

Zelio™ Plug-In Relays

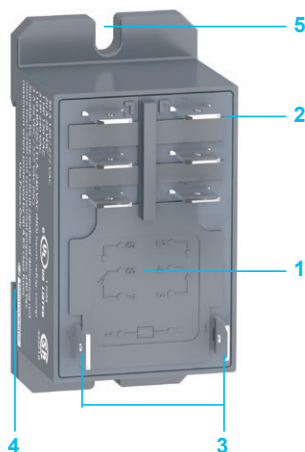
RPF power range

Catalog
2013



Schneider
Electric™

Introduction of the product range



- 1 30 A relays with 2 C/O or 2 N/O contacts
- 2 Four or six quick-connect contact terminals
- 3 Two relay coil terminals
- 4 A locating slot for DIN rail mounting
- 5 Two slots for optional panel mounting

General specifications

Conformity to standards			IEC/EN 61810-1, UL 508, CSAC22-2 n°14
Product certifications and standards			UL listed, CSA, CE, GOST, RoHS
Ambient air temperature around the device	Storage	°C (°F)	- 40 to + 85 (-40 to +185)
	Operation	°C (°F)	- 40 to + 55 (-40 to + 131)
Vibration resistance conforming to EC/EN 60068-2-6	In operation		3 gn (+/- 1 mm, 10 to 150 Hz) 5 cycles
	Not in operation		10 gn (+/- 1 mm, 10 to 150 Hz) 5 cycles
Degree of protection	Conforming to IEC/EN 60529		IP 40
Shock resistance conforming to IEC/EN 60068-2-27	In operation		10 gn
	Not in operation		30 gn
Protection category			RT II
Pollution degree			3
Mounting position			Any

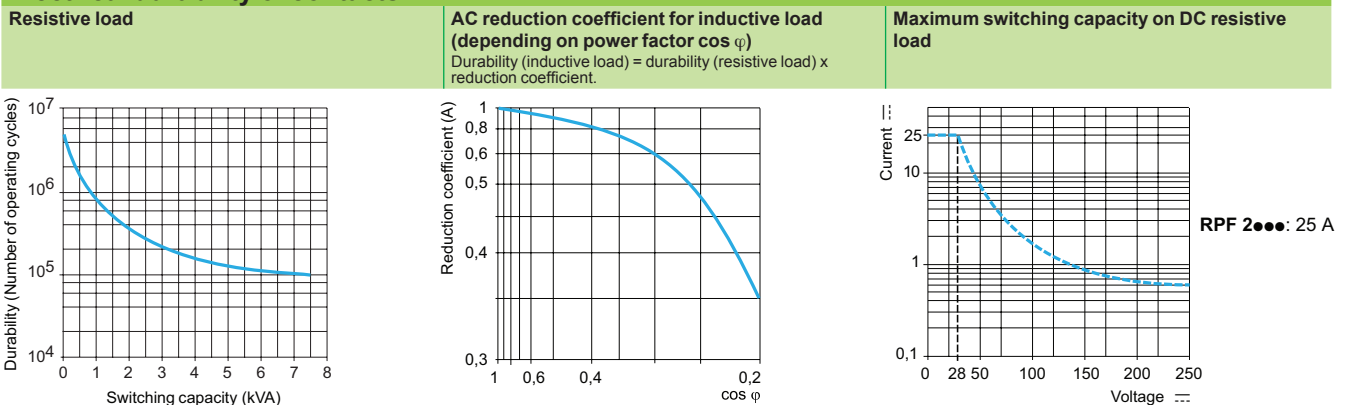
Insulation specifications

Rated insulation voltage (Ui)		V	250 (conforming to IEC)
		V	300 (conforming to UL)
Rated impulse withstand voltage (Uimp)		kV	4 (1.2 μs / 50 μs)
Dielectric strength (rms voltage)	Between coil and contact	Vac	4000 (reinforced insulation)
	Between poles	Vac	2000 (basic insulation)
	Between contacts	Vac	1500 (micro-disconnection)

Contact specifications

Relay type		RPF 2A●●	RPF 2B●●
Number and type of contacts		2 N/O	2 C/O
Contact materials		AgSnO ₂	
Conventional thermal current (I _{th})	For ambient temperature ≤ 40°C	N.O.: 30 A at 28 Vdc / 250 Vac (when mounted with 13 mm gap between two relays) N.O.: 25 A at 28 Vdc / 250 Vac (when mounted side by side without a gap)	
Rated operational current	Conforming to IEC	N.O.: 30 A at 250 Vac; 30 A at 28 Vdc	N.O.: 30 A at 250 Vac; 30 A at 28 Vdc N.C.: 3 A at 250 Vac; 3 A at 38 Vdc
	Conforming to UL	N.O.: General Use: 30 A at 277 Vac N.O.: Resistive: 20 A at 28 Vdc N.O.: Motor: 1.0 hp at 120 Vac; 3.0 hp at 240 Vac N.O.: LRA/FLA: 96 A / 22 A @ 240 Vac (AC coil), 30,000 cycles 10 A / 25.3 A @ 240 Vac (DC coil), 30,000 cycles N.O.: Pilot Duty: 720 VA / A 300, 6,000 cycles N.O.: Short Circuit: 5,000 A rms @ 3 hp, 240 Vac N.O.: Tungsten: 10 A at 120 Vac 50/60 Hz, 25,000 cycles 6 A at 250 Vac 50/60 Hz, 25,000 cycles	N.O.: General Use: 30 A at 277 Vac N.O.: Resistive: 20 A at 28 Vdc N.O.: Motor: 1.0 hp at 120 Vac; 3.0 hp at 240 Vac N.O.: LRA/FLA: 96 A / 22 A @ 240 Vac (AC coil), 30,000 cycles 10 A / 25.3 A @ 240 Vac (DC coil), 30,000 cycles N.O.: Pilot Duty: 720 VA / A 300, 6,000 cycles N.O.: Short Circuit: 5,000 A rms @ 3 hp, 240 Vac N.O.: Tungsten: 10 A at 120 Vac 50/60 Hz, 25,000 cycles 6 A at 250 Vac 50/60 Hz, 25,000 cycles N.C.: Resistive: 3 A at 277 Vac (6,000 cycles); 3 A at 28 Vdc
Minimum switching current		10 mA	
Minimum switching voltage		17 V	
Maximum switching voltage		250 Vac / Vdc (conforming to IEC)	
Switching capacity	Maximum	7,500 VA / 840 W (when mounted with 13 mm gap between two relays) 6,250 VA / 700 W (when mounted side by side without a gap)	
	Minimum	170 mW	
Maximum operating rate	No load	18,000 cycles per hour	
	Under load	1,200 cycles per hour	
Utilization coefficient		10 %	
Mechanical durability		50,000,000 cycles	
Electrical durability	Resistive load	100,000 cycles, unless otherwise specified under rated operational current	
	Inductive load	See curves below	

Electrical durability of contacts



Note: These curves are for reference only and are typical values only. Actual performance is dependant upon the actual load, environment, duty cycle, and other conditions specific to the application.

Coil specifications

Average consumption		VA	4			
		W	1.7			
Drop-out voltage threshold		Vac	≥ 0.15 Uc			
		Vdc	≥ 0.1 Uc			
Operating time (response time)	Between coil energization and making of the N.O. contact	ms	25 (max.)			
	Between coil de-energization and making of the N.C. contact	ms	25 (max.)			
Control circuit voltage Uc		V	12	24	120	230
Relay control voltage codes			JD	BD	—	—
DC supply	Average resistance at 20 °C ± 10%	Ω	86	350	—	—
	Operating voltage limits	Min. Vdc	9.6	19.2	—	—
		Max. Vdc	13.2	26.4	—	—
Relay control voltage codes			—	B7	F7	P7
AC supply	Average resistance at 20 °C ± 15%	Ω	—	170	4250	15,600
	Operating voltage limits	Min. Vac	—	19.2	96	184
		Max. Vac	—	26.4	132	253
Contractual warranty period			18 months			

Zelio™ Plug-In Relays

RPF power relays



Power relays (sold in lots of 10)

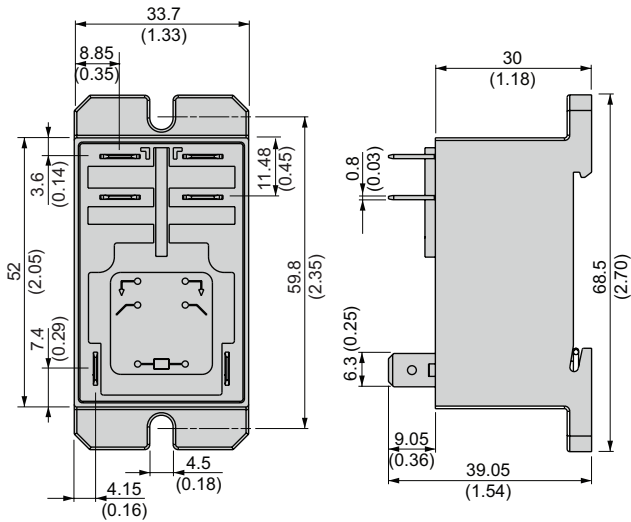
Control circuit voltage (V)	Number and type of contacts – Thermal current (lth)		Weight kg (lbs)
	2 N/O - 30 A (1)	2 C/O - 30 A (1)	
	Catalog number	Catalog number	
12 Vdc	RPF2AJD	RPF2BJD	0.082 (0.181)
24 Vdc	RPF2ABD	RPF2BBD	0.082 (0.181)
24 Vac	RPF2AB7	RPF2BB7	0.082 (0.181)
120 Vac	RPF2AF7	RPF2BF7	0.082 (0.181)
230 Vac	RPF2AP7	RPF2BP7	0.082 (0.181)

(1) 30 A when mounted with 13 mm gap between two relays and 25 A when mounted side by side without a gap.

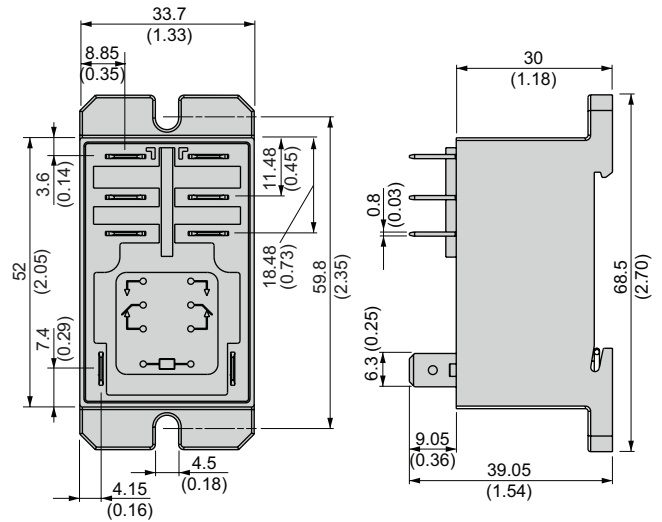
Dimensions: mm (inches)

Power relays

RPF 2A●●



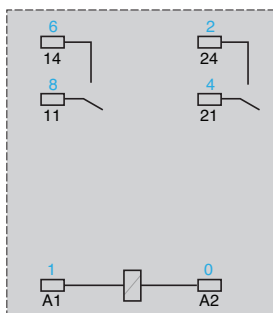
RPF 2B●●



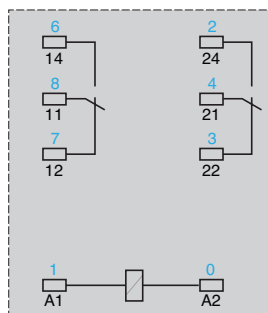
Wiring diagrams

Power relays

RPF 2A●●



RPF 2B●●



Symbols shown in blue correspond to NEMA marking; symbols shown in black correspond to IEC marking.

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