Bently Nevada 330851-02-000-070-90-00-CN

01 Function and selected configuration

Product function

Bently Nevada 330851-02-000-070-90-00-CN carries a collar-displacement signal along its nine-metre integral lead to a remote conditioner. Its 70 mm threaded body provides mechanical reach without changing the required nine-metre electrical match.

Selected configuration

The M30×2 probe has a 70 mm overall case length, a zero unthreaded-length selection and a 9.0 m total lead. The selected 00 armor option uses an unarmored lead. PEEK forms the probe tip, AISI 304 stainless steel forms the case, and the 75 Ω triaxial FluidLoc cable uses PFA insulation.

Functional path

Rotor collar / ramp	9.0 m 25 mm probe	Matched cable / Proximitor	DE monitor channel

Case interface	M30×2 threaded construction
Integral lead	9.0 m unarmored FluidLoc cable
Matched-system output	0.787 V/mm nominal

The 9 m probe lead must be treated as part of the corresponding 9 m calibrated system, not extended as though it were the 1 m version. Its disconnected center-to-outer-conductor resistance is 8.8 ± 1.1 Ω. The Proximitor Sensor provides the electrical excitation and conditioned output; the probe is not a stand-alone voltage transmitter.

330851-02-000-070-90-00-CN / Technical operating envelope

02 Technical operating envelope

Transducer family	3300 XL 25 mm
Mounting thread	M30×2
Overall case length	70 mm
Unthreaded-length selection	0 mm
Total probe lead	9.0 m
Lead armor	None

Probe resistance, center to outer	8.8 ± 1.1 Ω
Probe tip / case material	PEEK / AISI 304 stainless steel
Cable construction	75 Ω triaxial, PFA-insulated FluidLoc
Nominal scale factor	0.787 V/mm nominal
Nominal linear range	12.7 mm under specified calibration conditions
Probe continuous 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 9 m probe resistance for continuity assessment.

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.

330851-02-000-070-90-00-CN / System integration and applications

03 System integration and applications

Long-lead integrity

Keep the 9 m probe lead intact, route the excess without sharp bends and use the matching 9 m conditioner arrangement.

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 9.0 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.

How is the 70 mm case length of 330851-02-000-070-90-00-CN separated from measurement travel?

The 70 mm dimension is mechanical reach of the M30×2 body. The matched system has a nominal 12.7 mm linear range under the specified calibration conditions, independent of that case length.

330851-02-000-070-90-00-CN / Engineering selection decisions

04 Engineering selection decisions

Why does the nine-metre version of 330851-02-000-070-90-00-CN need its own matching conditioner?

Its integral 9.0 m lead defines the electrical-length selection. Use the corresponding 9 m 3300 XL 25 mm Proximitor Sensor; a conditioner chosen for a different total length does not preserve calibration.

Can spare lead on 330851-02-000-070-90-00-CN be cut away after routing?

No. Retain the calibrated lead and arrange excess cable without sharp bends or abrasion. The minimum bend radius is 25.4 mm, and the connector should remain protected and accessible.

Which nominal output interval corresponds to the calibrated gap of 330851-02-000-070-90-00-CN?

For the matched system under reference conditions, approximately 0.63–13.33 mm corresponds to about -1.5 to -11.5 Vdc. These are conditioned-system values, not voltage generated directly by the bare probe.

Can 330851-02-000-070-90-00-CN extend an existing 7200 measurement chain by changing only the probe?

No. Conversion from 7200 or 25 mm DE Integral equipment requires the probe, extension cable where used, and Proximitor Sensor to be selected as a matched 3300 XL 25 mm system.

Separate torque limits	Do not apply probe-body tightening torque to the electrical connector; 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.

330851-02-000-070-90-00-CN / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

The current manufacturing and manufacturer-support phase of 330851-02-000-070-90-00-CN 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 330851-05-000-040-50-01-05
- Bently Nevada 330851-06-000-070-10-00-05
- Bently Nevada 330851-02-000-060-50-00-05

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

Product enquiries