

Product datasheet

Specifications



Harmony, Universal plug-in relay, 10 A, 3 CO, with lockable test button, flat (faston) terminals, 12 V DC

RUMF31JD

⚠ Discontinued on: 9 Feb 2023

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Main

Range of product	Harmony Electromechanical Relays
Series name	Universal
Product or component type	Plug-in relay
Device short name	RUM
[Uc] control circuit voltage	12 V DC
Contacts type and composition	3 C/O
status LED	Without
Control type	Lockable test button
[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
Operating time	20 ms at nominal voltage
Rated operational voltage limits	9.6...13.2 V DC
[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	>= 0.1 Uc DC
[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	120 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	3
Operating position	Any position
Test levels	Level A group mounting
Device presentation	Complete product
Contacts material	AgNi
Shape of pin	Flat
Net weight	0.086 kg

Environment

Ambient air temperature for operation	-40...55 °C
IP degree of protection	IP40
Standards	EN/IEC 61810-1 UL 508 CSA C22.2 No 14
Product certifications	CSA EAC UL
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 EN/IEC 60068-2-27 10 gn (duration = 11 ms) for not operating conforming to EN/IEC 60068-2-27

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	3.7 cm
Package 1 Width	3.8 cm
Package 1 Length	7.2 cm
Package 1 Weight	92.0 g
Unit Type of Package 2	BB1
Number of Units in Package 2	10
Package 2 Height	3.8 cm
Package 2 Width	13.2 cm
Package 2 Length	20.0 cm
Package 2 Weight	894.0 g
Unit Type of Package 3	S02

Number of Units in Package 3	60
Package 3 Height	15.0 cm
Package 3 Width	30.0 cm
Package 3 Length	40.0 cm
Package 3 Weight	5.966 kg

Contractual warranty

Warranty (in months)	18
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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 >](#)

Use Better

Materials and Substances	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
EU RoHS Directive	Compliant

Use Longer

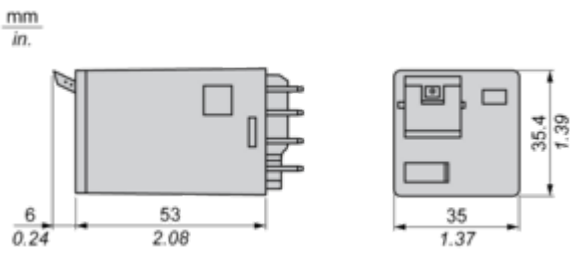
Lifetime extension	
Repair	No

Use Again

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

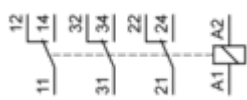
Dimensions Drawings

Dimensions

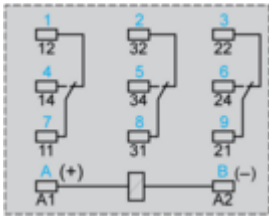


Connections and Schema

Wiring Diagram



Wiring Diagram

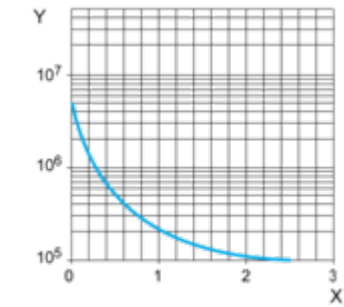


Symbols shown in blue correspond to Nema marking.

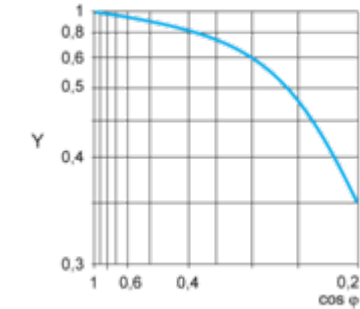
Performance Curves

Electrical Durability of Contacts

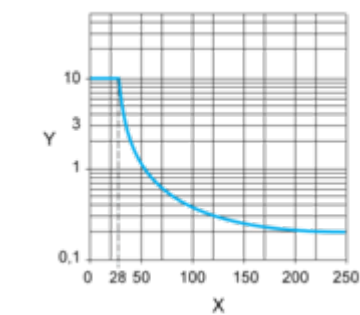
Durability (inductive load) = durability (resistive load) x reduction coefficient.
Resistive AC load



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.

Image of product in real life situation

