

# Single-Turn Continuous Rotation Analog Displacement Sensor


**RoHS**  
COMPLIANT

## FEATURES

- Conductive plastic potentiometer technology, infinite resolution
- Anodized light alloy housing
- Soldering terminal outputs
- Precious metal contacts
- Stainless steel shaft
- Applicable standards: NFC 93255, MIL R 39023
- Material categorization: for definitions of compliance please see [www.vishay.com/doc299912](http://www.vishay.com/doc299912)

## DESIGN SUPPORT TOOLS

[click logo to get started](#)
**3D**  
Models  
Available

| QUICK REFERENCE DATA |                                |
|----------------------|--------------------------------|
| Sensor type          | ROTATIONAL, conductive plastic |
| Output type          | Output by turrets              |
| Market appliance     | Industrial                     |
| Dimensions           | 36.5 mm                        |

| ELECTRICAL SPECIFICATIONS                |   |
|--|---|
| PARAMETER                                |   |
| Theoretical electrical travel            | 350° ± 3°   |
| Independent linearity standard           | ± 1 %   |
| Independent linearity optional           | ± 0.25 %, ± 0.5 %   |
| Total resistance range (R <sub>n</sub> ) | 4.7 kΩ or 10 kΩ   |
| Tolerance on R <sub>n</sub>              | ± 20 %  |
| Output smoothness                        | ≤ 0.1 %   |
| Power rating at 70 °C                    | 2 W (see "Power Rating Chart")  |
| Temperature coefficient                  | -300 ± 300 ppm/°C   |
| Wiper current                            | ≤ 1 mA  |
| Recommended load impedance               | ≥ 100 R <sub>n</sub> for linearity = 1 %<br>≥ 1000 R <sub>n</sub> for linearity ≤ 0.5 % |
| Insulation resistance                    | ≥ 1 GΩ at 500 V <sub>DC</sub>   |
| Dielectric strength                      | 750 V <sub>RMS</sub> , 50 Hz, 1 min   |

| MECHANICAL SPECIFICATIONS             |                               |
|---------------------------------------|-------------------------------|
| PARAMETER                             |                               |
| Mechanical rotation                   | 360° continuous               |
| Moment of inertia                     | ≤ 2 g cm <sup>2</sup>         |
| Mounting standard                     | Servo or screw-on front panel |
| Mounting optional (addition of a kit) | Bushing (see "Dimensions")    |
| Running and starting torque           | ≤ 0.25 N cm                   |
| Panel tightening torque               | ≤ 250 N cm (bushing version)  |
| Protection class                      | IP 50                         |
| Weight                                | 40 g                          |

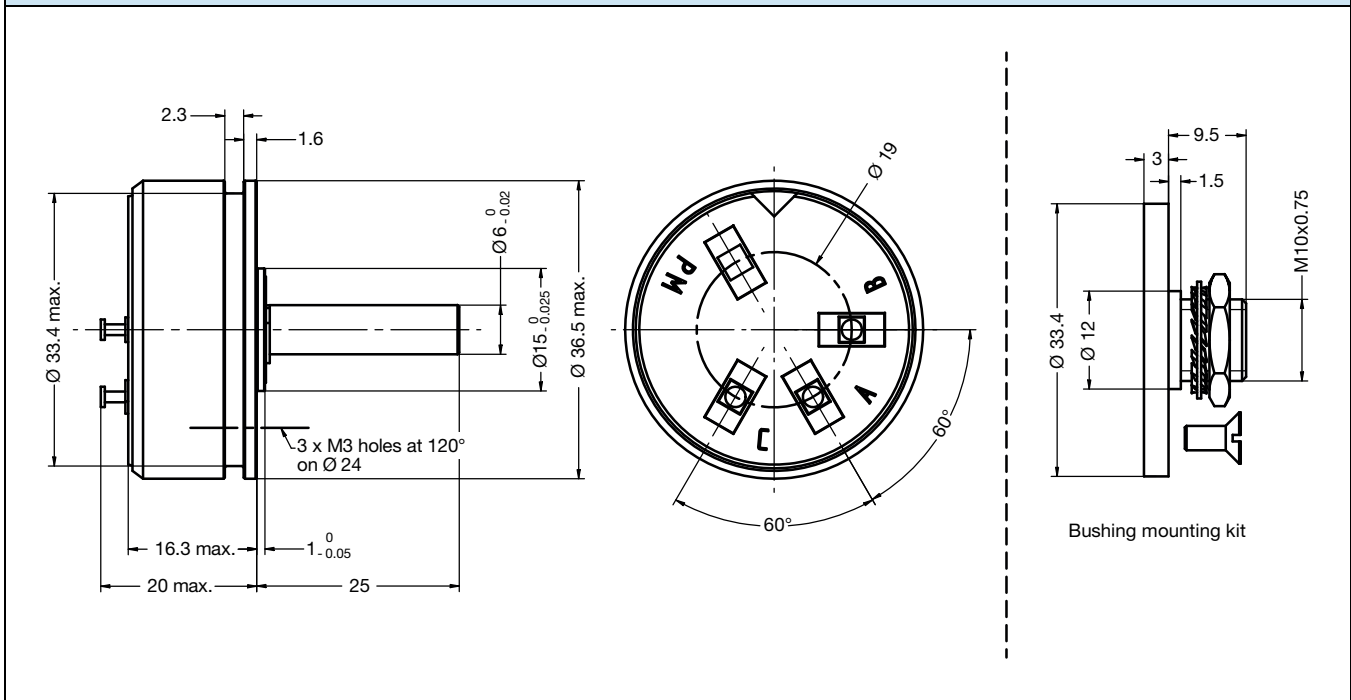
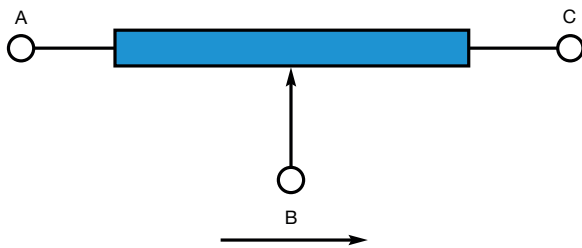
| PERFORMANCE                 |                   |
|-----------------------------|-------------------|
| PARAMETER                   |                   |
| Operating temperature range | -55 °C to +125 °C |
| Life                        | 20M cycles        |
| Rotation speed (max.)       | 600 rpm           |

## Note

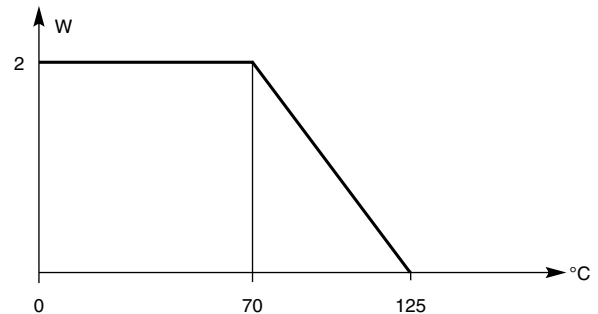
- Nothing stated herein shall be construed as a guarantee of quality or durability

**SAP PART NUMBERING GUIDELINES**

| MODEL | MOUNTING  | TYPE             | VALUE                   | LINEARITY | THEORETICAL ELECTRICAL TRAVEL | PACKAGING |
|-------|-----------|------------------|-------------------------|-----------|-------------------------------|-----------|
| PP36  | S = servo | R = ball bearing | 472 = 4.7K<br>103 = 10K | A = 1 %   | 350                           | B = box   |

**DIMENSIONS** in millimeters

**ELECTRICAL DIAGRAM**


Clockwise direction viewed from control shaft side

**POWER RATING CHART**

**OPTIONS** (on request)

- Bushing mounting
- Other tolerances on  $R_n$
- Other linearities
- Other theoretical electrical travel
- Center tap
- Sleeve bearing (S) in place of ball bearing (R)



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