

# 3300 XL 8mm Proximity Transducer System

## Bently Nevada\* Asset Condition Monitoring

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### Description

The 3300 XL 8 mm Proximity Transducer System consists of:

- One 3300 XL 8 mm probe,
- One 3300 XL extension cable<sup>1</sup>, and
- One 3300 XL Proximitor\* Sensor<sup>2</sup>.

The system provides an output voltage that is directly proportional to the distance between the probe tip and the observed conductive surface and can measure both static (position) and dynamic (vibration) values. The system's primary applications are vibration and position measurements on fluid-film bearing machines, as well as Keyphasor\* reference and speed measurements<sup>3</sup>.

The 3300 XL 8 mm system delivers the most advanced performance in our eddy current proximity transducer systems. The standard 3300 XL 8 mm 5-metre system also fully complies with the American Petroleum Institute's (API) 670 Standard (4<sup>th</sup> Edition) for mechanical configuration, linear range, accuracy, and temperature stability. All 3300 XL 8 mm proximity transducer systems provide this level of performance and support complete interchangeability of probes, extension cables, and Proximitor sensors, eliminating the need to match or bench calibrate individual components

Each 3300 XL 8 mm Transducer System component is backward-compatible and interchangeable<sup>4</sup> with other non-XL 3300 series 5 mm and 8 mm transducer system components<sup>5</sup>. This compatibility includes the 3300 5 mm probe, for applications in which an 8 mm probe is too large for the available mounting space<sup>6,7</sup>.

### Proximitor Sensor

The 3300 XL Proximitor Sensor incorporates numerous improvements over previous designs. Its physical packaging allows you to use it in high-density DIN-rail installations. You can also mount the sensor in a traditional panel mount configuration, where it shares an identical 4-hole mounting "footprint" with older Proximitor Sensor designs. The mounting base for either option provides electrical isolation and eliminates the need for separate isolator plates. The 3300 XL Proximitor Sensor is highly immune to radio frequency interference, allowing you to install it in fiberglass housings without adverse effects from nearby radio frequency signals. The 3300 XL Proximitor Sensor's improved RFI/EMI immunity satisfies European CE mark approvals without requiring special shielded conduit or metallic housings, resulting in lower installation costs and complexity.

The 3300 XL's SpringLoc terminal strips require no special installation tools and facilitate faster, more robust field wiring connections by eliminating screw-type clamping mechanisms that can loosen.



5 or 9 metres (including extension cable) or 1 metre (probe only).

tested prior to shipment. Contact our custom design department if you require a test of the pressure seal for your application.

**Total System Mass (Typical)**

*Probe:* 0.7 kg (1.5 lbm)

*Extension Cable:* 323 g (11.4 oz)

*Armored Extension Cable:* 34 g/m (0.4 oz/ft)

*Proximitior Sensor:* 103 g/m (1.5 oz/ft)

246 g (8.67 oz)

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**Note:** It is the responsibility of the customer or user to ensure that all liquids and gases are contained and safely controlled should leakage occur from a proximity probe. In addition, solutions with high or low pH values may erode the tip assembly of the probe causing media leakage into surrounding areas. Bently Nevada, Inc. will not be held responsible for any damages resulting from leaking 3300 XL 8 mm proximity probes. In addition, 3300 XL 8 mm proximity probes will not be replaced under the service plan due to probe leakage.

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**Environmental Limits**

**Probe Temperature Range**

**Operating and Storage Temperature**

*Standard Probe:*

-51 °C to +177 °C (-60 °F to +350 °F)

*Extended Temperature Range Probe:*

-51 °C to +218 °C (-60 °F to +425 °F) for the probe tip; -51 °C to +260 °C (-60 °F to +500 °F) for the probe cable and connector.

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

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**Probe Pressure**

3300 XL 8 mm probes are designed to seal differential pressure between the probe tip and case. The probe sealing material consists of a Viton® O-ring. Probes are not pressure

**Extension Cable Temperature Range**

**Operating and Storage Temperature**

*Standard Cable:*

-51 °C to +177 °C (-60 °F to +350 °F)

*Extended Temperature Range Cable:*

-51 °C to +260 °C (-60 °F to +500 °F)

**Proximitior Sensor Temperature Range**

**Operating Temperature**

-51 °C to +100 °C (-60 °F to +212 °F)

**Storage Temperature**

-51 °C to +105 °C (-60 °F to +221 °F)

**Relative Humidity**

Less than a 3% change in Average Scale Factor (ASF) when tested in 93% humidity in accordance with IEC standard 68-2-3 for up to 56 days.

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## Ordering Information Extension Cables

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### 3300 XL Standard Extension Cable

**330130-AXXX-BXX-CXX**

**Note:** Make sure that the extension cable length and the probe length, when added together, equal the Proximitor Sensor total length.

**A:** Cable Length Option

<b>030</b>	3.0 metres (9.8 feet)
<b>035</b>	3.5 metres (11.5 feet)
<b>040</b>	4.0 metres (13.1 feet)
<b>045</b>	4.5 metres (14.8 feet)
<b>060</b>	6.0 metres (19.7 feet)
<b>070</b>	7.0 metres (22.9 feet)
<b>075</b>	7.5 metres (24.6 feet)
<b>080</b>	8.0 metres (26.2 feet)
<b>085</b>	8.5 metres (27.9 feet)

**B:** Connector Protector and Cable Option

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

**C:** Agency Approval Option

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

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### 3300 XL Extended Temperature Range (ETR) Extension Cable

**330190-AXXX-BXX-CXX**

**Note:** Make sure that the extension cable length and the probe length, when added together, equal the Proximitor Sensor total length.

**A:** Cable Length Option

<b>030</b>	3.0 metres (9.8 feet)
<b>035</b>	3.5 metres (11.5 feet)
<b>040</b>	4.0 metres (13.1 feet)
<b>045</b>	4.5 metres (14.8 feet)
<b>070</b>	7.0 metres (22.9 feet)
<b>075</b>	7.5 metres (24.6 feet)
<b>080</b>	8.0 metres (26.2 feet)
<b>085</b>	8.5 metres (27.9 feet)

**B:** Cable Option

<b>00</b>	Standard cable
<b>01</b>	Armored cable

**C:** Agency Approval Option

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