

## **Bently Nevada 330500-02-02**

Manufacturer : Bently Nevada

Product No. : 330500-02-02

Product Type : Velomitor Piezo-velocity Sensor

Made in U.S.A

Model : 330500 - Velomitor Piezo-velocity Sensor

Mounting Thread Option : 02 M8 x 1

Agency Approval Option : -02 ATEX (European)

Parameters are specified from +20 ° C to +30 ° C  
(+68 ° F to +86 ° F) and at 100 Hz unless otherwise  
indicated.

Operating the transducer outside the  
specified limits may result in false  
readings or loss of machine  
monitoring.

Electrical

Sensitivity

3.94mV/mm/s (100 mV/in/s)

±5%.

Frequency

Response

4.5 Hz to 5 kHz (270 cpm to  
300 kcpm) ±3.0 dB.

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

**You can contact us through the following contact information**

[www.sparetechplc.com](http://www.sparetechplc.com) +86 180 3000 5825 [sales@sparetechplc.com](mailto:sales@sparetechplc.com)

Sensitivity

Less than 5% of sensitivity.

Amplitude

Linearity

$\pm 2\%$  to 152 mm/s (6 in/s)

peak.

Mounted

Resonant

Frequency

Greater than 12 kHz.

Output Bias

Voltage

-12  $\pm$  3.0 VDC, over

temperature referenced to

Pin A.

Dynamic

Output

Impedance

Less than 2400  $\Omega$

Broadband

Noise Floor (4.5

Hz to 5 kHz)

0.004 mm/s (160  $\mu$  in/s) rms,  
nominal

Grounding Case isolated

Maximum

Cable Length

305 metres (1,000 feet) of  
cable, part number 02173006,  
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

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#### Humidity

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

#### Base Strain

##### Sensitivity

0.005 in/s/mstrain.

##### Magnetic Field

##### Susceptibility

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

#### Physical

Weight 142 grams (5.0 oz), typical.

Diameter 25.3 mm (0.995 in).

Height 63.2 mm (2.49 in).

Case Material 316L stainless steel.

##### Connector

2-pin Mil-C-5015

hermetically-sealed, 316L  
stainless steel shell.

##### Mounting

##### Torque

32-46 kg cm (24-40 in-lb)  
max.

##### Polarity

When the sensor case  
motion is toward the  
connector, Pin A becomes  
positive with respect to pin B.

#### Recommended

cable length

(assuming

max vibration

of 50g,

frequency 10

kHz, and cable

capacitance

200 pf/m.)

208 ft (63m)

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## Compliance and Certifications

### FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

I This device may not cause harmful interference.

I This device must accept any interference received, including interference that may cause undesired operation.

### EMC

EMC Directive 2014/30/EU

### RoHS

RoHS Directive 2011/65/EU

### Maritime

DNV rules for classification - Ships

DNV rules for classification - High speed and light craft

DNV offshore standards

### Hazardous Area Approvals

330500 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

Install per dwg 167537

T4 @  $-40^{\circ}\text{C} \leq T_a \leq 100^{\circ}\text{C}$

Ex nL IIC T4

AEx nA IIC T4

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

Install per dwg 167537

T4 @  $-40^{\circ}\text{C} \leq T_a \leq 100^{\circ}\text{C}$

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