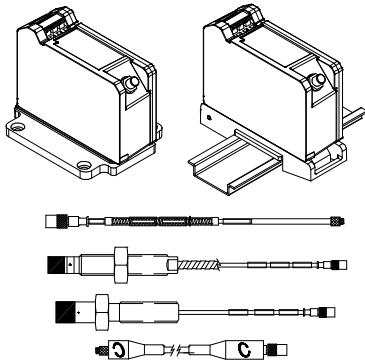


3300 XL NSv* Proximity Transducer System

Bently Nevada* Asset Condition Monitoring



Description

The 3300 XL NSv* Proximity Transducer system is intended for use with centrifugal air compressors, refrigeration compressors, process gas compressors and other machines with tight installation requirements. The 3300 XL NSv Proximity Transducer System consists of:

- a 3300 NSv probe
- a 3300 NSv extension cable
- a 3300 XL NSv Proximator* Sensor.¹

The primary uses for the 3300 XL NSv Transducer System are for areas where counter bore, sideview or rearview restrictions limit the use of standard Bently Nevada* 3300 and 3300 XL 5 and 8 mm Transducer Systems. It is also ideal for small target applications, such as measuring radial vibration on shafts smaller than 51 mm (2 in) or axial position on flat targets smaller than 15 mm (0.6 in). It is primarily used in the following applications on fluid-film bearing machines where a small shaft or reduced side-view is present:

- Radial vibration and radial position measurements
- Axial (thrust) position measurements
- Tachometer and zero speed measurements
- Phase reference (Keyphasor*) signals

The 3300 XL NSv Transducer System design allows it to replace both the 3300 RAM Transducer Systems and the 3000-series or 7000-series 190 Transducer System. Upgrades from the 3300 RAM system to the 3300 XL NSv system may use the existing probe, extension cable, and monitoring system with 3300 XL NSv Proximator Sensor. Upgrades from the 3000-series or 7000-series Transducer System must replace the probe, extension cable and Proximator Sensor with NSv components.

The 3300 XL NSv Transducer System has an Average Scale Factor of 7.87 V/mm (200 mV/mil), which is the most common output for eddy current transducers. Its enhanced side-view and small target characteristics give it a shorter linear range than the Bently Nevada 3300 XL-series 5 and 8 mm Transducer System. With The 1.5 mm (60 mils) of linear range exceeds the linear range of the 3000-series 190 Transducer System.

Application Alert: Although the terminals and connector on the Proximator Sensor have protection against electrostatic discharge, take reasonable precautions to avoid electrostatic discharge during handling.

Recommended case hole and tap size for M8x1 case

Drill Size

7.4mm

Hole Size

7.511 to 7.622 mm

Hole Depth

12 to 24 mm

Tap Drill Size

L

Recommended case hole and tap size for 3/8-24 case

Drill Size

0.332 in

Hole Size

0.338 to 0.343 in

Hole Depth

0.562 to 0.813 in

Tap Drill Size

Q

Recommended case hole and tap size for M10x1 case

Drill Size

9.4mm

Hole Size

9.541 to 9.662 mm

Hole Depth

15 to 30 mm

Tap Drill Size

U

Connector-to-connector torque

Probe case	Maximum	Recommended
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torque:	Rated	
¼ -28 or M8x1 probe cases	7.3 N•m (65 in•lb)	5.1 N•m (45 in•lb)
3/8-24 or M10x1 probe cases	33.9 N•m (300 in•lb)	11.3 N•m (100 in•lb)
3/8-24 or M10x1 probe cases – first three threads	22.6 N•m (200 in•lb)	7.5 N•m (66 in•lb)
Reverse mount probes	22.6 N•m (200 in•lb)	7.5 N•m (66 in•lb)

Recommended

torque: *Finger tight*

Maximum torque: 0.56 N•m (5 in•lb)

Minimum Bend

Radius (with or without

sst armor): 25.4 mm (1.0 in)

System Weight (typical):

Probe: *Approximately 14 to 150 g (0.5 to 5.3 oz)*

Extension Cable: 45 g/m (0.5 oz/ft)

Armored Extension

Cable: 64 g/m (0.7 oz/ft)

Proximitors

Sensor: 255 g (9 oz)

Environmental Limits

Probe Temperature Range

Operating

Temperature: -34°C to +177°C (-30°F to +351°F)

50 5.0 metres (16.4 feet)

70 7.0 metres (23.0 feet)

D: Connector and Cable-Type Option

01 Miniature coaxial ClickLoc connector with connector protector, standard cable

02 Miniature coaxial ClickLoc connector, standard cable

11 Miniature coaxial ClickLoc connector with connector protector, FluidLoc cable

12 Miniature coaxial ClickLoc connector, FluidLoc cable

E: Agency Approval Option

00 Not required

05 Multiple Approvals

3300 NSv Proximity Probes, Metric

330903 3300 NSv Probe, M8 x 1 thread, without armor

330904 3300 NSv Probe, M8 x 1 thread, with armor

330905 3300 NSv Probe, M10 x 1 thread, without armor

330910 3300 NSv Probe, M10 x 1 thread, with armor

Part Number-AXX-BXX-CXX-DXX-EXX

Option Descriptions

A: Unthreaded Length Option

Note: Unthreaded length must be at least 20 mm less than the case length.

Order in increments of 10 mm.

Length configuration:

Maximum unthreaded length: 230 mm

Minimum unthreaded length: 0 mm

Example: 0 6 = 60 mm

B: Overall Case Length Option

Order in increments of 10 mm.

Metric thread configurations:

Maximum length: 250 mm

Minimum length: 20 mm

Example: 0 6 = 60 mm

C: Total Length Option

05 0.5 metre (20 in)

10 1.0 metre (39 in)

50 5.0 metres (16.4 feet)

70 7.0 metres (23.0 feet)

D: Connector and Cable-Type Option

01 Miniature coaxial ClickLoc connector with connector protector, standard cable

02 Miniature coaxial ClickLoc connector, standard cable

11 Miniature coaxial ClickLoc connector with connector protector, FluidLoc cable

12 Miniature coaxial ClickLoc connector, FluidLoc cable

E: Agency Approval Option

00 Not required

05 Multiple Approvals

3300 NSv Reverse Mount Probe

330906-02-12- CXX-DXX-EXX, 3/8-24 UNF threads

330907-05-30- CXX-DXX-EXX, M10 x 1 threads

Option Descriptions

C: Total Length Option

05 0.5 metre (20 in)

10 1.0 metre (39 in)

50 5.0 metres (16.4 feet)

70 7.0 metres (23.0 feet)

D: Connector Option

02 Miniature coaxial ClickLoc connector, standard cable

12 Miniature coaxial ClickLoc connector, FluidLoc cable

E: Agency Approval Option

00 Not required

05 Multiple Approvals

Note: For a shorter delivery time, order commonly stocked probes. Currently, stocked probes consist of the following part numbers: 330901-00-24-05-02-00, 330901-00-90-05-02-00, 330902-00-50-05-02-00, 330902-00-95-05-02-00, 330903-00-02-10-02-00, 330903-00-03-10-02-00, 330906-02-12-05-02-00.

3300 XL NSv Proximito Sensor

330980-AXX-BXX

Option Descriptions

A: Total Length and Mounting Option

50 5.0 metre (16.4 feet) system length, panel mount

51 5.0 metre (16.4 feet) system length, DIN mount

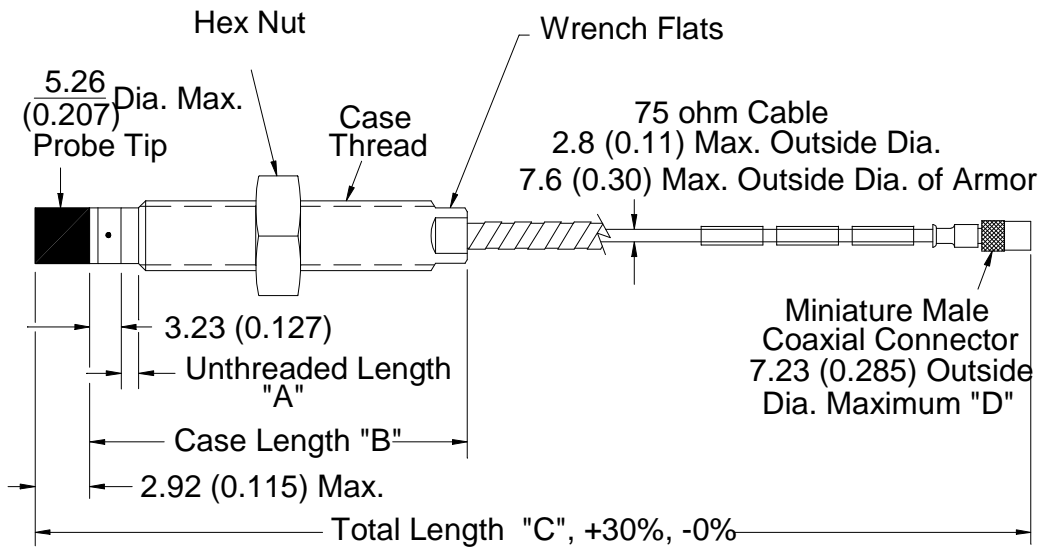


Figure 18 3300 NSv Proximity probes, Standard Mount

- 330901, 1/4 -28 UNF-2A, without armor
- 330902, 1/4 -28 UNF-2A, with armor
- 330903, M8x1 thread, without armor
- 330904, M8x1 thread, with armor
- 330905, M10x1 thread, without armor
- 330908, 3/8-24 UNF-2A, without armor
- 330909, 3/8-24 UNF 2A, with armor
- 330910, M10x1 thread, with armor

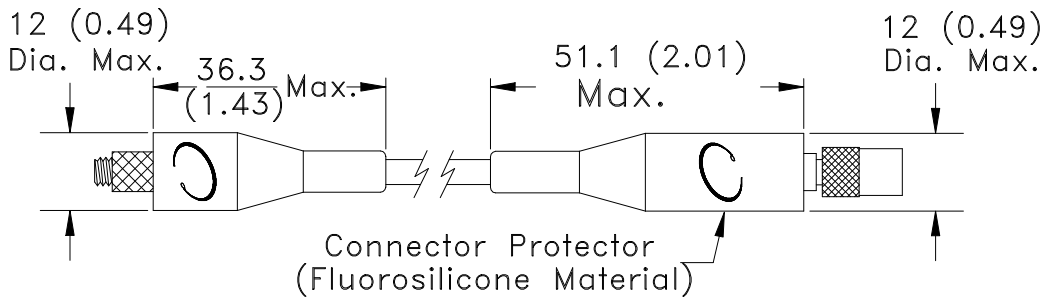


Figure 19 Installed Connector Protectors