

R20 SERIES

High Voltage Relays

28kV SYSTEM VOLTAGE

No Load Switching



DESCRIPTION

The R20 Series are vacuum-sealed ceramic high voltage relays designed for 28kV system voltage applications requiring reliable no-load switching performance. Rated for continuous currents up to 110A and peak operating voltages up to 28kVDC or 60Hz, the R20 Series provides stable electrical performance across DC and high-frequency environments.

Featuring a Form X (SPST-NO) contact arrangement, molybdenum/copper contacts, and M6 screw high voltage terminals, these relays are well suited for RF systems, test equipment, industrial high voltage platforms, and specialized power control applications where compact size, high voltage capability, and long mechanical life are required.

FEATURES

SPST Normally Open High Voltage Relay

- Vacuum-sealed ceramic construction
- Form X (SPST-NO) contact arrangement
- 28kV peak operating voltage
- 110A continuous current carry (DC or 60Hz)
- Molybdenum/copper contact system
- M6 screw high voltage terminals
- Through panel mounting configuration
- Compact high voltage relay design
- 2,000,000 cycle mechanical life
- RoHS compliant

TYPICAL APPLICATIONS

- Medical imaging, laser, and high voltage therapy systems
- Scientific research equipment and laboratory high voltage power supplies
- Lightning strike test equipment and surge simulation systems
- ESD test systems and high voltage stimulus switching
- Industrial HV equipment requiring stable vacuum-sealed performance

For factory-direct technical support and application assistance:

Call +1 805 456 6424

Email info@rinconpower.com

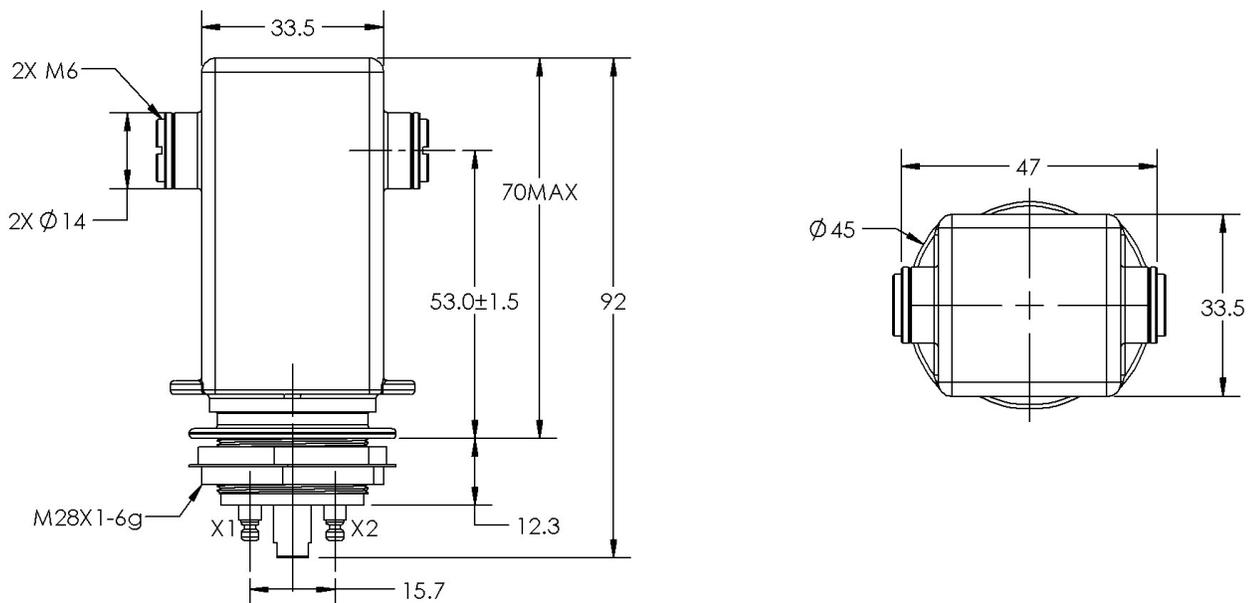
Visit <https://www.rinconpower.com/contact-us>

PERFORMANCE

TABLE 1. SPECIFICATIONS

CHARACTERISTIC	MEASURE	
Contact Arrangement	Form X, SPST – NO	
Max Operating Voltage (Peak, between Contacts and Contacts to Base) (Max Leakage Current: 15 μ A)	28kV dc or 60Hz 22kV 2.5MHz 12kV 16MHz 10kV 32MHz	
Test Voltage (Peak, between Contacts and Contacts to Base) (Max Leakage Current: 15 μ A)	30kV dc or 60Hz	
Continuous Current Carry, Max	110A dc or 60Hz 60A 2.5MHz 40A 13.56MHz 30A 32MHz	
Load Switching (Make and Break)	(Consult Factory)	
Coil Hi-Pot (V RMS, 60Hz)	500V	
Capacitance (Open Contacts)	2.5pF	
(Contacts to Ground)	2.5pF	
Contact Resistance (Max)	0.005 Ω @ 1A, 28Vdc	
Operate Time (Max, incl bounce)	18 ms	
Release Time (Max)	10 ms	
Shock, Operating, 1/2 Sine, 11ms (Peak)	30G	
Vibration, Operating, Sine (55-500Hz Peak)	10G	
Operating Temperature	-55°C to 125°C	
Mechanical life	2,000,000 cycles	
Weight	345 g	
COIL (25° C)	MEASURE	
Nominal Voltage ^{1,2}	12 VDC	26.5 VDC
Pick-up Voltage, Max ³	8 VDC	16 VDC
Drop-out Voltage ³	0.5-5 VDC	1.0-10 VDC
Coil Resistance (\pm 10%) ¹	24 Ω	120 Ω

PRODUCT DIMENSIONS [mm]



3D model available upon request

OPTIONS

TABLE 2. PART NUMBER CONFIGURATION

SERIES	HIGH VOLTAGE CONNECTION	MOUNTING	COIL
R20	W = M6 Screw	P = Through Panel	Blank = 26.5VDC -12V = 12VDC

Available Part Numbers: R20WP, R20WP-12V

NOTES

1. Relay is operated by a coil that changes resistance with temperature: Maximum coil voltage will be lower than indicated at temperatures above 25°C, and higher than indicated at temperatures below 25°C.
2. Nominal Coil Voltage for Pick-up Current, Coil Current and Coil Power specifications, Current/Wattage will be lower than indicated at temperatures above 25°C and higher than indicated at temperatures below 25°C.
3. Pick-up Voltage and Drop Out Voltage will be lower than indicated at temperatures below 25°C and higher than indicated at temperatures above 25°C.

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