

Throttle Position Sensor with Integrated Spring Return System



Spectrol model 971 series rotary position sensors are suitable for demanding environments where high life and consistent linearity performance is required. Typical applications include electrical industrial vehicles. Off-road vehicle steering and transmission, automotive engine management systems, and controls.

FEATURES

- High performance, compact potentiometric sensor
- Rugged construction, suitable for under-bonnet engine management and closed loop feedback applications
- Through-hole actuation capability
- Output type: flying leads
- Actuator and mounting configuration options

QUICK REFERENCE DATA

Sensor type	ROTATIONAL, conductive plastic
Output type	Flying leads
Market appliance	Industrial
Dimensions	43 mm x 32 mm x 14 mm

ELECTRICAL SPECIFICATIONS

PARAMETER	
Total resistance	5 k Ω at + 25 °C
Resistance tolerance	$\pm$ 20 %
Linearity (independent)	$\pm$ 2 %
Electrical travel	106°
Maximum power rating	1 W at 40 °C derated to zero at 135 °C
Output smoothness	0.3 % max.
Temperature coefficient	$\pm$ 600 ppm/°C
Index point (e/E)	3 % $\pm$ 2 %
Maximum voltage	13.5 V _{DC}

MECHANICAL SPECIFICATIONS

PARAMETER	
Rotation	130° $\pm$ 5° CCW
Spring torque	120 mNm max.
Stop strength	680 mNm min.
End play	0.25 mm max.
Lead wires	Nominal $\varnothing$ 1.8 mm length optional
Wire pull strength	10 kg max. (3 wires)

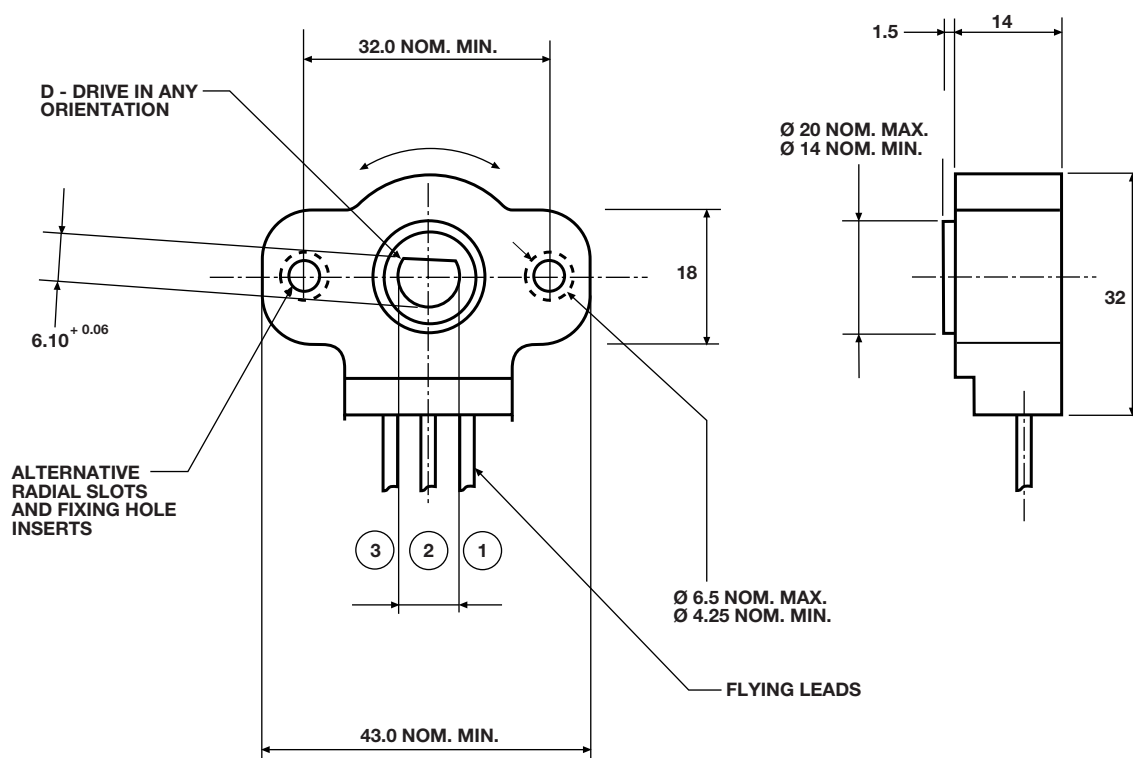
ORDERING INFORMATION/DESCRIPTION

971 MODEL	0002 OUTPUT TYPE 0002: Flying leads	BO100 PACKAGING Box of 100 pieces
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SAP PART NUMBERING GUIDELINES

971 MODEL	0002 STYLE	B30 PACKAGING
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DIMENSIONS in inches (millimeters)



ENVIRONMENTAL SPECIFICATIONS

Rotational life	5 x 10 ⁶ full cycles
Dither	10 x 10 ⁶ (2° rotation)
Vibration	15 g, 50 to 1000 Hz
Shock	50 g
Temperature range: Standard operating	- 40 °C to + 85 °C
Materials: housing	Polyester PBT
Leads: Standard PVC	+ 85 °C



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