# Bently Nevada 330709-000-050-10-12-05

## 01 Plan the metric sensing position

### 1 Identify the selected mechanical build

Confirm 330709-000-050-10-12-05 on the offered probe. The selected construction has an M16 x 1.5 thread, zero unthreaded length and a 50 mm case. Compare the mounting drawing and available target clearance with that specific build before disturbing the existing installation.

### 2 Set the measurement and containment boundary

Identify the shaft or thrust target, the expected displacement and the machine state required for access. Establish the approved isolation and process-containment arrangements. FluidLoc cable restricts migration inside the lead; it does not establish that a probe penetration, process seal or exposed connector is safe for the service.

### 3 Record the complete electrical chain

Read the installed Proximitor Sensor calibration and identify the compatible extension cable. The 1 m probe lead forms part of either a matched 5 m or 9 m standard chain. Keep that calibration record separate from the field cable connecting the conditioner to the monitor.

| | |
|---|---|
| Mount | M16 x 1.5; 50 mm case |
| Probe lead | 1 m FluidLoc; no armor |
| Measurement chain | Correct 11 mm sensor and total electrical length |

# 330709-000-050-10-12-05 / Prepare the fitting and cable route

## 02 Prepare the fitting and cable route

### 1 Inspect the mating thread

Check the mounting bore and M16 x 1.5 thread for damage, contamination and correct fit. The maximum specified thread engagement is 24 mm. Do not force a probe that binds or use additional torque to compensate for an incompatible or excessively long threaded engagement.

### 2 Protect the unarmored lead

Plan a route that avoids sharp edges, rubbing surfaces, crushing and tension at the probe exit. Support the lead independently of the connector joint. FluidLoc identifies the cable construction, while the lack of armor remains a separate mechanical-protection consideration for the installed route.

### 3 Prepare the connector joint

Inspect both ClickLoc mating surfaces and keep them clean and dry. The selected 12 option does not include the separate connector protector. Select the approved environmental protection for the connection without changing the calibrated cable type or introducing an arbitrary adapter into the measurement chain.

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|---|---|
| Engagement limit | 24 mm for M16 x 1.5 |
| Mechanical protection | No abrasion, pinch point or connector load |
| Connection | ClickLoc joint protected for actual environment |

# 330709-000-050-10-12-05 / Fit and establish the calibrated gap

## 03 Fit and establish the calibrated gap

### 1 Position the sensing tip deliberately

Place the probe using the approved installation drawing and maintain clearance from surrounding metal. Confirm that the sensing face sees the intended target across the expected movement. Do not infer the gap from a fixed number of thread turns when the mounting geometry or target location has changed.

### 2 Check probe continuity before connection

A disconnected 1 m 11 mm probe has a specified center-to-outer conductor resistance of 5.9 +/- 0.5 ohms. Compare a suitable low-energy resistance measurement with this range and inspect the connector if the result is abnormal. Continuity is only an initial test, not a calibration certificate.

### 3 Set gap through the complete system

Connect the matched probe, extension and conditioner and establish the gap under the approved procedure. The reference gap is 2.5 mm and the standard system span is 4 mm. Verify the actual target response; different materials and geometry can invalidate an assumed nominal conversion.

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|---|---|
| Reference gap | 2.5 mm under specified calibration conditions |
| Continuity reference | 5.9 +/- 0.5 ohms for 1 m probe |
| Span | 4 mm for complete matched system |

# 330709-000-050-10-12-05 / Verify the installed measurement channel

## 04 Verify the installed measurement channel

### 1 Compare static output with physical position

Check the gap output at known controlled positions and confirm the direction of response. The nominal system factor is 3.94 V/mm, with the stated tolerance and reference conditions. Keep the monitor scale aligned with the 11 mm system rather than using a 5 mm or 8 mm channel scale.

### 2 Check the path to the monitor

Verify conditioner supply, field wiring and the receiving-channel configuration after the probe is connected. A plausible gap reading at the conditioner does not prove correct indication at the monitor. Compare the displayed variable and the signal at appropriate test points using the approved test equipment.

### 3 Prove protection before release

Carry out the planned checks of channel OK status, alarm response and any associated protective function. Remove temporary bypasses only through the site release sequence. Record the measured gap, component identities and test conditions so that later changes in machine motion can be distinguished from installation changes.

| | |
|---|---|
| Scale | 3.94 V/mm nominal 11 mm system |
| Signal path | Probe through conditioner to correct monitor channel |
| Release | Gap, response and protection test recorded |

# 330709-000-050-10-12-05 / Assess abnormal readings and service limits

## 05 Assess abnormal readings and service limits

### 1 Separate cable faults from target effects

When output is unstable, inspect connector contamination, cable movement, mounting security and target condition before replacing the probe. Compare the static response with a controlled target movement. Changing the probe and conditioner together can hide the original cause and prevent a useful comparison with the previous calibration.

### 2 Apply the seal caveat independently

The probe electrical operating range extends from -52 to +177 deg C, but exposure below -34 deg C may cause premature pressure-seal failure. Evaluate the seal and the machine containment plan separately. A temperature within the electrical range is not proof of adequate pressure integrity.

### 3 Keep the selected configuration traceable

Record the full 12-05 suffix, FluidLoc lead, connector protection, thread arrangement and the actual approval markings. When a future replacement is proposed, compare those details with the service conditions. A standard-cable probe or a different mounting code is not automatically equivalent to this selected unit.

Technical basis: 3300 XL 11 mm Proximity Transducer System, 146256 Rev. T.

## Related product navigation

- Bently Nevada 330730-040-00-05
- Bently Nevada 330780-51-00
- Bently Nevada 330730-080-01-00

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