

# Single Turn Continuous Rotation Potentiometer or with Stop-Ends Conductive Plastic Track



## FEATURES

- Infinite resolution
- Precious metal contacts
- Housing: high temperature thermo plastic
- Terminals: soldering pins
- Shaft: stainless steel
- Plain bearing (= sleeve bearing)
- Bush mounting
- Rotation with stop-ends (standard design) or without
- Dust proof
- Applicable standards: NFC 93255, MIL R39023
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



## QUICK REFERENCE DATA

|                  |                                |
|------------------|--------------------------------|
| Sensor type      | ROTATIONAL, conductive plastic |
| Output type      | Output by turrets              |
| Market appliance | Industrial                     |
| Dimensions       | 27 mm                          |

## ELECTRICAL SPECIFICATIONS

| PARAMETER                          |  |                                                                                         |
|------------------------------------|--|-----------------------------------------------------------------------------------------|
| Useful electrical travel           |  | 310° ± 5°                                                                               |
| Independent linearity standard     |  | ± 1.0 %                                                                                 |
| Independent linearity optional     |  | ± 0.5 %                                                                                 |
| Total resistance (R <sub>n</sub> ) |  | 10 kΩ                                                                                   |
| Tolerance on R <sub>n</sub>        |  | ± 20 %                                                                                  |
| Output smoothness                  |  | ≤ 0.1 %                                                                                 |
| Power rating at 40 °C              |  | 1 W                                                                                     |
| 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, 50 Hz, 1 min                                                                     |

## MECHANICAL SPECIFICATIONS

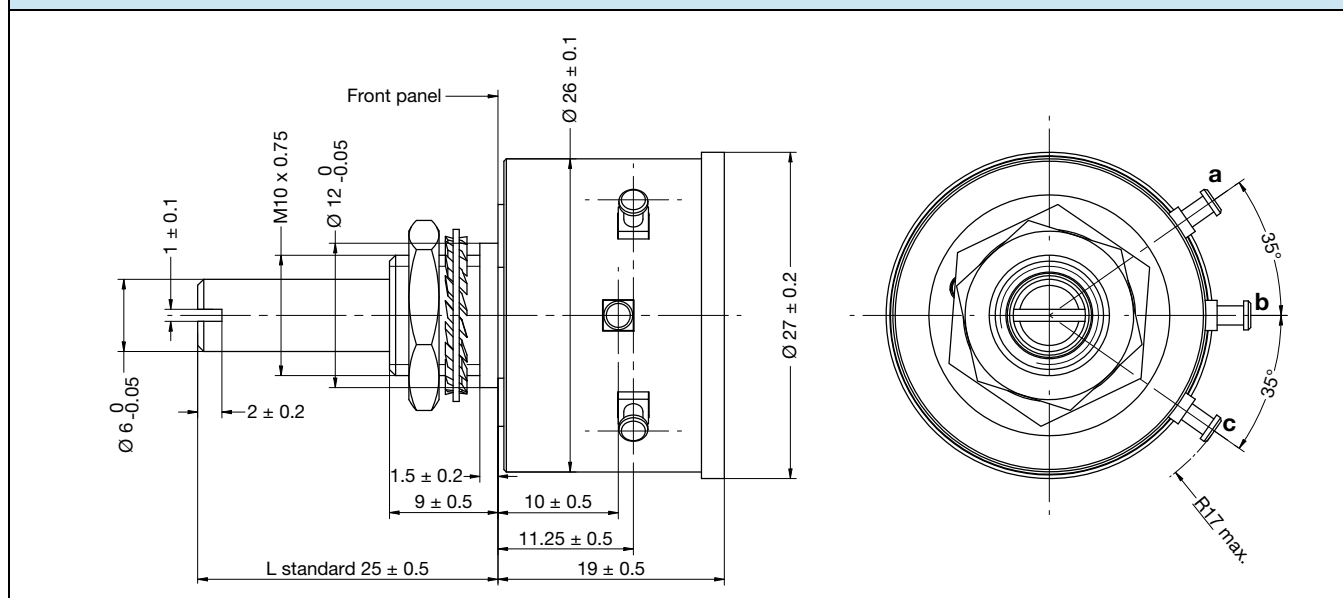
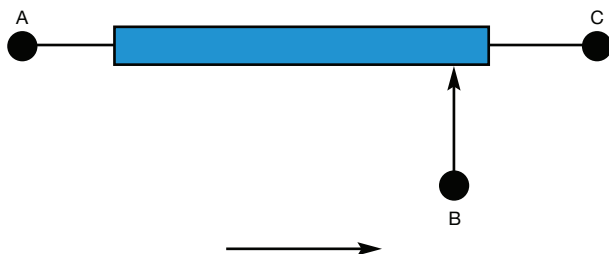
| PARAMETER                        |  |                       |
|----------------------------------|--|-----------------------|
| Mechanical rotation without stop |  | 360° continuous       |
| Mechanical rotation with stop    |  | 333° ± 5 ° continuous |
| Running and starting torque      |  | ≤ 1.4 N cm            |
| Stop torque                      |  | 100 N cm              |
| Bush tightening torque           |  | 250 N cm              |
| Moment of inertia                |  | ≤ 1 g cm <sup>2</sup> |
| Protection class                 |  | IP50                  |
| Weight                           |  | 30 g                  |
| Mounting                         |  | Bush                  |

## PERFORMANCE

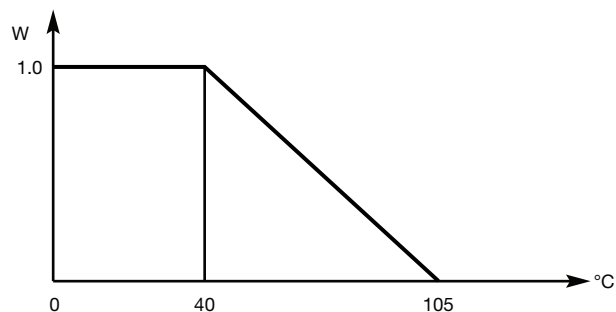
| PARAMETER                   |  |                   |
|-----------------------------|--|-------------------|
| Operating temperature range |  | -55 °C to +105 °C |
| Life                        |  | 10M cycles        |
| Rotation speed (max.)       |  | 120 rpm           |

**SAP PART NUMBERING GUIDELINES**

| MODEL | MOUNTING    | TYPE               | GANG | VALUE     | LINEARITY | ANGLE | PACKAGING |
|-------|-------------|--------------------|------|-----------|-----------|-------|-----------|
| PP27  | B = bushing | S = sleeve bearing | 1    | 103 = 10K | A = 1 %   | 310   | B = box   |

**DIMENSIONS** in millimeters

**ELECTRICAL DIAGRAM**


Clockwise when viewed from shaft end

**POWER RATING CHART**

**OPTIONS** (on request)

- Continuous rotation (without stop-ends)
- Through shaft
- Ganging 2 or 3
- Other electrical travels
- Other ohmic value
- Other tolerances on  $R_n$
- Other linearities (0.5 %)
- Middle tap
- Shaft with different length (top shaft, rear shaft), screwdriver slot
- Pin on the through shaft to use the rear side of potentiometer as a dial
- Output with wires equipped of connector



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