

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



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 _n) | 4.7 kΩ or 10 kΩ |
| Tolerance on R _n | ± 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 _n for linearity = 1 % ≥ 1000 R _n for linearity ≤ 0.5 % |
| Insulation resistance | ≥ 1 GΩ at 500 V _{DC} |
| Dielectric strength | 750 V _{RMS} , 50 Hz, 1 min |

MECHANICAL SPECIFICATIONS

| PARAMETER | |
|---------------------------------------|-------------------------------|
| Mechanical rotation | 360° continuous |
| Moment of inertia | ≤ 2 g cm ² |
| 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

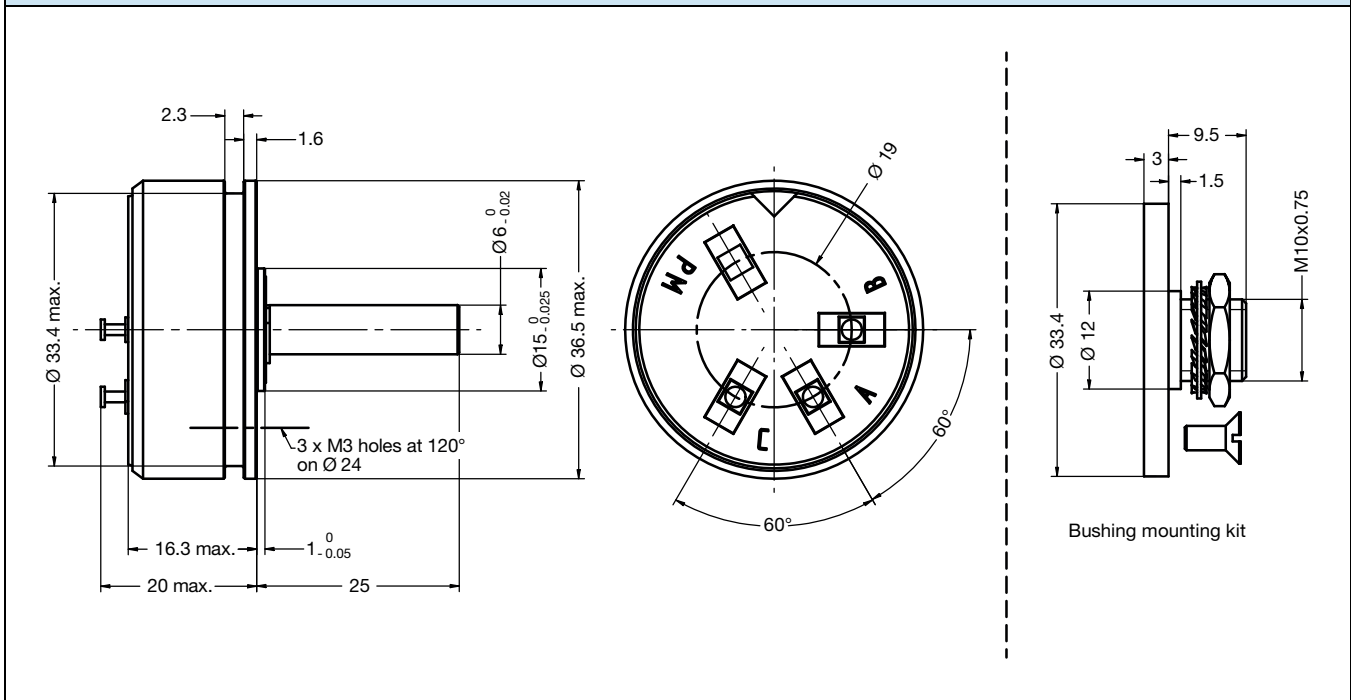
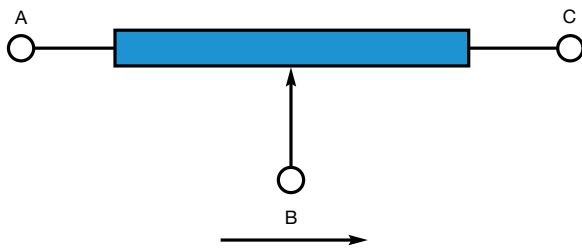
| PARAMETER | |
|-----------------------------|-------------------|
| Operating temperature range | -55 °C to +125 °C |
| Life | 20M cycles |
| Rotation speed (max.) | 600 rpm |

Note

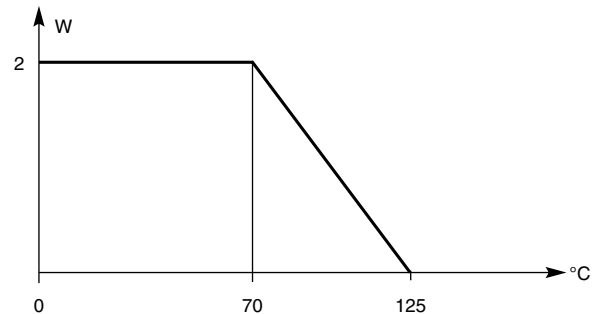
- Nothing stated herein shall be construed as a guarantee of quality or durability

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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