Bently Nevada 330530&330533 Series Service Manual

330530-00

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. : 330530-00

Product type : Radiation Resistant Velomitor Sensor

330530-AA

A: Mounting Thread Adapter Option

0 0 = No adapter

Pre-Radiation Electrical

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

Output Bias

Voltage, Ref:

Pin B to Pin A

-12.0 ± 1.0 V @ room

temperature

-12.0 ± 3.45 V over temperature

Frequency

Response

6.0 Hz to 2.5 kHz (360 cpm to 150

kcpm) ± 0.9 dB

4.5 Hz to 5.0 kHz (270 cpm to

300 kcpm) ± 3.0 dB

Temperature

Sensitivity

-11.0% to +10.5% typical over the

operating temperature range

Velocity

Range 635 mm/s (25 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 5

kHz)

0.008 mm/s (320 min/s) rms,

nominal

Maximum

Cable

Length

305 metres (1,000 feet) of cable,

Part Number 175873, with no

degradation of signal

Post-Radiation Electrical

Sensitivity

3.94 mV/mm/s (100 mV/in/s) ±

10% @ 3 Mrads

3.94 mV/mm/s (100 mV/in/s) ±

12% @ 12 Mrads

Output Bias

Voltage, Ref:

Pin B to Pin A

-12.0 ± 2.0 V @ room

temperature

-12.0 ± 3.70 V over temperature

Frequency

Response

6.0 Hz to 2.5 kHz (360 cpm to 150 kcpm) ± 1.0 dB

4.5 Hz to 5.0 kHz (270 cpm to 300 kcpm) ± 3.0 dB

Temperature Sensitivity

-10.0% to +12.5% typical over the operating temperature range

Velocity

Range 420 mm/s (16.5 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 5 kHz)

0.008 mm/s (320 min/s) rms, nominal

Maximum Cable Length

305 metres (1,000 feet) of cable, BN Part Number 175873, with no degradation of signal

Environmental Limits

Operating Temperature Range

-55 °C to +121 °C (-67 °F to +250 °F)

Shock

Survivability 5,000 g peak, maximum

Relative Humidity

To 100% non-submerged (case is hermetically sealed)

Base Strain

Sensitivity 0.005 in/s/mstrain

Magnetic Field Sensitivity

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

Radiation Dosage

12.0 Mrads, maximum guarantee

Physical

Weight 142 grams (5.0 ounces), typical

Diameter 25.3 mm (0.995 in)

Height 63.5 mm (2.5 in)

Case Material 304L stainless steel

Connector

2-pin MIL-C-5015

hermetically sealed, 304

stainless steel

Mounting

Torque

4.52 N-m (40 in-lbf)

maximum

Polarity

Pin A goes positive with

respect to Pin B when the

sensor case motion is

towards the connector.

Recommended

Cable Length

127 m (417 ft)