

Throttle Position Sensor with Integrated Spring Return System



FEATURES

- High performance, compact potentiometric sensor
- Rugged construction, suitable for under-bonnet engine management and closed loop feedback applications
- Through-hole actuation capability
- Integral connector or flying lead versions
- Actuator and mounting configuration options

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.

The 971 Rotational Position Sensor can be supplied with options for electrical track length, resistance, flying leads, integral connector and actuator drive direction

ELECTRICAL SPECIFICATIONS

PARAMETER	
Total Resistance	5 k Ω at + 25 °C
Optional	1 k Ω to 25 k Ω
Resistance Tolerance	$\pm 20\%$
Linearity (Independent)	$\pm 2\%$
Electrical Travel	106° optional to 130° max.
Maximum Power Rating	1 W at 40 °C derated to zero at 135 °C
Output Smoothness	0.3 % max.
Temperature Coefficient	± 600 ppm/°C
Index Point (e/E)	3 % $\pm 2\%$
Maximum Voltage	13.5 V _{DC}

MECHANICAL SPECIFICATIONS

PARAMETER	
Rotation	130° $\pm 5^\circ$ CCW
Optional	CCW or CW up to 140° max. $\pm 5\%$
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)

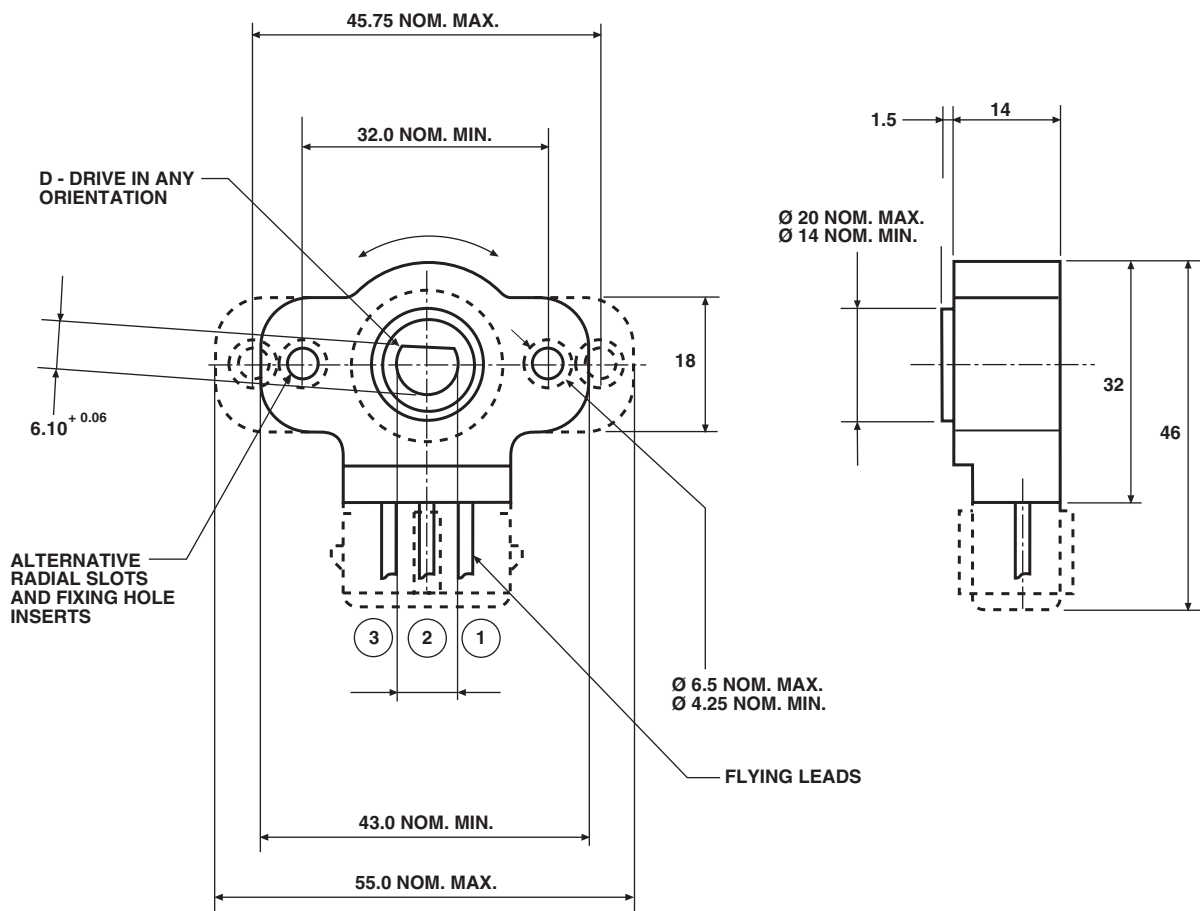
ORDERING INFORMATION/DESCRIPTION

971	0001	BO100
MODEL	OUTPUT TYPE	PACKAGING
	0001: Amp connector	Box of 100 pieces
	0002: Flying leads	

SAP PART NUMBERING GUIDELINES

971	0001	B30
MODEL	STYLE	PACKAGING

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 Optional Operating	- 40 °C to + 85 °C - 40 °C to + 130 °C
Materials: Housing	Polyester PBT
Leads: Standard PVC High Temperature PVC	+ 85 °C + 130 °C

OPTIONAL INTEGRAL CONNECTOR	
AMP style Junior Timer Mates: Housing Terminals	1 - 8275782 - 1 (unsealed) 927845 - 2
Housing Terminals Wire Seals	282191 - 1 (sealed) 929939 - 3 828904 - 1

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