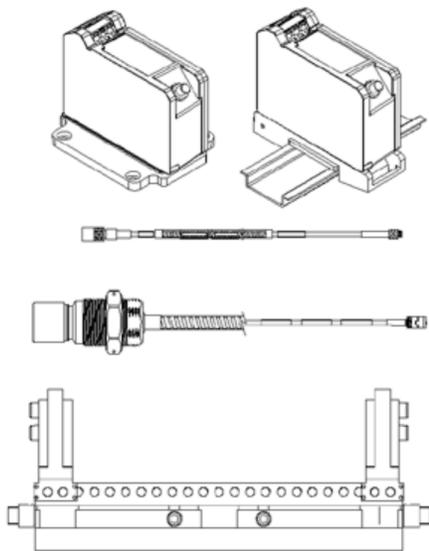


3300 XL Proximity Transducer System

Datasheet

Cordant™

163236 Rev. M



Description

The 3300 XL 25 mm Transducer System consists of a separate 25 mm probe, an extension cable, and a 3300 XL 25 mm Proximitor Sensor. The 0.787 V/mm (20 mV/mil) output gives this system a linear range of 12.7 mm (500 mils). Based on this linear range, the 3300 XL 25 mm Transducer System is suitable for measuring differential expansion (DE) on mid-size to large steam turbine generators caused by the difference in growth rates between the turbine rotor and the machine stator (casing).

Measuring Differential Expansion (DE)

The Differential Expansion measurement is made by two proximity transducers observing a collar or ramp some distance from the thrust bearing. Typical transducer mounting arrangements are:

- Two transducers observing the same side of a collar.
- Two complementary input transducers observing opposite sides of a collar, effectively doubling the measurable DE range.

Two transducers with at least one transducer viewing a ramp on a rotor and the second transducer viewing either a separate ramp or a different location on the rotor to compensate for radial movement. This arrangement adds some error to the measurement, but can measure a longer total DE distance than the complementary measurement.

The criteria for selecting a mounting method are the size of the available target, the expected amount of rotor axial movement and the type of DE target that exists in the machine (collar versus ramp). If sufficient collar height is available, two transducers observing the same side of a



Ordering Information

 For the detailed listing of country and product-specific approvals, refer to the [Approvals Quick Reference Guide \(108M1756\)](#).

For additional technical documentation, please log in to bntechsupport.com and access the Bently Nevada Media Library.

3300 XL 25 mm Proximity Probe

330851-AA-BBB-CCC-DD-EE-FF

A: Probe Case Type Option

 Standard case types are options 01 through 04.

01	1 ¼ - 12 thread
02	M30x2 thread
03	Smooth 1.06 in dia. - Rear Exit
04	Smooth 1.06 in dia. - Side Exit
05	1 ½ - 12 thread
06	M39x1.5 thread
07	Smooth 1.5 in dia. - Rear Exit
08	Smooth 1.5 in dia. - Side Exit

B: Unthreaded Length Option

 Standard unthreaded length is 0.0 mm or 0.0 in. There is an additional charge for non-standard unthreaded lengths.

 Unthreaded length must be at least 26 mm or 1.0 in less than the case length. Unthreaded length option is 0.0 for smooth case probe types.

Metric Case Types Order in increments of 2 mm

Maximum Unthreaded Length	224 mm
Minimum Unthreaded Length	0 mm
Example	050 = 50 mm

English Case Types Order in increments of 0.1 in

Maximum Unthreaded Length	8.9 in
Minimum Unthreaded Length	0.0 in
Example	025 = 2.5 in

C: Overall Case Length Option

 Standard case lengths are 26, 40, 60, 80, 100 and 250 mm for Metric cases and 1.0, 2.0, 3.0, 4.0, and 9.9 in for English cases. There is an additional charge for non-standard lengths.

Metric Case Types Order in increments of 2 mm

Maximum Unthreaded Length	250 mm
Minimum Unthreaded Length	26 mm
Example	050 = 50 mm

**English and Smooth Case Types
 Order in increments of 0.1 in**

Maximum Unthreaded Length	9.9 in
Minimum Unthreaded Length	1.0 in (1.5 in for side exit case types)
Example	020 = 2.0 in

D: Total Length Option

10	1.0 metre (3.3 feet)
50	5.0 metres (16.4 feet)
90	9.0 metres (29.5 feet)

 Five metre probes are designed for use with the five metre Proximity Sensor ONLY.

E: Armor Option

00	No Armor
01	with SST Armor

 When ordering SST Armor, the minimum probe length is 28 mm or 1.1 in

F: Agency Approval Option

00	No Approvals
05	Multiple Approvals

 For a shorter delivery time, order commonly stocked multi-approvals probes.

Currently, stocked probes consist of the following part numbers:

- 330851-01-000-020-10-00-05
- 330851-01-000-030-10-00-05
- 330851-02-000-040-10-00-05
- 330851-02-000-080-10-00-05
- 330851-04-000-015-10-00-05
- 330851-04-000-020-10-00-05

3300 XL 25 mm Proximity Sensor

330850-AA-BB

A: Total Length and Mounting Option

5 0	5.0 metres (16.4 feet) system length, panel mount
5 1	5.0 metres (16.4 feet) system length, DIN mount
9 0	9.0 metres (29.5 feet) system length, panel mount
9 1	9.0 metres (29.5 feet) system length, DIN mount

B: Agency Approval Option

0 0	No Approvals
0 5	Multiple Approvals

3300 XL 25 mm Extension Cable

330854-AAA-BB-CC



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

A: Cable Length Option

0 4 0	4.0 metres (13.1 feet)
0 8 0	8.0 metres (26.2 feet)

B: Armor and Cable Option

2 4	High Temperature FluidLoc cable
2 5	Armored High Temperature FluidLoc cable

C: Agency Approval Option

0 0	No Approvals
0 5	Multiple Approvals

3300 XL Sliding Bracket

330853-AA-BB

A: Bracket Length Option

0 1	Short – Single Differential Expansion Application
0 2	Long – Complementary Input Differential Expansion Application

B: Probe Adapter Option

0 0	Adapter not supplied
0 1	1¼-12 thread
0 2	M30x2 thread

0 3	1.06 in diameter Smooth
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When probe adapters are selected, one is supplied with the short bracket length and two are supplied with the long bracket length.

Dial Indicator Verification Kit

The dial indicator verification kit contains all of the parts needed to verify accuracy of a differential expansion installation. The kit contains a dial indicator, magnetic base, flex mounting arm, and indicator holding rod all housed in a protective carry case

163854-AA

A: Measurement Units Option

0 1	English Units (0–2 in)
0 2	Metric Units (0–50 mm)