Bently Nevada 330851-04-000-015-10-01-05

01 Function and selected configuration

Product function

Bently Nevada 330851-04-000-015-10-01-05 positions the sensing face in a smooth-case mounting while the lead leaves sideways. Its minimum-length side-exit body supports installations with limited axial clearance around a turbine collar.

Selected configuration

The smooth case is 1.06 in in diameter and 1.5 in long, with a side-exit lead and zero unthreaded-length selection. It uses a clamp or adapter suitable for the smooth body instead of a threaded mounting hole. The PEEK sensing tip and AISI 304 stainless-steel case are combined with a 75 Ω triaxial FluidLoc lead and stainless-steel armour.

Functional path

Rotor collar / ramp	1.0 m 25 mm probe	Matched cable / Proximitor	DE monitor channel

Case geometry	1.06 in diameter, 1.5 in overall length
Cable arrangement	Side exit, 1.0 m lead with SST armour
Matched response	0.787 V/mm nominal scale factor

The 1.0 m probe lead combines with a matching 4.0 m or 8.0 m extension cable and the corresponding 5 m or 9 m 3300 XL 25 mm Proximitor Sensor. Its isolated centre-to-outer-conductor resistance is 6.2 ± 0.5 Ω. Armour protects the cable mechanically but does not remove the need for proper support, connector protection or the 25.4 mm minimum bend radius.

330851-04-000-015-10-01-05 / Technical operating envelope

02 Technical operating envelope

Transducer family	3300 XL 25 mm
Case construction	Smooth, side exit
Case diameter	1.06 in
Overall case length	1.5 in
Total probe lead	1.0 m
Lead armour	Stainless steel

Probe resistance, centre to outer	6.2 ± 0.5 Ω
Probe tip / case material	PEEK / AISI 304 stainless steel
Cable impedance	75 Ω, triaxial
Nominal scale factor	0.787 V/mm
Nominal linear range	12.7 mm
Continuous probe temperature	-35 to +200 °C

Range and sensitivity describe the matched transducer system. The probe itself is passive; DC supply and conditioned output belong to the Proximitor Sensor. Use the 1 m probe resistance before adding extension-cable resistance.

Output loading

Reference performance uses a 10 kΩ load. Sensor output resistance is 50 Ω; assess the receiving channel and field wiring together.

Temperature conditions

Continuous probe operation is -35 to +200 °C. Short-term exposure up to +250 °C is limited to less than 24 hours.

330851-04-000-015-10-01-05 / System integration and applications

03 System integration and applications

Side-exit mounting clearance

Fit the 1.5 in smooth case in an appropriate supported mounting, allowing side clearance for the armoured lead without loading the exit point.

Turbine collar observation

Measure differential rotor-to-casing growth with a correctly aligned and gapped matched transducer chain.

Complementary DE channels

Use opposing collar faces only with the intended two-channel arrangement and corresponding monitor configuration.

Controlled displacement verification

Move the probe mounting relative to the target and compare the electrical indication with a mechanical movement reference.

System and supply context

This 1.0 m probe is one component of the 3300 XL 25 mm transducer chain. The Proximitor Sensor, any required extension cable, brackets and monitor are separate unless itemized.

Application boundary

Differential-expansion performance depends on the collar or ramp geometry, target material and configured channel arrangement. Mechanical fit alone does not establish electrical or calibration compatibility.

Why is 1.5 in an important case length for 330851-04-000-015-10-01-05?

The 015 selection is a 1.5 in overall case, the minimum for the side-exit case type. The 000 unthreaded-length field is the required zero selection for a smooth case; it does not create a threaded portion.

330851-04-000-015-10-01-05 / Engineering selection decisions

04 Engineering selection decisions

Does 330851-04-000-015-10-01-05 screw into an M30 mounting hole?

No. Its case is smooth, 1.06 in in diameter, with a side-exit lead. It needs a suitable smooth-case mounting or clamp arrangement rather than an M30 thread.

What routing advantage does the side exit of 330851-04-000-015-10-01-05 provide?

The lead leaves through the side of the smooth case, allowing routing away from the rear axis. Check radial clearance, support and the 25.4 mm minimum cable bend radius around the actual mounting.

How does 330851-04-000-015-10-01-05 achieve a nine-metre calibrated measurement chain?

Use the 1.0 m probe with the appropriate 8.0 m extension and 9 m 3300 XL 25 mm Proximitor Sensor. Confirm all components belong to the matching transducer system.

What distinguishes a clamp problem from an electrical fault when testing 330851-04-000-015-10-01-05?

Compare controlled target movement with output while observing that the smooth case remains fixed. If the case slips, correct its support first; if it stays fixed, inspect continuity, connectors, electrical length and target calibration.

Secure the smooth case	Use the correct clamp or adapter; do not transfer threaded-case torque values to this smooth body. Connector maximum is 0.565 N·m.
Observe thermal boundaries	Apply probe, cable and Proximitor Sensor temperature limits separately; avoid treating short-term exposure as continuous service.

330851-04-000-015-10-01-05 / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

The current manufacturing and manufacturer-support phase of 330851-04-000-015-10-01-05 is unconfirmed. Establish the available service route for the exact configuration when planning replacement.

Replacement assessment

Match the complete probe configuration and electrical length. Upgrades from 7200 or 25 mm DE Integral equipment require replacement of the probe, extension cable and Proximitor Sensor as a matched 3300 XL 25 mm system.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains configuration and selection boundaries. The independent installation guide organizes preparation, connection, testing and handover. It does not replace the applicable manufacturer installation instructions.

Technical basis

Bently Nevada 3300 XL 25 mm Proximity Transducer System, 163236 Rev. M.

Related product navigation

- Bently Nevada 330851-02-000-070-10-00-05
- Bently Nevada 330851-02-010-140-10-00-05
- Bently Nevada 330851-04-000-030-10-00-05

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries