# **Product datasheet**





Harmony, Universal plug-in relay, 10 A, 2 CO, with lockable test button, flat (faston) terminals, 48 V DC

RUMF21ED



Discontinued on: 1 Nov 2020



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	2 C/O
[Uc] Control Circuit Voltage	48 V DC
[Ithe] Conventional Enclosed Thermal Current	10 A at -4055 °C
Status Led	Without
Control Type	Lockable test button
Utilisation Coefficient	20 %

# Complementary

Shape Of Pin	Flat
[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
[le] Rated Operational Current	10 A at 277 V AC conforming to UL
	10 A at 30 V DC conforming to UL
	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
	10 A at 277 V AC conforming to CSA
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 W	1.4 W	
Drop-Out Voltage Threshold	>= 0.1 Uc DC	
Operate Time	20 ms at nominal voltage	
Release Time	20 ms at nominal voltage	
Average Coil Resistance	1800 Ohm at 20 °C +/- 15 %	
Rated Operational Voltage Limits	38.452.8 V DC	
Protection Category	RTI	
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	CSA UL EAC	
Standards	UL 508 CSA C22.2 No 14 IEC 61810-1	
Ambient Air Temperature For Storage	-4085 °C	
Ambient Air Temperature For Operation	-4055 °C	
Vibration Resistance	3 gn, amplitude = +/- 1 mm (f = 10150 Hz)5 cycles in operation 4 gn, amplitude = +/- 1 mm (f = 10150 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	3	

# 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	4.0 cm
Package 2 Width	13.2 cm
Package 2 Length	19.8 cm
Package 2 Weight	888.0 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	5.87 kg



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Transparency RoHS/REACh

# Well-being performance



Reach Free Of Svhc



Rohs Exemption Information

Yes

#### **Certifications & Standards**

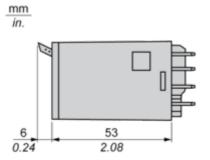
Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)  EU RoHS Declaration
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	No need of specific recycling operations

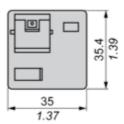
# **Product datasheet**

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# **Dimensions Drawings**

#### **Dimensions**



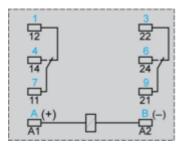


# **RUMF21ED**

Connections and Schema

#### Wiring Diagram

#### Wiring Diagram



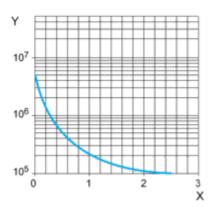
Symbols shown in blue correspond to Nema marking.

#### **RUMF21ED**

#### Performance Curves

#### **Electrical Durability of Contacts**

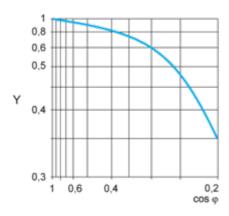
Durability (inductive load) = durability (resistive load) x reduction coefficient. Resistive AC load



X Switching capacity (kVA)

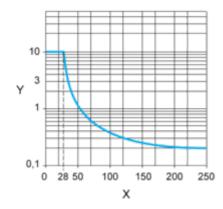
Y Durability (Number of operating cycles)

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



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.