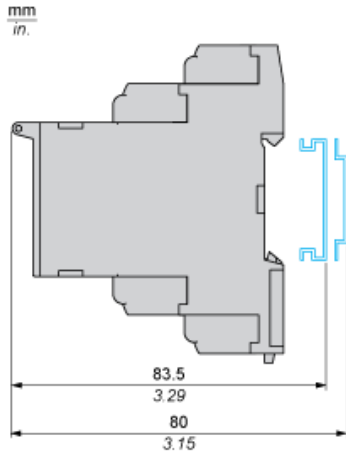


---

Mounting and Clearance

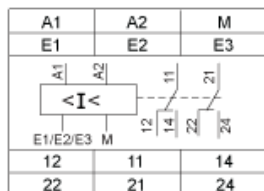
---

Rail Mounting



Current Measurement Relay

Wiring Diagram



A1,A2 : Supply voltage

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

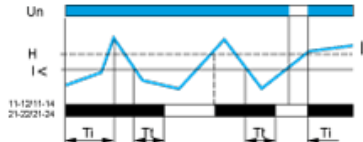
11-14,12 : 1st C/O contact of output relay

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

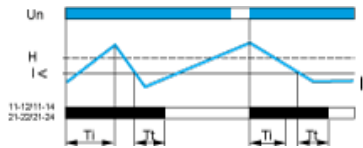
Function Diagrams

Undercurrent Detection

Without memory ("No Memory" mode)

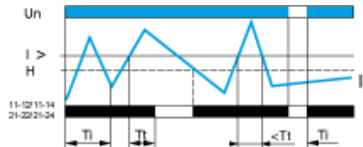


With memory ("Memory" mode)



Overcurrent Detection

Without memory ("No Memory" mode)



With memory ("Memory" mode)



Legend

- Ti Starting inhibition time delay
- Tt Time delay after crossing of threshold
- Un Supply voltage
- I Monitored current
- H Hysteresis
- I> Overcurrent threshold
- I< Undercurrent 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.