Bently Nevada 3300 Series Service Manual

74712-06-05-04-00

1. Description

74712-06-05-04-01

3. Product Information

74712-06-05-04-01 | Bently Nevada | High-temperature Two-wire Transducer

Manufacturer : Bently Nevada

Product No. : 74712-06-05-04-01

Product type : 74712 = High-temperature Two-wire Transducer

Made in U.S.A

Transducer Mounting Angle/Minimum Operating Frequency Option : 06 = 0 ±100, 10 Hz (600 cpm)

Mounting Base Option : 05 = No base; 1/2-in 20 UNF-3A stud

Connector Option : 04 = Side mount

Agency Approval Option : 01 = CSA

Height : 82 mm (3.2 in)

Height : 102 mm (4 in) typical (depends on connector option).

Diameter : 41 mm (1.6 in) typical.

Description

Bently Nevada™ Seismoprobe Velocity Transducer Systems
are designed to measure absolute (relative to free space)
bearing housing, casing, or structural vibration. The two-wire
systems consist of a transducer and appropriate cable.
The Seismoprobe family of velocity transducers is a two-wire
design that uses moving-coil technology. It provides a
voltage output directly proportional to the transducer's
vibration velocity.
Moving-coil transducers are less sensitive to impact or
impulsive excitation than solid-state velocity transducers,
which are inherently accelerometers with embedded
integration electronics.
Moving-coil transducers are less sensitive to impact or
impulsive excitation and can represent a good choice for
certain applications. Because they don’t require external
power, they are convenient for portable measurement
applications.
For most installations, Bently Nevada's Velomitor
family of velocity transducers, which incorporate
solid-state technology, provide improved
performance and ruggedness for casing velocity
measurement applications.

Operating and Storage Temperature :-29°C to +204°C (-20°F to +400°F).

Electrical

Sensitivity 20 mV/mm/s (500 mV/in/s), ±5% when properly terminated and oriented at the angle of calibration.

Calibration Load 10 kΩ Terminal "A" to "B"

Output taken across pins "A" and "B"

Sensitivity Temperature Coefficient 0.2%/°C

Dynamic operating range 2.54 mm (0.100 in) peak to peak maximum displacement.

Velocity Range 25 mm/s (1 in/s) (at +22 °C of casing vibration at 100 Hz with a 10 kΩ load.

Coil Resistance 1.25 kΩ ±5%

Locked Coil Inductance 125 mH, typical

Amplitude Linearity ±5% from 0.01 to 5.0 in/s
(0.254 to 127 mm/s) at 100Hz (6000CPM)

Shock resistance Withstands 50 g peak maximum acceleration along non-sensitive axis.

Transverse sensitivity ±10% maximum of the sensitive axis sensitivity at 100 Hz and 1.0 in/s (2.54 cm/s)

Polarity of output signal Pin A goes positive with respect to Pin B when the transducer case velocity is towards the connector.

Lead wire length 305 meters (1,000 feet) maximum between Seismoprobe Velocity Transducer and 3300 or Bently Nevada™ 3500
Monitor. Consult manual for frequency roll-off at longer lengths.

Relative
Humidity

To 95%, noncondensing.
100%, non-submerged, when
ordered with integral cable.

Maximum Use
Altitude

2000 m (6,561 ft) above sea
level.
Mounting Torque
1/2-20, 1/4-
20, 1/4-28,
5/8-18, or
M10X1
mounting
base
options:
5.6 N•m (50 in•lb)
8-32
threaded
studs:
1.41 N•m (12.5 in•lb)
Hazardous Area Approvals
cNRTLus
Class I, Division 1, Groups A, B, C and D T6;
Class II, Division 1, Groups E, F and G;
Class III:
Ex ia IIC T6 Ga;
Class I, Zone 0, AEx ia IIC T6 Ga;
Ex ec IIC T6 Gc;
Class I, Zone 2, AEx ex IIC T6 Gc
For Ex/AEx ia:
Ui = 28 VDC
Ii = 16 mA
Pi = 1.0 W
Ci = 0
L/Ri = 110 µH/Ω
Li = 131.25 mH
For EX/AEx ec:
V = 24 VDC
I = 24 mA