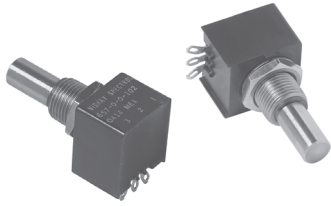


Industrial Rotary Position Sensor Bushing Mount Type, Conductive Plastic






FEATURES

- Fully sealed for high immunity to environmental damage
- Excellent temperature stability
- Rotational life exceeds 2 million revolutions
- Low cost and wide range of options
- Stainless steel shaft
- Shock to 30 G's vibration to 15 G's at 10 to 2000 Hz

| ELECTRICAL SPECIFICATIONS | |
|----------------------------------|---------------------------------------|
| PARAMETER | |
| Standard Resistance | 1 k Ω to 100 k Ω |
| Capability Range | 200 k Ω |
| Resistance Tolerance | $\pm 20\%$ |
| Linearity | $\pm 2\%$ |
| Power Rating | 1.0 W at 85 °C |
| Electrical Travel | 240° \pm 4° |
| Dielectric Withstanding | 500 V _{RMS} at 60 Hz minimum |
| Output Smoothness | 0.2 % maximum |

| MECHANICAL SPECIFICATIONS | |
|----------------------------------|----------------------------------|
| PARAMETER | |
| Bearing Type | Sleeve |
| Mechanical Rotation | 250° \pm 2° |
| Stop Strength | 10 in - lb minimum 11.5 kg/cm |
| Starting Torque | 3.0 o.z - in maximum 216 g/cm |
| Running Torque | 3.0 oz. - in maximum 216 g/cm |

| ORDERING INFORMATION/DESCRIPTION | | | | | | | |
|---|------------|--------------------------|---|---|---|------------------|------------------|
| 657 | B | F | 0 | | | 50 k Ω | BO10 |
| MODEL | STYLE | SHAFT OPTIONS | SHAFT BUSHING OPTIONS | | | TOTAL RESISTANCE | PACKAGING |
| | B: Bushing | R - Round F - Flatted |  Shaft Length 0 - 0.875" FMS 1 - 0.625" FMS 2 - 1.000" FMS 3 - 1.250" FMS |  Bushing Length 0.375" FMS 0.250" FMS 0.500" FMS 0.750" FMS |  Flat 0.440" 0.315" 0.440" 0.440" | | Box of 10 pieces |

| SAP PART NUMBERING GUIDELINES | | | | |
|--------------------------------------|-----------|---------------------------|-------------|-----------|
| 657B | R | 1 | 103 | BO10 |
| MODEL | END SHAFT | SHAFT AND BUSHING OPTIONS | OHMIC VALUE | PACKAGING |
| | R: Round | (see above) | | |

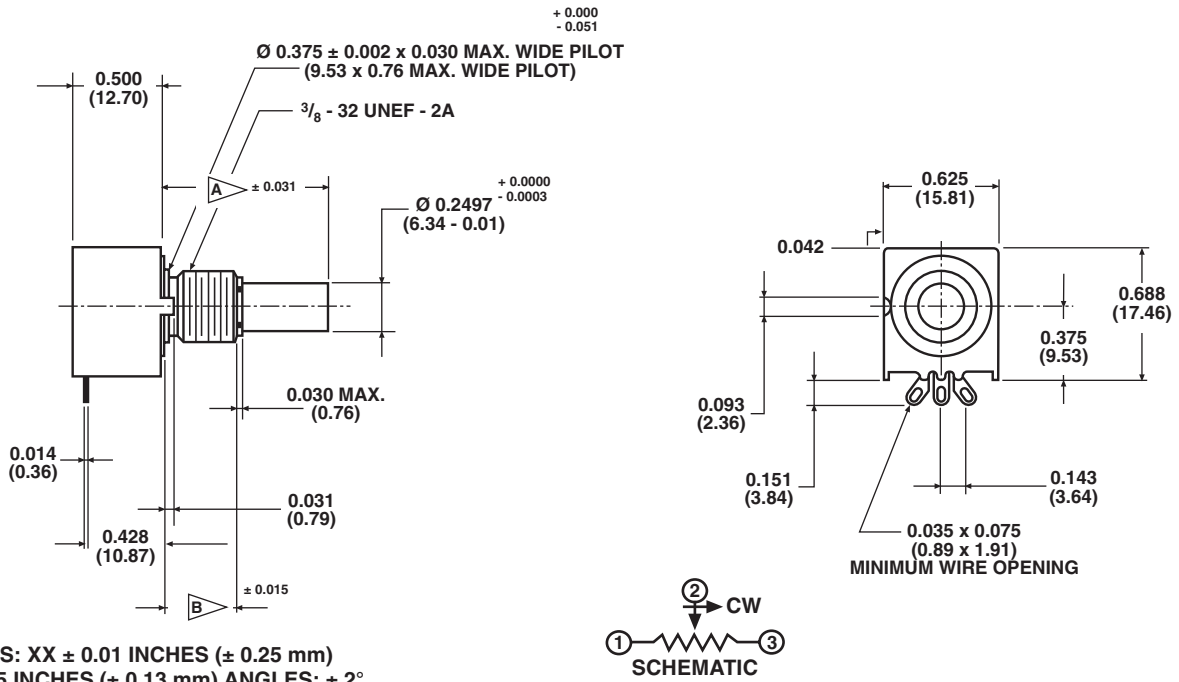
Model 657



Vishay Spectrol

Industrial Rotary Position Sensor
Bushing Mount Type, Conductive Plastic

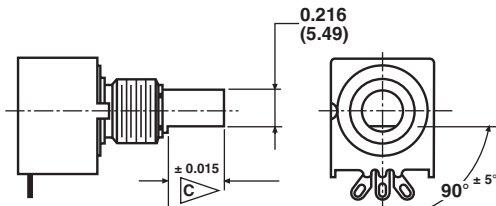
DIMENSIONS in inches (millimeters)



DECIMALS: XX ± 0.01 INCHES (± 0.25 mm)
XX ± 0.005 INCHES (± 0.13 mm) ANGLES: ± 2°



SHAFT FLAT AND PHASING DIAGRAM



WITH SHAFT FLAT POSITIONED AS SHOWN, OUTPUT RATIO
TO BE e/E = 0.50 ± 0.02



| STANDARD RESISTANCE VALUES | |
|----------------------------|----------------|
| CODE | RESISTANCE (Ω) |
| 102 | 1K |
| 202 | 2K |
| 502 | 5K |
| 103 | 10K |
| 203 | 20K |
| 503 | 50K |
| 104 | 100K |

| ENVIRONMENTAL SPECIFICATIONS | |
|----------------------------------|--|
| Rotational Life | 2 million revolutions |
| Vibration | 15 G's at 10 to 2000 Hz |
| Operating Temperature | - 40 °C to + 125 °C |
| Storage Temperature | - 55 °C to + 150 °C |
| Temperature Coefficient | ± 600 ppm/°C |
| Shock | 30 G's |
| Resistant to Solder Heat | 350 °C for 5 s |
| Moisture Resistance IP Rating | Sealed construction IP67* application to provide protection for wiring terminals |

| MATERIAL SPECIFICATIONS | |
|-------------------------|---|
| Shaft | Stainless steel |
| Bushing | Nickel plated brass |
| Housing | Thermoplastic |
| Element | Conductive plastic on alumina substrate |

| MARKING | |
|---------------------|---|
| Unit Identification | Vishay Spectrol, part number, data code, country of origin and terminal designation |



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All product specifications and data are subject to change without notice.

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