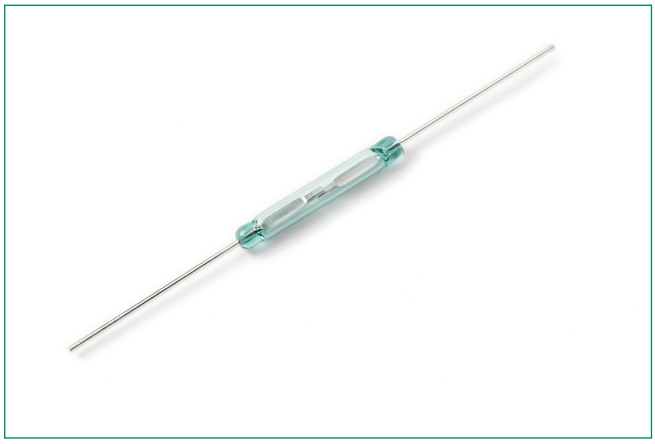
MRPR-20

20.3mm Miniature High Voltage and High Power Reed Switch



Description

The MRPR-20 Reed Switch is a miniature, normally open switch with a 20.32mm long x 2.84mm diameter (0.800" x 0.112") glass envelope, capable of high voltage and power switching of 265Vac at 50VA. The MRPR-20 has high insulation resistance of 10^{10} ohms minimum and contact resistance less than 100 milli-ohms.

Features & Benefits

- Miniature normally open switch
- Capable of switching 265Vac or 1.5A at up to 50W/VA
- Minimum breakdown voltage 750Vdc
- Available sensitivity range 17-43 AT
- UL Recognized to UL 121201, UL 60079-0, UL 60079-15, C22.2 No. 213-17, C22.2 No. 60079-0 and C22.2 No. 60079-15.
- Approved to EN 60079-0 and EN 60079-15.
- Hermetically sealed switch contacts are not affected by and have no effect on their external environment
- Zero operating power required for contact
- High voltage and power switching with a miniature switch

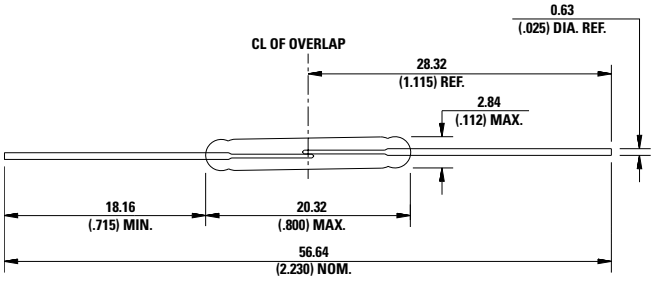
Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
c UL us	E47258, E471070	17-43 AT

Note: Contact Littelfuse for specific agency approval ratings.

Dimensions

Dimensions in mm (inch)



Applications

- Reed relays (suitable for switching global mains voltage)
- Limit switching
- Telecom line switching
- Heavy Load Switching

Switch Type

Contact Form	A (SPST-NO)
Materials	Body: Glass Leads: Tin-plated Ni-Fe wire

Note: SPST-NO = Single-pole, single-throw, normally open

Electrical Ratings

Contact Rating [1]		W/VA - max.	50
Voltage [3]	Switching [2]	Vdc - max.	250
		Vac - max.	265
	Breakdown [4]	Vdc - min.	750
Current [3]	Switching [2]	Adc - max.	1.5
		Aac - max.	1.1
	Carry	Adc - max.	3.0
Resistance	Contact, Initial	Ω - max.	0.100
	Insulation	Ω - min.	10^{10}
Capacitance	Contact	pF - typ.	0.2
Temperature	Operating	°C	-20 to +125
	Storage [5]	°C	-65 to +125

Notes:
1. Contact rating - Product of the switching voltage and current should never exceed the wattage rating. Contact Littelfuse for additional load/life information.
2. When switching inductive and/or capacitive loads, the effects of transient voltages and/or currents should be considered. Refer to Application Notes AN108A and AN107 for details.
3. Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
4. Breakdown Voltage - per MIL-STD-202, Method 301.
5. Storage Temperature - Long time exposure at elevated temperature may degrade solderability of the leads.

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MRPR-20

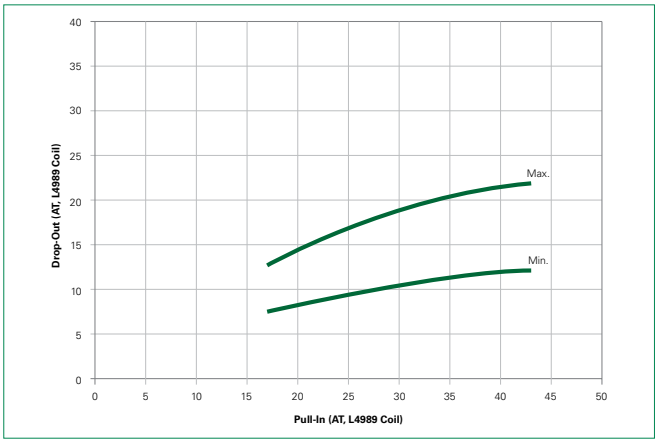
20.3mm Miniature High Voltage and High Power Reed Switch

Product Characteristics

Operating Characteristics		
Operate Time [1]		0.75ms - max.
Release Time [1]		0.3ms - max.
Shock [2]	11ms 1/2 sine wave	100G - max.
Vibration [2]	50-2000 Hertz	30G - max.
Resonant Frequency		2.1kHz - typ.
Magnetic Characteristics		
Pull-In Range [3]	Ampere Turns	17-43
Rating Sensitivity [4]	Ampere Turns	22
Test Coil	-	L4989

Notes:
1. Operate (including bounce)/Release Time - per EIA/NARM RS-421-A,diode suppressed coil (Coil II).
2. Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
3. Pull-In Range - Contact Littelfuse for narrower AT ranges available.
4. Rating Sensitivity - The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.
5. Custom modifications of forming and/or cutting of reed switches are available. Please contact Littelfuse.

Drop-Out vs. Pull-In Chart



Note: Chart represents the range of Drop-Out, min to max for a given Pull-In value.

Part Numbering System

MRPR-20 - 17-28

Series

AT Range
17-43 AT
17-23 AT
17-28 AT
22-33 AT
27-33 AT
27-38 AT
32-38 AT
32-43 AT
37-43 AT

Example:
17-28 AT product is
MRPR-20-17-28

Note: These AT values are the before-modification values of the bare reed switch.

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
Bulk	Bulk	1000	N/A	N/A

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/disclaimer-electronics.

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