Product data sheet

Specifications



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

RMNF22TB30

Product availability: Stock - Normally stocked in distribution facility

Main

Range of Product	Harmony Control Relays
Relay Type	NFC control relay
Relay name	RMNF22
Relay monitored parameters	Phase sequence Phase failure detection Overvoltage detection Undervoltage detection Overfrequency and underfrequency Asymmetry
Control Type	Without Diagnostic button
Software designation	Ecostruxure Industrial Device downloadable from Google Play store or Apple Store)
Product Compatibility	NFC enabled mobile device

Complementary

[Us] rated supply voltage	208...480 V AC 50/60 Hz, non self-powered 120...277 V AC 50/60 Hz, non self-powered
Supply voltage limits	166.4…576 V AC line to line 96…332.4 V AC line to neutral
Supply frequency	50...60 Hz +/- 10 %
Power consumption in VA	4 VA 480 V AC 60 Hz
Immunity to microbreaks	10 ms less than or equal
Measurement range	208...480 V AC
Maximum measuring cycle	150 ms measurement cycle as true rms value
Threshold adjustment voltage	2...20 % of Un selected
Hysteresis	3 % fixed at nominal voltage phase failure detection
Adjustment of asymmetry threshold	2...20 % of Un selected
Repeat accuracy	+/- 0.5 % input and measurement circuit +/- 3 % time delay
Measurement error	+/- 0.05 %/°C with temperature variation +/- 0.05 %/Hz with frequency variation
Time delay type	Adjustable 0.1 s...60 min Tt- time delay upon fault
Setting accuracy of time delay	+/- 3 % 10 s...60 min +/- 300 ms 0...10 s
Reset time	1500 ms at maximum rated voltage
Response time	<= 300 ms (in the event of a fault)

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

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Power on Delay	650 ms
Output contacts	2 C/O
nominal output current	8 A
Maximum switching voltage	250 V AC
Switching capacity in VA	2000 VA
Minimum switching current	10 mA 12 V DC
Maximum switching current	8 A AC
Electrical durability	100000 cycles
Mechanical durability	10000000 cycles
Utilisation category	AC-15 250 V AC 3 A conforming to IEC 60947-5-1 DC-13 24 V DC 2 A conforming to IEC 60947-5-1 AC-1 250 V AC 8 A conforming to IEC 60947-4-1 DC-1 24 V DC 5 A conforming to IEC 60947-4-1
NFC operating frequency	13.56 MHz
Maximum RF power transmitted	0.0002 mW
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
Operating system	Androidversion >= V7.0 IOSversion >= V14.5

Environment

Electromagnetic compatibility	Immunity for industrial environments conforming to IEC 61000-6-2 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 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
Standards	EN/IEC 60255-1
Product Certifications	CE UL CSA CCC EAC RCM UKCA
Marking	WEEE China RoHS ROHS
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) -40…158 °F (-40…70 °C)
Ambient air temperature for operation	-22…140 °F (-30…60 °C) -22…140 °F (-30…60 °C)
Relative humidity	93…97 % 77…131 °F (25…55 °C) IEC 60068-2-30 77…131 °F (25…55 °C)
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…60.1 Hz) in operation IEC 60068-2-6 0.5 gn 60.1…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 conforming to IEC 60664-1 III conforming to UL 508
Dielectric test voltage	2.5 kV AC 50 Hz, 1 min IEC 60255-27
[Uimp] rated impulse withstand voltage	4 kV IEC 60664-1
Insulation resistance	> 100 MOhm 500 V DC IEC 60255-27
[Ui] rated insulation voltage	400 V IEC 60664-1
Operating position	Any position without derating
Connections - terminals	Screw terminals, 2 x 0.5...2 x 2.5 mm² 20 AWG...14 AWG) solid without cable end Screw terminals, 2 x 0.2...2 x 1.5 mm² 24 AWG...16 AWG) flexible with cable end Screw terminals, 1 x 0.5...1 x 4 mm² 20 AWG...12 AWG) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm² 24 AWG...14 AWG) flexible with cable end
Tightening torque	5.3…8.9 lbf.in (0.6…1 N.m) IEC 60947-1 5.3…8.9 lbf.in (0.6…1.006 N.m)
Housing material	Polycarbonate
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 symmetrical DIN rail conforming to IEC 60715
Reliability data	MTTF = 128.5 years
Height	3.5 in (90 mm) 3.5 in (88.9 mm)
Width	0.9 in (22.5 mm) 0.9 in (22.9 mm)
Depth	3.9 in (99 mm) 3.9 in (99.06 mm)
Net Weight	0.276 lb(US) (0.125 kg) 0.28 lb(US) (0.13 kg)

Ordering and shipping details

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

Packing Units

Unit Type of Package 1	PCE

Nbr. of units in pkg.	1
Package 1 Height	1.181 in (3.000 cm)
Package 1 Width	3.937 in (10.000 cm)
Package 1 Length	4.252 in (10.800 cm)
Package weight(Lbs)	4.868 oz (138.000 g)
Unit Type of Package 2	S02
Number of Units in Package 2	36
Package 2 Height	5.906 in (15.000 cm)
Package 2 Width	11.811 in (30.000 cm)
Package 2 Length	15.748 in (40.000 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	29.528 in (75.000 cm)
Package 3 Width	23.622 in (60.000 cm)
Package 3 Length	31.496 in (80.000 cm)
Package 3 Weight	216.053 lb(US) (98.000 kg)

Contractual warranty

Warranty (in months)	18

Environmental Data

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 >

Environmental footprint

Total lifecycle Carbon footprint	**58 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**3 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**55 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0.1 kg CO2 eq.**
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
Packaging without single use plastic	**Yes**
SCIP Number	**5e3fdf99-611b-4d07-ad17-6eba84ab488b**
EU RoHS Directive	Compliant By Exemption
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
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**

Use Longer

Lifetime extension

Repair	**No**

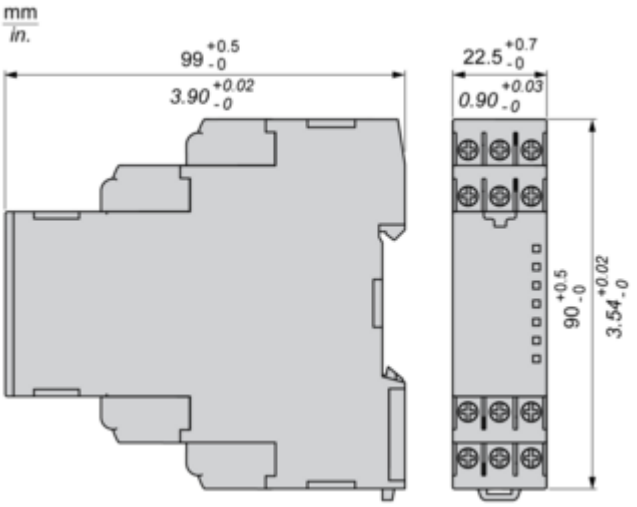
Use Again

Repack and remanufacture

Circularity Profile	End of Life Information
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.**

Dimensions Drawings

Dimensions



Mounting and Clearance

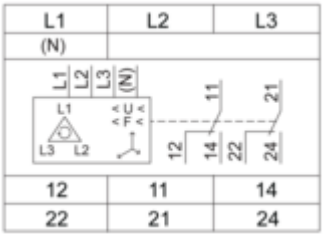
Mounting and Clearance

Rail Mounting



Connections and Schema

3-Phase Control Relay

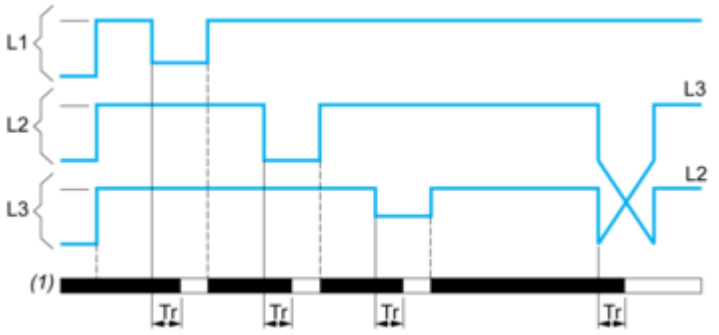


L1, L2, L3, (N) : Supply to be monitored (with or without neutral)
12, 11, 14 : 1st C/O contact of output relay
22, 21, 24 : 2nd C/O contact of output relay

Technical Description

Function Diagrams

Phase Loss and Phase Sequence

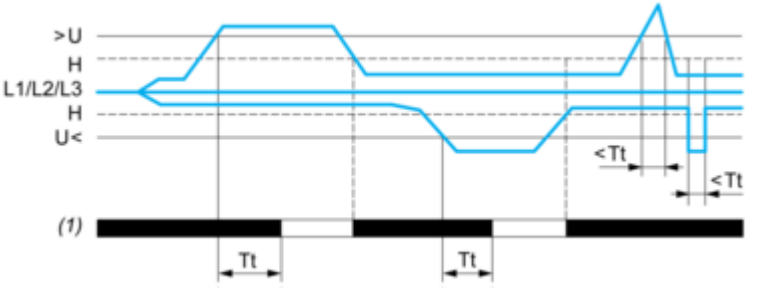


Tr : Response after crossing of threshold (< 300ms)
L1, L2, L3 : Phases of the supply voltage monitored
Alarm status:

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

(1) : Alarm

Overvoltage & Undervoltage

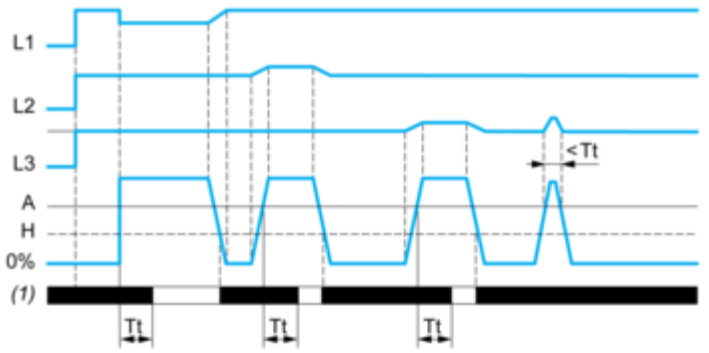


>U : Overvoltage threshold
H : Hysteresis
U< : Undervoltage threshold
L1, L2, L3 : Phases of the supply voltage monitored
Tt : Time delay after crossing of threshold (adjustable on app)
Alarm status:

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

(1) : Alarm

Asymmetry

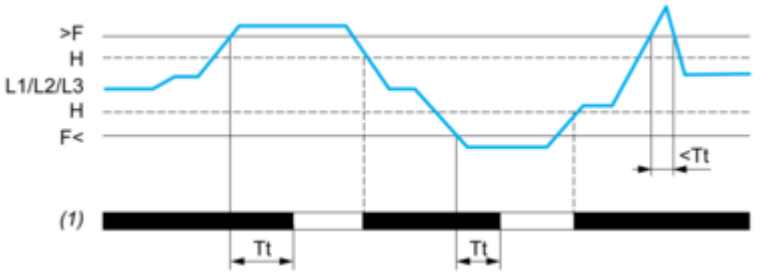


L1, L2, L3 : Phases of the supply voltage monitored
A : Asymmetry threshold (adjustable from 5...150V of the nominal supply voltage)
H : Hysteresis
Tt : Time delay after crossing of threshold (adjustable on app)
Alarm status:

- 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:

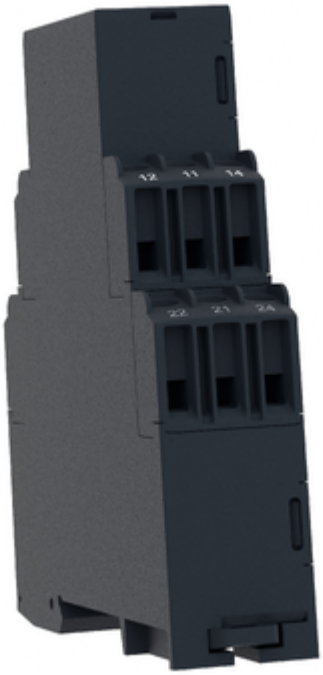
- White color : Alarm triggered
- Black color : Alarm not triggered

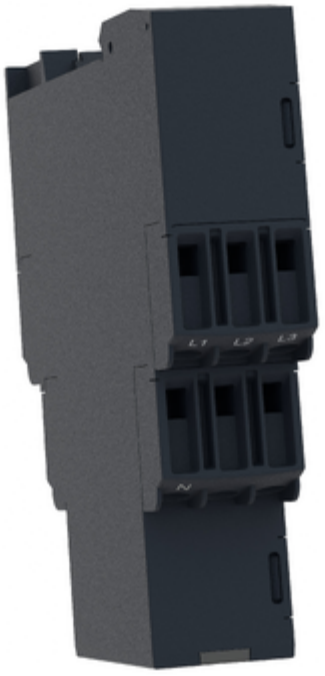
(1) : Alarm

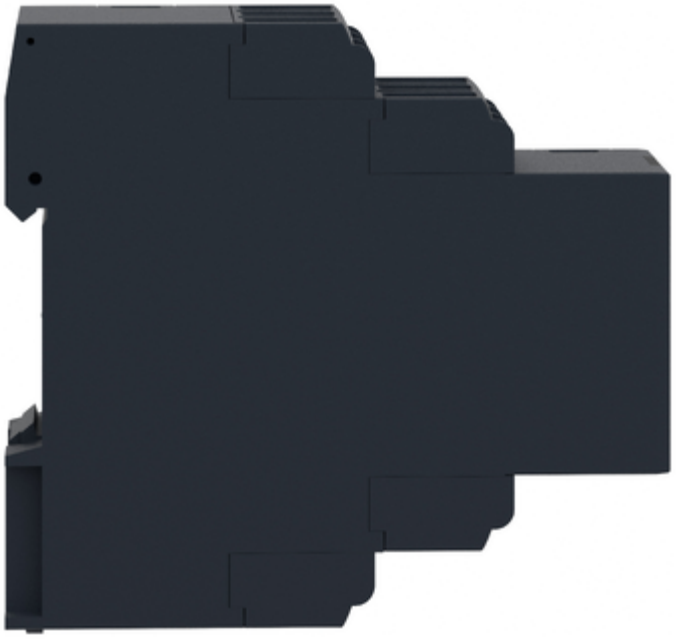
Image of product / Alternate images

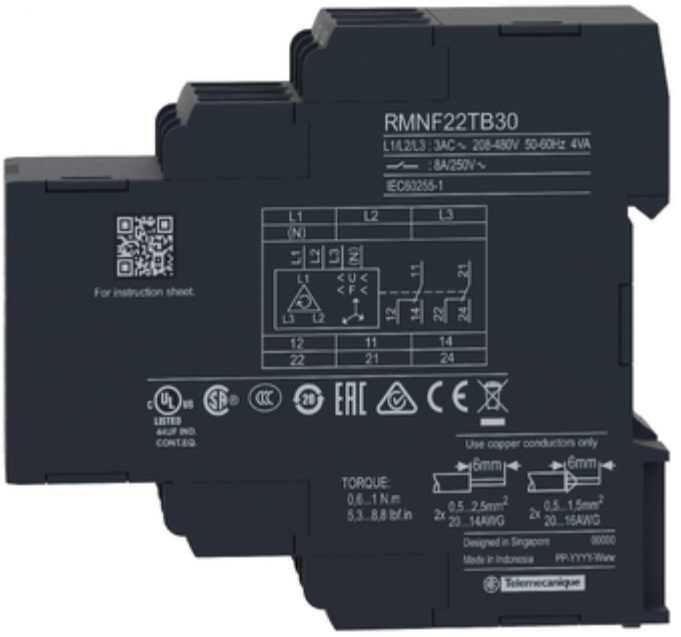
Alternative






L1
L2
L3
N




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

