Bently Nevada 33525 Series Service Manual

330525-05

1. Description

Part Number: 330525-05

3. Product Information

Part Number: 330525-05

Model: Velomitor XA Piezo-velocity Sensor

Brand: Bently Nevada

Condition: New & Original in Factory Packing

Factory Warranty: 12 Months

Ordering Information

Model 330525 Approvals

Agency Approval Option 0 2 = SIRA/CENELEC

Sensitivity 3.94mV/mm/s (100 mV/in/s) ±5%.

Frequency Response

4.5 to 2,000 Hz (270 to 120,000 cpm) ±3.0 dB,

6.0 to 1,000 Hz (360 to 60,000 cpm) ±0.9 dB.

Temperature Sensitivity

-14% to +7.5% typical over the operating temperature range.

Velocity Range

1270 mm/s (50 in/s) peak.

Transverse Sensitivity

Less than 5% of sensitivity.

Amplitude Linearity

±2% to 152 mm/s (6 in/s) peak.

Mounted Resonant Frequency

Greater than 12 kHz.

Broadband Noise Floor (4.5 Hz to 2kHz)

0.004 mm/s (160 min/s) rms, nominal.

Power Requirements

DC Voltage: -22 to -30 VDC

Bias Current: 2.5 to 6.0 mA

Output Bias Voltage

-12 ± 3.0 VDC, Over Temperature Referenced to Pin A

Dynamic Output Impedance

Less than 2400 Ω

Broadband

Noise Floor

Less than 0.004 mm/s (160

µin/s)

Grounding Case isolated

Maximum cable length 305 metres (1,000 feet) of cable, BN part number

02173007 with no degradation of signal.

Operating Temperature Range -55 °C to +121 °C (-67°F to +250°F)

Shock Survivability 5000 g peak, maximum

Relative Humidity

To 100% non-submerged; case is hermetically-sealed.

Magnetic Field Susceptibility

<51 min/s/gauss (50 gauss, 50-60 Hz)

Operating Temperature Range

-55 °C to +121 °C (-67°F to+250°F)

Shock Survivability

5000 g peak, maximum

Relative Humidity

To 100% non-submerged; case is hermetically-sealed.

Magnetic Field Susceptibility

<51 min/s/gauss (50 gauss, 50- 60 Hz)

Weight 156 g (5.5 oz), typical

Diameter 28 mm (1.1 in)

Height 73.1 mm (2.88 in)

Case Material 316L stainless steel

Connector 2-pin Mil-C-26482 hermeticallysealed, 316L stainless steel shell.

Mounting Torque 45 N-m (33 ft-lb) maximum

Polarity Pin A goes positive with respect to pin B when the sensor case motion is toward the connector.

Cable Bend Radius 1.5-in minimum bend radius.

Hazardous Area Approvals

Ex ia IIC T4

AEx ia IIC T4

Class I, Division 1, Groups A, B, C

and D Class II, Groups E, F, G

Class III

T4 @ -40°C ≤ Ta ≤ 100°C

Ex nL IIC T4

AEx nA IIC T4

Class I, Div 2, Groups A, B, C, D

Install per dwg 167539

T4 @ -40°C ≤ Ta ≤ 100°C