

Miniature Reed Relays with Magnetic Shield



DESCRIPTION

The NP series offers a wide range of switch and pin out options in a package of only 10.2 x 22 mm.

CHARACTERISTICS

- Magnetic shield
- Small size
- UL approved

FEATURES

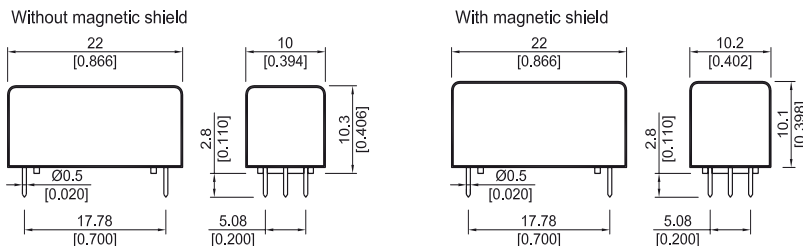
- High resistance coil up to 3000 Ω at 4 VDC
- Contact Forms 1A, 2A, 1C
- Various standard switch options
- Plastic case available

APPLICATIONS

- Alarm systems
- Computer peripherals
- Measuring equipment

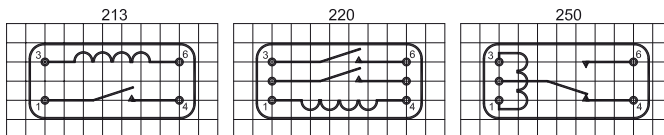
DIMENSIONS

All dimensions in mm [inches]



PIN OUT

View from top of component
2.54mm [0.10"] pitch grid



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ORDER INFORMATION

Part Number Example

NP12 - 1A66 - 2500 - 213

12 is the nominal voltage
1A is the contact form
66 is the switch model
2500 is the coil resistance
213 is the pin out

Series	Nominal Voltage	Contact Form	Contact Model	Coil Resistance	Pin Out
NP	XX	XX	XX -	XXXxx -	XXX
Options	05	1A	66	500	213
	12			2500	
	24			5000	
	04 HR	1A	66	3000	213
	12 HR			10000	
	05	2A	66	500	220
	12			1500	
	24			3000	
	05	1C	90	500	250
	12			2500	
	24			3500	

COIL DATA

Contact	Contact Model	Coil Voltage		Coil Resistance	Pull-in Voltage	Nominal Coil Power
All Data at 20 °C		VDC		VDC	VDC	mW
		Nom.	Max.	Max.	Min.	Typ.
1A	66	5	7.5	3.5	0.75	50
		12	16	8.4	1.8	60
		24	30	16.8	3.6	115
	66	4 HR	6	2.8	0.6	10
		12 HR	16	8.4	1.8	15
2A	66	5	7.5	3.5	0.75	50
		5	16	8.4	1.8	95
		24	30	16.8	3.6	190
1C	90	5	7.5	3.5	0.75	50
		12	16	8.4	1.8	60
		24	30	16.8	3.6	115

* The pull-in / drop-out voltages and coil resistance will change at the rate of 0,4 % / °C.

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RELAY DATA

All Data at 20° C	Switch Model → Contact Form →	Switch 66 Form A			Switch 90 Form C			Ein.
		Min.	Typ.	Max.	Min.	Typ.	Max.	
Contact Ratings	Conditions							
Switching Power *	Any DC combination of V & A not to exceed their individual max.'s			10			3	W
Switching Voltage	DC or peak AC			200			175	V
Switching Current	DC or peak AC			0.5			0.25	A
Carry Current	DC or peak AC			1.25			1.2	A
Static Contact Resistance	w/ 0.5 V & 10 mA			150			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5 V & 50 mA , 1.5 ms after closure			200			250	mΩ
Insulation Resistance across Contact	Across Contact Coil - Contact	10 ¹⁰ 10 ¹⁰			10 ⁹ 10 ¹⁰			Ω
Breakdown Voltage across Contact	Across Contact Coil - Contact	225 2.0 1.5			200 2.0 1.5			VDC kVCD kV/RMS
Operation Time incl. Bounce	At nominal voltage			0.5			0.7	ms
Release Time	With no coil suppression			0.1			1.5	ms
Capacitance	Across Contact Coil - Contact		0.2 4.0			1.0 5.0		pF
Life Expectance								
Switch Voltage 5V & 10 mA	DC < 10 pF stray cap.		1000			100		10 ⁶ Cycles
For other load requirements, see test on Page 152.								
Environment Data								
Shock Resistance	1/2 sinus wave duration 11 ms			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20	g
Ambient Temperature	10°C/ minute max. allowable	-20		70	-20		70	°C
Stock Temperature	10°C/ minute max. allowable	-25		85	-25		85	°C
Soldering Temperature	5 sec.			260			260	°C