

# Single-Turn Continuous Rotation Analog Displacement Sensor


**DESIGN SUPPORT TOOLS**
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**3D**  
Models  
Available

**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)


**RoHS**  
COMPLIANT

**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 % ≥ 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**

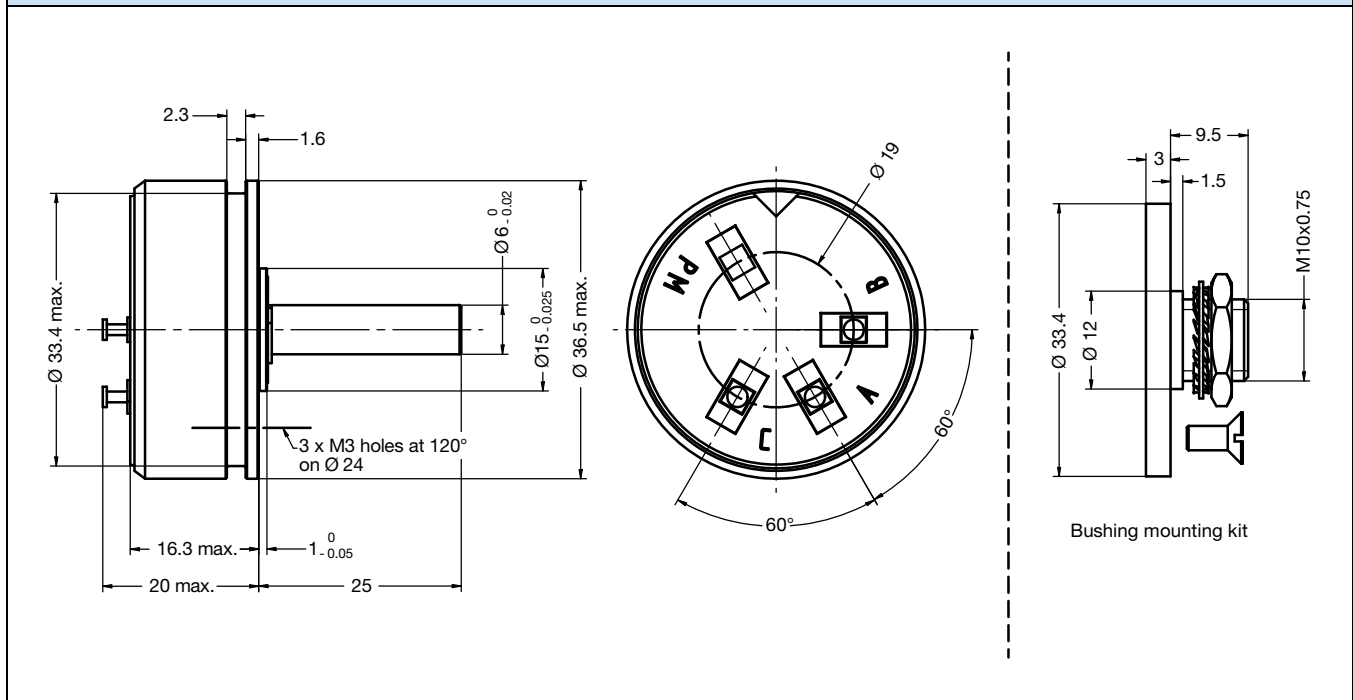
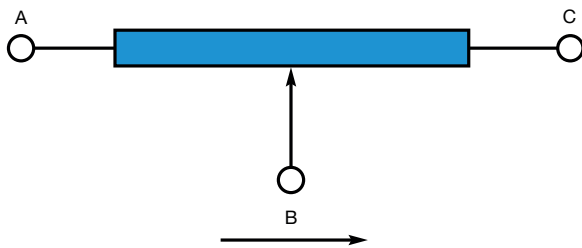
PARAMETER	
Operating temperature range	-55 °C to +125 °C
Life	20M cycles
Rotation speed (max.)	600 rpm

**Note**

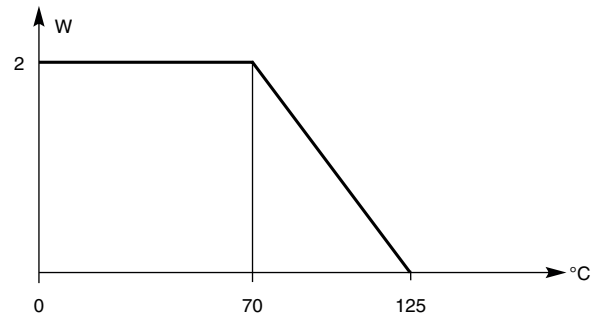
- Nothing stated herein shall be construed as a guarantee of quality or durability

**SAP PART NUMBERING GUIDELINES**

MODEL	MOUNTING	TYPE	VALUE	LINEARITY	THEORETICAL ELECTRICAL TRAVEL	PACKAGING
PP36	S = servo	R = ball bearing	472 = 4.7K 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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