

## MARR-5 Features and Benefits



### Features

- Miniature normally open switch with 19.69mm x 2.66mm (0.775" x 0.105") glass envelope
- Capable of switching 1000Vdc at up to 1mA
- Minimum voltage breakdown 2000Vdc
- $10^{12}$  Ohms insulation resistance
- Available sensitivity range 17-38 AT

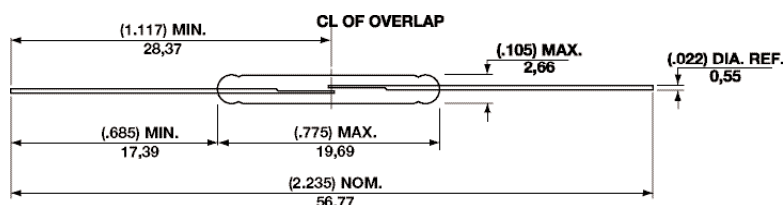
### Benefits

- Hermetically sealed switch contacts are not effected by and have no effect on their external environment
- Low, stable contact resistance
- Zero operating power required for contact closure
- Fit and forget durability

### Applications

- Reed relays (particularly suitable for high voltage breakdown applications)
- Security
- Limit switching
- Telecoms line switching
- Office equipment
- Automotive applications

## DIMENSIONS (in) mm



| Switch Type                                                    | MARR-5 |
|----------------------------------------------------------------|--------|
| Contact Form                                                   | A      |
| Underwriters Laboratories Recognised, File E47258 (see note 1) | UL     |

### ELECTRICAL RATINGS

|                    |                  |                    |             |
|--------------------|------------------|--------------------|-------------|
| Contact Rating (2) |                  | Watt - max.        | 10          |
| Voltage            | Switching (6)    | Vdc - max.         | 1000        |
|                    | Breakdown        | Vdc - min.         | 2000        |
| Current            | Switching        | A - max.           | 0.5         |
|                    | Carry            | A - max.           | 1.3         |
| Resistance         | Contact, Initial | $\Omega$ - max.    | 0.100       |
|                    | Insulation       | $\Omega$ - min.    | $10^{12}$   |
| Capacitance        | Contact          | pF - typ.          | 0.2         |
| Temperature        | Operating        | $^{\circ}\text{C}$ | -75 to +125 |
|                    | Storage (7)      | $^{\circ}\text{C}$ | -75 to +125 |

### OPERATING CHARACTERISTICS

|                    |                              |           |      |
|--------------------|------------------------------|-----------|------|
| Operate Time (3)   |                              | ms - max. | 0.75 |
| Release Time (3)   |                              | ms - max. | 0.3  |
| Shock              | 1 ms $\frac{1}{2}$ sine wave | G - max.  | 100  |
| Vibration          | 50-2000 Hertz                | G - max.  | 30   |
| Resonant Frequency |                              | Hz - typ. | 3200 |

### MAGNETIC CHARACTERISTICS

|                        |  |              |       |
|------------------------|--|--------------|-------|
| Pull-In Range (4)      |  | Ampere Turns | 17-38 |
| Rating Sensitivity (5) |  | Ampere Turns | 35    |
| Test Coil              |  |              | L4989 |

- Notes
- 1) For details on electrical specifications, contact Hamlin.
  - 2) Contact rating-Product of the switching voltage and current should never exceed the wattage rating. Contact Hamlin for additional load/life information.
  - 3) Operate (inc. bounce) /Release Time-per EIA/NARM RS421A, diode suppressed coil.

- 4) Pull in Range-Contact Hamlin for tolerances available within this range.
- 5) Rating Sensitivity-The value at which contact ratings and operating characteristics are determined. Derating may be required below this value.
- 6) MARR-5 Switching current is limited to 1ma at 1000Vdc. Higher voltages and currents can be switched using correct suppression circuitry (consult Hamlin).
- 7) Storage Temperature-Long time exposure at elevated temperature may degrade solderability of the leads.

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