

Product Datasheet

Characteristic

RENF22R2MMW

multifunction relay, Harmony Timer  
Relays, 8A, 2CO, 0.05s to 999h  
asymmetrical on delay and off delay 24  
to 240V AC DC



Main

Range of product	Harmony Timer Relays
product or component type	NFC timer relay
Device short name	RENF22
Software designation	Ecostruxure Industrial Device (downloadable from Google Play store or Apple Store)

Complementary

Discrete output type	Relay
Nominal output current	8 A
Contacts type and composition	2 C/O timed contact, cadmium free 1 C/O timed and instantaneous contact, cadmium free
time delay type	Power on-delay On-delay and off-delay Pulse delay Asymmetrical on-delay and off-delay Interval Off-delay Symmetrical flashing Safe-guard Star-delta Asymmetrical flashing Bistable
time delay range	0.05 s...999 h
Product compatibility	NFC enabled mobile device
Control type	Without test button
[Us] rated supply voltage	24...240 V AC/DC
Input voltage	<= 2.4 V
Voltage range	0.85...1.1 Un
Nominal power	0.0002 mW
Maximum operating frequency	13.56 MHz
Supply frequency	50...60 Hz +/- 5 %
Connections - terminals	Screw terminals, 1 x 0.5...1 x 3.3 mm² (AWG 20...AWG 12) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm² (AWG 20...AWG 14) 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 Screw terminals, 2 x 0.2...2 x 1.5 mm <sup>2</sup> (AWG 24...AWG 16) flexible with cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1 0.6...1.0 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing
Repeat accuracy	+/- 0.2 % for 10 s...999 h time delay range +/- 0.5 % for 100 ms...10 s time delay range +/- 0.7 % for 50...100 ms time delay range
Temperature drift	+/- 0.05 %/°C
Voltage drift	+/- 0.2 %/V
Setting accuracy of time delay	+/- 1 % for 1...999 h time delay range at 25 °C +/- 2 % for 1...3600 s time delay range at 25 °C +/- 20 ms for 100 ms...10 s time delay range at 25 °C +/- 30 ms for 50...100 ms time delay range at 25 °C
Minimum pulse duration	100 ms with load in parallel 60 ms no-load
Insulation resistance	100 MOhm at 500 V DC conforming to IEC 60664-1
Reset time	120 ms on de-energisation
Power consumption in VA	3 VA at 240 V AC
Power consumption in W	1.5 W at 240 V DC 0.6 W at 24 V DC
Switching capacity in VA	2000 VA
Minimum switching current	10 mA at 5 V
Maximum switching current	8 A
Maximum switching voltage	250 V
Electrical durability	100000 cycles for resistive load, 8 A at 250 V, AC
Mechanical durability	10000000 cycles
[Uimp] rated impulse withstand voltage	5 kV 1.2/50 µs conforming to IEC 60664-1
Maximum delay response	100 ms
Creepage distance	4 kV/3 conforming to IEC 60664-1
Overvoltage category	III conforming to IEC 60664-1
Safety reliability data	MTTFd = 227.5 years 100 % duty cycle continuous operating condition at 30 °C
Mounting position	Any position
Mounting support	35 mm DIN rail conforming to IEC 60715
Local signalling	LED Un: (steady), green for power ON LED R1: (steady), amber for relay energised LED R2: (steady), amber for relay energised LED pairing: (steady), green for communication status LED Un: (fast blinking), green for diagnosis mode LED R1: (blinking), amber for timing in progress LED R2: (blinking), amber for timing in progress
Operating distance	10 mm
Function available	A- Power on-delay relay-2 C/O Ac- On-delay and off-delay relay w/ control signal-2 C/O Ad- Pulse delayed relay w/ control signal-2 C/O Ah- Pulse delayed relay (single cycle) w/ control signal-2 C/O Ak- Asymmetrical on-delay and off -delay relay w/ control signal-2 C/O O At- Power on-delay relay w/ pause/summation (Y1)-2 C/O B- Single interval relay w/ control signal-2 C/O Bw- Double interval relay w/ control signal-2 C/O C- Off-delay relay w/ control signal-2 C/O D- Symmetrical flashing relay (starting pulse-off)-2 C/O Di- Symmetrical flashing relay (starting pulse-on)-2 C/O Dt- Symmetrical flashing relay (starting pulse-off) w/ pause/summation (Y1)-2 C/O Dit- Symmetrical flashing relay (starting pulse-on) w/ pause/summation (Y1)-2 C/O H- Interval relay-2 C/O Ht- Interval relay w/ pause/summation (Y1)-2 C/O Li- Asymmetrical flashing relay (starting pulse-on)-2 C/O Lt- Asymmetrical flashing relay (starting pulse-off) w/ pause/summation (Y1)-2 C/O Lit- Asymmetrical flashing relay (starting pulse-on) w/ pause/summation (Y1)-2 C/O N- Safe-guard relay-2 C/O

	O- Delayed Safe-guard relay-2 C/O P- Pulse delayed relay w/ fixed pulse length-2 C/O Pt- Pulse delayed relay w/ fixed pulse length and pause/summation-2 C/O Qt- Star-delta relay (2 CO outputs w/ split common)-2 C/O Qtt- Star-delta relay (2 CO outputs w/ split common) w/ pause/summation (Y1)-2 C/O TI- Bistable relay w/ control signal on-2 C/O Tt- Retriggerable bistable relay w/ control signal on-2 C/O W- Interval relay w/ control signal off-2 C/O L- Asymmetrical flashing relay (starting pulse-off)-2 C/O
Operating system	Androidversion >= V7.0 IOSversion >= V14.5
Width	22.5 mm
net weight	0.0904 kg
Number of functions	28

## Environment

Immunity to microbreaks	10 ms
Dielectric strength	2.5 kV for 1 mA/1 minute at 50 Hz with between relay output and power supply with basic insulation with basic insulation
Standards	IEC 61000-6-1 IEC 61000-6-2 IEC 61000-6-4 EN 61812-1 IEC 61000-6-3
Directives	2014/35/EU - low voltage directive 2014/53/EU - radio equipment directive 2014/30/EU - electromagnetic compatibility
Product certifications	CE CSA KC UL CCC EAC DNV-GL
Ambient air temperature for operation	-20...60 °C
Ambient air temperature for storage	-40...70 °C
IP degree of protection	IP40 housing: conforming to IEC 60529 IP40 front face: conforming to IEC 60529 IP20 terminals: conforming to IEC 60529
Pollution degree	3 conforming to IEC 60664-1
Vibration resistance	20 m/s <sup>2</sup> (f= 10...150 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn not operating for 11 ms conforming to IEC 60068-2-27 5 gn in operation for 11 ms conforming to IEC 60068-2-27
Relative humidity	95 % at 25...55 °C
Electromagnetic compatibility	Electrostatic discharge immunity test - test level: 6 kV level 3 (contact discharge) conforming to IEC 61000-4-2 Electrostatic discharge immunity test - test level: 8 kV level 3 (air discharge) conforming to IEC 61000-4-2 Fast transients immunity test - test level: 1 kV level 3 (capacitive connecting clip) conforming to IEC 61000-4-4 Fast transients immunity test - test level: 2 kV level 3 (direct contact) conforming to IEC 61000-4-4 Surge immunity test - test level: 1 kV level 3 (differential mode) conforming to IEC 61000-4-5 Surge immunity test - test level: 2 kV level 3 (common mode) conforming to IEC 61000-4-5 Radiated radio-frequency electromagnetic field immunity test - test level: 10 V level 3 (0.15...80 MHz) conforming to IEC 61000-4-6 Electromagnetic field immunity test - test level: 10 V/m level 3 (80 MHz...1 GHz) conforming to IEC 61000-4-3 Immunity to microbreaks and voltage drops - test level: 30 % (500 ms) conforming to IEC 61000-4-11 Immunity to microbreaks and voltage drops - test level: 100 % (20 ms) conforming to IEC 61000-4-11 Radiated emission class B conforming to EN 55022 Conducted emission class A conforming to EN 55022 Electromagnetic field immunity test - test level: 3 V/m level 2 (1.4 GHz...2 GHz) conforming to IEC 61000-4-3

Electromagnetic field immunity test - test level: 1 V/m level 1 (2...2.7 GHz) conforming to IEC 61000-4-3

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	2.4 cm
Package 1 Width	8.05 cm
Package 1 Length	9.45 cm
Package 1 Weight	103.635 g
Unit Type of Package 2	S02
Number of Units in Package 2	40
Package 2 Height	15.0 cm
Package 2 Width	30.0 cm
Package 2 Length	40.0 cm
Package 2 Weight	4.616 kg
Unit Type of Package 3	P06
Number of Units in Package 3	640
Package 3 Height	70.0 cm
Package 3 Width	60.0 cm
Package 3 Length	80.0 cm
Package 3 Weight	84.13 kg

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	X
RoHS exemption information	Yes
Environmental Disclosure	ENVPEP1401008EN
Circularity Profile	ENVEOLI1401008EN