

LOW POWER (50 mW) BITE Indicators

Model MI 51LP

Qualified to MIL-I-83287/4

FEATURES

- 50 Milliwatt Sensitivity
- Manual Reset
- Magnetic Latching
- Environmentally Sealed

The MI 51LP is a miniature dual coil magnetic latching drum indicator, featuring a nonvolatile two-drum display, excellent positive indication of a fault condition with superior visibility in high ambient light. It is fully qualified to MIL-I-83287 and is designed to monitor electronic systems where space is limited.

OPERATION

When the indicator coil is energized with a 25 millisecond (or longer) pulse, the highly visible drums spin 180 degrees and latches to the magnetic core. The drums will remain magnetically latched to the core in the position last pulsed. Even if the fault signal is removed, the indicator will "remember" that a fault had occurred. A similar pulse of proper polarity applied to the reset coil will cause the drum to rotate and show black.

ELECTRICAL SPECIFICATIONS

Standard Coil Voltages and Resistances

DC Coil Resistance in Ohms, +10%	Nominal Voltage DC @ 25°C	Operating Voltage	
		Min Required	Max Allowed
45	1.5	1.2	1.8
180	3	2.4	3.6
500	5	4.0	6.0
720	6	4.8	7.2
2,880	12	9.6	14.4
11,500	24	19.2	30.0
15,700	28	22.4	35.0

Pulse Power: 50 mw.

Nominal Pulse Length: 25 milliseconds, minimum.

Dielectric Withstanding Voltage: 500 V RMS

Insulation Resistance: Mil Spec: Per MIL-I-83287
100 megohms minimum at 500 VDC.

Electromagnetic Interference and Magnetic Susceptibility:

Per MIL-I-83287. The MI 51LP will not malfunction or false transfer when subjected to a 20 ampere turn field at 400 Hertz.

MECHANICAL SPECIFICATIONS

Case: Black, anodized aluminum.

Mounting: Front panel mount (D hole or keyed washer)

Weight: 6.5 grams

Display Colors: "NO FAULT" (reset) is black,
"FAULT" (set) is white, as shown.

Terminations: Solder terminals (turret type), and wire leads standard per MIL-I- 83287. *Solder loops also available.*

Designations are:

Turret Terminals TT (Standard)

Wire Leads WL (Standard)

Loop Terminals LT (Special)

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range: -65°C to +125°C.

Vibration*: .06" D.A. or 15 G Peak, whichever is less, 10 Hz to 2 kHz
per MIL STD 202, Method 204, Test Condition B.

Shock: 100 G's MIL STD 202, Method 213, Test Condition I.

Moisture Resistance: (Humidity): MIL STD 202, Method 106.

Altitude: 100,000 ft., MIL STD 202, Method 105, Test Condition D.

Thermal Shock: MIL STD 202, Method 105, Test Condition B.

Salt Spray: MIL STD 202, Method 105, Test Condition B.

Life: 10,000 cycles at cycling rate of 10 per minute.

During vibration testing caution should be taken to shield the indicator from the strong magnetic field.

Patent No. 3,465,333

ORDERING INFORMATION When ordering, show model number first, then coil voltage desired, then the color combination desired. If this is a special part, factory assigned modification number will be added at the end of the ordering number.

Example:

Basic model for 12 volts with white as set color and black as reset color would be model MI 51LP-12-W/BLK-TT.

MI 51LP - 12 - W/BLK - TT - S

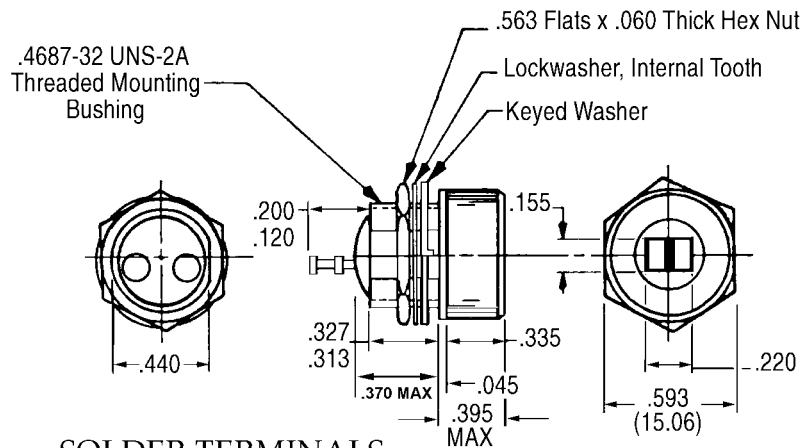
Basic Model	Coil Voltage	Color Combination	Terminal Type	Factory Modification Number if Special
MI51LP	1.5	W/BLK	LT-Solder Loops	S + ID No.
	3		WL-Wire Leads	
	5		TT-Turret Terminals	
	6			
	12			
	24			
	28			

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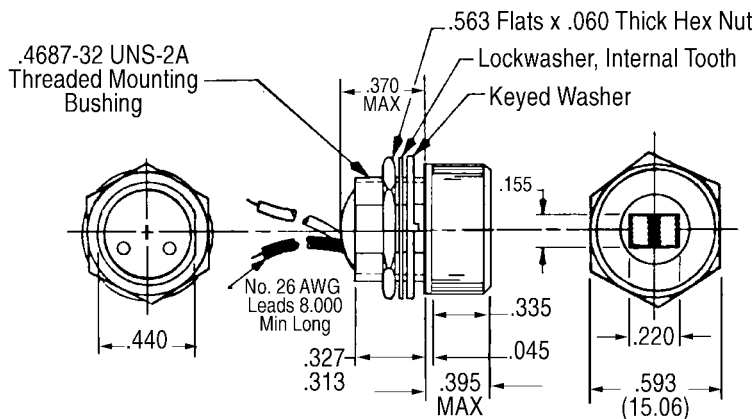
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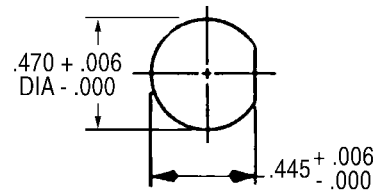
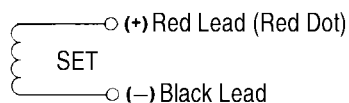
Model MI 51LP



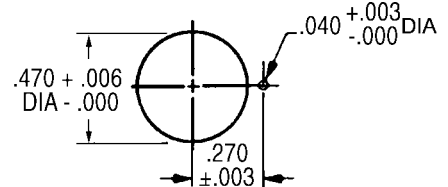
SOLDER TERMINALS



SCHEMATIC



PANEL LAYOUT



Optional Panel Layout
Using Keyed Washer

NOTE:

Dim. in () are mm. Tolerances: Decimals: $\pm .010$ (0,25), Fractions: $\pm 1/64$ —All mounting hardware is black anodized aluminum. Mounting Torque: 5-7 in. lbs.