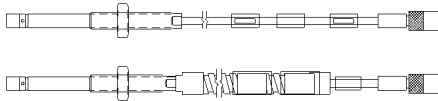
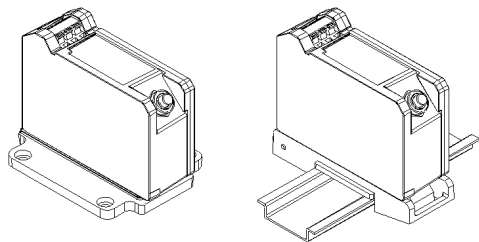


# 3300 5 mm Transducer System

## Datasheet

Bently Nevada Machinery Condition Monitoring

172036 Rev. N



## Description

### Transducer System

The 3300 5mm Proximity Transducer System consists of:

- a 3300 5mm probe <sup>1, 2</sup>
- a 3300 XL extension cable (ref 141194-01)
- a 3300 XL Proximitior Sensor <sup>3, 4, 5</sup> (ref 141194-01)

When combined with a 3300 XL Proximitior Sensor and XL extension cable, the system provides an output voltage that is directly proportional to the distance between the probe tip and the observed conductive surface. The system can measure both static (position) and dynamic (vibration) data. Its primary use is in vibration and position measurement applications on fluid-film bearing machines, as well as Keyphasor measurement and speed measurement applications<sup>6</sup>.

The system provides an accurate, stable signal output over a wide temperature range. All 3300 XL Proximity Transducer Systems achieve this level of performance with complete interchangeability of probe, extension cable, and Proximitior sensor, eliminating the need for individual component matching or bench calibration.

### Proximity Probe

The 3300 5 mm probe improves upon previous designs. A patented TipLoc molding method provides a more robust bond between the probe tip and the probe body. The 3300 5 mm system is orderable with Fluidloc cable options for preventing oil and other liquids from leaking out of the machine through the cable's interior.

### Connectors



The 3300 5mm probe and 3300 XL extension cable have corrosion-resistant, gold-plated brass ClickLoc connectors. These connectors require only finger-tight torque (connectors will "click"), and the specially engineered locking mechanism prevents the connectors from loosening. The connectors require no special tools for installation or removal.

3300 5mm Probes and XL Extension Cables can be ordered with connector protectors already installed, or we can supply the connector protectors separately for installation in the field (such as when the cable must be run through restrictive conduit). We recommend connector protectors for all installations to provide increased environmental protection<sup>7</sup>.

**Notes:**

1. A 5mm probe uses smaller physical packaging and provides the same linear range as a 3300 XL 8mm probe (ref 141194-01). The 5mm probe does not, however, reduce the sideview clearances or tip-to-tip spacing requirements as compared to an XL 8mm probe. Use the 5mm probe when physical (not electrical) constraints preclude the use of an 8mm probe, such as mounting between thrust bearing pads or other constrained spaces. When your application requires narrow sideview probes, use the 3300 XL NSv probe and extension cable with the 3300 XL NSv Proximitor Sensor (refer to Specifications and Ordering Information p/n 147385-01).
2. XL 8mm probes provide a thicker encapsulation of the probe coil in the molded PPS plastic probe tip to produce a more rugged probe. The larger diameter of the probe body also provides a stronger, more robust case. We recommend the use of XL 8mm probes when possible to provide optimal robustness against physical abuse.
3. A 3300 XL Proximitor Sensor is available and provides many improvements over the non-XL version. The XL sensor is electrically and mechanically interchangeable with the non-XL version. Although the packaging of the 3300 XL Proximitor Sensor differs from its predecessor, its design allows for the use of a 4-hole mounting base to fit it in the same 4-hole mounting pattern and to fit within the same mounting space specifications (when the application observes the minimum permissible cable bend radius). Consult Specifications and Ordering Information (p/n 141194-01) or our sales and service professional for more information.
4. Use of XL components with 3300 5mm Probes will limit system performance to the specifications for the non-XL 3300 system.
5. The factory supplies Proximitor Sensors that are calibrated by default to AISI 4140 steel. Calibration to other target materials is available upon request.
6. When using this transducer system for tachometer or over-speed measurements, consult [Bently.com](http://Bently.com) for the application note regarding the use of eddy current proximity probes for over-speed protection.
7. We provide silicone tape with each 3300 XL extension cable. Use this tape instead of connector protectors. We do not recommend silicone tape in applications which will expose the probe-to-extension cable connection to turbine oil.

# Ordering Information



For the detailed listing of country and product specific approvals, refer to the *Approvals Quick Reference Guide* (108M1756) available from [Bently.com](http://Bently.com).

## 3300 5mm Proximity Probes

**330171 3300 5mm Probe, 1/4-28 UNF thread, without armor**

**330172 3300 5mm Probe, 1/4-28 UNF thread, with armor**

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

### A: Unthreaded Length Option



Unthreaded length must be at least 0.8 in. less than the case length. Order in increments of 0.1 in.

**Length configurations:** Maximum unthreaded length:

**8 8** = 8.8 in. Minimum unthreaded length:

**0 0** = 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 unthreaded length: **9 6** = 9.6 in.

Minimum unthreaded length: **0 8** = 0.8 in.

**Example: 2 4** = 2.4 in.

### C: Total Length Option

0 5	0.5 meter (1.6 feet)
1 0	1.0 metre (3.3 feet)
2 0	2.0 metres (6.6 feet)
5 0	5.0 metres (16.4 feet) <sup>1</sup>

9 0	9.0 metres (29.5 feet)
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### D: Connector Option

0 1	Miniature coaxial ClickLoc connector with connector protector, standard cable
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	Agency Approval Option
0 5	Multiple Approvals

## 3300 5mm Proximity Probes, Metric

**330173 3300 5mm Probe, M8 x 1 thread, without armor**

**330174 3300 5mm Probe, M8 x 1 thread, with armor**

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

### A: Unthreaded Length Option



Unthreaded length must be at least 20mm less than the case length. Order in increments of 10mm.

**Length configurations: |**

Maximum unthreaded length: **2 3** = 230mm

Minimum unthreaded length: **0 0** = 0.0mm

**Example: 0 6** = 60mm

### B: Overall Case Length Option

Order in increments of 10mm

**Metric thread configurations:**