

# Bently Nevada 190501-12-99-00 Manual

Brand	Bently Nevada
Product Series	190501
Product Type	Velomitor CT Velocity Transducer

## Description

Manufacturer : Bently Nevada

Product No. : 190501-12-99-00

Product Type : Velomitor CT Velocity Transducer

Made in U.S.A

190501

Mounting Hardware Option : 12 = Plate Stud 3/8-in 24 to M8x1

Connection Option : 99 = Unit with included 32 foot cable

Agency Approval Option : 00 = No approvals

Weight : 0.297 Kg

### Electrical

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

±5%.

### Frequency

#### Response

3.0 Hz to 900 Hz

(180 to 54,000 cpm) ±1.0 dB

1.5 Hz to 1.0 kHz

(90 to 60,000 cpm) ±3.0 dB

### Temperature

#### Sensitivity

-8% to +5% typical over the operating temperature range

### Transverse

#### Response

Less than 5% of the axial sensitivity.

### Amplitude

#### Linearity

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±2% to 63.5 mm/s pk  
(2.5 in/s pk)  
Mounted  
Resonant  
Frequency  
9 kHz, minimum (stud  
mounted, except quick  
disconnect)  
Output Bias  
Voltage  
10.1 Vdc ± 1.0 Vdc, Pin A  
referenced to Pin B  
Dynamic  
Output  
Impedance  
<400 Ω typical  
Broadband 0.229 mm/s (0.009 in/s) pk.  
Base Strain  
Sensitivity  
0.43 mm/s/μstrain (0.017  
in/s/μstrain).  
Grounding Internal electronics are isolated  
from case.  
Maximum  
Cable  
Length  
305 metres (1,000 ft.) of cable  
(part number 02173006) with  
no degradation of signal.

#### Environmental Limits

##### Operating

##### Temperature

-40°C to +85°C  
(-40°F to +185°F).

##### Storage

##### Temperature

-40°C to +100°C  
(-40°F to +212°F).

Shock Limit 5000 g pk, maximum.

##### Humidity

##### Limit

100% condensing,  
non-submerged.

##### Magnetic

##### Field

##### Susceptibility

<0.0068 mm/s/gauss (0.268  
mil/s/gauss) @ 50 gauss, 50-  
60Hz

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Mechanical

Weight <297 g (10.5 oz.), typical.

Mounting

Surface

33 mm diameter (1.3 in diameter).

Height 82 mm (3.2 in).

Case

Material 316L stainless steel

Connector 2-pin 316L stainless steel MIL-C5015, top.

Mounting

Torque

4.5 N-m  $\pm$  0.6 N-m (40 in-lbf  $\pm$  5 in-lbf).

Polarity

Pin A goes positive with respect to Pin B when velocity is from base to top of the transducer.

Mounting

Angle Any orientation.

190501 (Agency Approval Options 01 through 04)

Intrinsically

Safe

Ex ia IIC T4:

Class I, Div 1, Groups A, B, C, D.

Class II, Group E, F and G

Class III

AEx ia IIC T4:

Class I, Div 1, Groups A, B, C, D;

Class II, Groups E, F, G

Class III

Install per drawing 167536

T4 @ -40°C  $\leq$  Ta  $\leq$  +100°C

(-40°F  $\leq$  Ta  $\leq$  +212°F)

Intrinsically

Safe and

NonIncendive

Ex nL IIC T4

Class I, Division 2, Groups A, B, C and D

AEx nA T4

Class I, Division 2, Groups A, B, C and D

Install per drawing 167536

T4 @ -40°C  $\leq$  Ta  $\leq$  +100°C

(-40°F  $\leq$  Ta  $\leq$  +212°F)

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