Reed Switches Datasheet

MRPR-20 20.3mm Miniature High Voltage and High Power Reed Switch





Agency Approvals

Agency	Agency File Number	Ampere-Turns Range
c FL [°] us	E47258, E471070	17-43 AT

Note: Contact Littelfuse for specific agency approval ratings



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 10¹⁰ 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.

Applications

- Reed relays (suitable for switching global mains voltage)
- Limit switching

- 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
- Telecom line switching
- Heavy Load Switching

Switch Type

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

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

Electrical Ratings

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

Electrical Load Life Expectancy - Contact Littelfuse with voltage, current values along with type of load.
Breakdown Voltage - per MIL-STD-202, Method 301.
Storage Temperature - Long time exposure at elevated temperature may degrade solderability of the leads.



Product Characteristics

Operating Characteristics						
Operate Time 1		0.75ms - max.				
Release Time 1		0.3ms - max.				
Shock ²	Shock ² 11ms 1/2 sine wave					
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).

Shock and Vibration - per EIA/NARM RS-421-A and MIL-STD-202.
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.



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

Part Numbering System



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

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