

3300 XL 8mm Proximity Transducer System

Bently Nevada* Asset Condition Monitoring

Description

The 3300 XL 8 mm Proximity Transducer System consists of:

- One 3300 XL 8 mm probe,
- One 3300 XL extension cable¹, and
- One 3300 XL Proximitor* Sensor².



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 measurements³.

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 (4th 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 interchangeable⁴ with other non-XL 3300 series 5 mm and 8 mm transducer system components⁵. This compatibility includes the 3300 5 mm probe, for applications in which an 8 mm probe is too large for the available mounting space^{6,7}.

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.



imagination at work

Specifications and Ordering Information
Part Number 141194-01
Rev. AA (01/16)

Probe Case
Torque:

Probe Type	Maximum Rated	Recommended
Standard forward-mounted probes	33.9 N•m (300 in•lbf)	11.2 N•m (100 in•lbf)
Standard forward-mount probes - first three threads	22.6 N•m (200 in•lbf)	7.5 N•m (66 in•lbf)
Reverse-mount probes	22.6 N•m (200 in•lbf)	7.5 N•m (66 in•lbf)

Connector-to-connector
recommended
torque:

Connector Type	Tightening Instructions
Two 3300 XL gold "click" type connectors	Finger tight
One non-XL stainless steel connector and one 3300 XL connector	Finger tight plus 1/8 turn using pliers

Extension Cable Material

Standard cable:

75Ω triaxial, fluoroethylene propylene (FEP) insulated.

Extended Temperature Range cable:

75Ω triaxial, perfluoroalkoxy (PFA) insulated.

Minimum Cable Bend Radius:

25.4 mm (1.0 in)

Note: 3300 XL 8 mm components are both electrically and physically interchangeable with non-XL 3300 5 mm and 8 mm components when minimum permissible cable bend radius is observed..

Connector Material:

Gold-plated brass or gold-plated beryllium copper.

Maximum Connector Torque:

0.565 N•m (5 in•lbf)

Proximator Sensor Material

A308 aluminum

Connector Material:

Gold-plated brass or gold-plated beryllium copper.

System Length

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

Total System Mass (Typical)

0.7 kg (1.5 lbm)

Probe:

323 g (11.4 oz)

Extension Cable:

34 g/m (0.4 oz/ft)

Armored Extension Cable:

103 g/m (1.5 oz/ft)

Proximator Sensor:

246 g (8.67 oz)

Probe Ordering Information Notes:

1. Mounting clamps must be ordered separately for 330140, 330141, 330197, and 330198.
2. For a shorter delivery time, order commonly stocked probes. The following part numbers are currently stocked probes:

330101-00-08-05-02-00, 330101-00-08-05-02-05,
330101-00-08-10-02-00, 330101-00-08-10-02-05,
330101-00-12-10-02-00, 330101-00-12-10-02-05,
330101-00-16-10-02-00, 330101-00-16-10-02-05,
330101-00-20-05-02-00, 330101-00-20-10-02-00,
330101-00-20-10-02-05, 330101-00-30-10-02-00,
330101-00-30-10-02-05, 330101-00-40-05-02-00,
330101-00-40-10-02-00, 330101-00-40-10-02-05,
330101-00-60-10-02-00, 330101-00-60-10-02-05,
330102-00-20-10-02-00, 330103-00-02-10-02-05,
330103-00-04-10-02-00, 330103-00-05-10-02-00,
330104-00-06-10-02-00, 330104-01-05-50-02-00,
330105-02-12-05-02-00, 330105-02-12-05-02-05,
330105-02-12-10-02-00, 330105-02-12-10-02-05,
330106-05-30-05-02-00, 330106-05-30-05-02-05,
330106-05-30-10-02-00, 330106-05-30-10-02-05.

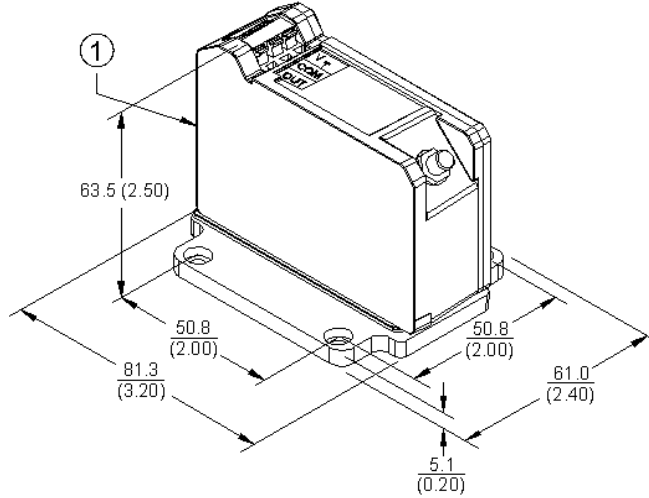
Ordering Information Proximity Sensor

3300 XL Proximity Sensor**330180-AXX-BXX****A: Total Length and Mounting Option**

- | | |
|-----------|--|
| 10 | 1.0 metre (3.3 feet) system length, panel mount |
| 11 | 1.0 metre (3.3 feet) system length, DIN mount |
| 12 | 1.0 metre (3.3 feet) system length, no mounting hardware |
| 50 | 5.0 metre (16.4 feet) system length, panel mount |
| 51 | 5.0 metre (16.4 feet) system length, DIN mount |
| 52 | 5.0 metre (16.4 feet) system length, no mounting hardware |
| 90 | 9.0 metres (29.5 feet) system length, panel mount |
| 91 | 9.0 metres (29.5 feet) system length, DIN mount |
| 92 | 9.0 metres (29.5 feet) system length, no mounting hardware |

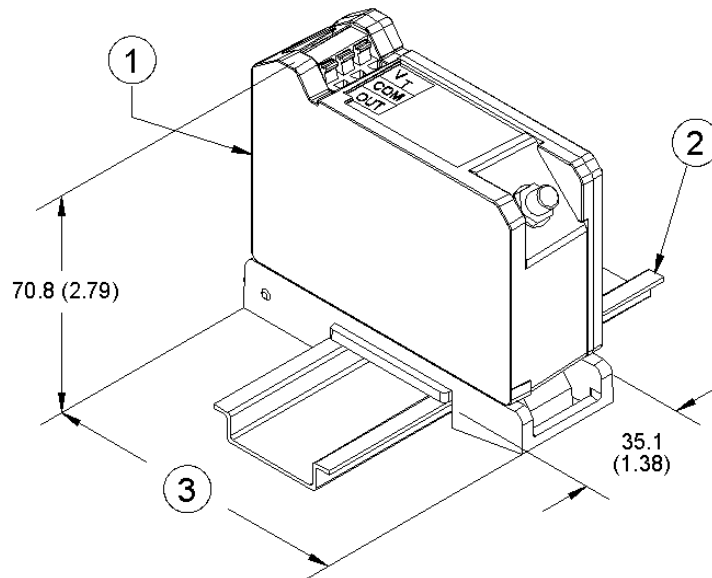
B: Agency Approval Option

- | | |
|-----------|----------------------------|
| 00 | Not required |
| 05 | CSA, ATEX, IECEx approvals |



1. Mounting option "A", Options -50 or -90

Figure 19: Panel Mount 3300 XL Proximity Sensor



1. Mounting option "A", Options -51 or -91
2. 35mm DIN rail (not included)
3. 89.4 mm (3.52 in). Additional 3.05 mm (0.120 in) clearance required to remove DIN rail.

Figure 20: DIN Mount 3300 XL Proximity Sensor