Bently Nevada 200150&200151 Series Service Manual

200157-01-05

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. : 200157-01-05

Product Type : Enveloping Trendmaster Pro

Accelerometer

Made in U.S.A

MOunting stud option : 01 = 3/8-24 thread, 2 adhesive mount frames with adhesive

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