

## 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

<b>ELECTRICAL SPECIFICATIONS</b>	
PARAMETER	
Total Resistance Optional	5 kΩ at + 25 °C 1 kΩ to 25 kΩ
Resistance Tolerance	± 20 %
Linearity (Independent)	± 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 % ± 2 %
Maximum Voltage	13.5 V <sub>DC</sub>

<b>MECHANICAL SPECIFICATIONS</b>	
PARAMETER	
Rotation Optional	130° ± 5° CCW CCW or CW up to 140° max. ± 5 %
Spring Torque	120 mNm max.
Stop Strength	680 mNm min.
End Play	0.25 mm max.
Lead Wires	Nominal Ø 1.8 mm length optional
Wire Pull Strength	10 kg max. (3 wires)

<b>ORDERING INFORMATION/DESCRIPTION</b>		
971 MODEL	0001 OUTPUT TYPE 0001: Amp connector 0002: Flying leads	B0100 PACKAGING Box of 100 pieces

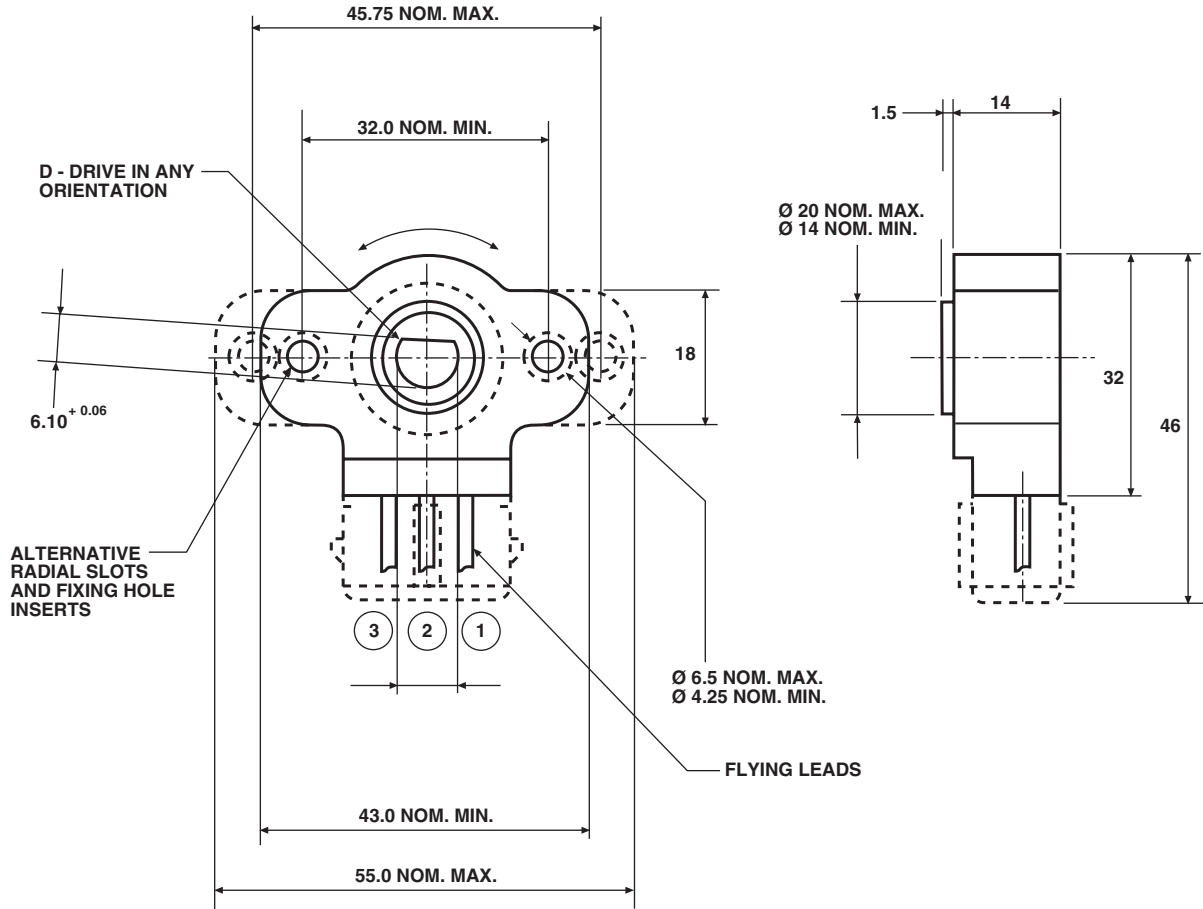
<b>SAP PART NUMBERING GUIDELINES</b>		
971 MODEL	0001 STYLE	B30 PACKAGING



**Throttle Position Sensor with  
Integrated Spring Return System**

Vishay Spectrol

**DIMENSIONS** in inches (millimeters)



ENVIRONMENTAL SPECIFICATIONS	
Rotational Life	5 x 10 <sup>6</sup> full cycles
Dither	10 x 10 <sup>6</sup> (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



## Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.