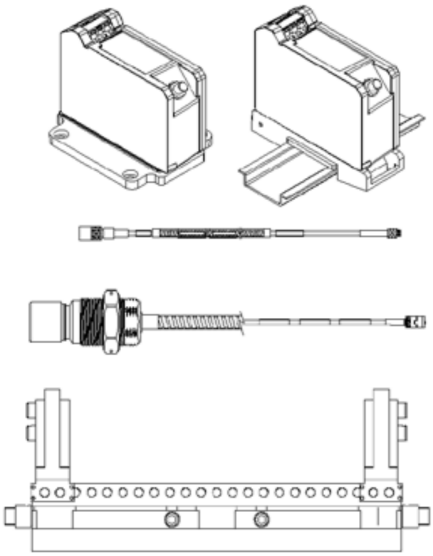
3300 XL Proximity Transducer System

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

Baker Hughes

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 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)

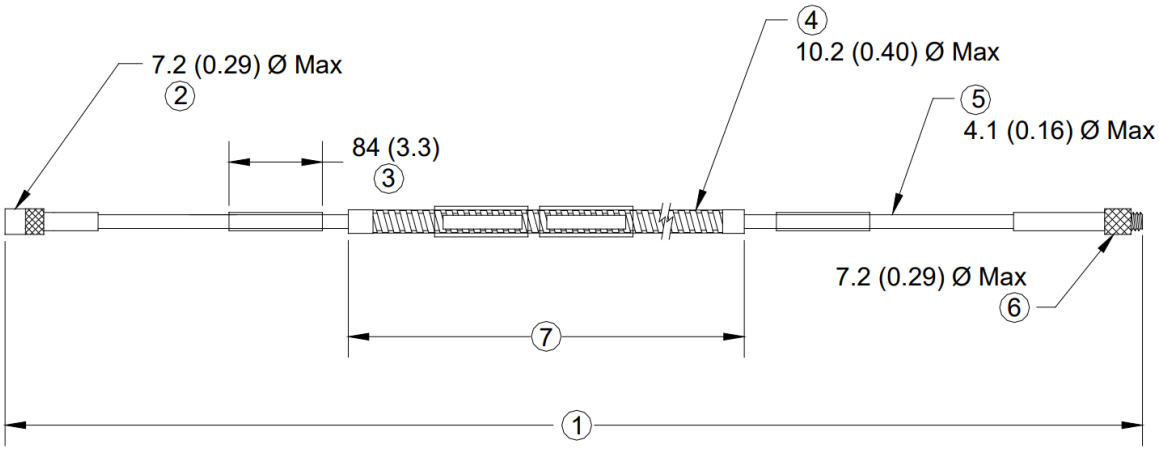


Figure 17: 330854, 3300 XL 25mm Extension Cable

1. Cable Length +20%, -0%
2. Miniature Male Coaxial Connector
3. Customer Shrink Tubing, 2 Places
4. Optional Stainless Steel Armor, PFA Jacket
5. FluidLoc Coaxial Cable, PFA Jacket
6. Miniature Female Coaxial Connector
7. Armor Length = Cable Length – 300 (11.8)

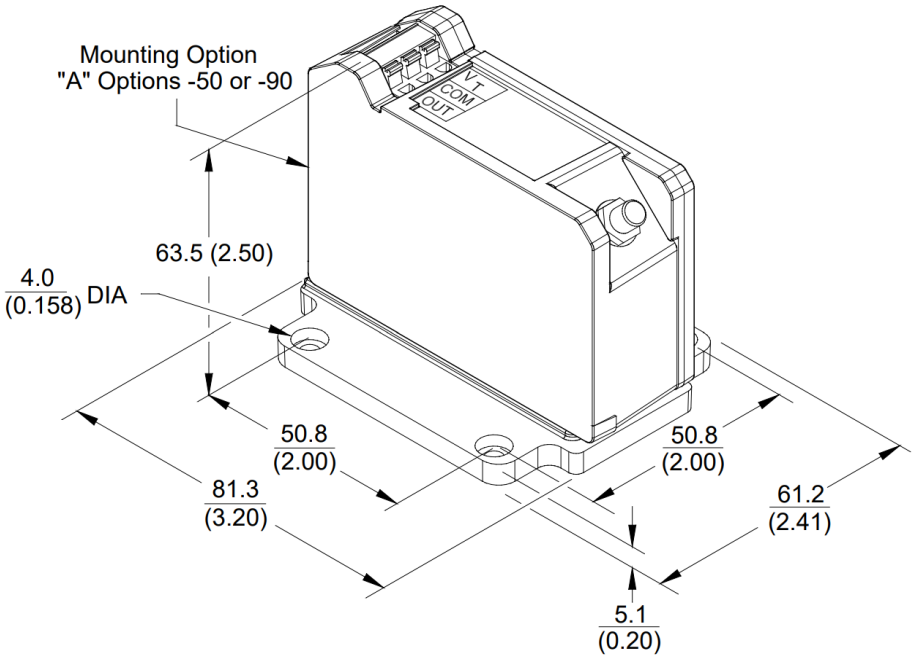


Figure 18: 330850 Panel Mount 3300 XL 25mm Proximitor Sensor