

## RM22TA31

trofazni relej za kontrolu asimetrije 200...240Vac, 2 C/O



### Glavno

Range of product	Zelio Control
Product or component type	Modular measurement and control relays
Relay type	Control relay
Network number of phases	3 phases
Relay name	RM22TA
Relay monitored parameters	Asymmetry Phase failure detection Phase sequence
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	200...240 V voltage AC

### Komplementarno

Reset time	$\leq 1500$ ms at maximum voltage
Maximum switching voltage	250 V AC
Minimum switching current	10 mA at 5 V DC
Maximum switching current	8 A AC
[Us] rated supply voltage	200...240 V AC
Supply voltage limits	160...288 V AC
Control circuit voltage limits	- 20 % + 20 % $U_n$
Power consumption in VA	10 VA at 240 V AC 60 Hz
Voltage detection threshold	$< 100$ V AC
Supply frequency	50...60 Hz +/- 10 %
Output contacts	2 C/O
Setting accuracy of the switching threshold	+/- 10 % of the full scale
Switching threshold drift	$\leq 0.05$ % per degree centigrade depending permissible ambient air temperature $\leq 1$ % within the supply voltage range
Setting accuracy of time delay	10 P
Time delay drift	$\leq 0.05$ % per degree centigrade depending permissible ambient air temperature $\leq 1$ % within the supply voltage range
Hysteresis	2 % fixed or selectable
Run-up delay at power-up	$\leq 650$ ms
Measuring cycle	150 ms measurement cycle as true rms value
Threshold adjustment voltage	2...20 % of $U_n$ selected
Voltage range	200...240 V phase to phase
Adjustment of asymmetry threshold	5...15 % of $U_n$ selected
Repeat accuracy	+/- 0.5 % input and measurement circuit +/- 3 % time delay
Measurement error	$< 0.05$ %/°C with temperature variation $< 1$ % over the whole range with voltage variation
Response time	$\leq 300$ ms
Overvoltage category	III conforming to IEC 60664-1 III conforming to UL 508
Insulation resistance	$> 100$ MOhm at 500 V DC conforming to IEC 60255-27
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 cable without cable

Informacije dane u ovoj dokumentaciji sadrže opće opise i/ili tehničke karakteristike o performansama ovdje sadržanih proizvoda. Ova dokumentacija nije namijenjena kao zamjena za niti bi se trebala koristiti za određivanje prikladnosti ili pouzdanosti predmetnih proizvoda za konkretne korisničke primjene. Svaki takav korisnik ili integrator dužan je provesti odgovarajuću i potpunu analizu rizika, procjenu i ispitivanje proizvoda u odnosu na odgovarajuću specifičnu primjenu ili uporabu istog. Niti društvo Schneider Electric Industries SAS niti bilo koje od njegovih povezanih poduzeća ili podružnica neće preuzeti obvezu ili snositi odgovornost za pogrešnu upotrebu ovdje sadržanih informacija.

end  
 Screw terminals 2 x 0.2...2 x 1.5 mm<sup>2</sup> - AWG 24...AWG 16, flexible cable with cable end  
 Screw terminals 1 x 0.5...1 x 3.3 mm<sup>2</sup> - AWG 20...AWG 12, solid cable without cable end  
 Screw terminals 1 x 0.2...1 x 2.5 mm<sup>2</sup> - AWG 24...AWG 14, flexible cable with cable end

Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	LED yellow for relay ON LED green for power ON
Mounting support	35 mm DIN rail conforming to EN/IEC 60715
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
Utilisation category	AC-15 conforming to IEC 60947-5-1 DC-13 conforming to IEC 60947-5-1 AC-1 conforming to IEC 60947-4-1 DC-1 conforming to IEC 60947-4-1
Safety reliability data	MTTFd = 388.1 years B10d = 350000
Contacts material	Cadmium free
Width	22.5 mm
Product weight	0.09 kg

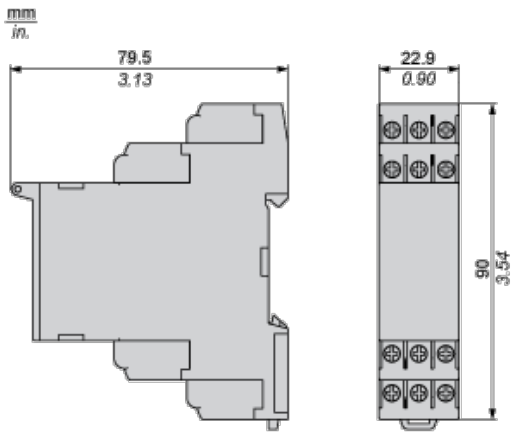
## Okolina

immunity to microbreaks	<= 10 ms
electromagnetic compatibility	Emission standard for industrial environments conforming to EN/IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3 Immunity for industrial environments conforming to EN/IEC 61000-6-2 Conducted and radiated emissions class B conforming to CISPR 22 Immunity for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-1 Electrostatic discharge 6 kV level 3 contact discharge conforming to IEC 61000-4-2 Electrostatic discharge 8 kV level 3 air discharge conforming to IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test 10 V/m level 3 conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test 4 kV level 4 direct conforming to IEC 61000-4-4 Electrical fast transient/burst immunity test 2 kV level 4 capacitive coupling conforming to IEC 61000-4-4 Surge immunity test 4 kV level 4 common mode conforming to IEC 61000-4-5 Surge immunity test 2 kV level 4 differential mode conforming to IEC 61000-4-5 Conducted and radiated emissions class B group 1 conforming to CISPR 11
standards	EN/IEC 60255-1
product certifications	CCC CE CSA GL UL RCM EAC China RoHS
ambient air temperature for storage	-40...70 °C
ambient air temperature for operation	-20...50 °C at 60 Hz -20...60 °C at 50 Hz AC/DC
relative humidity	93...97 % at 25...55 °C conforming to IEC 60068-2-30
vibration resistance	0.075 mm (f = 10...58.1 Hz) (not in operation) conforming to IEC 60068-2-6 1 gn (f = 10...58.1 Hz) (not in operation) conforming to IEC 60068-2-6 0.035 mm (f = 58.1...150 Hz) (in operation) conforming to IEC 60068-2-6 0.5 gn (f = 58.1...150 Hz) (in operation) conforming to IEC 60068-2-6
shock resistance	15 gn for 11 ms (not in operation) conforming to IEC 60068-2-27 5 gn for 11 ms (in operation) conforming to IEC 60068-2-27
IP degree of protection	IP20 on terminals conforming to IEC 60529 IP40 on housing conforming to IEC 60529 IP50 on front panel conforming to IEC 60529
pollution degree	3 conforming to IEC 60664-1 3 conforming to UL 508

### Offer Sustainability

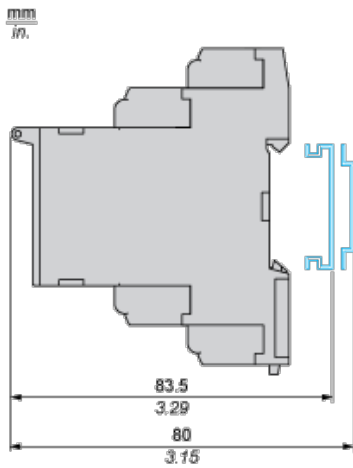
Green Premium product	Green Premium product
Compliant - since 0701 - Schneider Electric declaration of conformity	Compliant - since 0701 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold	Reference not containing SVHC above the threshold
Available	Available
Available	Available

### Dimensions



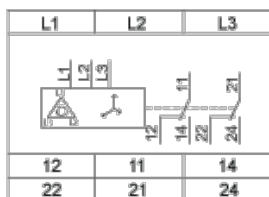
### Mounting and Clearance

#### Rail Mounting



### 3-Phase Control Relay

Wiring Diagram



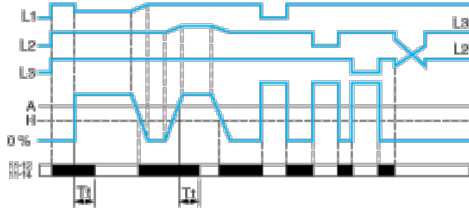
L1,L2,L3 : Supply to be monitored

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

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

## Function Diagram

Phase Sequence Control, Phase Failure Detection ( $U_{\text{measured}} < 0.7 \times \text{nominal supply voltage}$ ), and Asymmetry Detection



### Legend

Tt Time delay after crossing of threshold

L1, L2, L3 Phases of the supply voltage monitored

A Asymmetry threshold

H Hysteresis

11-12, 11-14 Output relay connections

Relay status: black color = energized.