

Product data sheet

Specifications



universal plug in relay, Harmony
Electromechanical Relays, 10A,
3CO, without LED, lockable test
button, cylindrical, 48V AC

RUMC31E7

Main

Range of product	Harmony Electromechanical Relays
Series name	RUM series
Product or component type	Plug-in relay
Relay type	Universal relay
Contacts type and composition	3 C/O
status LED	Without
Control type	Lockable test button
[Uc] control circuit voltage	48 V AC 50/60 Hz
[Ithe] conventional enclosed thermal current	10 A at -40...55 °C

Complementary

[Uimp] rated impulse withstand voltage	4 kV (1.2/50 µs)
Minimum switching capacity	170 mW at 10 mA, 17 V
Electrical durability	100000 cycles for resistive load
Average coil consumption in VA	3 at 60 Hz
Operating time	20 ms at nominal voltage
Rated operational voltage limits	38.4...52.8 V AC
[UI] rated insulation voltage	250 V conforming to IEC 300 V conforming to CSA 300 V conforming to UL
Reset time	20 ms at nominal voltage
Maximum switching voltage	250 V conforming to IEC
Drop-out voltage threshold	>= 0.15 U _c AC
[Ie] rated operational current	10 A at 277 V AC conforming to UL 10 A at 30 V DC conforming to UL 10 A at 277 V AC (same polarity) conforming to CSA 10 A at 30 V DC conforming to CSA 5 A at 250 V AC (NC) conforming to IEC 5 A at 28 V DC (NC) conforming to IEC 10 A at 250 V AC (NO) conforming to IEC 10 A at 28 V DC (NO) conforming to IEC
Average resistance	290 Ohm at 20 °C +/- 15 %
Maximum switching capacity	2500 VA/280 W
Mechanical durability	5000000 cycles
Safety reliability data	B10d = 100000

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

Operating rate	<= 18000 cycles/hour no-load <= 1200 cycles/hour under load
Utilisation coefficient	20 %
Compatibility code	RUM
Dielectric strength	1500 V AC between contacts with micro disconnection 2500 V AC between coil and contact with reinforced 2000 V AC between poles with basic
Protection category	RT I
Pollution degree	2
Operating position	Any position
Test levels	Level A group mounting
Device presentation	Complete product
Contacts material	AgNi
Shape of pin	Cylindrical
Product weight	0.086 kg

Environment

Ambient air temperature for operation	-40...55 °C
IP degree of protection	IP40
Standards	IEC 61810-1 CSA C22.2 No 14 UL 508
Product certifications	UL CSA EAC
Ambient air temperature for storage	-40...85 °C
Vibration resistance	3 gn, amplitude = +/- 1 mm (f = 10...150 Hz)5 cycles in operation 4 gn, amplitude = +/- 1 mm (f = 10...150 Hz)5 cycles not operating
Shock resistance	10 gn (duration = 11 ms) for in operation conforming to IEC 60068-2-27 10 gn (duration = 11 ms) for not operating conforming to IEC 60068-2-27

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.500 cm
Package 1 Width	6.900 cm
Package 1 Length	3.600 cm
Package 1 Weight	91.000 g
Unit Type of Package 2	BB1
Number of Units in Package 2	10
Package 2 Height	4.000 cm
Package 2 Width	14.600 cm
Package 2 Length	20.000 cm
Package 2 Weight	996.000 g
Unit Type of Package 3	S02

Number of Units in Package 3	60
Package 3 Height	15.000 cm
Package 3 Width	30.000 cm
Package 3 Length	40.000 cm
Package 3 Weight	6.481 kg

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	31

Use Better

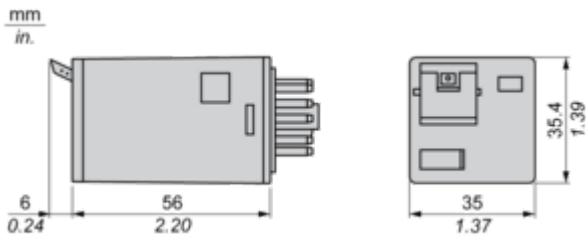
Materials and Substances	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
California proposition 65	WARNING: This product can expose you to chemicals including: Nickel compounds, which is 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 Again

Repack and remanufacture	
End of life manual availability	No need of specific recycling operations
Take-back	No

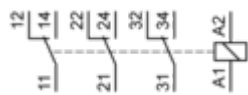
Dimensions Drawings

Dimensions

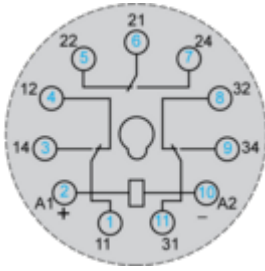


Connections and Schema

Wiring Diagram



Wiring Diagram

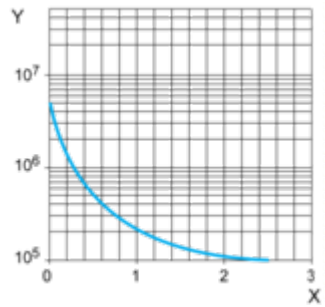


Symbols shown in blue correspond to Nema marking.

Performance Curves

Electrical Durability of Contacts

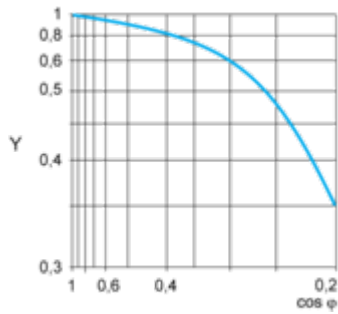
Durability (inductive load) = durability (resistive load) x reduction coefficient.
Resistive AC load



X Switching capacity (kVA)

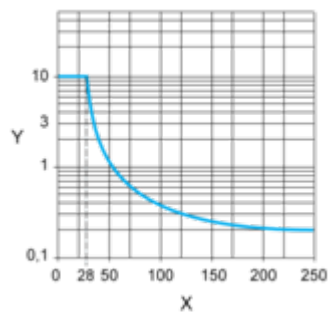
Y Durability (Number of operating cycles)

Reduction coefficient for inductive AC load (depending on power factor cos φ)



Y Reduction coefficient (A)

Maximum switching capacity on resistive DC load



X Voltage DC

Y Current DC

Note : These are typical curves, actual durability depends on load, environment, duty cycle, etc.

Technical Illustration

Dimensions

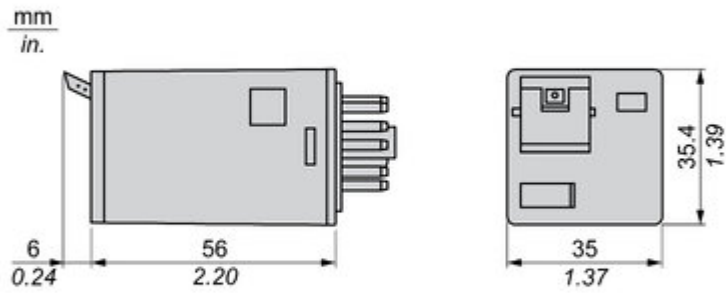


Image of product in real life situation

