

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) |

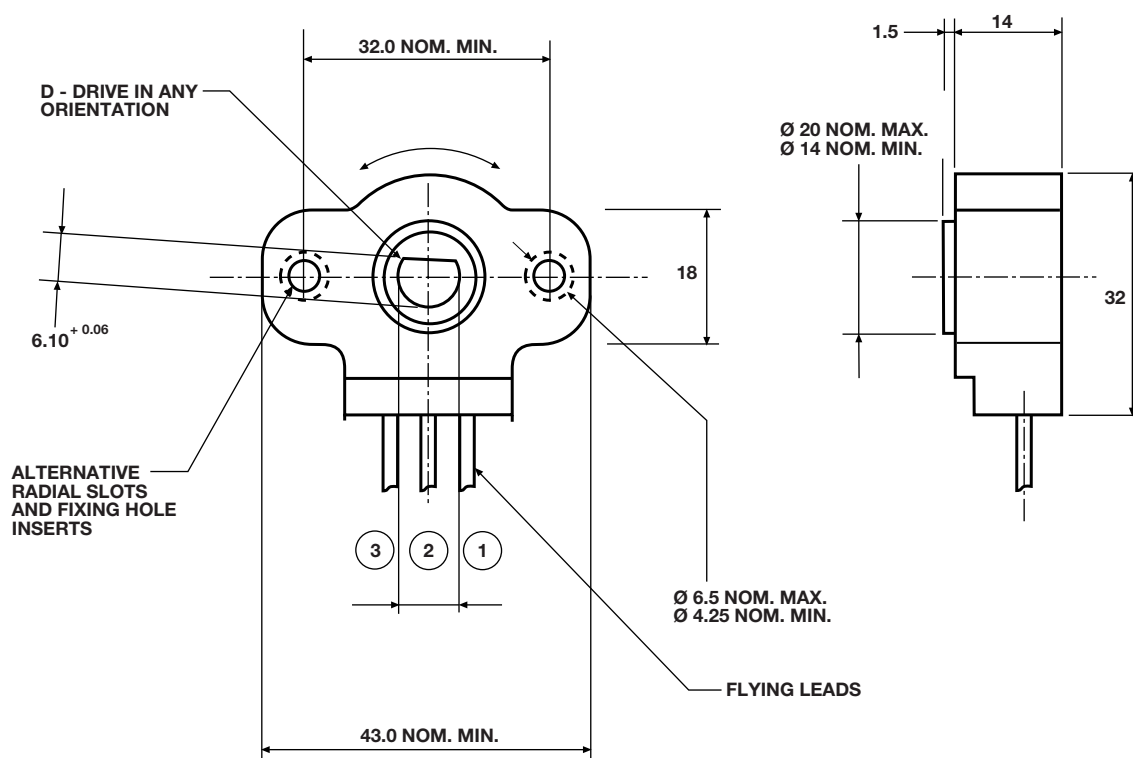
ORDERING INFORMATION/DESCRIPTION

| 971 MODEL | 0002 OUTPUT TYPE 0002: Flying leads | BO100 PACKAGING Box of 100 pieces |
|--------------|---|---|
|--------------|---|---|

SAP PART NUMBERING GUIDELINES

| 971 MODEL | 0002 STYLE | B30 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 | - 40 °C to + 85 °C |
| Materials: housing | Polyester PBT |
| Leads: Standard PVC | + 85 °C |



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