### Model 357

www.vishay.com

QUICK REFERENCE DATA

Sensor type

Output type

Dimensions

Market appliance

Vishay Spectrol

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



ROTATIONAL, conductive plastic

Output by turrets

Industrial <sup>7</sup>/<sub>8</sub>" (22.2 mm)

#### •



- <sup>7</sup>/<sub>8</sub>" 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 <u>www.vishay.com/doc?99912</u>

| ELECTRICAL SPECIFICATIONS       |   |  |  |  |  |  |
|---------------------------------|---|--|--|--|--|--|
| PARAMETER                       |   |  |  |  |  |  |
| Resistance                      | Standard range, 1 k $\Omega$ to 50 k $\Omega$ |  |  |  |  |  |
| Tolerance                       | STANDARD<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 $340^\circ \pm 3^\circ$ ) |  |  |  |  |

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

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For technical questions, contact: sferprecisionpot@vishay.com

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### Model 357

**Vishay Spectrol** 

|                 | NUMBERIN              |                  |                     |                          |              |   |                 |
|-----------------|-----------------------|------------------|---------------------|--------------------------|--------------|---|-----------------|
| 357B            | 2                     | 203              |                     | <b>/</b>                 | X            | B25                                     | 1S22            |
| MODEL           | FEATURES              | OHMIC VALUE      |                     |                          | LINEARITY    |   | SHAFT TYPE      |
|                 | <u> </u>              | 203 = 20K        | M: ± 20 %           | /K: ± 10 %               | X: ± 2 %     | Box of 50 pieces                        |                 |
| IMENSION        | <b>S</b> in millimete | rs               |                     |                          |              |   |                 |
|                 |                       |                  | <u>Ø 6.35 mm SH</u> | AFT VERSION              |              |   |                 |
|                 |                       |                  | 9.4                 | 22                       |              |   |                 |
|                 |                       |                  | <mark>⊲ 8.8</mark>  |                          |              |   |                 |
|                 |                       | <u>3 x 3.2</u>   | <b>→</b> <u>1.5</u> |                          |              | 90°                                     |                 |
|                 |                       |                  |                     | 0.64 ± 0.2               |              |   | $\searrow$      |
|                 |                       |                  |                     |                          |              |   | $\times$        |
|                 |                       |                  |                     |                          |              |   |                 |
| (               |                       |                  |                     |                          |              |   |                 |
| <u>↑</u>        |                       | 3 ]              |                     |                          | 1-           |   | 3               |
| 7.92 ± 0.2      |                       |                  | ╎││┠┸──             |                          |              |   |                 |
| <u>+</u> `      |                       |                  |                     | Ø 6.345 - 0.0            | <u>R 4.5</u> |   | //              |
|                 |                       |                  |                     | Ø 6.345 <sub>- 0.0</sub> | )5           | 2                                       |                 |
| Ø 1.57 ±        | . 0.1                 |                  |                     | /8-32 UNEF-2A            |              |   |                 |
|                 |                       |                  | 1.57                |                          |              |   |                 |
|                 |                       |                  |                     |                          |              |   |                 |
|                 |                       | -                |                     |                          |              |   |                 |
|                 |                       | Ø                | 6.0 mm SHAFT VA     | RIATION: METRIC          |              |   |                 |
|                 |                       |                  |                     |                          | IDENTIF      |   | $\frown$        |
|                 |                       |                  | 10.3                | <b>→</b>                 |              | $ \land \checkmark \checkmark $         |                 |
|                 |                       |                  |                     |                          |              |   |                 |
|                 |                       |                  |                     |                          |              |   | Y               |
|                 | 0                     |                  |                     | _                        | M.           | on all t                                |                 |
|                 |                       | ·Ħ               |                     |                          |              |   |                 |
| 0               | <u>~~~~</u> 3         |                  |                     | -                        |              |   |                 |
| SC              | CHEMATIC              | - <b>1</b>       |                     |                          |              |   |                 |
|                 |                       |                  |                     |                          |              |   |                 |
|                 |                       |                  |                     | Ø 6 <sub>- 0.05</sub>    | -            | OLERANCES: LINEAF                       | 0 + 0 50        |
|                 |                       |                  |                     |                          | 1            | ANGUL                                   |                 |
| ENVIRONM        | IENTAL SPE            | CIFICATIONS      |                     | MARKIN                   | G            |   |                 |
| Vibration       |                       | 15 g, 10 Hz to   |                     |                          |              | anufacturer's name and                  | d model number  |
| Shock           |                       | 50 g             | 2000 112            |                          |              | sistance value and tole                 |                 |
| Load Life       |                       | 1000 1           | 1                   | Unit                     | sp           | ecification date code a                 |                 |
| Storage temper  | ature range           | -55 °C to +      |                     | Indentificat             |              | entification.<br>ample of a marking for | a standard part |
| Life            | - 5-                  | 5 000 000 shaft  |                     |                          |              | 57-0-0-1S22-103                         | a standard part |
| Materials       |                       |                  |                     | L                        | I            |   |                 |
| Housing         |                       | Thermoplastic    | housing             |                          |              |   |                 |
| Bushing         |                       | Brass, nicke     | plated              |                          | NCE VAL      |   |                 |
| Rear lid        |                       | Alumin           | a                   | Ohms                     |              | 1K, 2K, 5K, 10K, 2                      | 20K, 50K        |
| Shaft           |                       | Stainless        |                     |                          |              |   |                 |
| Terminals       |                       | Turret type, sol | der plated          |                          |              |   |                 |
| Bushing mount   |                       |                  |                     |                          |              |   |                 |
| Lockwasher inte | ernal tooth           | Steel, nickel    | plated              |                          |              |   |                 |
| Panel nut       |                       | Brass nickel     | -                   |                          |              |   |                 |

#### Note

 Nothing stated herein shall be construed as a guarantee of quality or durability.

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