

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

BENTLY NEVADA

330780-90-05

9 M PANEL-MOUNT PROXIMITOR SENSOR

Used with the applicable 3300 XL 11 mm Proximity Transducer System system configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official pages follow this cover with source pagination retained.

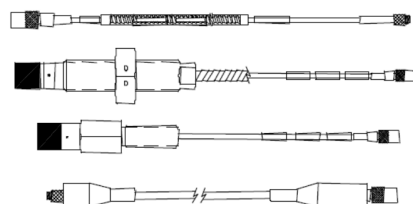
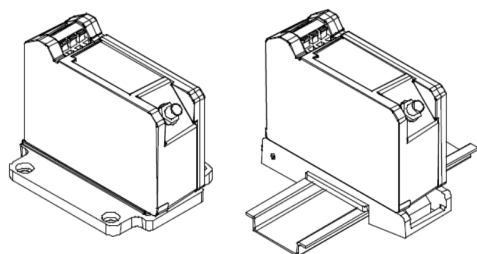
146256 Rev. T

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 Proximitor Sensor¹

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 Proximitor 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.



Mechanical

Probe Tip Material	Polyphenylene sulfide (PPS).
Probe Case Material	AISI 304 stainless steel (SST).
Probe Cable Specification	75 Ω triaxial, fluoroethylene propylene (FEP) insulated probe cable in the following total probe lengths: 1, 5 or 9 meters.
Extension Cable Material	75 Ω triaxial, fluoroethylene propylene (FEP) insulated.
Proximator Sensor Material	A380 aluminum
System Length	5 or 9 meters including extension cable
Extension Cable Armor (optional)	Flexible AISI 302 SST with FEP outer jacket.
Tensile Strength (maximum rated)	330 N (75 pounds) probe case to probe lead. 270 N (60 pounds) at probe lead to extension cable connectors.
Connector Material	Gold-plated brass

Probe Case Torque

	Maximum Rated	Recommended
1/2-20 and 5/8-18 probe cases	45.2 N•m (400 in•lb)	15.2 N•m (133 in•lb)
M14x1.5 and M16x1.5 probe cases	63.3 N•m (560 in•lb)	21.1 N•m (187 in•lb)
Reverse mount probes	22.6 N•m (200 in•lb)	7.5 N•m (66 in•lb)

Connector-to-connector torque

Recommended torque	Finger tight
Maximum torque	0.565 N•m (5 in•lb)
Minimum Bend Radius (with or without SST armor)	25.4 mm (1.0 in)

System Weight (typical)

Probe

70 g (2.5 oz) (minimum length case, 1m lead, no armor)

170 g (6.0 oz) (minimum length case, 1m lead, with armor)

For longer case lengths add 1.1 g/mm (1.0 oz/in).

For 5 m probe length add 180 g (6 oz) for non-armored probe or 560 g (20 oz) for armored probe.

For 9 m probe length add 360 g (12 oz) for non-armored probe or 1120 g (40 oz) for armored probe.

Extension Cable	45 g/m (0.5 oz/ft)
Armored Extension Cable	140 g/m (1.5 oz/ft)
Proximator Sensor	255 g (9 oz)

Thread Engagement Limits

Probe Case Thread	Maximum Length of Thread Engagement
1/2-20	0.750 in
5/8-18	0.938 in

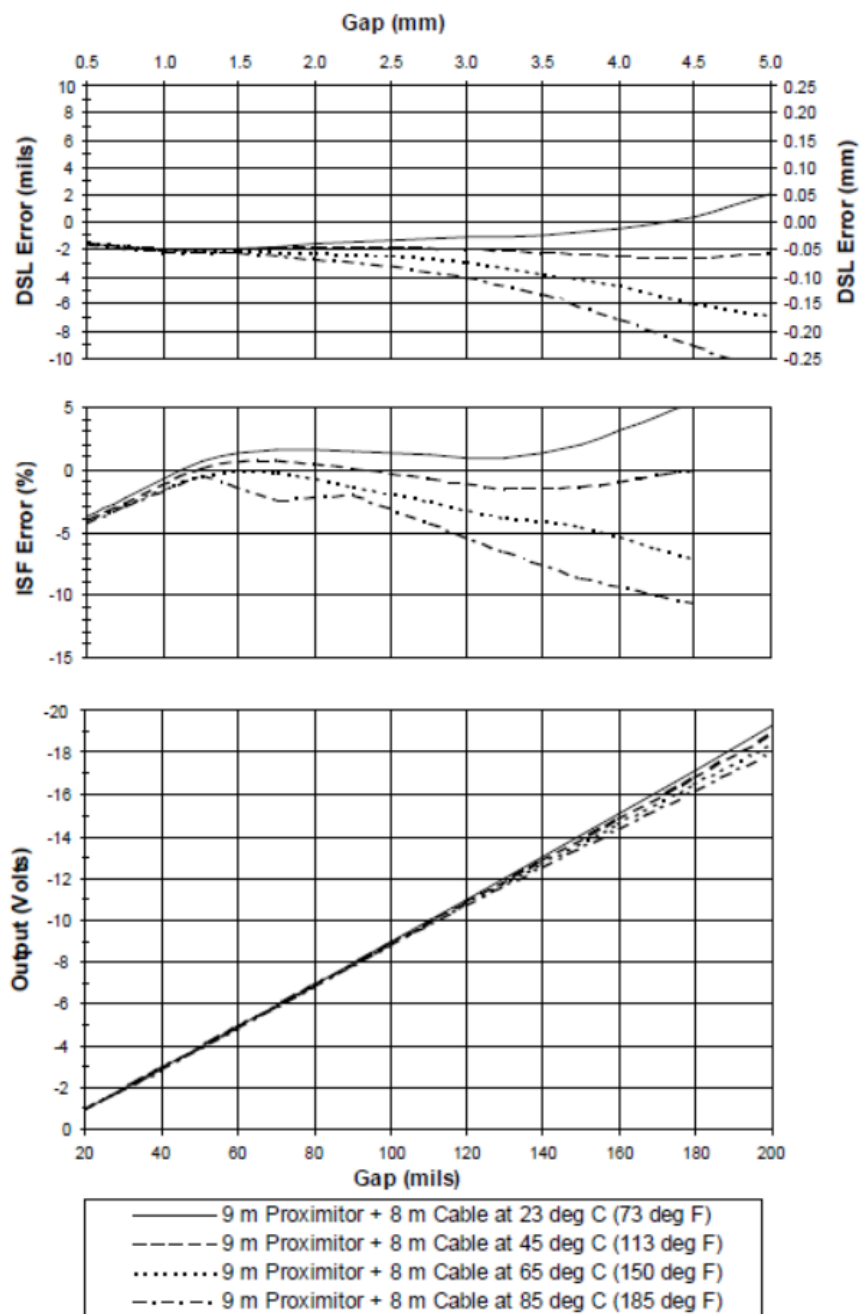


Figure 8: Typical 3300 XL 11 mm 9 m Proximitors with 8 m of Extension Cable @ High Temperature
(Probe is at 25°C.)

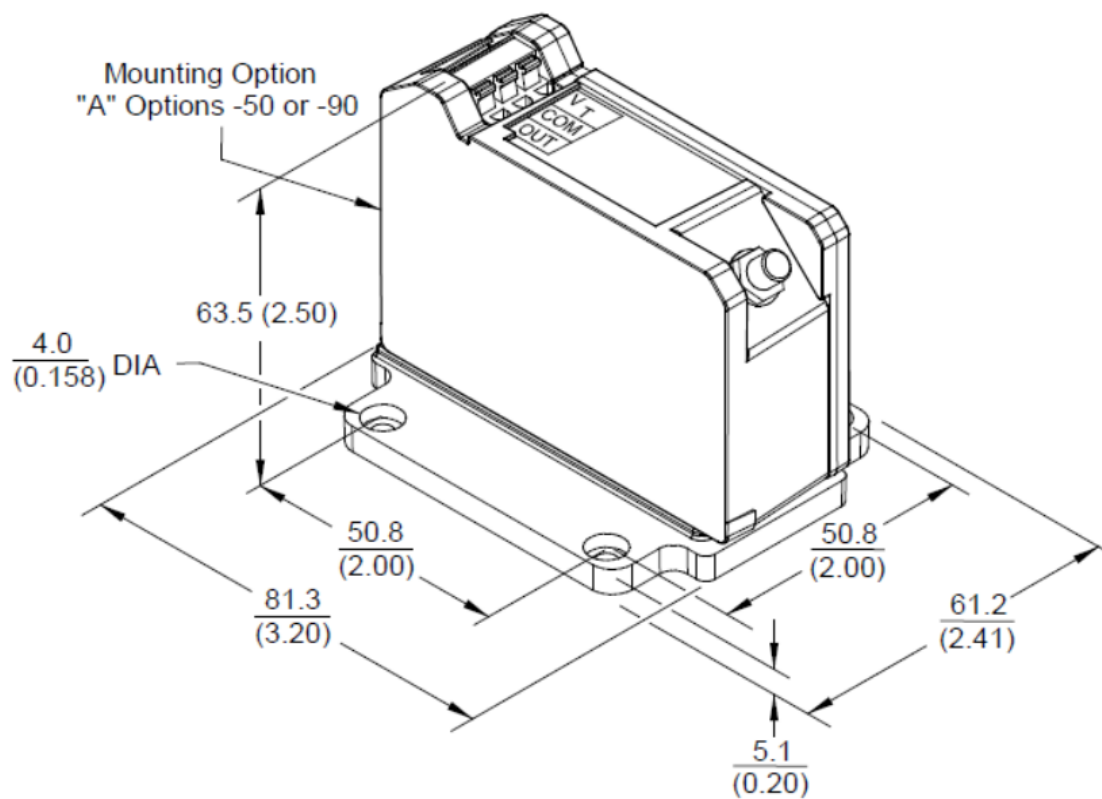


Figure 15: Panel Mount 3300 XL 11 mm Proximity Sensor