

# 3-phase control relay, Harmony Control Relays, 8A, 2CO, 380...480V AC

RM22TR33

Product availability: Stock - Normally stocked in distribution

### Main

Range of Product	Harmony Control Relays	
Relay Type	Control relay	
Product or Component Type	3-phase control relay	
Phase	3 phase	
Relay name	RM22TR	
Relay monitored parameters	Overvoltage and undervoltage detection Phase sequence Phase failure detection	
Time delay type	Adjustable 0.130 s, +/- 10 % of the full scale value Tt- time delay upon fault	
Switching capacity in VA	2000 VA	
Measurement range	380480 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 5 V DC	
Maximum switching current	8 A AC	
[Us] Rated Supply Voltage	AC/DC	
Supply voltage limits	304576 V AC	
operating limits	- 20 % + 20 % Un	
Power consumption in VA	15 VA 480 V AC 60 Hz	
Voltage detection threshold	< 100 V AC	
supply voltage frequency	5060 Hz +/- 10 %	
Output contacts	2 C/O	
nominal output current	8 A	
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 selectable	

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

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		
Repeat accuracy	+/- 0.5 % input and measurement circuit +/- 3 % 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 500 V DC 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	5.38.9 lbf.in (0.61 N.m) 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 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		
[Un] rated nominal voltage	, self-powered		
Safety reliability data	MTTFd = 388.1 years B10d = 350000		
Contacts material	Cadmium free		
Control Type	With test button		
Width	0.9 in (22.5 mm)		
Net Weight	0.20 lb(US) (0.09 kg)		

### **Environment**

Immunity to microbreaks 10 ms

Electromagnetic compatibility	Immunity for residential, commercial and light-industrial environments conforming to IEC 61000-6-1		
	Immunity for industrial environments conforming to IEC 61000-6-2		
	Emission standard for residential, commercial and light-industrial environments		
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	conforming to IEC 61000-6-3		
	Emission standard for industrial environments conforming to 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)		
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	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 group 7 conforming to CISPR 22		
	Conducted and radiated emissions class is comorning to Clar 17.22		
Standards	IEC 60255-1		
Product Certifications	GL		
	CSA		
	RCM		
	CE		
	EAC		
	CCC		
	UL		
Ambient Air Temperature for	-40158 °F (-4070 °C)		
Storage			
Ambient air temperature for	-4122 °F (-2050 °C) 60 Hz		
operation	-4140 °F (-2060 °C) 50 Hz AC/DC		
Relative humidity	9397 % 77131 °F (2555 °C) IEC 60068-2-30		
Vibration resistance	0.075 mm 1058.1 Hz) not in operation IEC 60068-2-6		
	1 gn 1058.1 Hz) not in operation IEC 60068-2-6		
	0.035 mm 58.1150 Hz) in operation IEC 60068-2-6		
	, ,		
	0.5 gn 58.1150 Hz) in operation IEC 60068-2-6		
Shock resistance	15 gn 11 ms) not in operation IEC 60068-2-27		
Shock redictance			
	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		
. cacii dogi oo			
	3 UL 508		
Dielectric test voltage	2.5 kV AC 50 Hz, 1 min IEC 60255-27		
	2.0 10 10 10 112, 1 11111 120 00200 21		

# Ordering and shipping details

Category	US10CP222380
Discount Schedule	0CP2
GTIN	3606480792199
Returnability	Yes
Country of origin	ID

# Packing Units

Unit Type of Package 1	PCE	
Number of Units in Package 1	1	
Package 1 Height	1.22 in (3.100 cm)	

Package 1 Width	3.46 in (8.800 cm)	
Package 1 Length	3.94 in (10.000 cm)	
Package 1 Weight	3.739 oz (106.000 g)	
Unit Type of Package 2	S02	
Number of Units in Package 2	40	
Package 2 Height	5.91 in (15.000 cm)	
Package 2 Width	11.81 in (30.000 cm)	
Package 2 Length	15.75 in (40.000 cm)	
Package 2 Weight	10.344 lb(US) (4.692 kg)	
Unit Type of Package 3	P06	
Number of Units in Package 3	640	
Package 3 Height	29.53 in (75.000 cm)	
Package 3 Width	23.62 in (60.000 cm)	
Package 3 Length	31.50 in (80.000 cm)	
Package 3 Weight	178.707 lb(US) (81.060 kg)	



Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing "Use Better, Use Longer, Use Again" campaign to extend product lifetimes and recyclability.

#### Environmental Data explained >

How we assess product sustainability >

<b>⊘</b> Environmental footprint			
Carbon footprint (kg CO2 eq, Total Life cycle)	95		

#### **Use Better**

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	3c095d35-159c-493c-8604-58788d456aa9
REACh Regulation	REACh Declaration
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

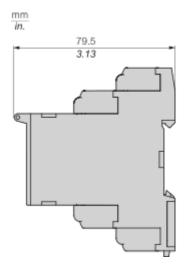
#### **Use Again**

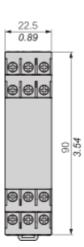
○ Repack and remanufacture	
Take-back	No
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

# **RM22TR33**

# **Dimensions Drawings**

### **Dimensions**



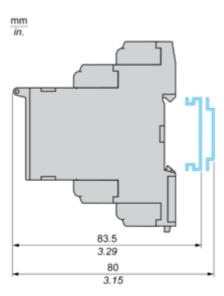


# **RM22TR33**

Mounting and Clearance

### Mounting and Clearance

### **Rail Mounting**



# **Product data sheet**

### **RM22TR33**

#### Connections and Schema

### 3-Phase Voltage Control Relay

#### Wiring Diagram

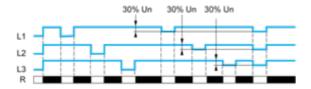


L1,L2,L3: Supply to be monitored 11-14,12: 1st C/O contact of output relay 21-24,22: 2nd C/O contact of output relay

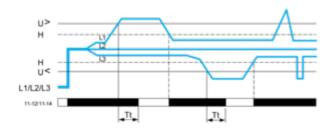
#### **Technical Description**

#### **Function Diagrams**

### Phase Failure Detection (U measured < 0.7 x nominal supply voltage)



#### Control of Overvoltage and Undervoltage



#### Legend

Un Nominal supply voltage

R Output relay

Tt Overvoltage and undervoltage threshold delay (adjustable on front panel from 0.3 to 30 s)

**H** Hysteresis

U> Overvoltage threshold

U< Undervoltage threshold

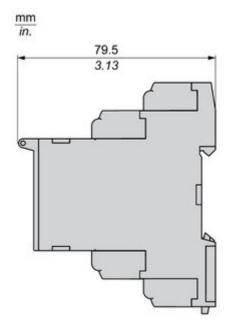
L1, L2, L3 Phases of the supply voltage monitored

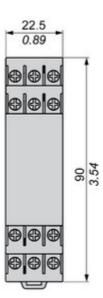
11-12, 11-14 R1 output relay connections

Relay status: black color = energized.

### **Technical Illustration**

### **Dimensions**





### Offer Marketing Illustration

#### Product benefits / Features



### Offer Marketing Illustration

#### Product benefits / Features

# **Technical Benefits**

Harmony Control Relay



Image of product / Alternate images

### **Alternative**













Image of product in real life situation

