Bently Nevada 200150&200151 Series Service Manual

200157-16-05

1. Description

"""Manufacturer : Bently Nevada

3. Product Information

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Product No. :200157-16-05

Product Type : Enveloping Trendmaster Pro

Accelerometer

Made in U.S.A

MOunting stud option : 16 3/8-24 to 1/2-13 UNC, 3/4 inch

hex stud

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

Accelerometer 200157

Used with ProTIM Option : Standard Accelerationto-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 (± 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

(±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)

±2%

Transverse

Sensitivity

≤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 ± 0.23 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 ºC to +105 ºC (-40 ºF to +221
ºF)
Sealing
(Hermetic)
5X10-8 atm•cc/s (3.1X10-9
atm•in3/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
200155 316L stainless steel
Temperature
Range
-55 ºC to +121 ºC (-67 ºF to +250
ºF)
Cure Time 24 hours"""