Bently Nevada 330173-04-08-10-02-00

01 Function and selected configuration

Product function

Bently Nevada 330173-04-08-10-02-00 provides a metric mounting arrangement with extended smooth reach, allowing the sensing tip to project beyond the threaded support.

Selected configuration

The selected probe configuration uses a 80 mm overall case with 40 mm unthreaded length. Its M8 x 1 mounting thread must match the probe holder, with no more than 12 mm engagement. The 5 mm tip reduces physical packaging size without reducing the required electromagnetic clearances.

Functional path

Conductive target	5 mm sensing tip	Matched XL cable	Proximitor → monitor

Mounting geometry	M8 x 1; 40 mm unthreaded section
Probe case	80 mm overall length, without armor
Connection	1.0 m standard cable; miniature coaxial ClickLoc

The probe, compatible XL extension cable and XL Proximitor Sensor form one measurement chain. Total probe and extension-cable length must match the conditioner; the complete system provides a nominal 7.87 V/mm response over a 2 mm linear range under the specified calibration conditions.

330173-04-08-10-02-00 / Technical operating envelope

02 Technical operating envelope

Mounting thread	M8 x 1
Unthreaded length	40 mm
Overall case length	80 mm
Total probe length	1.0 m
Termination	Miniature coaxial ClickLoc; standard cable
Sensing tip diameter	5 mm
Probe cable impedance	75 ohm, FEP-insulated triaxial

Probe resistance at 1 m	7.59 ±0.50 ohm, center to outer conductor
Matched-system linear range	2 mm; approximately 0.25–2.3 mm gap
Nominal system sensitivity	7.87 V/mm (200 mV/mil)
Recommended operating gap	1.27 mm (50 mils)
System frequency response	DC–10 kHz, +0 / -3 dB
Probe temperature range	-35 to +177 °C

The 2 mm span, 7.87 V/mm sensitivity and DC–10 kHz response are complete-system values. Reference conditions include +18 to +27 °C, -24 VDC, a 10 kohm load, an AISI 4140 target and 1.27 mm gap. The probe is not a standalone voltage-output sensor.

Conditioner supply headroom

The compatible XL conditioner requires -17.5 to -26 VDC at up to 12 mA. Operation more positive than -23.5 VDC can reduce the linear range; assess supply at the installed circuit.

Target and probe separation

The flat target minimum is 15.2 mm diameter. The recommended shaft minimum is 76.2 mm; smaller shafts and closely spaced probes require assessment of scale factor and cross-talk.

330173-04-08-10-02-00 / System integration and applications

03 System integration and applications

Radial shaft vibration

Measure changing shaft-to-probe distance on fluid-film bearing machines using a suitable radial mounting position.

Axial position

Observe thrust-surface movement with adequate target area and clearance between adjacent probes.

Constrained mechanical access

Use the 80 mm case and 40 mm smooth section where the holder geometry requires this particular reach and thread.

Speed and phase reference

Detect a suitable shaft feature with the appropriate monitoring input and application-specific target arrangement.

System and supply context

330173-04-08-10-02-00 is the probe element; extension cable, Proximitor Sensor and monitor are separate system components. The complete chain must have matching electrical length.

Application boundary

Applications depend on a conductive target, correct probe location and a receiving channel configured for the required vibration, position or timing function.

Can 330173-04-08-10-02-00 be screwed into a 1/4-28 probe holder?

No. M8 x 1 and 1/4-28 UNF are different thread forms and pitches. Use the matching metric mounting arrangement and do not force the probe into an imperial holder.

330173-04-08-10-02-00 / Engineering selection decisions

04 Engineering selection decisions

What mounting geometry is selected by 04-08 on 330173-04-08-10-02-00?

The probe has 40 mm unthreaded length and an 80 mm overall case. Its M8 x 1 thread provides metric mounting; the remaining nominal threaded section is 40 mm.

What bend radius should be retained around the lead of 330173-04-08-10-02-00?

The minimum cable bend radius is 25.4 mm. Allow sufficient routing space beyond the case so the lead is not sharply bent, pulled against an edge or loaded by the connector joint.

Does the 1 m lead on 330173-04-08-10-02-00 define the complete system length?

No. The 10 code specifies the probe total length. The probe plus compatible extension cable must equal the selected 5 m or 9 m Proximitor system length.

Why should two axial probes near 330173-04-08-10-02-00 be checked for cross-talk?

Their electromagnetic fields can interact. For the stated 5 mm system conditions, maintain at least 40 mm tip separation for axial measurements; shaft geometry and operating gap also influence interaction.

Matched chain	Verify probe and extension lengths against the Proximitor Sensor before connecting the monitor.
Joint protection	Protect the standard ClickLoc joint from moisture; do not assume option 02 includes a connector protector.

330173-04-08-10-02-00 / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

Current production and end-of-support status are not confirmed for this exact configuration.

Replacement assessment

Preserve the M8 x 1 thread, 40 mm smooth section, 80 mm case, 1.0 m lead and complete order code. Check the target and matched electrical length before replacing an installed probe.

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 5 mm Transducer System, 172036 Rev. T.

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