Product data sheet

Specifications

3-phase control relay, Harmony Control Relays, 8A, 2CO, overfrequency and underfrequency, 208â€¦480V AC

RMNF22TB30

Product availability: Stock - Normally stocked in distribution facility

Price*: 90.00 USD

Main

Range of Product	Harmony Control Relays
Relay Type	Control relay
Product or Component Type	NFC control relay
Phase	3 phase
Relay name	RMNF22
Relay monitored parameters	Phase sequence Phase failure detection Overvoltage detection Undervoltage detection Overfrequency and underfrequency Asymmetry
App for product	Ecostruxure Industrial Device downloadable from Google Play store or Apple Store)
Product Compatibility	NFC enabled mobile device
Time delay type	Adjustable 0.1 s...1 min Tt- time delay upon fault
Switching capacity in VA	2000 VA

Complementary

NFC operating frequency	13.56 MHz
Maximum RF power transmitted	0.0002 mW
Reset time	1500 ms at maximum voltage
Maximum switching voltage	250 V AC
Minimum switching current	100 mA 6 V
Maximum switching current	8 A AC
Supply voltage limits	166.4…576 V AC line to line 96…332.4 V AC line to neutral
Power consumption in VA	4 VA 480 V AC 60 Hz
On-load factor	100 %
supply voltage frequency	50...60 Hz +/- 10 %
Output contacts	2 C/O
Measurement range	208...480 V AC
Setting accuracy of the switching threshold	+/- (1.5 % + 1 V)

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

Setting accuracy of time delay	+/- 3 % 10 s...60 min +/- 300 ms 0...10 s
Hysteresis	3 % fixed phase failure detection
Alarm threshold	166...576 V adjustable overvoltage and undervoltage detection (line to line) 96...332 V adjustable overvoltage and undervoltage detection (line to neutral) 5...150 V adjustable asymmetry 45...66 Hz adjustable overfrequency or underfrequency
Run-up delay at power-up max	650 ms
Maximum measuring cycle	150 ms measurement cycle as true rms value
Threshold adjustment voltage	2...20 % of Un selected
Adjustment of asymmetry threshold	2...20 % of Un selected
Repeat accuracy	+/- 0.5 % input circuit +/- 3 % time delay
Setting accuracy of the switching threshold	+/- (1.5 % + 1 V)
Measurement error	< 0.05 %/Hz with frequency variation < 0.05 %/°C with temperature variation
Response time	<= 300 ms
Insulation resistance	> 100 MOhm 500 V DC IEC 60255-27
[Ui] rated insulation voltage	400 V
[Uimp] rated impulse withstand voltage	4 kV 1.2/50 µs
Dielectric test voltage	2.5 kV AC 50 Hz, 1 min IEC 60255-27
Mounting position	Any position
Connections - terminals	Screw terminals, 2 x 0.5...2 x 2.5 mm² AWG 20...AWG 14) solid without cable end Screw terminals, 2 x 0.5...2 x 1.5 mm² AWG 20...AWG 16) flexible with cable end Screw terminals, 1 x 0.5...1 x 3.3 mm² AWG 20...AWG 12) solid without cable end Screw terminals, 1 x 0.5...1 x 2.5 mm² AWG 20...AWG 14) flexible with cable end
Tightening torque	5.3…8.9 lbf.in (0.6…1 N.m) IEC 60947-1 5.3…8.8 lbf.in (0.6…1.0 N.m) IEC 60947-1
Housing material	Self-extinguishing plastic
Local signalling	Un, green LED steady)power ON R1, amber LED steady)relay energised R1, amber LED blinking)timing in progress R2, amber LED steady)relay energised R2, amber LED blinking)timing in progress PL, red LED steady)alarm phase failure triggered PS, red LED blinking)alarm phase sequence failure triggered UV, red LED steady)alarm undervoltage failure triggered OV, red LED blinking)alarm overvoltage failure triggered UF, red LED steady)alarm underfrequency failure triggered OF, red LED blinking)alarm overfrequency failure triggered ASYM, red LED steady)alarm asymmentry failure triggered
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
[Ith] conventional free air thermal current	8 A
[Un] rated nominal voltage	208...480 V AC 50/60 Hz, non self-powered 120...277 V AC 50/60 Hz, non self-powered
Operating system	Androidversion >= V7.0 IOSversion >= V14.5

Contacts material	Cadmium free
Control Type	Without test button
Width	0.9 in (22.5 mm)
Height	3.5 in (90 mm)
Depth	3.9 in (99 mm)
Contacts type and composition	2 C/O
Net Weight	0.276 lb(US) (0.125 kg)

Environment

Immunity to microbreaks	10 ms
Electromagnetic compatibility	Voltage dips and interruptions immunity test - test level: 70 % (25/30 cycles) conforming to IEC 61000-4-11 Electrostatic discharge - test level: 6 kV level 3 (contact 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 Immunity for industrial environments conforming to IEC 61000-6-2 1 MHz damped oscillating wave - test level: 2.5 kV CM, 1 kV DM criteria B conforming to IEC 61000-4-18 Voltage dips and interruptions immunity test - test level: 0 % (0.5...25 cycles) conforming to IEC 61000-4-11 Magnetic field at power frequency - test level: 30 A/m (continuous)-300 A/m (1-3 s) level 4 conforming to IEC 61000-4-8 Surge immunity test - test level: 2 kV level 4 (differential mode) conforming to IEC 61000-4-5 Immunity for residential, commercial and light-industrial environments conforming to IEC 61000-6-1 Voltage dips and interruptions immunity test - test level: 40 % (10/12 cycles) conforming to IEC 61000-4-11 Voltage interruptions - test level: 0 % criteria C (250/300 cycles) conforming to IEC 61000-4-29 Electrical fast transient/burst immunity test - test level: 4 kV criteria B (direct) conforming to IEC 61000-4-4 Emission standard for industrial environments conforming to IEC 61000-6-4 Surge immunity test - test level: 4 kV level 4 (common mode) conforming to IEC 61000-4-5 Electrostatic discharge - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2 Conducted RF disturbances level 3 conforming to IEC 61000-4-6
Standards	IEC 60255-1
Product Certifications	CE UL CSA CCC EAC RCM
Directives	2014/30/EU - electromagnetic compatibility 2014/35/EU - low voltage directive 2014/53/EU - radio equipment directive
Ambient Air Temperature for Storage	-40…158 °F (-40…70 °C)
Ambient air temperature for operation	-4…140 °F (-20…60 °C)
Relative humidity	93…97 % 77…131 °F (25…55 °C) IEC 60068-2-30
Vibration resistance	0.075 mm 10…58.1 Hz) not in operation IEC 60068-2-6 1 gn 58.1…150 Hz) not in operation IEC 60068-2-6 0.035 mm 10…58.1 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) IP40 IEC 60529 front panel)

Pollution degree	3 IEC 60664-1 3 UL 508
Overvoltage category	III IEC 60664-1 III UL 508

Ordering and shipping details

Category	US10CP222376
Discount Schedule	0CP2
GTIN	3606489591120
Returnability	Yes
Country of origin	US

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.78 in (9.6 cm)
Package 1 Width	0.98 in (2.5 cm)
Package 1 Length	4.25 in (10.8 cm)
Package 1 Weight	4.8 oz (136.0 g)
Unit Type of Package 2	S02
Number of Units in Package 2	36
Package 2 Height	5.91 in (15 cm)
Package 2 Width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)
Package 2 Weight	12.297 lb(US) (5.578 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	576
Package 3 Height	29.53 in (75 cm)
Package 3 Width	23.62 in (60 cm)
Package 3 Length	31.50 in (80 cm)
Package 3 Weight	216.05 lb(US) (98 kg)

Sustainability

Green Premium^{TM} label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO_2 products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

How we assess product sustainability >

Transparency

RoHS/REACh

Well-being performance

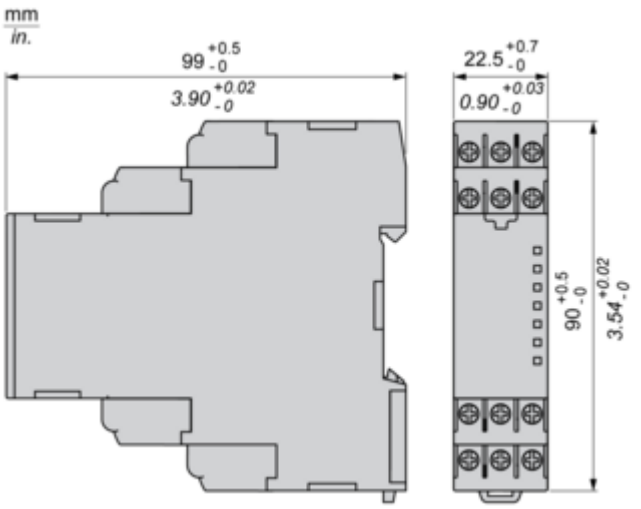
Mercury Free	
Rohs Exemption Information	Yes

Certifications & Standards

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
Circularity Profile	End of Life Information
California Proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Dimensions Drawings

Dimensions



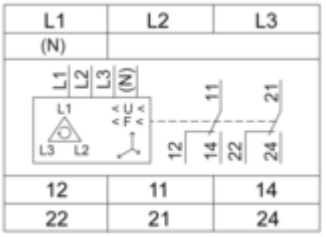
Mounting and Clearance

Mounting and Clearance

Rail Mounting

Connections and Schema

3-Phase Control Relay

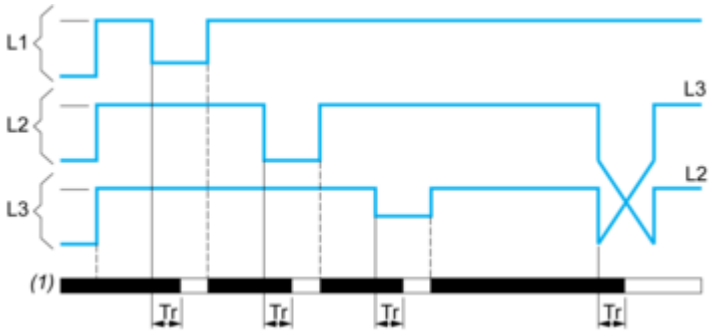


L1, L2, L3, (N) : Supply to be monitored (with or without neutral)
12, 11, 14 : 1st C/O contact of output relay
22, 21, 24 : 2nd C/O contact of output relay

Technical Description

Function Diagrams

Phase Loss and Phase Sequence

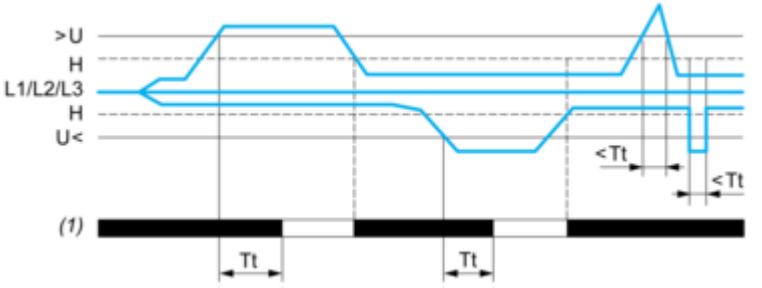


Tr : Response after crossing of threshold (< 300ms)
L1, L2, L3 : Phases of the supply voltage monitored
Alarm status:

- White color: Alarm triggered
- Black color: Alarm not triggered

(1) : Alarm

Overvoltage & Undervoltage

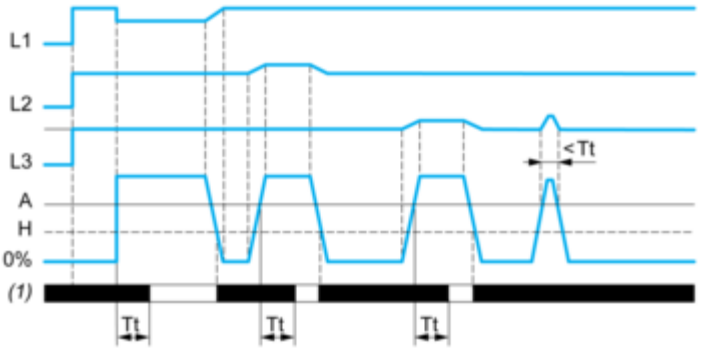


>U : Overvoltage threshold
H : Hysteresis
U< : Undervoltage threshold
L1, L2, L3 : Phases of the supply voltage monitored
Tt : Time delay after crossing of threshold (adjustable on app)
Alarm status:

- White color : Alarm triggered
- Black color : Alarm not triggered

(1) : Alarm

Asymmetry

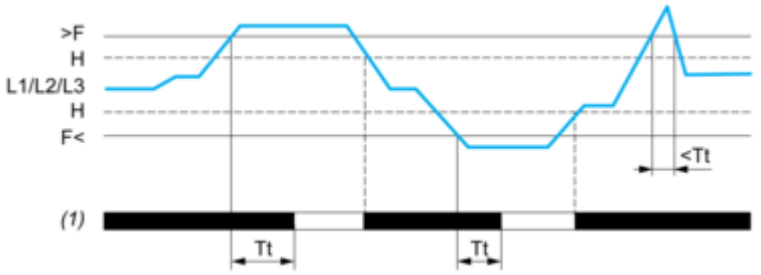


L1, L2, L3 : Phases of the supply voltage monitored
A : Asymmetry threshold (adjustable from 5...150V of the nominal supply voltage)
H : Hysteresis
Tt : Time delay after crossing of threshold (adjustable on app)
Alarm status:

- White color : Alarm triggered
- Black color : Alarm not triggered

(1) : Alarm

Over Frequency & Under Frequency



>F : Over frequency threshold
H : Hysteresis
F< : Under frequency threshold
L1, L2, L3 : Line frequency
Tt : Time delay after crossing of threshold (adjustable on app)
Alarm status:

- White color : Alarm triggered
- Black color : Alarm not triggered

(1) : Alarm

Technical Illustration

Dimensions

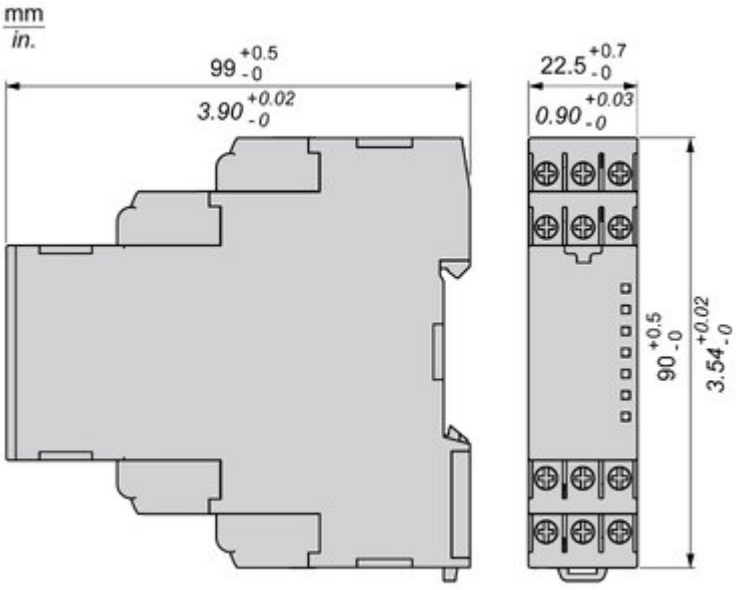
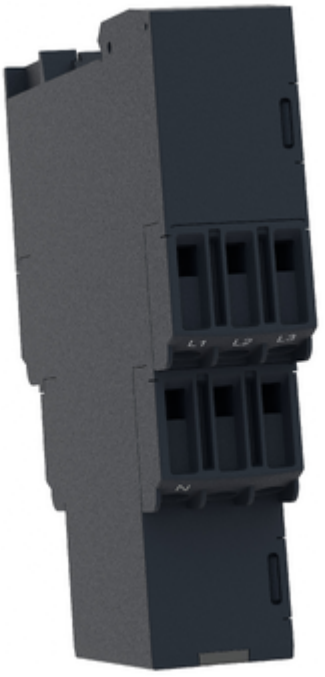
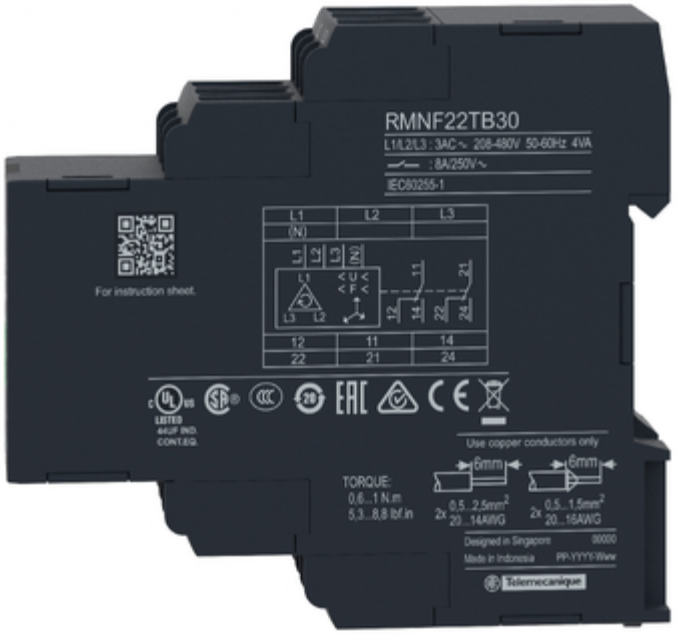
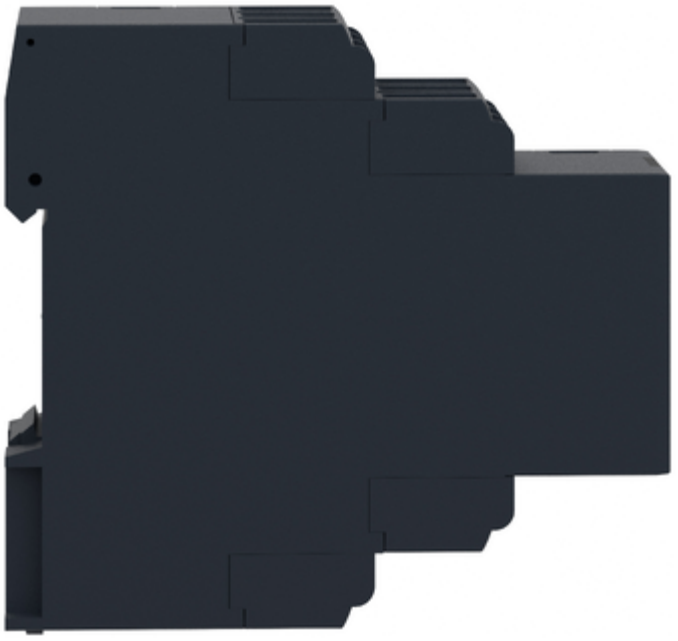


Image of product / Alternate images

Alternative




RMNF22TB30
L1/L2/L3 : 3AC ~ 208-480V 50-60Hz 4VA
: 8A/250V ~
IEC60255-1
For instruction sheet.
L1
L2
L3
(N)
12
11
14
22
21
24
TORQUE:
0,6...1 N.m
5,3...8,8 lbf.in
Use copper conductors only
6mm
6mm
2x 0,5...2,5mm²
20...14AWG
2x 0,5...1,5mm²
20...16AWG
Designed in Singapore
Made in Indonesia
PP-YYYY-Www
Telemecanique




L1
L2
L3
N
PL /-PS-
UV /-OV-
Asym
UF /-OF-
R2
R1
Un
NFC
Schneider Electric
12
11
14
22
21
24