



Modular 3 phase supply control relay, Harmony, 5A, 2CO, 380...480V AC

RM22TA33

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	RM22TA
Relay monitored parameters	Phase sequence Phase failure detection Asymmetry
Time delay type	Adjustable 0.130 s, +/- 10 % of the full scale value on crossing the threshold Tt
Switching capacity in VA	2000 VA
Measurement range	380480 V voltage AC
Contacts type and composition	2 C/O

Complementary

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	380480 V AC
Supply voltage limits	304576 V AC
Operating limits	- 20 % + 20 % Un
Power consumption in VA	15 VA at 480 V AC 60 Hz
Voltage detection threshold	< 100 V AC
Supply voltage frequency	5060 Hz +/- 10 %
Output contacts	2 C/O
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	2 % fixed of selectable
Run-up delay at power-up	650 ms
Maximum measuring cycle	150 ms measurement cycle as true rms value
Threshold adjustment voltage	220 % of Un selected
Voltage range	380480 V phase to phase
Adjustment of asymmetry threshold	515 % of Un selected
Repeat accuracy	+/- 0.5 % for input and measurement circuit +/- 3 % for time delay
Measurement error	< 1 % over the whole range with voltage variation < 0.05 %/°C with temperature variation
Response time	<= 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 0.52 x 2.5 mm² (AWG 20AWG 14) solid without cable end Screw terminals, 2 x 0.22 x 1.5 mm² (AWG 24AWG 16) flexible with cable end Screw terminals, 1 x 0.51 x 3.3 mm² (AWG 20AWG 12) solid without cable end Screw terminals, 1 x 0.21 x 2.5 mm² (AWG 24AWG 14) flexible with cable end
Tightening torque	0.61 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Status LED	LED (yellow) relay ON LED (green) 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
Net weight	0.09 kg
Environment	
Immunity to microbreaks	10 ms
Electromagnetic compatibility	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

Immunity to microbreaks	10 ms
Electromagnetic compatibility	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
Standards	EN/IEC 60255-1
Product certifications	GL EAC CCC CF

Unit Type of Package 2	S02
	40
<u> </u>	
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	4.47 kg
	·
Unit Type of Package 3	P06
Number of Units in Package 3	640
	75.0 cm
Package 3 Height	75.0 cm
Package 3 Width	60.0 cm
Package 3 Length	80.0 cm
Package 3 Length	80.0 cm
Package 3 Weight	82.34 kg
Package 3 Weight	82.34 kg
Package 3 Weight	82.34 kg
	82.34 kg
Package 3 Length	80.0 cm
Package 3 Length	80.0 cm
Package 3 Length	80.0 cm
Package 3 Width	60.0 cm
Package 3 Width	60.0 cm
Package 3 Height	75.0 cm
Number of Units in Package 3	640
Unit Type of Package 3	P06
Package 2 Weight	4.47 kg
Package 2 Weight	4.47 kg
Package 2 Length	40.0 cm
	40.0 cm
Package 2 Width	30.0 cm
	30.0 cm
Package 2 Height	15.0 cm
<u> </u>	15.0 cm
<u> </u>	40
Number of Units in Package 2	40
	40
Unit Type of Package 2	S02
Package 1 Weight	104.0 g
	104 0 a
Package 1 Length	9.5 cm
Package 1 Width	8.2 cm
Package 1 Height	2.6 cm
Number of Units in Package 1	1
Unit Type of Package 1	
	PCE
Packing Units	
Dielectric test voltage	2.5 kV, 1 min AC 50 Hz conforming to IEC 60255-27
	3 conforming to UL 508
Pollution degree	3 conforming to IEC 60664-1
	IP40 (housing) conforming to IEC 60529 IP50 (front panel) conforming to IEC 60529
IP degree of protection	IP20 (terminals) conforming to IEC 60529
	5 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27
Shock resistance	15 gn (duration = 11 ms) for not in operation conforming to IEC 60068-2-27
	0.035 mm (f= 58.1150 Hz) in operation conforming to IEC 60068-2-6 0.5 gn (f= 58.1150 Hz) in operation conforming to IEC 60068-2-6
Vibration resistance	0.075 mm (f= 1058.1 Hz) not in operation conforming to IEC 60068-2-6 1 gn (f= 1058.1 Hz) not in operation conforming to IEC 60068-2-6
Relative humidity	
operation Polotivo humidity	9397 % at 2555 °C conforming to IEC 60068-2-30
Ambient air temperature for	-2050 °C at 60 Hz -2060 °C at 50 Hz AC/DC
storage	
Ambient air temperature for	-4070 °C
	UL RCM
	CSA

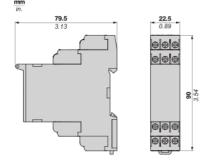
Circularity Profile End of Life Information

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

RM22TA33

Dimensions Drawings

Dimensions

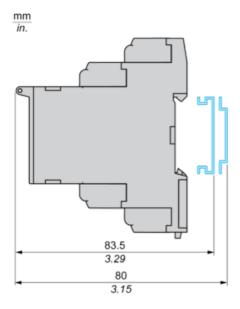


RM22TA33

Mounting and Clearance

Mounting and Clearance

Rail Mounting



RM22TA33

Connections and Schema

3-Phase Control Relay

Wiring Diagram



L1,L2,L3 : Supply to be monitored

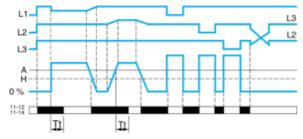
11-14,12: 1st C/O contact of output relay 21-24,22: 2nd C/O contact of output relay

RM22TA33

Technical Description

Function Diagram

Phase Sequence Control, Phase Failure Detection (U measured < 0.7 x 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.

Recommended replacement(s)