

7/8" (22.2 mm) Ten Turn Wirewound Precision Potentiometer with a Plastic Shaft


FEATURES

- 10 standard resistance values
- Plastic shaft
- Rugged integrated construction
- 0.25 % linearity
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

QUICK REFERENCE DATA

| | |
|------------------|----------------------------------|
| Sensor type | ROTATIONAL, multi turn wirewound |
| Output type | Output by turrets |
| Market appliance | Industrial |
| Dimensions | 7/8" (22.2 mm) |

ELECTRICAL SPECIFICATIONS

| PARAMETER | |
|-----------------------------|---|
| Total resistance | Range 100 Ω to 100 kΩ, tolerance ± 5 % |
| Linearity (independent) | ± 0.25 % |
| Noise | 100 Ω ENR maximum |
| Electrical angle | 3600° + 10° - 0° |
| Power rating | 2.0 W at 70 °C derated to zero at 125 °C |
| Insulation resistance | 1000 MΩ minimum, 500 V _{DC} |
| Dielectric strength | 1000 V _{RMS} , 60 Hz |
| Absolute minimum resistance | Not to exceed 0.10 % of total resistance or 1 Ω, whichever is greater |
| Temperature coefficient | 20 ppm/°C (wire only) |
| End voltage | 0.25 % of total applied voltage maximum |

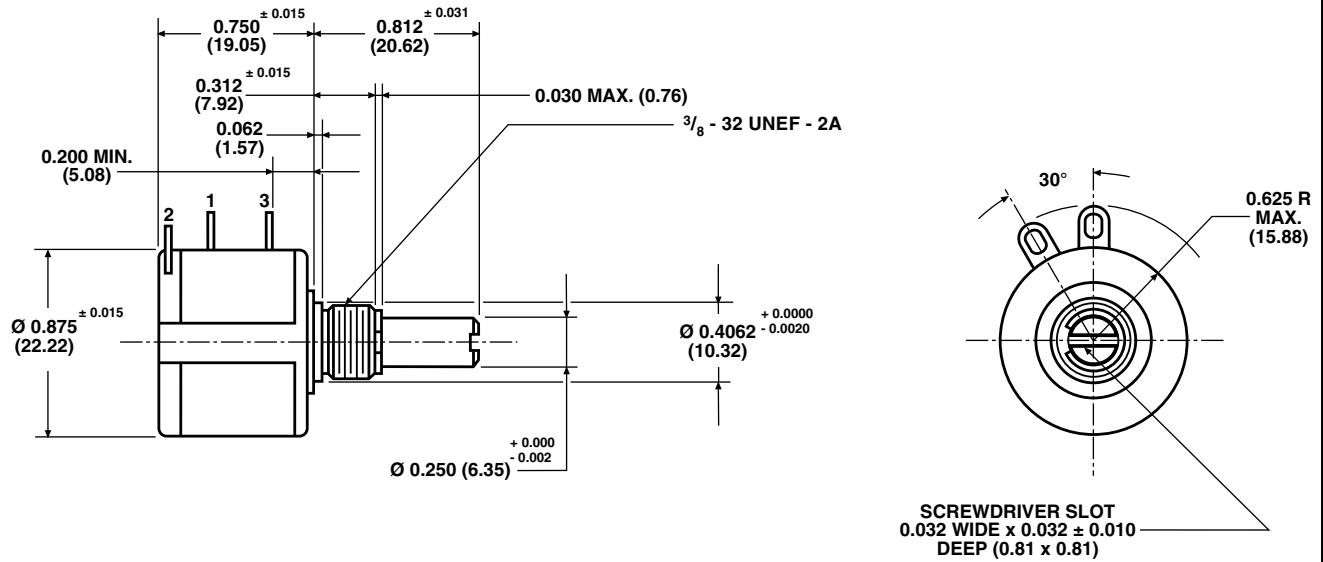
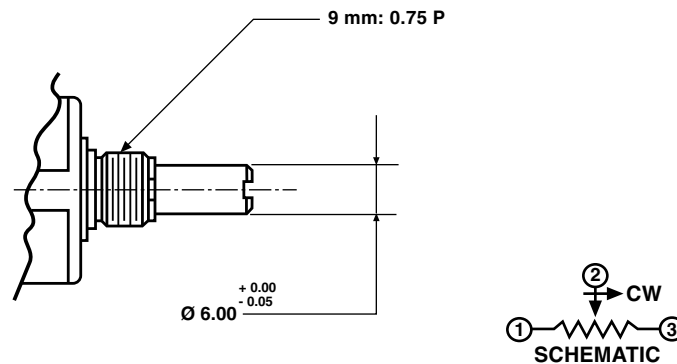
ORDERING INFORMATION/DESCRIPTION

| 536 | B | 10K | BO10 | e4 |
|-------|------------|-------------|------------------|-------------|
| MODEL | MOUNTING | OHMIC VALUE | PACKAGING | LEAD FINISH |
| | B: Bushing | | Box of 10 pieces | |

SAP PART NUMBERING GUIDELINES

| 536 | B | 103 | B10 |
|-------|-------|-------------|-----------|
| MODEL | STYLE | OHMIC VALUE | PACKAGING |

DIMENSIONS in inches (millimeters)

BUSHING MOUNT

METRIC SHAFT/BUSHING THREAD


TOLERANCES: UNLESS OTHERWISE NOTED.
 DECIMALS ± 0.005 ANGLES $\pm 2^\circ$

MECHANICAL SPECIFICATIONS

| PARAMETER | | |
|----------------------|--|---|
| Rotation | $3600^\circ + 10^\circ$ $- 0^\circ$ | |
| Torque (maximums) | STARTING 0.5 oz. - in (36.00 g - cm) | RUNNING 0.4 oz. - in (28.80 g - cm) |
| Mechanical runouts | | |
| Shaft (TIR) | 0.005" (0.13 cm) | |
| Pilot dia. (TIR) | 0.003" (0.08 cm) | |
| Lateral runout (TIR) | 0.005" (0.13 cm) | |
| Shaft end play | 0.010" (0.25 cm) | |
| Shaft radial play | 0.005" (0.13 cm) | |
| Weight (maximum) | 0.75 oz. (21.26 g) | |
| Stop strength | 75 oz. - in (static) (5.4 kg - cm) | |



| MATERIAL SPECIFICATIONS | |
|---|---|
| Front lid | Stainless steel and nickel plated brass bushing |
| Housing | Thermoplastic nylon glass filled |
| Rear lid | Thermo-glass filled |
| Shaft | Thermo-glass filled |
| Terminals | Brass plated for solderability |
| Mounting hardware Lockwasher internal tooth: Panel nut: | Steel nickel plated Brass, nickel plated |

| ENVIRONMENTAL SPECIFICATIONS | |
|------------------------------|-----------------------------|
| Vibration | 15 g thru 2000 Hz |
| Shock | 50 g |
| Rotational life | 1 million shaft revolutions |
| Load life | 900 h |
| Operating temperature range | - 55 °C to + 125 °C |

POWER RATING CHART



| RESISTANCE ELEMENT DATA | | | | |
|--------------------------------|----------------|---------------|---------------------------------------|---------------------------------|
| STANDARD RESISTANCE VALUES (Ω) | RESOLUTION (%) | OHMS PER TURN | MAXIMUM CURRENT AT 70 °C AMBIENT (mA) | MAXIMUM VOLTAGE ACROSS COIL (V) |
| 100 | 0.060 | 0.0603 | 141.0 | 14.1 |
| 200 | 0.037 | 0.0746 | 100.0 | 20.0 |
| 500 | 0.031 | 0.1520 | 63.2 | 31.6 |
| 1K | 0.025 | 0.2459 | 44.7 | 44.7 |
| 2K | 0.021 | 0.4113 | 31.6 | 63.2 |
| 5K | 0.016 | 0.8206 | 20.0 | 100.0 |
| 10K | 0.017 | 1.7230 | 14.1 | 141.0 |
| 20K | 0.015 | 3.0160 | 10.0 | 200.0 |
| 50K | 0.009 | 4.6690 | 6.32 | 316.0 |
| 100K | 0.007 | 7.4560 | 4.47 | 447.0 |

| MARKING | |
|---------------------|--|
| Unit identification | Units shall be marked with Vishay Spectrol name and model no, resistance, resistance tolerance, linearity, terminal identification and date code |



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