

# Bently Nevada 200150&200151 Series Service Manual

200150-03-05

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## 1. Description

Manufacturer : Bently Nevada

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## 3. Product Information



Manufacturer : Bently Nevada

Product No. : 200150-03-05

Product Type : General Purpose Trendmaster 2000 or Trendmaster Pro Accelerometer

Made in U.S.A

Mounting stud option : 03= 3/8-24 to 1/2-20 UNF 1-3/8 inch hex plate stud

Approvals : 05 = Multiple Approvals (CSA, ATEX, and IECEx)

Accelerometer 200150

Used with ProTIM Option Standard Acceleration-to-Velocity channel type (-01)

Type of Application General application

Specifications

All specifications are at +25°C (+77°F), unless  
otherwise specified.

Electrical

Sensitivity @

80 Hz ( $\pm 12\%$ )

10.2 mV/(m/s<sup>2</sup>) (100 mV/g)

Measurement Range

Accelerometer 200150

Measurement Range in m/s<sup>2</sup> (g)  $\pm 245$  ( $\pm 25$ )

Frequency Range Referenced to 80Hz

( $\pm 10\%$ )

Accelerometer 200150

Frequency Range in Hz

(cpm) 10 to 1000 (600 to 60,000)

Mounted

Resonant

Frequency

>20 kHz (>1200 kcpm)

Amplitude

Linearity

(1 to 10g pk)

$\pm 2\%$

Transverse

Sensitivity

$\leq 7\%$

Settling Time (Within 5% of Bias)

Accelerometer Settling Time (ms)

200150  $\leq 300$

Excitation

Voltage

4.7 to 5.5 Vdc

Polarity

(Acceleration

from Base to

Connector)

SIG+ positive with respect to

SIG-.

Quiescent

Current

<800  $\mu$ A

Output Bias

Voltage

+2.5  $\pm$  0.23 Vdc

Accelerometer 200150

Measurement Range in mm/s<sup>2</sup> (mg) 14.7 (1.5)

Environmental

Axial Shock

Limit

49,050 m/s<sup>2</sup> pk (5,000 g pk)



Temperature  
Range  
-40 °C to +105 °C (-40 °F to +221 °F)  
Sealing  
(Hermetic)  
5X10<sup>-8</sup> atm•cc/s (3.1X10<sup>-9</sup> atm•in<sup>3</sup>/s), maximum  
Relative  
Humidity  
100% relative, condensing, non-submerged  
Physical  
Size (Hex x Height)  
17.5 mm x 45.7 mm (11/16 in x 1.8 in)  
Weight 58 g (2.0 oz), typical  
Mounting  
Thread  
3/8-24 female  
Mounting  
Torque  
2.7 to 6.8 N•m (2 to 5 ft•lbf)  
Sensing  
Element  
Ceramic  
Sensing  
Geometry  
Shear  
Housing and connector material  
200150 316L stainless steel  
Temperature  
Range  
-55 °C to +121 °C (-67 °F to +250 °F)  
Cure Time 24 hours

