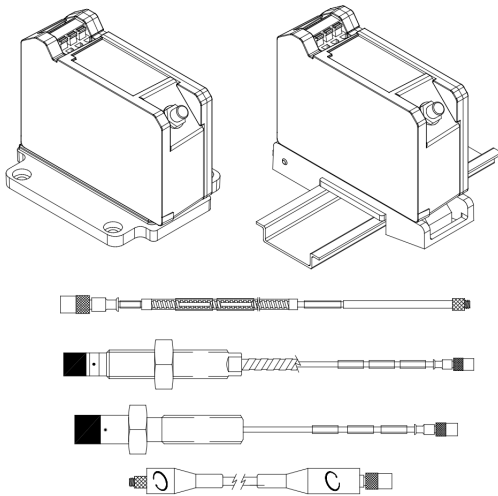


3300 XL NSv Proximity Transducer System

Datasheet

Bently Nevada Machinery Condition Monitoring

147385 Rev. K



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 Proximitor 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-filled 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 Proximitor Sensor. Upgrades from the 3000-series or 7000-series Transducer System must replace the probe, extension cable and Proximitor 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.



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

Proximator Sensor

The 3300 XL NSv Proximator Sensor has similar features to those found in the 3300 XL 8 mm Proximator Sensor. Its thin design allows the user to mount it in either a high-density DIN-rail installation or a more traditional panel mount configuration. Improved RFI/EMI immunity allows the 3300 XL NSv Proximator Sensor to achieve European CE mark approvals without any special mounting considerations. This RFI immunity also prevents nearby high frequency radio signals from adversely affecting the transducer system. SpringLoc terminal strips on the Proximator Sensor require no special installation tools and facilitate faster, highly robust field wiring connections.

Proximity Probe and Extension Cable

The 3300 NSv probe and extension cable are mechanically and electrically compatible and interchangeable with Bently Nevada's previous 3300 RAM proximity probe and extension cable. The NSv probe has increased chemical resistance compared to the 3300 RAM probe, which allows its use in many process compressor applications. The side-view characteristics of the 3300 NSv probe are also superior to those of the 3000-series 190 probe when gapping the 3300 NSv probe at the same distance from the probe target.

The 3300 NSv probe comes in varying probe case configurations, including armored and unarmored ¼ -28, 3/8 -24, M8 X 1 and M10 X 1 probe threads. The reverse mount 3300 NSv probe comes standard with either 3/8 -24 or M10 X 1 threads. All components of the transducer system have gold-plated brass ClickLocconnectors. ClickLoc connectors lock into place and prevent the connection from loosening. The patented TipLocmolding method provides a robust bond between the probe tip and the probe body. Bently Nevada's patented CableLocdesign provides 220 N (50 lb) of pull strength and securely attaches the probe cable to the probe tip. Connector protectors are recommended for use on the probe-to-extension cable connection, as well as on the cable-to-Proximator Sensor connection. Connector protectors prevent most liquids from entering into the ClickLoc connectors and adversely affecting the electrical signal(2).

Notes:

(1) ProximatorSensors are supplied by default from the factory calibrated to AISI 4140 steel. Calibration to other target materials is available upon request.

(2) Silicone tape is also provided with each 3300 NSv extension cable and can be used instead of connector protectors. Silicone tape is not recommended in applications where the probe-to-extension cable connection will be exposed to turbine oil.

0 2	Miniature coaxial ClickLoc connector, standard cable
1 1	Miniature coaxial ClickLoc connector with connector protector, FluidLoc cable
1 2	Miniature coaxial ClickLoc connector, FluidLoc cable
E: Agency Approval Option	
0 0	Not required
0 5	Multiple Approvals

3300 NSv Reverse Mount Probe

330906-02-12-CC-DD-EE 3/8-24 UNF threads

330907-05-30- CC-DD-EE M10 x 1 threads


C: Total Length Option

0 5	0.5 metre (20 in)
1 0	1.0 metre (39 in)
5 0	5.0 metres (16.4 feet)
7 0	7.0 metres (23.0 feet)

D: Connector Option

0 2	Miniature coaxial ClickLoc connector, standard cable
1 2	Miniature coaxial ClickLoc connector, FluidLoc cable

E: Agency Approval Option

0 0	Not required
0 5	Multiple Approvals
	 <p>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.</p>

3300 XL NSv Proximator Sensor

330980-AA-BB

A: Total Length and Mounting Option

5 0	5.0 metre (16.4 feet) system length, panel mount
5 1	5.0 metre (16.4 feet) system length, DIN mount


5 2	5.0 metre (16.4 feet) system length, no mounting hardware ¹
7 0	7.0 metres (23.0 feet) system length, panel mount
7 1	7.0 metres (23.0 feet) system length, DIN mount
7 2	7.0 metres (23.0 feet) system length, no mounting hardware ¹

B: Agency Approval Option

0 0	Not required
0 5	Multiple approvals

3300 NSv Extension Cable

330930-AAA-BB-CC

 Make sure that the extension cable length and the probe length, when added together, equal the Proximator Sensor total length.

A: Cable Length Option

0 4 0	4.0 metres (13.1 feet)
0 4 5	4.5 metres (14.8 feet)
0 6 0	6.0 metres (19.7 feet)
0 6 5	6.5 metres (21.3 feet)

B: Connector and Cable Option

0 0	Without stainless steel armor
0 1	With stainless steel armor, with FEP jacket
0 2	With stainless steel armor, without FEP jacket
0 3	Without stainless steel armor, with connector protector
0 4	With stainless steel armor, with FEP jacket, with connector protector
0 5	With stainless steel armor, without FEP jacket, with connector protector
0 6	FluidLoc cable without stainless steel armor
0 7	FluidLoc cable with stainless steel armor, with FEP jacket
0 8	FluidLoc cable with stainless steel armor, without FEP jacket
0 9	FluidLoc without stainless steel armor, with connector protector
1 0	FluidLoc cable with stainless steel armor, with FEP jacket, with connector protector