Bently Nevada 330400&330425&330500 Series Service Manual

330425-01-05

1. Description

Manufacturer : Bently Nevada

3. Product Information

Manufacturer : Bently Nevada

Product No. :330425-01-05

Product type : Accelerometer Acceleration Transducers

Made in U.S.A

Mounting Thread Option : 0 1 ¼-28 UNF integral stud

Agency Approval Option :0 5

Multiple approvals (CSA, ATEX,

IECEx,)

Sensitivity 10.2 mV/m/s2 (100 mV/g) ±5%.

Acceleration

range

490 m/s2 (50 g) peak overall

acceleration within the 10 Hz to

15 kHz frequency span.

Vibration at frequencies above

15 kHz, especially at the

transducers resonance will

significantly decrease this

range.

Amplitude

Linearity

±1% to 490 m/ s2 (50 g) peak.

Broadband

Noise Floor

(10 Hz to 15

kHz)

0.039 m/s2 (0.004 g) rms.

Frequency

Response

10 Hz to 15 kHz

(600 cpm to 900,000 cpm)

±3dB;

30 Hz to 10 kHz

(1800 cpm to 600,000 cpm)

±10%

Temperature

Sensitivity

-11% to +3% typical over the

operating temperature range.

Transverse

Sensitivity Less than 5% of axial.

Mounted

Resonant

Frequency

Greater than 30 kHz.

Amplitude of

Resonant

Peak

20 dB maximum.

Base Strain Sensitivity

For serial

numbers

preceded by

the letter “G”

(including all

new sensors

49 mm/s2/mstrain (0.005

g/mstrain)

For serial

numbers
NOT
preceded by
the letter “G”
(shipped
prior to April
2004)
980 mm/s2/mstrain (0.100
g/mstrain) without Mounting
Base (API adapter);
4.9 mm/s2/mstrain (0.0005
g/mstrain) with Mounting Base
(API adapter) supplied with the
accelerometer.
For units bearing
serial numbers NOT
preceded by the
letter “G”, Bently
Nevada
recommends
installing with the
Mounting Base to
minimize base strain
sensitivity.
Maximum
cable length
305 metres (1000 ft) with no
degradation of signal.
Power requirements
Input
Voltage -24 ± 0.5 Vdc.
Bias Current 2 mA nominal.
Output Bias
Voltage: -8.5 ± 0.5 Vdc.
Grounding Case isolated.
Environmental Limits
Operating
and storage
temperature
-55°C to +121°C (-67°F to
+250°F)
Shock
Survivability
49,050 m/s2 (5000 g) peak,
maximum.
Relative
humidity
100% condensing, nonsubmerged. Case is
hermetically sealed.
Magnetic
Field
Susceptibility
<2.21 mm/s2/gauss (225
mg/gauss) [50 gauss, 50-
60Hz].
IP Rating
Equivalent to an IP 68 (Dust
tight and watertight). Please
note that this is for the sensor

only and does not apply to the

cable.

Physical

Weight (no

cable) 99 g (3.5 oz), typical

Diameter 23 mm (0.93 in).

Height 59 mm (2.3 in), including

mounting stud.

Connector 3-pin MIL-C-5015 Receptacle

316L stainless steel

Mounting

Surface 32 minch rms.

Mounting

Torque 4.1 N·m (3.0 ft·lb).

Case

Material 316L stainless steel

Weight (no

cable) 100 g (3.5 oz), typical

Mounting

Angle Any orientation