Bently Nevada 330103-00-06-90-02-00

01 Function and selected configuration

Product function

Bently Nevada 330103-00-06-90-02-00 carries the probe signal through an integral 9.0 m cable, allowing a matched 9 m Proximitor Sensor to condition the signal without adding a separate extension section.

Selected configuration

The selected case has a M10 x 1 mounting thread, 60 mm overall length and 0 mm unthreaded section. Its standard 75-ohm triaxial cable uses FEP insulation. The miniature coaxial ClickLoc connection is supplied without a factory-installed 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	9.0 m total probe cable
Connection	ClickLoc connector without factory protector

The 9.0 m probe connects to the corresponding 9 m Proximitor Sensor without an added extension cable. An extra extension would alter the calibrated electrical length.

330103-00-06-90-02-00 / Technical operating envelope

02 Technical operating envelope

Measurement principle	Non-contact eddy current
Mounting thread	M10 x 1
Total probe length	9.0 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	9.87 ± 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 9.0 m probe resistance is 9.87 ± 0.50 ohm from center to outer conductor. Disconnect it for the appropriate measurement.

Conditioned response

A standard 9 m system provides a nominal 7.87 V/mm incremental scale factor with ±6.5% interchangeability error over the specified linear range at 0°C to +45°C. Its straight-line deviation is less than ±0.038 mm under those conditions.

330103-00-06-90-02-00 / System integration and applications

03 System integration and applications

Shaft vibration

Use the 9.0 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 60 mm case and 0 mm unthreaded section define the available reach and support interface for this selection.

Measurement-chain renewal

Use the 9.87 ± 0.50 ohm probe resistance as one isolated continuity check before a full gap-response verification.

System and supply context

330103-00-06-90-02-00 is one sensing element in a matched 3300 XL 8 mm transducer system. The probe configuration is M10 x 1 with 9.0 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.

What scale-factor tolerance applies to a standard 9 m system using 330103-00-06-90-02-00?

The nominal incremental scale factor is 7.87 V/mm with ±6.5% including interchangeability error, measured in 0.25 mm increments over the linear range at 0°C to +45°C under the specified calibration conditions.

330103-00-06-90-02-00 / Engineering selection decisions

04 Engineering selection decisions

Is a separate extension cable needed with 330103-00-06-90-02-00?

Its integral 9.0 m probe cable already supplies the 9 m electrical length. Pair it with the appropriate 9 m Proximitor Sensor; adding an extension would change that length.

Which straight-line deviation limit belongs to the 330103-00-06-90-02-00 9 m configuration?

For a standard 9 m system with components at 0°C to +45°C, deviation from the best-fit straight line is less than ±0.038 mm. The tighter standard 1 m or 5 m limit must not be substituted.

Does 330103-00-06-90-02-00 use the same calibration as a 5 m Proximitor Sensor?

No. The selected 9.0 m probe requires the matching electrical-length calibration. Mechanical connector compatibility alone does not establish a calibrated system.

How are cable loss and field-wire response distinguished when installing 330103-00-06-90-02-00?

The 9 m probe cable is part of the calibrated transducer system. Wiring downstream of the Proximitor is a separate circuit; long field wiring can reduce high-frequency response and must be assessed independently.

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.

330103-00-06-90-02-00 / 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 9.0 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 330130-080-01-05
- Bently Nevada 330130-030-01-CN
- Bently Nevada 330130-045-01-CN

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

Product enquiries