

## High Voltage Reed Relays



## DESCRIPTION

High voltage relay having up to 10 kVDC switching and 15 kVDC breakdown voltage contact to coil.

## CHARACTERISTICS

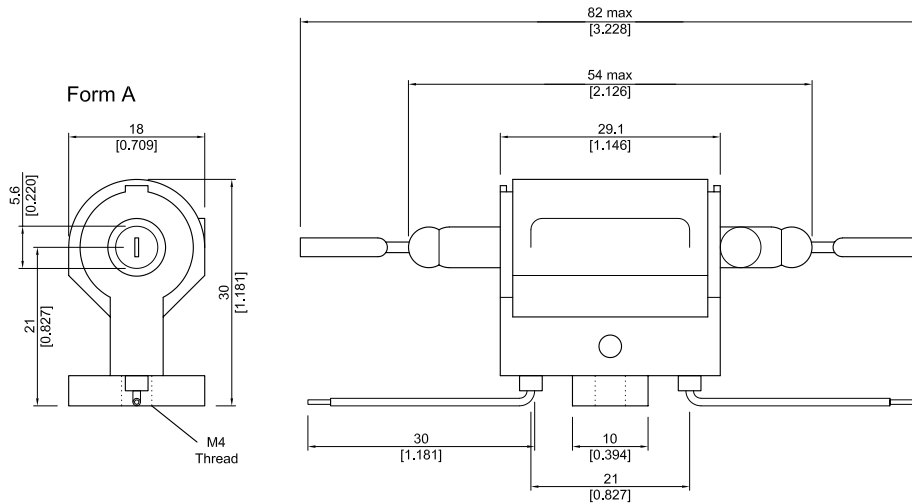
- Coil covered with a thermoplastic that meets UL94V-0

## FEATURES

- Form A and B options
- Switching up to 10 kVDC
- 1000 Gigaohm between coil and contact
- Breakdown voltage of 15 kVDC

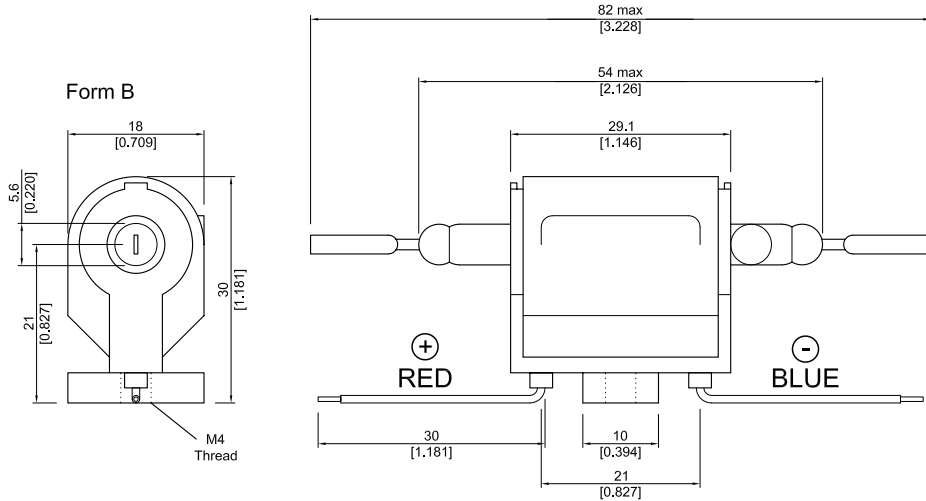
## DIMENSIONS

All dimensions in mm [inches]



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All dimensions in mm [inches]



**ORDER INFORMATION**

**Part Number Example**

H24 - 1A83

24 is the nominal voltage  
1A is the contact form  
83 is the switch model

SERIES	NOMINAL VOLTAGE	CONTACT FORM	SWITCH MODEL
H	XX -	1X	XX
OPTIONS	05, 12, 24	A, B	69, 77, 83

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### RELAY DATA

All data at 20 °C	Switch Model -> Contact Form ->	Switch 69 Form A / B			Switch 77 Form A / B			Switch 83 Form A / B			
Contact Ratings	Conditions	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Switching Power	Any DC combination of V & A not to exceed their individual max.'s			50			25			50	W
Switching Voltage	DC or peak AC			10			3.5			7.5	kV
Switching Current	DC or peak AC			3.0			0.5			3.0	A
Carry Current	DC or peak AC			5.0			6.0			5.0	A
Static Contact Resistance	w/ 0.5V & 50mA			150			150			150	mΩ
Dynamic Contact Resistance	Measured w/ 0.5V & 50mA 1.5 ms after closure			200			250			250	mΩ
Insulation Resistance (100 Volts applied)	Across contacts Contact to coil	10 <sup>10</sup> 10 <sup>12</sup>			10 <sup>10</sup> 10 <sup>12</sup>			10 <sup>9</sup> 10 <sup>12</sup>			Ω
Breakdown Voltage	Across contacts Contact to coil	15 15			15 15			10 15			KVDC
Operate Time, incl. Bounce	Measured w/ 100% overdrive			3.0			3.0			3.0	ms
Reset Time	Measured w/ no coil suppression			1.5			3.0			1.5	ms
Capacitance	Across contacts Contact to coil		0.8 8			0.8 8			0.8 8		pF
<b>Life Expectancies</b>											
Switching 5 Volts@ 10mA	DC only & <10 pF stray cap.		NA			200			50		10 <sup>9</sup> Cycles
For other load requirements please see our life test section located on page 151.											
<b>Environmental Data</b>											
Shock Resistance	1/2 sine wave duration 11ms			50			50			50	g
Vibration Resistance	From 10 - 2000 Hz			20			20			20	g
Ambient Temperature	10 °C/ minute max. allowable	-20		70	-20		70	-20		70	°C
Storage Temperature	10 °C/ minute max. allowable	-25		85	-25		85	-25		85	°C
Soldering Temperature	5 sec. dwell			260			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	69 77 83	5	7.5	45	50	55	0.85	3.5	0.75	3.4	500
		12	16	306	340	374	1.9	8.4	1.8	8.3	425
		24	30	1350	1500	1650	3.7	16.8	3.6	16.7	385
1B **		5	7.5	59	65	72	0.85	3.5	0.75	3.4	385
		12	16	248	275	303	1.9	8.4	1.8	8.3	525
		24	30	585	650	715	3.7	16.8	3.6	16.7	885

\* The pull-in / drop-out voltages and coil resistance 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. Red lead is positive.