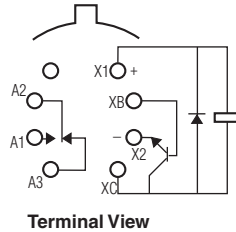


Single Pole, Electrically Held, 1 Amp and Less (Continued)

1MST

1MST

**Sensitive TO-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

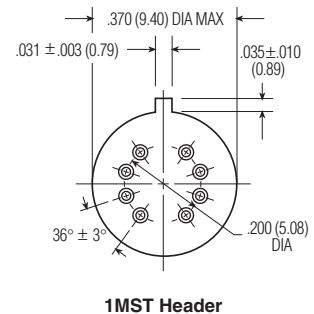
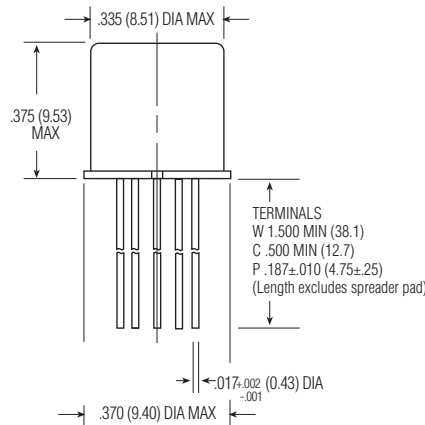
Duty Cycle — Continuous

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



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

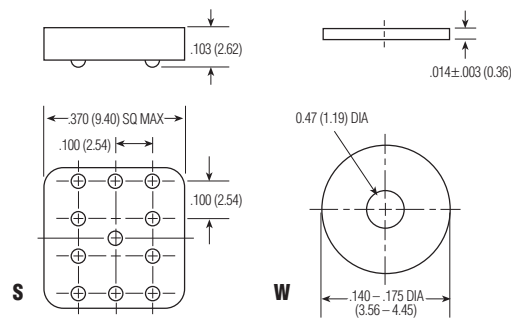
Transistor —

0.3 Vdc min. base turn off voltage;

6.0 Vdc min. emitter-base breakdown

voltage (BV_{EB0}) @ 25°C;

80.0 Vdc min. collector-base breakdown

voltage (BV_{CB0}) @ 25°C & I_C=100 µA


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	10
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

1MS

Terminal

C

Diodes

T

Coils

-26

Spreader/Mounting Pads

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.