

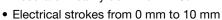
Linear Position Sensor in Hall Effect Technology (0 mm to 10 mm max.)



| QUICK REFERENCE DATA | | | |
|----------------------|------------------------------------|--|--|
| Sensor type | LINEAR, non contacting hall effect | | |
| Output type | Wires | | |
| Market appliance | Industrial | | |
| Dimensions | 46 mm x 20.8 mm x 37 mm | | |

FEATURES

• Accurate linearity down to: ± 1 %





- Long life: Greater than 10M cycles
- Non contacting technology: Hall effect
- · Model dedicated to all applications in harsh environments
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

| ELECTRICAL SPECIFICATIONS | | | |
|-----------------------------|---|--|--|
| PARAMETER | STANDARD | | |
| Electrical stroke | Up to 10 mm | | |
| Linearity | ± 2 % or ± 1 % | | |
| Supply voltage | 5 V _{DC} ± 10 % | | |
| Supply current | < 16 mA typical | | |
| Output signal | Analog ratiometric 10 % to 90 % of V _{supply} or PWM 10 % to 90 % duty cycle | | |
| Over voltage protection | +20 V _{DC} | | |
| Reverse voltage protection | -10 V _{DC} | | |
| Load resistance recommanded | Min. 1 kΩ for analog output and PWM output | | |
| Hysteresis | Static: 0.1 % of V _{supply} /Dynamic: 0.25 % of V _{supply} | | |
| Resolution | 12 bits | | |

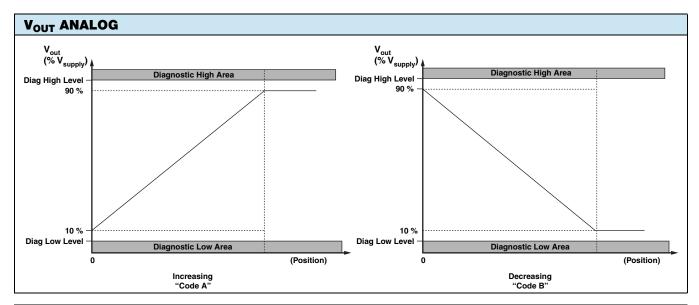
| MECHANICAL SPECIFICATIONS | | |
|---------------------------|---|--|
| PARAMETER | | |
| Mechanical travel | 12 mm max. | |
| Bearing type | Sleeve bearing | |
| Standard | For spring loaded model: IP 51/without spring: Other on request | |
| Weight | 26 g ± 4 g | |

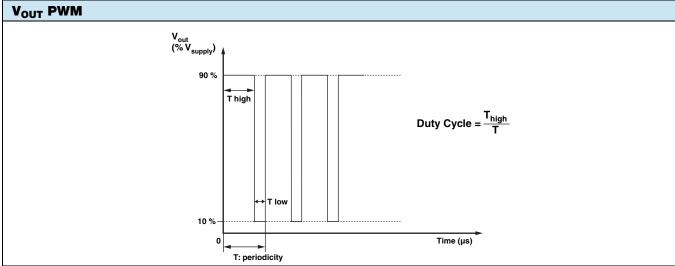
| ORDERING INFORMATION/DESCRIPTION | | | | | | | |
|----------------------------------|---------------------------------------|----------------------|-----------------------|---|--|--------------------|----------------|
| 20 LHE | 1 | Α | W | Α | 1P30 | хххх | e1 |
| MODEL | FEATURES | LINEARITY | OUTPUT TYPE | OUTPUT SIGNAL | SHAFT TYPE | SPECIAL REQUEST | LEAD FINISH |
| | 1: Spring return 2: Without spring | X: ± 2 % A: ± 1 % | W: Wires Z: Custom | A: Analog increasing B: Analog decreasing C: PWM increasing D: PWM decreasing | 1: 3.175 mm 9: Special P: Plain T: Threaded M3 x 6 Z: Other type | | |
| | | | | Shaft leng | gth from mounting face | 30 mm when fu | ull extended |

| SAP PART NUMBERING GUIDELINES | | | | | | |
|-------------------------------|------------------------------|-----------|----------------|----------------|---------------|--------------------|
| 20 LHE | 2 | X | Z | С | 1T35 | xxxx |
| MODEL | FEATURES | LINEARITY | OUTPUT TYPE | OUTPUT SIGNAL | SHAFT TYPE | SPECIAL REQUEST |
| | Without spring return system | ± 2 % | "Custom" | PWM increasing | | |

Revision: 27-Mar-15 1 Document Number: 57115







| ENVIRONMENTAL SPECIFICATIONS | | | |
|---|--|--|--|
| Vibrations | 20 g from 10 Hz to 2000 Hz | | |
| Shocks | 3 shocks/axis; 50 g half a sine 11 ms | | |
| Operating temperature range | -40 °C; +85 °C | | |
| Life | > 10M of cycles | | |
| Speed (max.) | 60 mm/s | | |
| Immunity to radiated electromagnetic disturbances | 200 V/m 150 kHz/1 GHz IEC 62132-2 part 2 (level A) | | |
| Immunity to power frequency magnetic field | 200 A/m 50 Hz/60 Hz EN 61000-4-8 | | |
| Radiated electromagnetic emissions | 30 MHz/1 GHz < 30 dBμV/m EN 61000-6-4 | | |
| Electrostatic discharges | Contact discharges: ± 4 kV Air discharges: ± 8 kV EN 61000-4-2 | | |
| Immunity to radiated RF field | 10 V/m 80 MHz to 1 GHz EN6100-4-3 | | |

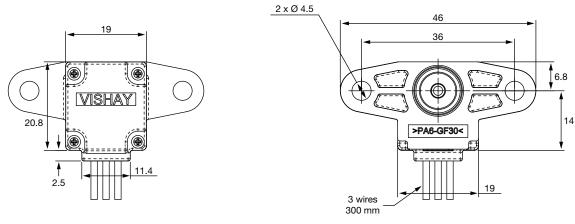


| ENVIRONMENTAL SPECIFICATIONS | | |
|------------------------------|--|--|
| Materials | | |
| Housing | Thermoplastic housing | |
| Mounting type | Flange with 2 holes Ø 4.5 mm | |
| Shaft | Ø 3.175 mm (stainless steel) | |
| Output | 3 lead wires (AWG 20) Length: 300 mm | |
| Centering diameter | Ø 12 mm | |
| Spring force | From 1.5 N to 7 N along stroke (typical) | |

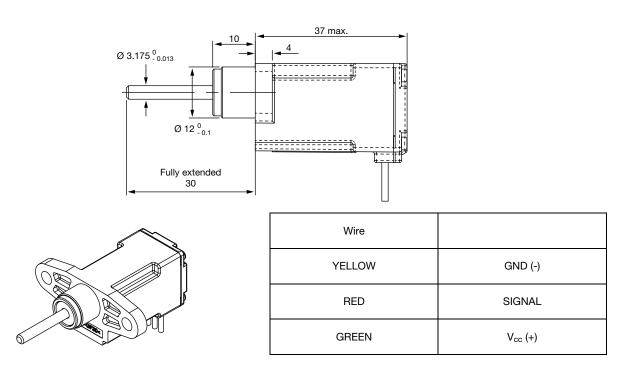
Note

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

DIMENSIONS in millimeters



Tol. gen.: ± 0.5 mm





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