

3300 5mm Transducer

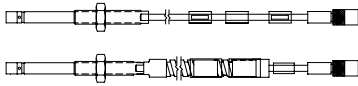
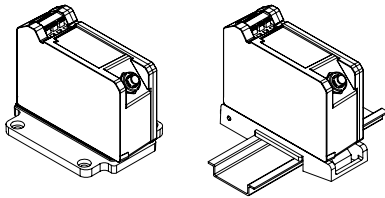
Bently Nevada* Asset Condition Monitoring

Description

Transducer System

The 3300 5mm Proximity Transducer System consists of:

- a 3300 5 mm probe ^{1,2}
- a 3300 XL extension cable (ref 141194-01)
- a 3300 XL Proximator* Sensor ^{3,4,5} (ref 141194-01)



When combined with a 3300 XL Proximator 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 applications⁶.

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 Proximator 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.

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.

You can order 3300 5mm Probes and XL Extension Cables with connector protectors already installed, or we can supply the connector protectors separately for installation in the field (such as when you must run the cable through restrictive conduit). We recommend connector protectors for all installations to provide increased environmental protection⁷.



Specifications and Ordering Information
Part Number 172036
Rev. G (09/09)

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 8 mm probe. You should 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 8 mm 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 you to use 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. If you are considering using this transducer system for tachometer or over-speed measurements, consult www.ge-energy.com/bently 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. You can 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.

Minimum Cable Bend Radius

25.4 mm (1.0 in).

Weight

Total System

0.71 kg (1.6 lbm), typical.

3300 5mm Probe

323 g (11.39 oz).

XL Extension Cable

34 g/m (0.4 oz/ft)

103 g/m (1.5 oz/ft) (armored)

XL Proximitor Sensor

246 g (8.7 oz)

Environmental Limits

Probe Temperature Range:

-35 °C to +177 °C (-31 °F to +351 °F)

Note: Exposing the probe to temperatures below -34 °C (-30 °F) may cause premature failure of the pressure seal.

Extension Cable Temperature Range:

-51° C to +177° C (-60° F to +351° F) for standard extension cable. ref 141194-01

Probe Pressure:

3300 5 mm probes are designed to seal differential pressure between the probe tip and case. The probe sealing material consists of a fluorocarbon O-ring. We do not pressure test probes prior to shipment. Contact our custom design department if you require a test of the pressure seal for your application.

Note: It is the responsibility of the customer or user to ensure that all liquids and gases are contained and safely controlled should a proximity probe leak. In addition, solutions with high or low pH values may erode the tip assembly of the probe causing media to leak into surrounding areas. Bently Nevada LLC will not be held responsible for any damages resulting from leaking 3300 5 mm proximity probes. In addition, Bently Nevada LLC will not replace 3300 5mm proximity probes under the service plan due to probe leakage.

Patents:

One or more components or procedures described in the following patents apply to this product: 5,016,343; 5,126,664; 5,351,388; and 5,685,884.

Ordering Information

3300 5 mm Proximity Probes

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

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

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

A: Unthreaded Length Option

Note: 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 case length:

9 6 = 9.6 in

Min. case length:

0 8 = 0.8 in

Example: 2 4 = 2.4 in

C: Total Length Option

0 5 0.5 metre (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)¹

9 0 9.0 metres (29.5 feet)