



Miniature BITE Indicators

Latching Type

Qualified to MIL-PRF-83287/3*

BHG (Single Coil) Family

BHGD (Dual Coil) Family

FEATURES

- Magnetic Latching
- High Visibility
- Small, Lightweight
- Ultra Reliable

Our patented latching feature assures fast positive response to a fault signal. The display ball changes color only when the indicator coil is pulsed by a BITE (Built-In Test Equipment) system. Our magnetic indicators have no bearings, springs or filaments to wear out and offer excellent visibility in high ambient light.

OPERATION

When the indicator coil is energized with a 40 millisecond (or longer) pulse, the highly visible, two-color display ball spins 180 degrees and latches to the magnetic core. The displayed ball 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 has occurred.

Return to "No-Fault" color is accomplished electrically. Model BHG (single coil) is reset by reversing polarity of input signal to the coil. Model BHGD (dual coil) is reset by pulsing a separate internal coil.

Optional features include insulated lead wire termination, special lenses (radius dome, cylindrical, non-glare), "O" ring panel seal, internally mounted diodes and RFI panel shield. Consult the factory for details.

Care should be taken in the application of the device as it is subject to magnetic interference from other devices that may emit magnetic fields.

* See page 27 for additional /3 qualified designs.

ELECTRICAL SPECIFICATIONS

Standard Coil Voltages and Resistances

| Nominal Voltage DC | Operating Voltage | | DC Coil Resistance in Ohms |
|--------------------|-------------------|------|----------------------------|
| | Min | Max | |
| 1.5 | 1.25 | 1.75 | 3.1-3.8 |
| 3.0 | 2.5 | 3.5 | 12-15.2 |
| 5.0 | 4.5 | 5.5 | 34-42 |
| 6.0 | 5.5 | 6.5 | 49-61 |
| 12.0 | 9.0 | 15.0 | 198-242 |
| 24.0 | 17.0 | 27.0 | 792-968 |
| 28.0 | 20.0 | 30.0 | 1080-1320 |

Nominal Pulse Power: 650 milliwatts.

Operating Pulse Length: will operate at 40 milliseconds or greater.

Dielectric Withstanding Voltage: 500 VAC RMS case-to-terminals; 500 VAC RMS coil-to-coil (BHGD style).

Insulation Resistance: 100 megohms minimum at 500 VDC

MECHANICAL SPECIFICATIONS

Case: Aluminum, black anodized with sealed glass window.

Mounting: Front panel threaded, rear panel threaded, and press fit sleeve.

Weight:

| | |
|---|-----------|
| Models BHG 21, BHG 21T, BHG 27T | 2.5 Grams |
| Models BHGD 21, BHGD 21T, BHGD 27T, BHG 37T | 3.0 Grams |
| Model BHGD 37T | 4.0 Grams |

Display Colors: Any combination of: Red (R), White (W), Black (BLK), Green (G), Yellow (Y), or Orange (O).

Mounting Hardware: Lockwasher, internal tooth bronze, Nylon mounting sleeve. Hex nuts are black anodized aluminum. Body diameter on all MIL qualified units is .275 in. (7,00mm). See page 5 for Indicator dimensions.

Display Area: all units measure .200 in. (5,08mm) diameter

ENVIRONMENTAL SPECIFICATIONS

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

Vibration*: Sinusoidal: .06" D.A. or 20 G Peak, whichever is less, 10Hz to 2 kHz,

MIL STD 202, Method 204, Test Condition D.

Random Vibration: 11.6 G's per MIL STD 202, Method 214, Test Condition D, Curve I.

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

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

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

Thermal Shock: MIL STD 202, Method 107, Test Condition B.

Salt Spray: MIL STD 202, Method 101, Test Condition B.

Immersion: 3-ft. head of water for two minutes. IP67

Life: 1,000,000 cycles at cycling rate of 10 per minute.

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

ORDERING INFORMATION

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

Example:

Single coil model with front panel threaded case for 12 volts with white as set color and black as reset color would be Model BHG21T-12-W/BLK.

Covered by U.S. and Foreign Patents.

BHG21T - 12 - W / BLK - S

| Basic Model Number | Coil Voltage | Fault or Set Color | No-Fault or Reset Color | Factory Modification Number if Special S.+ ID No. |
|--------------------|--------------|--------------------|-------------------------|---|
| BHG21 | 1.5 | R Red | R Red | |
| BHG21T | 3 | W White | W White | |
| BHG27T | 5 | BLK Black | BLK Black | |
| BHG37T | 6 | G Green | G Green | |
| BHGD21 | 12 | Y Yellow | Y Yellow | |
| BHGD21T | 24 | O Orange | O Orange | |
| BHGD27T | 28 | | | |



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BALL INDICATORS

* See page 27 for additional /3 qualified designs.

Recommended Cut-Out is .315 in.

| | | |
|--|--|---|
| <p>BHG21 BHGD21</p> | <p>BHG27T BHGD27T</p> | |
| <p>BHG21T BHGD21T</p> | <p>BHG37T BHGD37T</p> | |
| <p>ELECTRICAL DATA</p> | | |
| <p>MECHANICAL DATA</p> | | <p>OPTIONS AVAILABLE (consult factory)</p> |

NOTE: Dimensions in () are mm. Tolerances: Decimals: ± .010 (0.25) Fractions: ± 1/64—All mounting hardware is black anodized aluminum. Mounting Torque: 5-7 in. lbs.