Bently Nevada 330103-03-08-10-01-00

01 Function and selected configuration

Product function

The partially unthreaded case of Bently Nevada 330103-03-08-10-01-00 separates the smooth nose section from the threaded mounting region. Its protected cable junction connects the measurement point to the remotely located signal conditioner.

Selected configuration

The selected case has a M10 x 1 mounting thread, 80 mm overall length and 30 mm unthreaded section. Its standard 75-ohm triaxial cable uses FEP insulation. The miniature coaxial ClickLoc connection is supplied with a connector protector; it is separate from the case mounting interface.

Functional path

Conductive target	8 mm probe	Matched cable path	Proximitor output

Mounting interface	M10 x 1; unarmored probe construction
Electrical length	1.0 m total probe cable
Connection	ClickLoc connector with protector

The 1.0 m total probe length must be included in the complete electrical-length calculation. A compatible extension and Proximitor Sensor must form the selected 3300 XL 8 mm system; connector fit alone does not establish calibration.

330103-03-08-10-01-00 / Technical operating envelope

02 Technical operating envelope

Measurement principle	Non-contact eddy current
Mounting thread	M10 x 1
Total probe length	1.0 m
Cable impedance	75 ohm triaxial
Cable insulation	FEP, standard cable
Probe tip material	PPS

Probe case material	AISI 303 or 304 stainless steel
Nominal probe DC resistance	7.59 ± 0.50 ohm, center to outer conductor
Standard probe temperature	-52°C to +177°C
Matched-system nominal scale factor	7.87 V/mm
Matched-system linear range	2 mm under specified calibration conditions

System performance assumes matched 3300 XL 8 mm components and the specified calibration conditions. The nominal 7.87 V/mm response is produced by the complete chain. Probe temperature and Proximitor Sensor temperature have different limits.

Probe continuity

The 1.0 m probe resistance is 7.59 ± 0.50 ohm from center to outer conductor. Disconnect it for the appropriate measurement.

Conditioned response

The complete matched system provides a nominal 7.87 V/mm scale factor and a 2 mm linear measurement range. Radial-vibration setup uses approximately 1.27 mm gap, corresponding to -9 VDC under the specified AISI 4140 steel calibration conditions.

330103-03-08-10-01-00 / System integration and applications

03 System integration and applications

Shaft vibration

Use the 1.0 m probe path to acquire non-contact shaft motion within the calibrated system range.

Static shaft position

Condition the probe gap signal with the matched Proximitor Sensor for a monitor configured for position.

Machine mounting

The 80 mm case and 30 mm unthreaded section define the available reach and support interface for this selection.

Measurement-chain renewal

Use the 7.59 ± 0.50 ohm probe resistance as one isolated continuity check before a full gap-response verification.

System and supply context

330103-03-08-10-01-00 is one sensing element in a matched 3300 XL 8 mm transducer system. The probe configuration is M10 x 1 with 1.0 m total length; the Proximitor Sensor, extension cable when needed and mounting accessories are separate items unless listed.

Application boundary

The applications below concern the complete calibrated measurement chain. Target material, physical clearance and monitor configuration determine suitability for each machine position.

Can the full threaded portion of 330103-03-08-10-01-00 be screwed into its bracket?

No. The M10 x 1 case has a maximum thread engagement of 15 mm. The available threaded case length does not override that limit.

330103-03-08-10-01-00 / Engineering selection decisions

04 Engineering selection decisions

What purpose does the smooth section of 330103-03-08-10-01-00 serve?

The selected case has a 30 mm unthreaded section ahead of the mounting thread. The overall case is 80 mm; the smooth section is not an additional cable length or an active sensing length.

What connector insulation arrangement is included with 330103-03-08-10-01-00?

The standard cable terminates in a miniature coaxial ClickLoc connector with the option-01 connector protector. Keep the connection insulated from surrounding conductive surfaces.

What does a varying DC gap signal from 330103-03-08-10-01-00 represent?

The matched Proximitor output changes with probe-to-target distance. A static component represents position or average gap, while the varying component can represent shaft vibration within the system measurement range.

Why should connector tightening for 330103-03-08-10-01-00 be separated from case tightening?

Gold ClickLoc connectors use finger-tight locking. Probe-case mounting torque is a different mechanical requirement and must not be applied to the cable connector.

Temperature boundaries	Apply the probe temperature limit separately from the lower Proximitor operating-temperature limit.
Target calibration	Verify target material and geometry. AISI 4140 steel is the reference calibration target.

330103-03-08-10-01-00 / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

A current production or end-of-support phase is not confirmed for this complete order code.

Replacement assessment

Retain the M10 x 1 mounting interface, selected case geometry and 1.0 m probe length. Assess the complete transducer chain and supplied connector protection before selecting a replacement.

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 8 mm Proximity Transducer System Datasheet, 141194 Rev. AN.

Related product navigation

- Bently Nevada 330130-045-03-05
- Bently Nevada 330130-045-01-00
- Bently Nevada 330180-50-05

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

Product enquiries