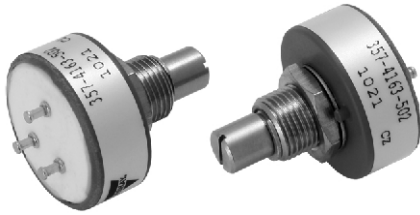


## 7/8" (22.2 mm) Conductive Plastic Potentiometer, Bushing Mount Type



### FEATURES

- 7/8" diameter single turn
- Compact size, advanced design technology
- Offer a cost effective solution to your potentiometer requirements
- Suitable model for all industrial applications
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS  
COMPLIANT**

### QUICK REFERENCE DATA

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

### ELECTRICAL SPECIFICATIONS

| PARAMETER                       |   |                             |
|---------------------------------|---|-----------------------------|
| Resistance                      | Standard range, 1 kΩ to 50 kΩ           |                             |
| Tolerance                       | <b>STANDARD</b><br>± 20 %               | <b>SPECIAL TO</b><br>± 10 % |
| Linearity (independent)         | <b>STANDARD</b><br>± 2.0 %              | <b>SPECIAL</b><br>± 1.0 %   |
| Output smoothness               | 0.1 % maximum                           |                             |
| TCR                             | ± 600 ppm/°C maximum                    |                             |
| Power rating                    | 1.0 W at 70 °C derated to 0 W at 125 °C |                             |
| Electrical travel               | 340° ± 3°                               |                             |
| End voltage                     | 0.5 % maximum                           |                             |
| Dielectric withstanding voltage | 1000 V <sub>RMS</sub> , 60 Hz           |                             |
| Insulation resistance           | 1000 MΩ, 500 V <sub>DC</sub>            |                             |

### MECHANICAL SPECIFICATIONS

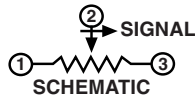
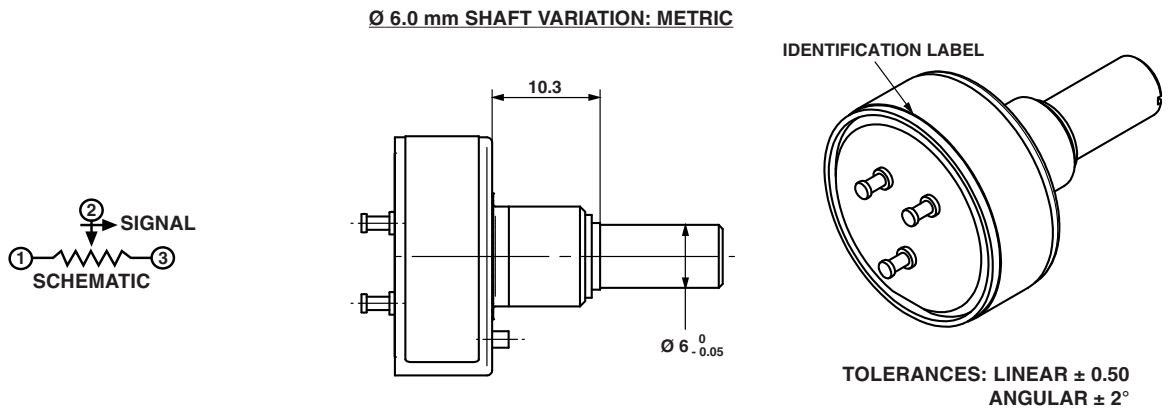
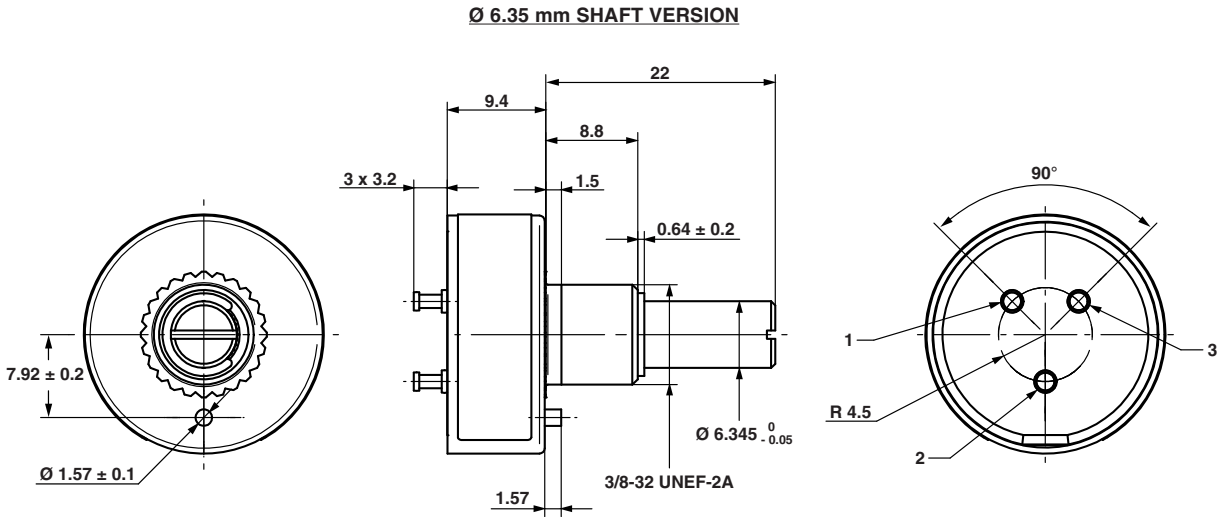
| PARAMETER                |   |  |
|--------------------------|---|--|
| Rotation                 | 360° continuous (optional mechanical stops 340° ± 3°) |  |
| Mounting                 | 3/8 - 32 UNEF - 2A                                    |  |
| Operating torque maximum | Starting and running 3.68 mNm (0.5 oz. - in)          |  |
| Shaft tolerance maximum  |   |  |
| Runout                   | 0.13 mm (0.005")                                      |  |
| End play                 | 0.25 mm (0.010")                                      |  |
| Radial play              | 0.13 mm (0.005")                                      |  |
| Weight                   | 17.5 g (0.62 oz.)                                     |  |

### ORDERING INFORMATION/DESCRIPTION

| 357   | B       | 0   | 10K             | 20 %                     | A                    | BO50             | 0 P 22  | e4          |
|-------|---------|---|-----------------|--------------------------|----------------------|------------------|---|-------------|
| MODEL | STYLE   | FEATURES                                  | OHMIC VALUE     | TOLERANCE ON OHMIC VALUE | LINEARITY            | PACKAGING        | SHAFT TYPE  | LEAD FINISH |
|       | Bushing | 0 Non turn pin and continuous rotation    |                 |                          |                      | Box of 50 pieces | Shaft diameter<br>0 = 6.0 mm or<br>1 = 6.35 mm (1/4")           |             |
|       |         | 1 No non turn pin and continuous rotation | From 1K to 50 K | ± 10 %<br>or<br>± 20 %   | X: ± 2 %<br>A: ± 1 % |                  | Shaft type<br>P = Plain<br>S = Slotted FMF (from mounting face) |             |
|       |         | 2 Non turn pin, with stops on rotation    |                 |                          |                      |                  | Range from 12 mm to 75 mm in 1 mm increments                    |             |
|       |         | 3 No non turn pin with stops on rotation  |                 |                          |                      |                  |   |             |

| SAP PART NUMBERING GUIDELINES |          |             |                               |              |                  |            |
|-------------------------------|----------|-------------|-------------------------------|--------------|------------------|------------|
| 357B                          | 2        | 203         | M                             | X            | B25              | 1S22       |
| MODEL                         | FEATURES | OHMIC VALUE | TOLERANCE ON OHMIC VALUE      | LINEARITY    | PACKAGING        | SHAFT TYPE |
|                               |          | 203 = 20K   | M: $\pm 20\%$ / K: $\pm 10\%$ | X: $\pm 2\%$ | Box of 50 pieces |            |

### DIMENSIONS in millimeters



| ENVIRONMENTAL SPECIFICATIONS |                             |
|------------------------------|-----------------------------|
| Vibration                    | 15 g, 10 Hz to 2000 Hz      |
| Shock                        | 50 g                        |
| Load Life                    | 1000 h                      |
| Storage temperature range    | - 55 °C to + 125 °C         |
| Life                         | 5 000 000 shaft revolutions |
| Materials                    |                             |
| Housing                      | Thermoplastic housing       |
| Bushing                      | Brass, nickel plated        |
| Rear lid                     | Alumina                     |
| Shaft                        | Stainless steel             |
| Terminals                    | Turret type, solder plated  |
| Bushing mount hardware       |                             |
| Lockwasher internal tooth    | Steel, nickel plated        |
| Panel nut                    | Brass nickel plated         |

| MARKING             |  |
|---------------------|--|
| Unit Identification | Manufacturer's name and model number, resistance value and tolerance, linearity specification date code and terminal identification.<br>Example of a marking for a standard part: 357-0-0-1S22-103 |

| RESISTANCE VALUE |                           |
|------------------|---------------------------|
| Ohms             | 1K, 2K, 5K, 10K, 20K, 50K |



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