

# Product data sheet

Specifications



## power relay plug-in - Harmony RPF - 2 CO - 110 V DC - 25 A

RPF2BFD

⚠ Discontinued on: 29 January 2021

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### Main

Range of product	Harmony Relay
Series name	Power
Product or component type	Plug-in relay
Device short name	RPF
Contacts type and composition	2 C/O
[Uc] control circuit voltage	110 V DC
Shape of pin	Flat
Contacts material	Silver tin oxide
Resistive rated load	25 A at 28 V DC 30 A at 250 V AC
Utilisation coefficient	10 %

### Complementary

Mounting support	DIN rail Panel
Control circuit voltage limits	88...121 V
[Ie] rated operational current	30 A at 277 V (AC) NO conforming to UL 20 A at 28 V (DC) NO conforming to UL 30 A at 250 V (AC) NO conforming to IEC 25 A at 28 V (DC) NO conforming to IEC 3 A at 277 V (AC) NC conforming to UL 3 A at 28 V (DC) NC conforming to UL 3 A at 250 V (AC) NC conforming to IEC 3 A at 28 V (DC) NC conforming to IEC
[Ui] rated insulation voltage	250 V conforming to EN/IEC 60947
[Uimp] rated impulse withstand voltage	4 kV conforming to IEC 61000-4-5
Maximum switching voltage	250 V conforming to IEC
Maximum switching capacity	7500 VA/700 W
Minimum recommended switching capacity	170 mW
Operating rate	<= 1200 cycles/hour under load <= 18000 cycles/hour no-load
Mechanical durability	5000000 cycles

Electrical durability	100000 cycles for resistive load
Average coil consumption	1.7 W
Drop-out voltage threshold	>= 0.1 U <sub>c</sub> DC
Operate time	20 ms
Release time	20 ms
Average resistance	7255 Ohm at 20 °C +/- 10 %
Safety reliability data	B10d = 100000
Protection category	RT IV
Operating position	Any position
Net weight	0.082 kg
Device presentation	Complete product

## Environment

Dielectric strength	2000 V AC between poles with basic 4000 V AC between coil and contact with reinforced 1500 V AC between contacts with micro disconnection
Standards	EN/IEC 61810-1 CSA C22.2 No 14 UL 508
Product certifications	CE CSA GOST UL
Ambient air temperature for storage	-40...85 °C
Ambient air temperature for operation	-40...55 °C
Vibration resistance	10 gn, amplitude = +/- 1 mm (f = 10...150 Hz)5 cycles in operation conforming to EN/IEC 60068-2-27 3 gn, amplitude = +/- 1 mm (f = 10...150 Hz)5 cycles not operating conforming to EN/IEC 60068-2-27
IP degree of protection	IP40 conforming to EN/IEC 60529
Shock resistance	10 gn for in operation conforming to EN/IEC 60068-2-27 10 gn for not operating conforming to EN/IEC 60068-2-27
Pollution degree	3

## Offer Sustainability

EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Toxic heavy metal free	Yes
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a>
RoHS exemption information	<a href="#">Yes</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

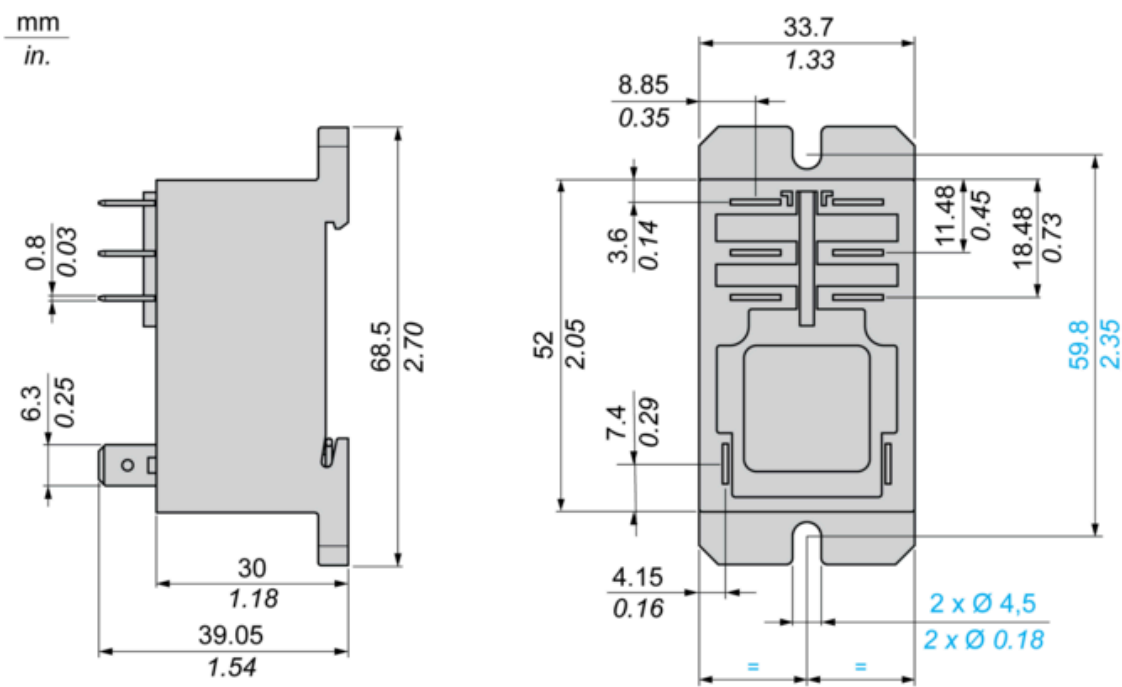
## Contractual warranty

Warranty	18 months
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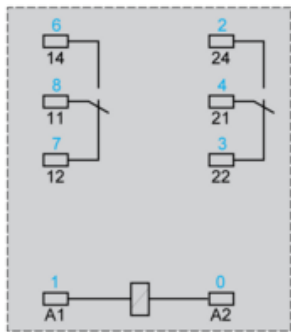
## Dimensions Drawings

# RPF2BFD

## Dimensions



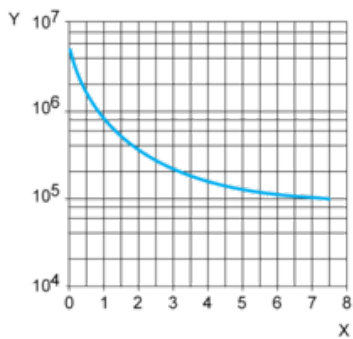
Wiring Diagram



Symbols shown in blue correspond to Nema marking.

Electrical Durability of Contacts

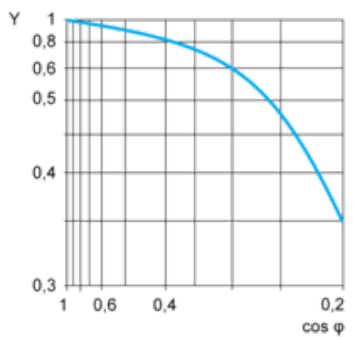
AC Resistive load



X Switching capacity (kVA)  
Y Durability (number of operating cycles)

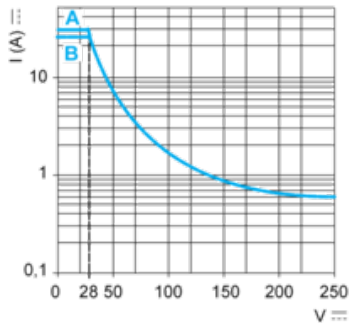
AC Reduction coefficient for inductive load (depending on power factor cos φ)

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



Y reduction coefficient

Maximum switching capacity on DC resistive load



A 30 A  
B 25 A

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

Recommended replacement(s)

RPF2BFD is replaced by the following product range:



**Harmony Electromechanical Relays**  
Interface, miniature, and power electromechanical relays (formerly known as Zelio Electromechanical Relays)  
Products: 536