Bently Nevada 330173-00-06-10-02-00

01 Define the five-millimetre measurement point

1 Identify the exact metric probe

Confirm 330173-00-06-10-02-00 and compare the M8 x 1 mounting arrangement with the installed point. The 00/06 case options mean zero unthreaded length and a 60 mm overall case. Do not select the probe only by its lead connector or by a similar 3300-family number.

2 Record target and channel context

Identify the shaft material, diameter, expected position range and any nearby probes. The 5 mm family has a nominal 2 mm system span and 7.87 V/mm scale factor under reference conditions. Preserve the monitor configuration so that a different transducer-family scale cannot be introduced during replacement.

3 Plan access and isolation

Use the approved machine-access procedure before approaching rotating or moving targets. Identify the affected channel and its alarm response to disconnection. Retain the pre-work gap reading and the complete component identities, then establish the maintenance state needed to fit and test the probe safely.

Build	M8 x 1; fully threaded 60 mm case
Lead	1 m standard cable; without armor
Channel basis	5 mm system; 7.87 V/mm nominal

330173-00-06-10-02-00 / Inspect the M8 fitting and unarmored lead

02 Inspect the M8 fitting and unarmored lead

1 Check thread engagement

Inspect the M8 x 1 mating thread for contamination and damage. The specified maximum thread engagement is 12 mm; excessive engagement can cause binding. Resolve the fitting geometry before applying force, and check that the sensing tip retains the required clearance from surrounding metal.

2 Protect cable bends and exits

Route the lead with a bend radius of at least 25.4 mm. Keep it away from sharp edges and movement that can pull on the probe exit or connector. The standard lead has no armor, so cabinet or machine routing must provide the mechanical protection appropriate to the actual service.

3 Prepare the ClickLoc joint

Inspect the miniature coaxial connector and the matching extension connection. The 02 option uses standard cable without the separate connector protector. Keep the contact surfaces clean and protect the completed joint under the applicable installation instructions; do not use an arbitrary cable adapter as a substitute.

M8 engagement	Maximum 12 mm
Bend radius	Minimum 25.4 mm
Connector option	02; standard ClickLoc, no separate protector

330173-00-06-10-02-00 / Connect the matched transducer system

03 Connect the matched transducer system

1 Verify electrical length before assembly

Read the conditioner calibration and identify the compatible XL extension cable. The probe's 1 m lead is part of the calibrated total length. Do not shorten, splice or replace it with ordinary wire, even if the mechanical routing would become easier; preserve the approved complete transducer combination.

2 Use continuity as an initial check

For the disconnected 1 m probe, the center-to-outer conductor resistance is specified as 7.59 +/- 0.50 ohms. Investigate an abnormal value together with connector condition and cable damage. A satisfactory resistance value does not prove that the probe sees the correct target or that the complete system is calibrated.

3 Establish gap using measured response

Set the operating gap through the complete measurement chain using the approved target procedure. The reference gap is 1.27 mm. Compare the response as the target position changes in a controlled way instead of relying only on a ruler measurement or a fixed number of thread turns.

Electrical chain	Probe, XL extension and matching conditioner
Resistance reference	7.59 +/- 0.50 ohms for the 1 m probe
Reference gap	1.27 mm / 50 mils

330173-00-06-10-02-00 / Check geometry and dynamic performance

04 Check geometry and dynamic performance

1 Assess small-target effects

The system specifies a minimum shaft diameter of 50.8 mm and recommends at least 76.2 mm. Review the actual geometry and neighboring probe separation before applying nominal sensitivity. A small shaft or nearby conductive surface can change response even when the cable and conditioner identities are correct.

2 Verify channel scale and operating span

Check the monitor against the nominal 7.87 V/mm scale and the 2 mm linear span under the stated reference conditions. Do not reuse the 3.94 V/mm setting of an 11 mm system. Verify direction, units and range together with the measured gap so that the displayed position is meaningful.

3 Review the whole signal path

The family response is specified to 10 kHz under its stated conditions, including field wiring. Assess the installed cable route, monitor filtering and actual measurement bandwidth before interpreting the result. Complete the planned channel OK and alarm tests after the mechanical and electrical response is acceptable.

Target assessment	Diameter, material and adjacent probes checked
Scale	7.87 V/mm nominal; 2 mm span
Release proof	Gap, dynamics, monitor and alarm path

330173-00-06-10-02-00 / Preserve the calibration and service record

05 Preserve the calibration and service record

1 Investigate repeatable versus intermittent errors

Compare abnormal output with target position and cable movement under a controlled test. Review connector contamination, mounting security, electrical length and monitor scaling before changing hardware. Preserve the original measurements so that a later test can distinguish a stable calibration mismatch from an intermittent connection problem.

2 Keep pressure-seal limits separate

The probe operates from -35 to +177 deg C, with a pressure-seal caveat for exposure below -34 deg C. The probe seal is not a substitute for a complete process-containment assessment. Inspect the service conditions and the approved installation arrangement before interpreting temperature compliance as proof against leakage.

3 Record the accepted installation

Retain the complete model, fitting geometry, component chain, target material, gap result, monitor settings and protection-test outcome. These records support a repeatable future replacement. A visually similar 5 mm probe with a different lead length or connection option still needs its own configuration review.

Technical basis: 3300 5 mm Transducer System, 172036 Rev. T.

Related product navigation

- Bently Nevada 330180-50-05
- Bently Nevada 330180-91-05
- Bently Nevada 330130-040-00-05

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