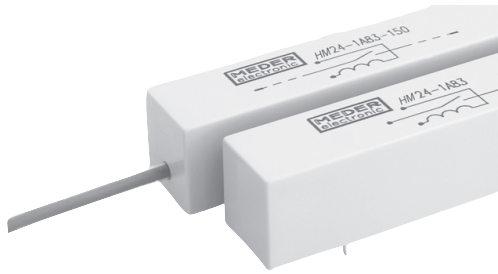


High Voltage Reed Relays for PCB Mounting



DESCRIPTION

High voltage Reed Relays for PCB mounting suitable for switching up to 10 kVDC and breakdown voltage up to 15 kVDC. This series is available with high voltage cables. Standard relays available in 1 Form A and 1 Form B switching configurations. 2 Form A and 1 Form C with a switching voltage of up to 2500 VDC are available, please consult factory.

FEATURES

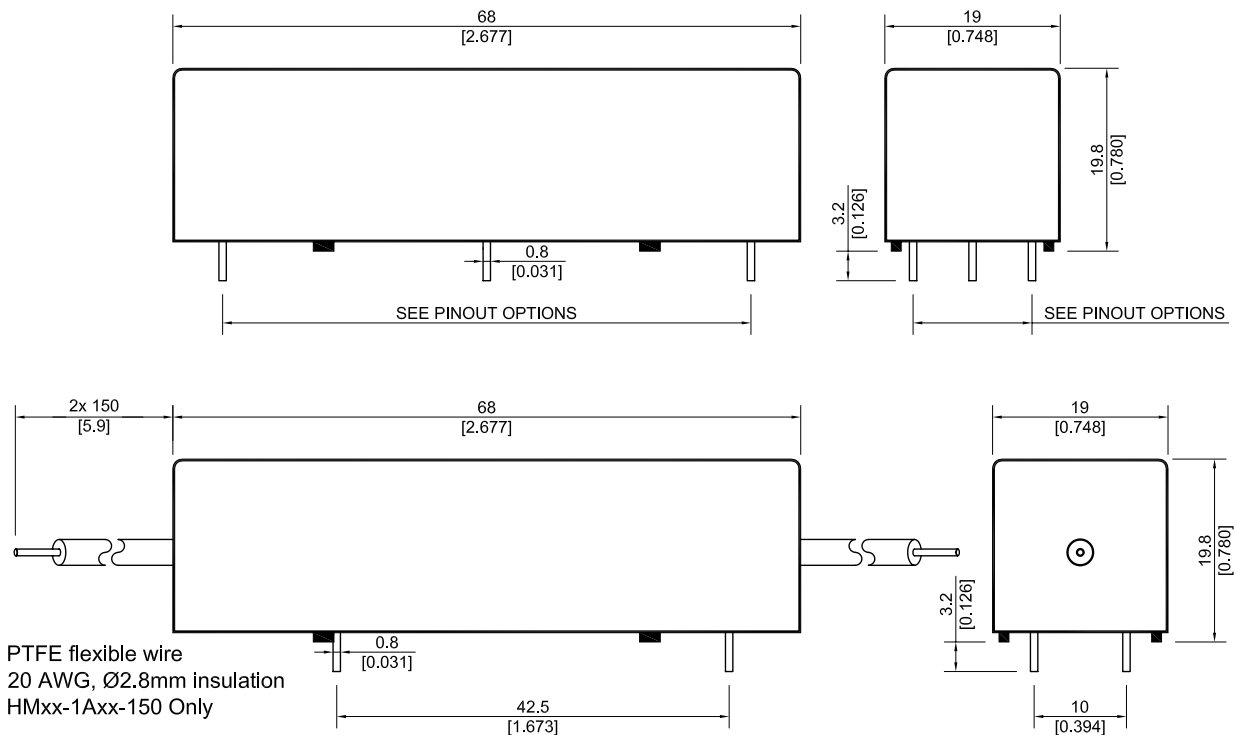
APPLICATIONS

- High voltage test sets
- Cable testers
- Medical equipment (RF surgery)

- Power switching up to 100 W available
- Special pin outs available
- 1 Form A and 1 Form B are standard
- Various case sizes and cable lengths available
- 32 mm spacing between contact and coil available

DIMENSIONS

All dimensions in mm [inches]



ORDER INFORMATION

Part Number Example

HM12 - 1A83 - 02

12 is the nominal voltage
1A is the contact form
83 is the switch model
02 is the pinout

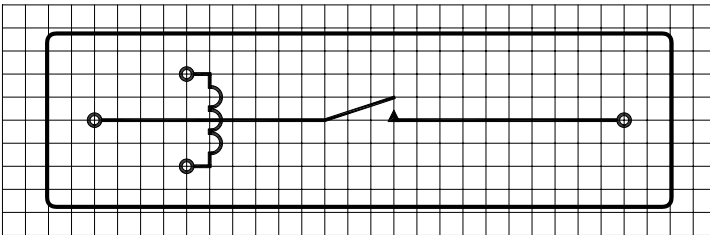
| SERIES | NOMINAL VOLTAGE | CONTACT FORM | SWITCH MODEL | PINOUT |
|---------|-----------------|--------------|--------------|-------------------------|
| HM | XX - | XX | XX - | XXx ** |
| OPTIONS | 05, 12, 24 | 1A* | 69, 83 | 02, 03, 04, 06, 08, 150 |
| | | 1B | 83 | |

* 2A available
** Pinouts only applicable for 1A

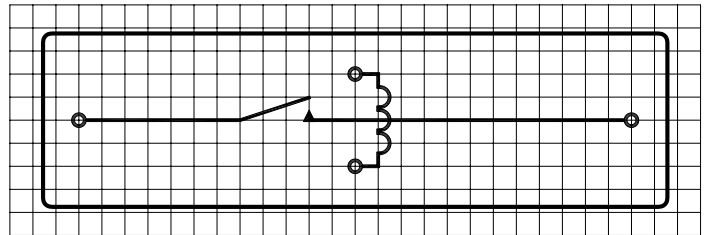
View from top of component
2.5mm [0.098"] pitch grid

PIN OUT

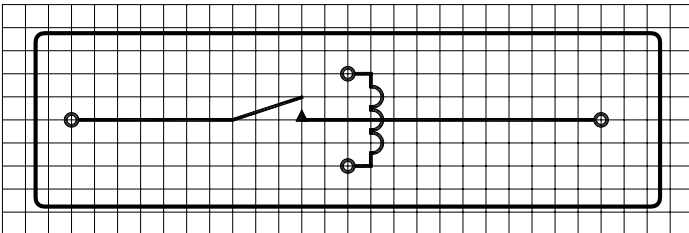
HMxx-1Axx



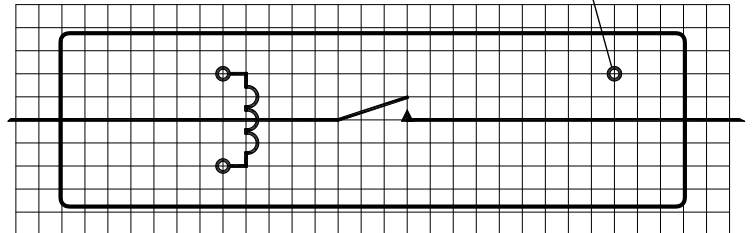
HMxx-1Axx-06



HMxx-1Axx-03

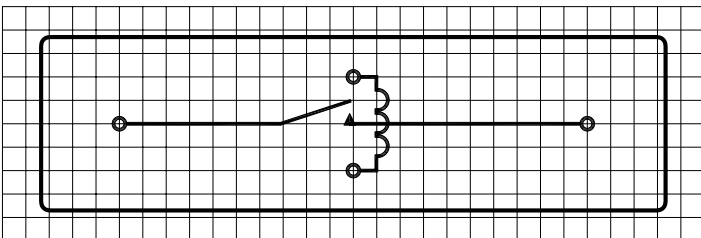


HMxx-1Axx-150

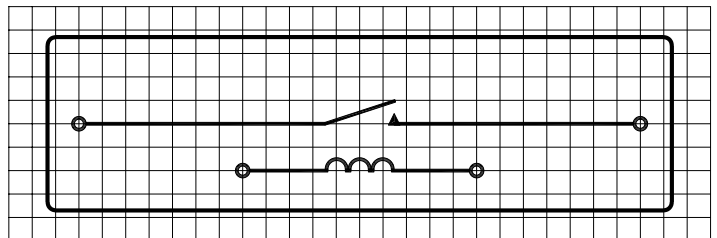


View from top of component
2.54mm [0.100"] pitch grid

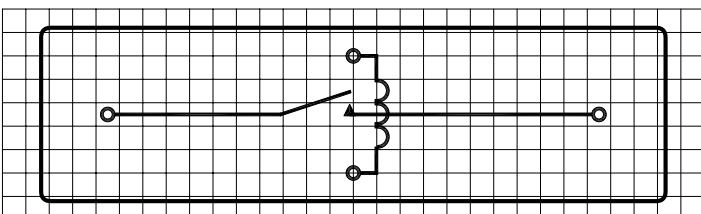
HMxx-1Axx-02



HMxx-1Axx-08



HMxx-1Axx-04



High Voltage Reed Relays for PCB Mounting

RELAY DATA

| All data at 20 °C | Switch Model --> Contact Form --> | Switch 69 Form A | | | Switch 83 Form A / B | | | Units |
|---|---|--------------------------------------|------------|------|--------------------------------------|------------|------|---------------------------|
| | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| Contact Ratings | Conditions | | | | | | | |
| Switching Power | Any DC combination of V & A not to exceed their individual max.'s | | | 50 | | | 50 | W |
| Switching Voltage | DC or peak AC | | | 10 | | | 7.5 | kV |
| Switching Current | DC or peak AC | | | 3.0 | | | 3.0 | A |
| Carry Current | DC or peak AC | | | 5.0 | | | 5.0 | A |
| Static Contact Resistance | w/ 0.5V & 50mA | | | 150 | | | 150 | mΩ |
| Insulation Resistance (100 Volts applied) | Across contacts Contact to coil | 10 ¹⁰ 10 ¹² | | | 10 ¹⁰ 10 ¹² | | | Ω |
| Breakdown Voltage | Across contacts Contact to coil | 15 15 | | | 10 15 | | | kVDC |
| Operate Time, incl. Bounce | Measured w/ 100% overdrive | | | 3.0 | | | 3.0 | ms |
| Reset Time | Measured w/ no coil suppression | | | 1.5 | | | 1.5 | ms |
| Capacitance | Across contacts Contact to coil | | 0.8 5.0 | | | 0.8 5.0 | | pF |
| Life Expectancies | | | | | | | | |
| Switching 5 Volts@ 10mA | DC only & <10 pF stray cap. | | 50 | | | 50 | | 10 ⁶ Cycles |
| For other load requirements please see our life test section located on page 151. | | | | | | | | |
| Environmental Data | | | | | | | | |
| Shock Resistance | 1/2 sine wave duration 11ms | | | 50 | | | 50 | g |
| Vibration Resistance | From 10 - 2000 Hz | | | 20 | | | 20 | g |
| Ambient Temperature | 10 °C/ minute max. allowable | -20 | | 70 | -20 | | 70 | °C |
| Storage Temperature | 10 °C/ minute max. allowable | -35 | | 105 | -35 | | 105 | °C |
| Soldering Temperature | 5 sec. dwell | | | 260 | | | 260 | °C |

COIL DATA

| CONTACT FORM | SWITCH MODEL | COIL VOLTAGE | | COIL RESISTANCE | | | PULL-IN VOLTAGE | | DROP-OUT VOLTAGE | | NOMINAL COIL POWER |
|--------------------|--------------|--------------|------|-----------------|------|------|-----------------|------|------------------|------|--------------------|
| All data at 20 °C* | | VDC | | Ω | | | VDC | | VDC | | mW |
| | | Nom. | Max. | Min. | Typ. | Max. | Min. | Max. | Min. | Max. | Typ. |
| 1A | 83 | 5 | 7.5 | 45 | 50 | 55 | 0.85 | 3.5 | 0.75 | 3.4 | 500 |
| | | 12 | 16 | 225 | 250 | 275 | 1.9 | 8.4 | 1.8 | 8.3 | 575 |
| | | 24 | 30 | 900 | 1000 | 1100 | 3.7 | 16.8 | 3.6 | 16.7 | 575 |
| 1B** | | 5 | 7.5 | 90 | 100 | 110 | 0.85 | 3.5 | 0.75 | 3.4 | 250 |
| | | 12 | 16 | 360 | 400 | 440 | 1.9 | 8.4 | 1.8 | 8.3 | 360 |
| | | 24 | 30 | 1350 | 1500 | 1650 | 3.7 | 16.8 | 3.6 | 16.7 | 385 |

* The pull-in / drop-out voltages and coil resistances will change at the rate of 0.4% per °C.
 ** Reclosure of the Form B may occur if the max. coil voltage is exceeded. Coil polarity on Form B must be observed.