5-Turn Analog Displacement Sensor P22 Redundant



FEATURES

- Dual conductive plastic potentiometer technology
- Infinite resolution
- Molded metal housing
- Stainless steel shaft
- Precious metal contacts
- Soldering terminal contacts
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

QUICK REFERENCE DATA	
Sensor type	ROTATIONAL, multi turns conductive plastic
Output type	Output by turrets, wires, or connector
Market appliance	Transportation
Dimensions	51.1 mm x 30 mm

ELECTRICAL SPECIFICATIONS	
PARAMETER	
Theoretical electrical travel	1700° ± 15°
Independent linearity	± 1 %
Inter-linearity	± 2.5 %
Total resistance (R_n)	2 x 2.2 kΩ
Tolerance on R_n	± 20 %
Output smoothness	≤ 0.1 %
Power rating at 70 °C	1 W
Temperature coefficient	-300 ± 300 ppm/°C
Wiper current	≤ 1 mA
Recommended load impedance	≥ 100 R_n
Insulation resistance	≥ 1 GΩ at 500 V_{DC}
Dielectric strength	750 V_{RMS}, 50 Hz, 1 min

MECHANICAL SPECIFICATIONS	
PARAMETER	
Mechanical rotation	Continuous
Running and starting torque	≤ 2 N cm
Panel tightening torque	≤ 250 N cm
Weight	100 g
Protection class	IP 50 to IP 66 (front face)
Backlash	< 14°

PERFORMANCE	
PARAMETER	
Operating temperature range	-30 °C to +70 °C
Life	100M cycles
Rotation speed (max.)	150 rpm

Note

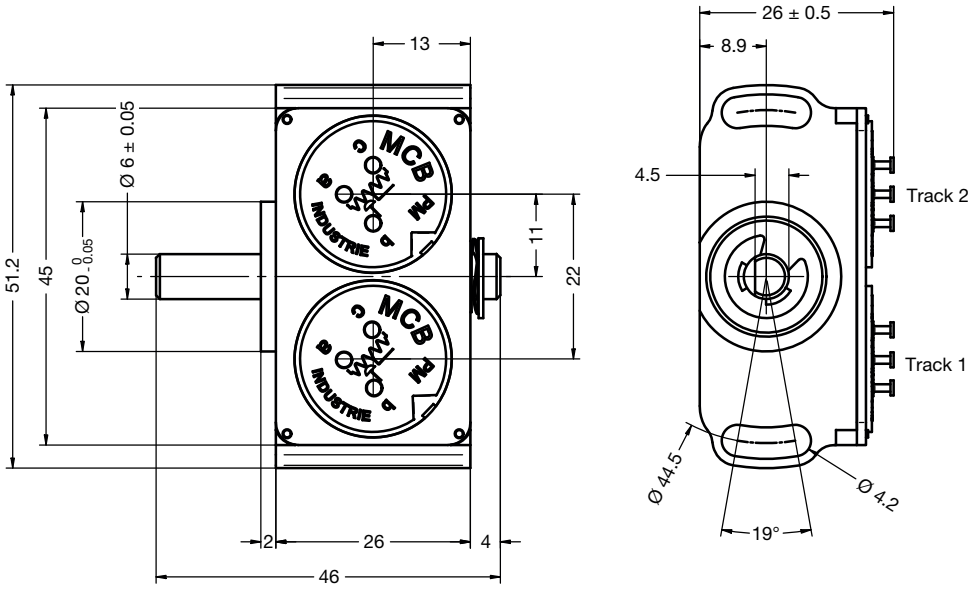
- Nothing stated herein shall be construed as a guarantee of quality or durability

For technical questions, contact: mcbprecisionpot@vishay.com

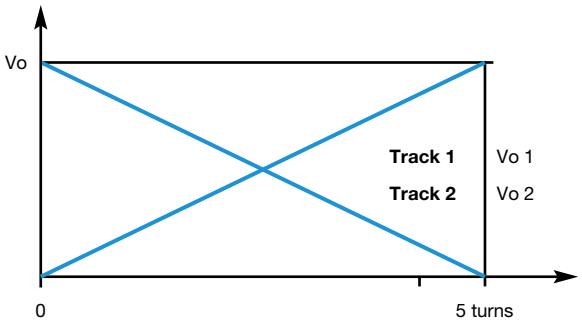
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SAP PART NUMBERING GUIDELINES							
MODEL	FUNCTION	MOUNTING	TYPE	VALUE	LINEARITY	ANGLE	PACKAGING
P22	R = redundant	S = servo	R = ball bearing	222 = 2K2	A = 1 %	1700 # 5 turns	B = box

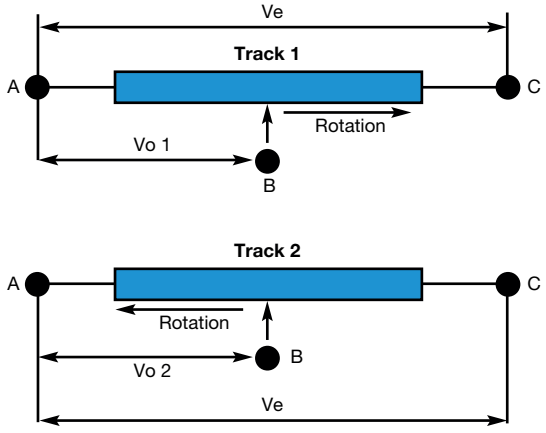
DIMENSIONS in millimeters



ELECTRICAL DIAGRAM



Clockwise rotation viewed from shaft side
with identical wiring on both tracks



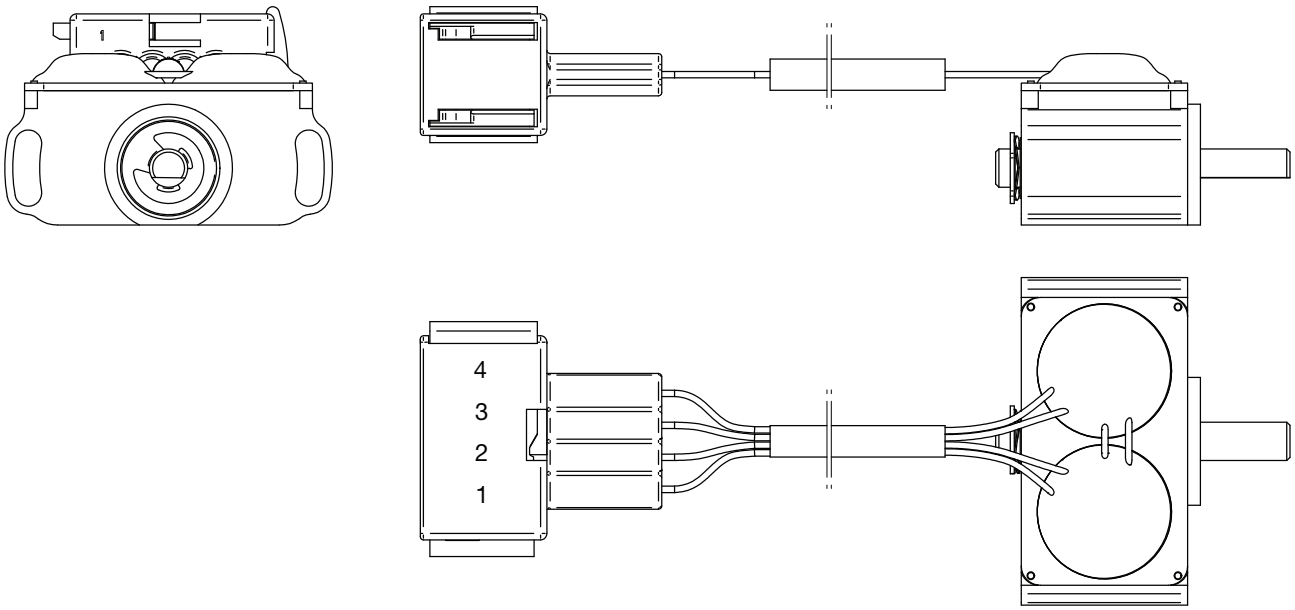
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OPTIONS (on request)

- Other total resistance (R_n)
- Other versions: 2.5 turns and 8 turns
- Option wire outputs or connector: in such case, between wires and turrets of sensor P22R, to protect against moisture and risk of short circuit, a potting is added on turrets to provide insulating function (to not confuse with mechanical stress / efforts applied on potting, to avoid such mechanical stress on potting / turrets)

P22R WITH OUTPUT CONNECTOR



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