

## Product data sheet

### Characteristics

# RUMC31E7

Harmony Electromechanical Relays, Universal plug in relay, 10A, 3CO, lockable test button, 48V AC



#### Main

Range of product	Harmony Electromechanical Relays
Series name	Universal
Product or component type	Plug-in relay
Device short name	RUM
Contacts type and composition	3 C/O
[Uc] control circuit voltage	48 V AC 50/60 Hz
[Ithe] conventional enclosed thermal current	10 A at -40...55 °C
Status LED	Without
Control type	Lockable test button
Utilisation coefficient	20 %

#### Complementary

Shape of pin	Cylindrical
[Ui] rated insulation voltage	250 V conforming to IEC 300 V conforming to CSA 300 V conforming to UL
[Uimp] rated impulse withstand voltage	4 kV (1.2/50 µs)
Contacts material	AgNi
[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
Maximum switching voltage	250 V conforming to IEC
Resistive rated load	10 A at 250 V AC 10 A at 28 V DC
Maximum switching capacity	2500 VA/280 W
Minimum switching capacity	170 mW at 10 mA, 17 V
Operating rate	<= 18000 cycles/hour no-load <= 1200 cycles/hour under load
Mechanical durability	5000000 cycles
Electrical durability	100000 cycles for resistive load
Average coil consumption in VA	3 at 60 Hz
Drop-out voltage threshold	>= 0.15 U <sub>c</sub> AC
Operate time	20 ms at nominal voltage
Release time	20 ms at nominal voltage
Average coil resistance	290 Ohm at 20 °C +/- 15 %
Rated operational voltage limits	38.4...52.8 V AC
Protection category	RT I

Test levels	Level A group mounting
Safety reliability data	B10d = 100000
Operating position	Any position
Net weight	0.086 kg
Device presentation	Complete product

## Environment

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
Product certifications	UL[RETURN]CSA[RETURN]EAC
Standards	IEC 61810-1 CSA C22.2 No 14 UL 508
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-40...55 °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
IP degree of protection	IP40
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
Pollution degree	2

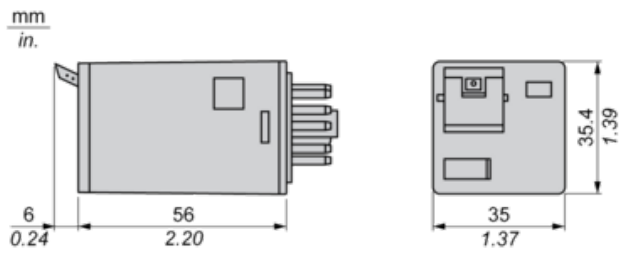
## Packing Units

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	95.0 g
Unit Type of Package 2	BB1
Number of Units in Package 2	10
Package 2 Height	4.0 cm
Package 2 Width	14.6 cm
Package 2 Length	20.0 cm
Package 2 Weight	996.0 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	6.481 kg

## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 <a href="#">REACH Declaration</a>
REACH free of SVHC	Yes
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)  <a href="#">EU RoHS Declaration</a>
China RoHS Regulation	 <a href="#">China RoHS Declaration</a>
RoHS exemption information	 <a href="#">Yes</a>
Environmental Disclosure	 <a href="#">Product Environmental Profile</a>
Circularity Profile	No need of specific recycling operations

## Dimensions



## Wiring Diagram



## Wiring Diagram

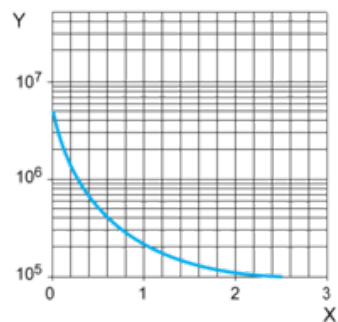


Symbols shown in blue correspond to Nema marking.

Electrical Durability of Contacts

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

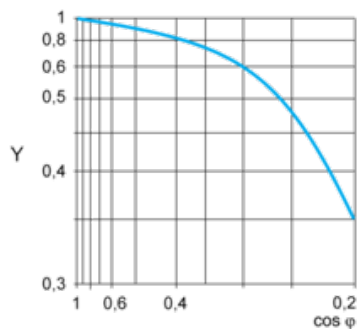
Resistive AC load



X Switching capacity (kVA)

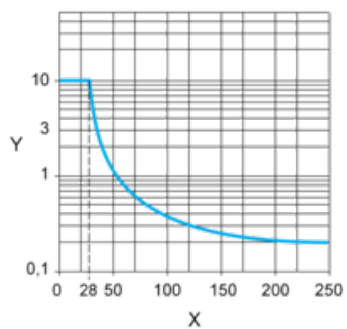
Y Durability (Number of operating cycles)

Reduction coefficient for inductive AC load (depending on power factor  $\cos \phi$ )



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.