

Bently Nevada 200157-20-05 Manual

Brand	Bently Nevada
Product Series	200150&200151
Product Type	Enveloping Trendmaster Pro

Description

Manufacturer : Bently Nevada

Product No. :200157-20-05

Product Type : Enveloping Trendmaster Pro
Accelerometer

Made in U.S.A

Mounting stud option : 20 3/8-24 thread, 1 magnetic
mount base

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

Accelerometer 200157

Used with ProTIM Option : Standard Acceleration-to-Velocity with Acceleration
Enveloping channel type (-06)

Type of Application : Roller element bearing and certain types of cavitation effects

Specifications

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

Electrical

Sensitivity @

80 Hz ($\pm 12\%$)

10.2 mV/(m/s²) (100 mV/g)

Measurement Range

Accelerometer 200157

Measurement Range in m/s² (g) ± 245 (± 25)

Frequency Range Referenced to 80Hz
($\pm 10\%$)

Accelerometer 200157

Frequency Range in Hz
(cpm) 10 to 10,000 (600 to 600,000)

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)
200157 ≤ 300
Excitation
Voltage
4.7 to 5.5 Vdc
Polarity
(Acceleration
from Base to
Connector)
SIG+ positive with respect to
SIG-
Quiescent
Current
<800 μA
Output Bias
Voltage
 $+2.5 \pm 0.23 \text{ Vdc}$

Accelerometer 200157
Measurement Range in mm/s² (mg) 14.7 (1.5)

Environmental
Axial Shock
Limit
49,050 m/s² pk (5,000 g pk)
Temperature
Range
-40 °C to +105 °C (-40 °F to +221
°F)
Sealing
(Hermetic)
5X10⁻⁸ atm•cc/s (3.1X10⁻⁹
atm•in³/s), maximum
Relative
Humidity
100% relative, condensing,
non-submerged

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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

200155 316L stainless steel

Temperature

Range

-55 °C to +121 °C (-67 °F to +250

°F)

Cure Time 24 hours"

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