01 INSTALLATION & COMMISSIONING

Bently Nevada 330106-05-30-15-02-CN

01 / PLAN THE REVERSE-MOUNT CHANNEL

Bently Nevada 330106-05-30-15-02-CN is an M10 x 1 reverse-mount 3300 XL 8 mm probe with a 1.5 m standard ClickLoc lead. Its matched transducer system measures shaft-relative vibration and position.

Identify the selected parts

Base 330106-05-30	Fixed reverse-mount M10 x 1 execution
CC15	1.5 m standard electrical probe lead
DD02	Miniature ClickLoc; protector not included
EE CN	China-specific approval selection

Match the installed electrical length

5 m electrical chain	1.5 m probe + 3.5 m extension; matching 5 m sensor
9 m electrical chain	1.5 m probe + 7.5 m extension; matching 9 m sensor

01 Check the receiving assembly

Confirm the M10 x 1 reverse-mount interface, sleeve arrangement and intended target. The selected 1.5 m lead cannot be assigned to the 1 m probe-only sensor execution.

02 Establish approval and calibration

Keep the CN product marking and approved circuit available for the installation check. Record the target material and selected conditioner length before changing a sensing-chain component.

Readiness sequence

Identify	Pair	Verify
Reverse mount and CN execution	1.5 m lead and selected extension	Target, conditioner and channel

Machine boundary

Use the machine-specific isolation and protection procedure. The following checks concern the sensing channel and do not define a turbine shutdown setting or hazardous-area installation authorization.

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02 / FIT AND PROTECT THE INTERFACES

03 Seat the reverse-mounted probe

Inspect the receiving M10 x 1 support and sleeve condition. Apply the reverse-mount case row; do not transfer the fully supported forward-mount recommendation to this execution.

Interface-specific handling

Reverse-mount case	7.5 N m recommended; 22.6 N m maximum
Two XL ClickLoc connectors	Finger tight
Connector torque	0.565 N m maximum; not the tightening target
Extension bend radius	25.4 mm minimum

04 Connect the miniature coaxial junction

Join two XL gold ClickLoc connectors finger tight. The documented mixed XL/non-XL instruction is separate. Keep the contacts clean and the finished connection electrically insulated from ground.

05 Arrange standard-cable protection

The -02 selection has no included protector. Provide suitable environmental protection, support the cable and avoid persistent strain at the case or service joint.

Is FluidLoc normally required by the sleeve arrangement used with 330106-05-30-15-02-CN?

The ordering notes state that FluidLoc is unnecessary for most 330105/330106 installations because of the probe sleeve. This -02 execution uses standard cable; assess the application before selecting a separate FluidLoc option.

Identify materials during inspection

Probe tip	PPS
Probe case	AISI 303 or 304 stainless steel
Coaxial contact	Gold-plated brass or beryllium copper
Conditioner housing	A308 aluminum

Containment check

The Viton O-ring seals differential pressure between probe tip and case. Probes are not pressure-tested before shipment. Provide independent containment for the process; exposure below -34 deg C can cause premature seal failure, and aggressive pH conditions can erode the tip assembly.

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03 / CHECK THE ELECTRICAL PATH

Supply and component checks

Non-incendive circuit	-17.5 to -26 VDC; per drawing 140979
With barriers	-23 to -26 VDC
Supply more positive than -23.5 VDC	May reduce the usable linear range
Isolated 1.5 m probe	7.73 +/- 0.50 ohm; center to outer conductor
Maximum conditioner demand	12 mA

Check the selected extension

3.5 m center conductor	0.77 +/- 0.12 ohm
7.5 m center conductor	1.65 +/- 0.25 ohm
3.5 / 7.5 m jacket resistance	0.23 +/- 0.05 / 0.49 +/- 0.10 ohm

06 Measure the intended component

Disconnect the component under the approved safe-work procedure before a resistance check. Do not compare a probe center-to-outer measurement with an extension center-to-center value.

07 Check the loaded negative supply

Read voltage at the conditioner under the installed load. A supply more positive than -23.5 VDC can reduce linear range; preserve barrier-specific circuit requirements.

08 Inspect the monitor circuit

The sensor-to-monitor cable is separate from the probe-plus-extension electrical length. Use the documented shielded three-conductor triad arrangement and tinned field wiring. Compare the installed run with the response curves when judging high-frequency performance.

Electrical acceptance

The selected extension length, probe component check, clean service junction and intended sensor supply must agree before interpreting the monitor signal.

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04 / GAP, GEOMETRY AND RESPONSE

09 Establish the operating point

For radial vibration, set and verify the recommended -9 VDC gap. The matched system has a 2 mm calibrated span, approximately 0.25 to 2.3 mm from the target. Keep intended motion within the usable region.

Check the target arrangement

Flat target diameter	15.2 mm minimum
Shaft diameter	50.8 mm minimum; 76.2 mm recommended minimum
Axial tip separation	Generally at least 40 mm
Radial tip separation	Generally at least 38 mm

10 Limit adjacent-channel interaction

Check tip separation and shaft diameter under the documented cross-talk conditions. A change of shaft geometry can affect scale factor even with an electrically correct sensing chain.

Performance rows for this length selection

5 m standard chain	ISF +/-5%; DSL less than +/-0.025 mm, components 0 to +45 deg C
9 m standard chain	ISF +/-6.5%; DSL less than +/-0.038 mm, components 0 to +45 deg C

11 Test the channel function

Confirm the configured monitor scaling and the intended static and dynamic response. Speed or phase-reference use needs the correct target feature and receiving channel.

Temperature interpretation

The broad component operating limits do not establish the tightest accuracy over that whole range. Apply the correct 5 m or 9 m row and each component temperature condition.

Acceptance basis

The standard reference uses a complete 3300 XL 8 mm chain, AISI 4140 steel target, -24 VDC supply, 10 kohm load and components between +18 and +27 deg C unless stated otherwise. A different target calibration changes the applicability of the accuracy and interchangeability statements.

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05 / DIAGNOSE AND RETURN TO SERVICE

Symptoms and focused checks

Gap displaced or outside the region	Inspect target position and conditioner voltage
Stable gap, uncertain dynamic amplitude	Check monitor scaling, electrical length and field wiring
Intermittent channel	Inspect sleeve support, junction and lead strain
Adjacent-channel influence	Review probe separation and target geometry

Service comparison

Preserve the installed electrical-length arrangement and target calibration when comparing readings before and after work. Recheck the reverse-mount support and CN circuit boundary after replacement.

Companion limits

Standard probe / extension	-52 to +177 deg C; operating and storage
Conditioner operating	-52 to +100 deg C
Conditioner storage	-52 to +105 deg C

Related proximity portfolio

Bently Nevada 330104-00-24-10-02-00	Related 3300 XL probe; compare complete execution
Bently Nevada 330103-00-14-10-01-00	Related 3300 XL probe; compare complete execution
Bently Nevada 330103-00-03-05-02-00	Related 3300 XL probe; compare complete execution
Bently Nevada 330103-00-04-05-02-05	Related 3300 XL probe; compare complete execution

Manufacturer references

3300 XL 8 mm Proximity Transducer System | 141194 Rev. AN	Ordering p. 14; resistance and power p. 4; accuracy p. 5; target geometry p. 6; hardware pp. 7-8; temperature and seal p. 9.
Approvals Quick Reference Guide | 108M1756 Rev. AV	CN scope p. 10 and 330106 option availability p. 27. Use actual marking and the approved circuit for the installed rating.

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