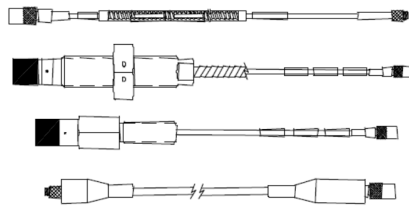
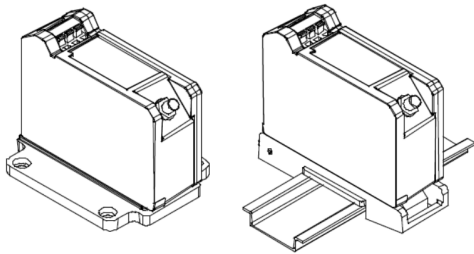


# 3300 XL 11 mm Proximity Transducer System

## Datasheet

Cordant™

146256 Rev. T



## Description

### Transducer System

The Bently Nevada™ 3300 XL 11 mm Proximity Transducer System consists of:

- 3300 XL 11 mm probe
- 3300 XL 11 mm extension cable
- 3300 XL 11 mm Proximator Sensor<sup>1</sup>

The 3300 XL 11 mm Proximity Transducer System has a 3.94 V/mm (100 mV/mil) output for non-contacting vibration and displacement measurements on fluid film bearing machines. The large 11 mm tip enables this transducer system to have a longer linear range compared to our standard 3300 XL 8 mm Transducer System. It is primarily used in the following applications where the longer linear range is necessary:

- Axial (thrust) position measurements
- Ramp differential expansion measurements on steam turbines
- Rod position or rod drop measurements on reciprocating compressors
- Tachometer and zero speed measurements
- Phase reference (Keyphasor) signals

The 3300 XL 11 mm Proximator Sensor is designed to replace the 7200-series 11 mm and 14 mm Transducer Systems. When upgrading from the 7200-series system to the 3300 XL 11 mm system, every component must be replaced with 3300 XL 11 mm components. In addition, the monitoring system must be updated. If using a 3500 Monitoring System, an updated version of the configuration software that lists the 3300 XL 11 mm Transducer System as a compatible option is required.



Existing 3300 Monitoring Systems may need a modification. Contact your local sales and service representative for assistance.



The 3300 XL 11 mm Proximity Transducer is designed for measuring position or vibration within a frequency range of 0 to 8 kHz. Typical applications of this system include radial vibration and position, axial position and Keyphasor measurements.

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

## Proximitor Sensor

The 3300 XL 11 mm Proximitor Sensor has the same advanced features found in the 3300 XL 8 mm Proximitor Sensor. Its thin design allows it to be mounted in either a high-density DIN-rail installation or a more traditional panel mount configuration. Improved RFI/EMI immunity allows the 3300 XL Proximitor Sensor to achieve European CE mark approvals without any special mounting considerations. This RFI immunity also prevents the transducer system from being adversely affected by nearby high frequency radio signals. SpringLoc terminal strips on the Proximitor Sensor require no special installation tools and facilitate faster, highly robust field wiring connections.

## Proximity Probe and Extension Cable

The 3300 XL 11 mm probe comes in varying probe case configurations, including armored and unarmored  $\frac{1}{2}$ -20,  $\frac{5}{8}$ -18, M14 X 1.5 and M16 X 1.5 probe threads. The reverse mount 3300 XL 11 mm probe comes standard with either  $\frac{3}{8}$ -24 or M10 X 1 threads. All components of the transducer system have gold-plated brass ClickLoc connectors. ClickLoc connectors lock into place, preventing the connection from becoming loose. The patented TipLoc molding method provides a robust bond between the probe tip and the probe body. The probe cable

is securely attached to the probe tip utilizing our patented CableLoc design that provides 330 N (75 lb) pull strength.

3300 XL Probes and Extension Cables can also be ordered with a FluidLoc cable option. This option prevents oil and other liquids from leaking out of the machine through the cable's interior. The connector protector option provides additional protection of the connectors in a humid or moist environment. Connector protectors are recommended for all installations and provide increased environmental protection<sup>2</sup>. Additionally, the 3300 XL 11 mm probe comes standard with a locknut with pre-drilled safety wire holes.

Notes:

1. Proximitor Sensors 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 XL 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.

## Ordering Information



For the detailed listing of country and product-specific approvals, refer to the [Approvals Quick Reference Guide \(108M1756\)](#).

For additional technical documentation, please log in to [bntechsupport.com](http://bntechsupport.com) and access the Bently Nevada Media Library.

### 3300 XL 11 mm Proximity Probes

**330701** 3300 XL 11 mm Probe, 1/2-20 UNF thread, without armor

**330702** 3300 XL 11 mm Probe, 1/2-20 UNF thread, with armor

**330707** 3300 XL 11 mm Probe, 5/8-18 UNF thread, without armor

**330708** 3300 XL 11 mm Probe, 5/8-18 UNF thread, with armor

**Part Number-AA-BB-CC-DD-EE-**

#### A: Unthreaded Length Option



Unthreaded length must be at least 1.0 inch less than the case length.

Order in increments of 0.1 in  
 Length configurations:

**Maximum unthreaded length:**  
 8.9 in

**Minimum unthreaded length:**  
 0.0 in

Example: **0 4** = 0.4 in

#### B: Overall Case Length Option

Order in increments of 0.1 in  
 Threaded length configurations:

**Maximum case length:** 9.9 in

**Minimum case length:** 1.0 in

Example: **2 4** = 2.4 in

#### C: Total Length Option

<b>10</b>	1.0 meter (3.3 feet)
<b>50</b>	5.0 meters (16.4 feet)
<b>90</b>	9.0 meters (29.5 feet)



Five meter probes are designed for use with the five meter Proximitor Sensor only.

#### D: Connector and Cable-Type Option

<b>01</b>	Miniature coaxial ClickLoc connector with connector protector, standard cable
<b>02</b>	Miniature coaxial ClickLoc connector, standard cable
<b>11</b>	Miniature coaxial ClickLoc connector with connector protector, FluidLoc cable
<b>12</b>	Miniature coaxial ClickLoc connector, FluidLoc cable

#### E: Agency Approval Option

<b>00</b>	Not required
<b>05</b>	Multiple Approvals

### 3300 XL 11 mm Proximity Probes, Metric

**330703** 3300 XL 11 mm Probe, M14 x 1.5 thread, without armor


**330704** 3300 XL 11 mm Probe, M14 x 1.5 thread, with armor

**330709** 3300 XL 11 mm Probe, M16 x 1.5 thread, without armor

**330710** 3300 XL 11 mm Probe, M16 x 1.5 thread, with armor

**Part Number-AAA-BBB-CC-DD-EE**


**A: Unthreaded Length Option**

	 Unthreaded length must be at least 26 mm less than the case length.
	Order in increments of 2 mm. Length configuration: <b>Maximum unthreaded length:</b> 224 mm <b>Minimum unthreaded length:</b> 0 mm Example: <b>0 6 0</b> = 60 mm

**B: Overall Case Length Option**

	Order in increments of 2 mm. Metric thread configurations: <b>Maximum length:</b> 250 mm <b>Minimum length:</b> 26 mm Example: <b>0 6 0</b> = 60 mm
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**C: Total Length Option**

<b>10</b>	1.0 meter (3.3 feet)
<b>50</b>	5.0 meters (16.4 feet)
	9.0 meters (29.5 feet)
<b>90</b>	 Five meter probes are designed for use with the five meter Proximitator Sensor only.

**D: Connector and Cable-Type Option**

<b>01</b>	Miniature coaxial ClickLoc connector with connector protector, standard cable
<b>02</b>	Miniature coaxial ClickLoc connector, standard cable
<b>11</b>	Miniature coaxial ClickLoc connector with connector protector, FluidLoc cable

<b>12</b>	Miniature coaxial ClickLoc connector, FluidLoc cable
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**E: Agency Approval Option**


<b>00</b>	Not required
<b>05</b>	Multiple Approvals

**3300 XL 11 mm Reverse Mount Probe**

**330705-02-18- CC-DD-EE** 3/8-24 UNF threads

**330706-005-046- CC-DD-EE** M10 x 1 threads

**C: Total Length Option**

<b>10</b>	1.0 meter (3.3 feet)
<b>50</b>	5.0 meters (16.4 feet)
	9.0 meters (29.5 feet)
<b>90</b>	 Five meter probes are designed for use with the five meter Proximitator Sensor only.

**D: Connector Option**

<b>02</b>	Miniature ClickLoc coaxial connector
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**E: Agency Approval Option**

<b>00</b>	Not required
<b>05</b>	Multiple Approvals

For a shorter delivery time, order commonly stocked probes. Currently, stocked probes consist of the following part numbers: 330701-00-10-10-02-00, 330701-00-20-10-02-00, 330703-000-050-10-02-00, 330705-02-18-10-02-00, 330706-005-046-10-02-00.

## 3300 XL 11 mm Proximator Sensor

### 330780-AA-BB

#### A: Total Length and Mounting Option

<b>50</b>	5.0 meter (16.4 feet) system length, panel mount
<b>51</b>	5.0 meter (16.4 feet) system length, DIN mount
<b>52</b>	5.0 meter (16.4 feet) system length, no mounting hardware
<b>90</b>	9.0 meters (29.5 feet) system length, panel mount
<b>91</b>	9.0 meters (29.5 feet) system length, DIN mount
<b>92</b>	9.0 meters (29.5 feet) system length, no mounting hardware

#### B: Agency Approval Option

<b>00</b>	Not required
<b>05</b>	Multiple approvals



Country specific approvals may be available, consult your local Customer Care Representative for more information.

## 3300 XL 11 mm Extension Cable

### 330730-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

<b>040</b>	4.0 meters (13.1 feet)
<b>080</b>	8.0 meters (26.2 feet)

#### B: Connector and Cable Option

<b>00</b>	Standard cable
<b>01</b>	Armored cable
<b>02</b>	Standard cable with connector protector
<b>03</b>	Armored cable with connector protector
<b>10</b>	FluidLoc cable
<b>11</b>	Armored FluidLoc cable
<b>12</b>	FluidLoc cable with connector protector
<b>13</b>	Armored FluidLoc cable with connector protector

#### C: Agency Approval Option

<b>00</b>	Not required
<b>05</b>	Multiple Approvals

## Accessories

146255	3300XL 11 mm User Guide
144979	Performance Specification
02120015	Bulk field wire. 1.0 mm <sup>2</sup> (18 AWG), 3 conductor, twisted, shielded cable with drain wire. Specify length in feet.
02173009	Bulk field wire. 1.0 mm <sup>2</sup> (18 AWG), 3 conductor, twisted, shielded cable. Specify length in feet.
138492-01	Replacement panel-mount mounting pad
138493-01	Replacement DIN-mount mounting pad
01609137	BNC (F) to banana plugs
01609138	Proximator Connector Test Pin wiring (two test pins to a BNC (F) connector)

40971-04	50 Ω cable with two BNC (M) connectors. Use this cable in combination with adapter 01609137 and adapter 01609138 when checking performance of the transducer system from the Proximitor Sensor test pin holes.	03839420	Female Connector Protector. Placed on the probe lead to connect to the male connector protector on the extension cable and provide environmental protection of connectors. Also placed on the extension cable to slide over the Proximitor Sensor connection and protect it from the environment.
04310310	3300XL Proximitor Sensor Panel-mount Screws. Package includes four 6-32 UNC thread forming mounting screws (Supplied standard with 3300 XL Proximitor Housings [3300 XL option]).	330153-01	3300 XL Connector Kit. Used on 3300 XL probes and extension cables. Contains one set of male and female ClickLoc connectors, sleeves and one strip of silicone tape.
03200006	Silicone Self-fusing tape. A 9.1 meter (10 yard) roll of silicone tape to protect connectors. It is easy to install and provides excellent electrical isolation and protection from the environment. It is not recommended for use inside the casing of the machine.	163356	Connector Crimp Tool Kit. Includes one set of 75 Ω 3300 XL ClickLoc inserts and connector installation instructions. Supplied with carrying case.
40113-02	Connector Protector Kit. Connector Protector Kit for 3300 XL probes and extension cables, including connector protectors and installation tools.		
136536-01	Connector Protector Adapter. Makes our previous 3300 connector protector kits compatible with 3300 XL probes and extension cable connectors.		
40180-02	Connector Protectors. Package contains 10 pairs of connector protectors.		
03839410	Male Connector Protector. Placed on the extension cable to connect to the female connector protector on the probe and provide environmental protection of connectors.		