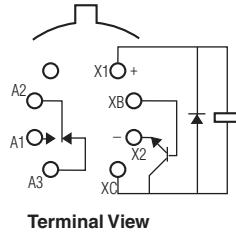


**Single Pole, Electrically Held, 1 Amp and Less** (Continued)

1MST

**1MST**  
**Sensitive T0-5**  
**Diode Suppressed/**  
**Transistor Driven**  
**High Performance Relay**  
**Qualified to MIL-R-28776/4**



**Product Facts**

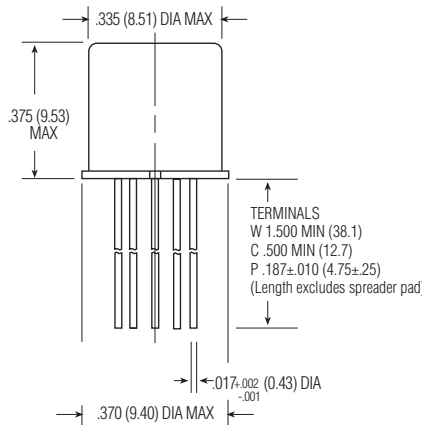
- Transistor driver & suppression diode
- Hermetically sealed
- High shock & vibration ratings
- Spreader pad
- Excellent RF switching

**Electrical Characteristics**

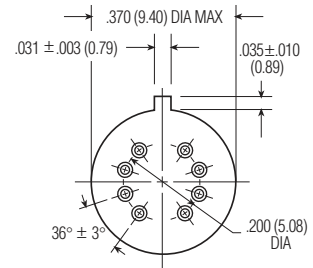
**Contact Arrangement** — 1 Form C (SPDT)  
**Contact Material** — Stationary — Gold/platinum/palladium/silver alloy (gold plated)  
 Moveable — Gold/platinum/palladium/silver alloy (gold plated)  
**Contact Resistance** — Before Life — 100 milliohms max. (measured @ 10 mA @ 6 Vdc)  
 After Life — 200 milliohms max. (measured @ 1 A @ 28 Vdc)  
**Mechanical Life Expectancy** — 1 million operations  
**Coil Voltage** — 5 to 40 Vdc  
**Coil Power** — 506 mW max. @ 25°C  
**Duty Cycle** — Continuous  
**Pick-up Voltage** — Approximately 50% of nominal coil voltage  
**Pick-up Sensitivity** — 40 mW max. @ 25°C

**Contact Ratings**

Contact Load	Type	Operations Min.
1.0 A @ 28 Vdc	Resistive	100,000
250 mA @ 115 Vac, 60 Hz & 400 Hz	Resistive (case not grounded)	100,000
100 mA @ 115 Vac, 60 Hz & 400 Hz	Resistive	100,000
0.2 A @ 28 Vdc	Inductive (0.32 Henry)	100,000
0.1 A @ 28 Vdc	Lamp	100,000
30 µA @ 50 mVdc	Low Level	1,000,000
0.1 A @ 28 Vdc	Intermediate Current	50,000



1MST Enclosure



1MST Header

**Single Pole, Electrically Held, 1 Amp and Less** (Continued)

**1MST** (Continued)

**Operating Characteristics**

**Timing** —  
 Operate Time — 3.5 ms max.  
 Release Time — 7.5 ms max.  
**Contact Bounce** — 1.5 ms max  
**Dielectric Withstanding Voltage** —  
 Between Open Contacts — 500 Vrms 60 Hz  
 Between Adjacent Contacts — 500 Vrms 60 Hz  
 Between Contacts & Coil — 500 Vrms 60 Hz  
**Insulation Resistance** —  
 10,000 megohms @ 500 Vdc  
 1,000 megohms @ 500 Vdc (coil to case @ +125°C)

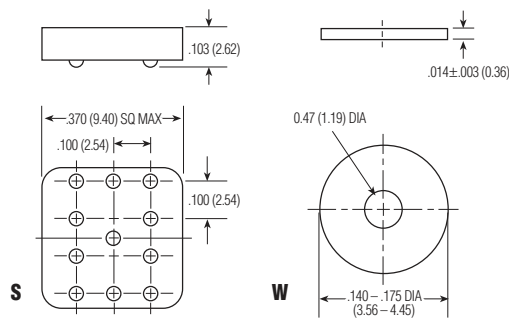
**Environmental Characteristics**

**Temperature Range** — -65°C to +125°C  
**Weight** —  
 0.10 oz. (2.84 grms)  
 0.11 oz. (3.09 grms) with spreader pad attached  
**Vibration Resistance** — 30 G's, 10 to 3,000 Hz  
**Shock Resistance** — 75 G's, 6 ±1 ms max.  
**QPL Approval** — MIL-R-28776/4 (J1MST)

**Semiconductor Characteristics**

**Diode** —  
 100 Vdc peak inverse voltage (PIV)  
 1.0 Vdc max. transient voltage  
**Transistor** —  
 0.3 Vdc min. base turn off voltage;  
 6.0 Vdc min. emitter-base breakdown voltage (BV<sub>EB0</sub>) @ 25°C;  
 80.0 Vdc min. collector-base breakdown voltage (BV<sub>CB0</sub>) @ 25°C & I<sub>C</sub>=100 µA

1  
CII Low Signal Relays



Spreader & Mounting Pads

**Coil Data**

Nom. Coil Voltage (Vdc)	Coil Resistance in Ohms ±10% @ 25°C (Note 1)	Coil Circuit Current mA (Max.) (Note 1&2)	Coil Circuit Current mA (Min.) (Note 1&2)	Pickup Voltage Vdc (Max.) @ 25°C (Note 2)	Base Turn On Current mA (Max.) @ 25°C	Pickup Voltage Vdc (Max.) @ 125°C (Note 2)	Base Turn On Current mA (Max.) @ 125°C	Drop-Out Voltage Vdc (Min.) @ 25°C (Note 2)	Drop-Out Voltage Vdc (Min.) @ -65°C (Note 2)	Nom. Coil Power (mW) @ 25°C	Max. Coil Voltage	Coil Desig.
1MST												
5.0	125	47.8	34.7	2.6	0.28	3.6	1.20	0.22	0.15	200	8.0	5
6.0	255	27.7	21.2	3.5	0.20	4.8	0.78	0.28	0.18	141	11.0	6
9.0	630	16.8	11.8	5.4	0.13	7.8	0.48	0.54	0.35	129	16.0	9
12.0	1,025	13.6	10.1	6.6	0.10	10.0	0.39	0.63	0.41	140	22.0	12
18.0	2,300	9.1	6.7	9.8	0.07	14.5	0.26	0.91	0.58	141	33.0	18
26.5	4,000	7.7	5.7	12.8	0.05	19.0	0.20	1.37	0.89	176	45.0	26
32.0	6,500	5.8	4.2	18.7	0.04	24.0	0.16	1.60	1.00	158	57.0	32
40.0	11,000	4.3	3.1	23.3	0.03	30.0	0.13	2.10	1.30	145	75.0	40

**Notes:** 1. Coil resistance not directly measurable. Coil current should be within limits shown when tested at nominal voltage at 25°C for 5 seconds max.  
 2. Set base current at 3 mA to 15 mA during measurements.

**Ordering Instructions**

Catalog-selected Relays: The catalog number is derived by choosing the proper CODE for each of the relay characteristics in the order in which the codes are listed.

Specifying a Part Number Example:	Type	Terminal	Diodes	Coils	Spreader/Mounting Pads
	1MS	C	T	-26	S

\* The part number example shown on this page is for catalog items. For a list of specific QPL part numbers, please see the index in Section 15.