

# Product data sheet

Specifications



## Harmony, Modular 3-phase supply control relay, 8 A, 2 CO, 183...528 V AC

RM22TG20

### Main

Range of product	Harmony Control Relays
Product or component type	3-phase control relay
Relay type	Control relay
Network number of phases	3 phases
Relay name	RM22TG
Relay monitored parameters	Phase sequence Phase failure detection (2 or more phase cut)
Time delay type	Without
Switching capacity in VA	2000 VA
Measurement range	183...528 V voltage AC
Contacts type and composition	2 C/O

### Complementary

Reset time	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	208...480 V AC
Supply voltage limits	183...528 V AC
Operating limits	183...528 V AC
Power consumption in VA	15 VA at 480 V AC 60 Hz
Voltage detection threshold	< 100 V AC
Supply voltage frequency	50...60 Hz +/- 10 %
Output contacts	2 C/O
Run-up delay at power-up	650 ms
Response time	<= 200 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

<b>Connections - terminals</b>	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
<b>Tightening torque</b>	0.6...1 N.m conforming to IEC 60947-1
<b>Housing material</b>	Self-extinguishing plastic
<b>Status LED</b>	LED (yellow) relay ON LED (green) power ON
<b>Mounting support</b>	35 mm DIN rail conforming to EN/IEC 60715
<b>Electrical durability</b>	100000 cycles
<b>Mechanical durability</b>	10000000 cycles
<b>Utilisation category</b>	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
<b>Safety reliability data</b>	MTTFd = 924.6 years B10d = 850000
<b>Contacts material</b>	Cadmium free
<b>Width</b>	22.5 mm
<b>Net weight</b>	0.09 kg

## Environment

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

Dielectric test voltage	2.5 kV, 1 min AC 50 Hz conforming to IEC 60255-27
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## Packing Units

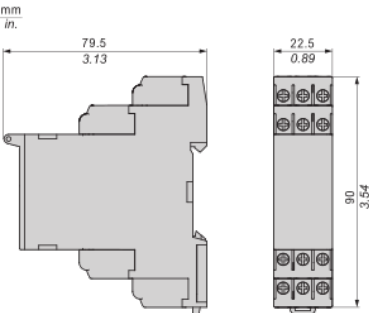
Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	103.0 g
Package 1 Height	2.5 cm
Package 1 width	8.2 cm
Package 1 Length	9.5 cm
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Weight	4.318 kg
Package 2 Height	15 cm
Package 2 width	30 cm
Package 2 Length	40 cm
Unit Type of Package 3	P06
Number of Units in Package 3	640
Package 3 Weight	86.18 kg
Package 3 Height	50 cm
Package 3 width	80 cm
Package 3 Length	60 cm

## Offer Sustainability

Sustainable offer status	Green Premium product
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>
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>

Dimensions

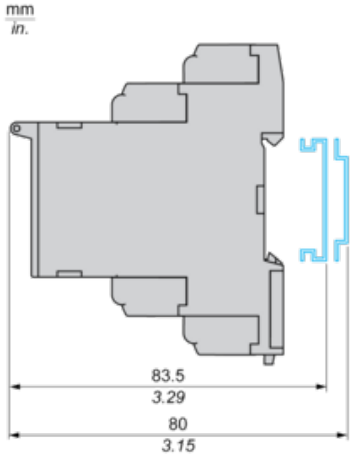
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**Mounting and Clearance**

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**Rail Mounting**



**3-Phase Control Relay**

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Wiring Diagram



**L1,L2,L3** : Supply to be monitored

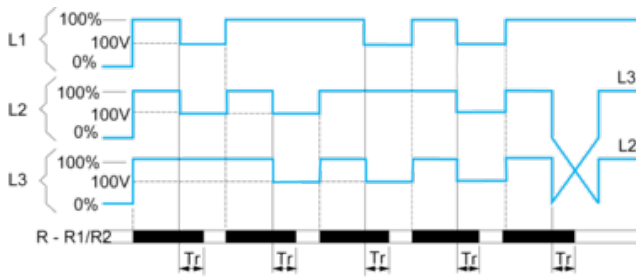
**11-14,12** : 1st C/O contact of output relay

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

Function Diagram

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Phase Sequence Control and Total Loss of Phase Detection



Legend

$T_r$  Response time on appearance of a fault

L1, L2, L3 Phases of the supply voltage monitored

R - R1/R2 Output relay(s),

Relay status: black color = energized.