01 INSTALLATION & COMMISSIONING

Bently Nevada 330104-01-08-50-01-CN

01 / PLAN THE DIRECT CHANNEL

Equipment covered

Bently Nevada 330104-01-08-50-01-CN is an armored 3300 XL 8 mm proximity probe with an M10 x 1 thread and a 5 m standard lead. Its protected ClickLoc connection is intended for the matching 5 m Proximitor system used for non-contact shaft vibration and position measurements.

Read the selected execution

330104	XL 8 mm probe; M10 x 1; with armor
AA01 / BB08	Retained mechanical order-code execution
CC50	5.0 m total probe length; matching 5 m sensor only
DD01	Standard cable, ClickLoc and connector protector
CN	Country-specific approval option; inspect marking

Trace probe to conditioner

Probe	Connection	Proximitor
5 m armored 330104 lead	Direct protected ClickLoc junction	Matching 5 m XL system

01 Select the correct electrical arrangement

CC50 is a five-metre probe designed for the five-metre Proximitor only. Connect the integral lead to the matching conditioner without adding an extension. Do not apply a one-metre-probe-plus-extension recipe to this selected five-metre execution.

02 Establish the work boundary

Identify the shaft, channel and existing target calibration before disconnecting the probe. Apply the site isolation and machinery-protection procedure and retain circuit labels. Document the intended vibration, position or timing-reference function.

03 Verify approval requirements

108M1756 Rev. AV lists CN for the 330104 family. CN covers China-specific hazardous-area requirements, including NEPSI/CCC and ATEX/IECEx markings as applicable. Read the supplied marking, certificate and installed circuit requirements; the country option alone is not a universal approval for every location.

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02 / MOUNT AND SUPPORT THE PROBE

04 Confirm the metric interface

Inspect the M10 x 1 mating thread and selected AA01 / BB08 execution. Keep thread engagement within 15 mm and do not force a binding mount. Establish whether normal support or the first-three-threads torque condition applies.

Apply torque to the correct interface

Standard forward mount	11.2 N m recommended; 33.9 N m maximum
First three threads	7.5 N m recommended; 22.6 N m maximum
Two XL gold ClickLocs	Finger tight; connector maximum 0.565 N m

05 Route the armored lead

Maintain the 25.4 mm minimum cable bend radius and support the lead so its connector is not under steady pull. Armor provides a mechanical execution choice; do not assume it seals a damaged cable or changes the chosen electrical length.

06 Fit the protected connector

DD01 includes the connector protector with the standard ClickLoc cable execution. The armored case family and connector protector are independent selections. FluidLoc is a different cable option and must not be inferred from armor or from the presence of the protector.

07 Review component locations

The standard probe operates and stores at -52 to +177 deg C. The conditioner operates at -52 to +100 deg C and stores at -52 to +105 deg C. Locate and assess the two components separately; the probe temperature rating does not extend the Proximitor range.

Related proximity-probe selections

Bently Nevada 330103-03-06-05-02-00	Related XL probe; compare full execution
Bently Nevada 330104-00-24-10-02-00	Related XL probe; compare full execution

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03 / CHECK PROBE AND FIELD CIRCUIT

Isolated probe check

Nominal Probe DC Resistance	8.73 +/-0.50 ohm; center to outer conductor
Standard Probe Cable	75 ohm triaxial; FEP insulated
Probe Tip Material	Polyphenylene sulfide (PPS)
Probe Case Material	AISI 303 or 304 stainless steel

08 Measure the disconnected component

Isolate the circuit under the machine procedure and disconnect the probe from the powered conditioner before measuring center-to-outer resistance. Record the five-metre nominal value and tolerance with the component result. Inspect contacts and routing if the reading is questionable.

Companion supply interface

Non-incendive circuit per drawing 140979	-17.5 to -26 VDC
With barriers	-23 to -26 VDC
Maximum Proximitor consumption	12 mA
Proximitor output resistance	50 ohm

09 Restore the direct connection

CC50 is a five-metre probe designed for the five-metre Proximitor only. Connect the integral lead to the matching conditioner without adding an extension. Do not apply a one-metre-probe-plus-extension recipe to this selected five-metre execution.

10 Inspect the monitor circuit

The Proximitor-to-monitor wiring is a separate circuit from the five-metre probe lead. The manufacturer specifies 0.2 to 1.5 mm2 conductors and recommends three-conductor shielded triad with tinned field wiring. The maximum documented field run is 305 m; evaluate high-frequency rolloff using the published response curves.

Supply headroom

A supply more positive than -23.5 VDC may reduce linear range. Check the actual conditioner supply and any barrier arrangement before interpreting range or gap anomalies.

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04 / GAP AND FUNCTIONAL ACCEPTANCE

Channel commissioning reference

Matched System Linear Range	2 mm; approximately 0.25 to 2.3 mm
Radial Vibration Gap Setting	-9 VDC; approximately 1.27 mm
Nominal System Scale Factor	7.87 V/mm (200 mV/mil)
System Frequency Response	0 to 10 kHz; +0 / -3 dB

11 Verify target and reference conditions

Published channel performance assumes XL 8 mm components, an AISI 4140 steel target, -24 VDC supply, a 10 kohm load and 1.27 mm probe gap. The general reference temperature is +18 to +27 deg C and altitude is no greater than 2000 m unless a performance row states different conditions.

12 Set gap for the intended role

For radial vibration, the documented recommendation is -9 VDC, approximately 1.27 mm. Check the actual target calibration before applying this voltage-to-gap relationship. A radial-vibration recommendation does not define an axial-position setpoint.

13 Compare the relevant accuracy row

For the standard 5 m system at 0 to +45 deg C, scale factor is 7.87 V/mm within +/-5% and deviation from straight line is below +/-0.025 mm. With the probe at -35 to +120 deg C and the Proximitor at 0 to +45 deg C, the stated 5 m row changes to +/-10% and +/-0.076 mm. These are complete-system performance limits.

14 Complete the machine functional test

Verify static response, intended dynamic signal and monitor interpretation through the installed procedure. Retain the machine protection settings and document the result; a resistance check alone does not prove a functioning measurement channel.

Related proximity-probe selections

Bently Nevada 330106-05-30-05-02-CN	Related XL probe; compare full execution
Bently Nevada 330103-00-14-10-01-00	Related XL probe; compare full execution

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05 / HANDOVER AND REPLACEMENT REVIEW

Inspection and release record

Code	Full model, CN and DD01 verified
Length	5 m probe directly matched to 5 m sensor
Mechanics	M10 fit, engagement and case support checked
Connection	ClickLoc seated and protector fitted
Component test	Isolated probe resistance recorded
Channel test	Target, gap and monitor response accepted

What approval selection does CN identify on 330104-01-08-50-01-CN?

CN is the China-specific approval ordering option. Check the actual component markings and the applicable installed circuit requirements before use.

Why is the temperature check for 330104-01-08-50-01-CN separate from its Proximitor?

The standard probe operates and stores at -52 to +177 deg C. The Proximitor operates to +100 deg C and stores to +105 deg C, so a probe location within its rating can still be unsuitable for the conditioner.

Related proximity-probe selections

Bently Nevada 330103-00-03-05-02-00	Related XL probe; compare full execution
Bently Nevada 330103-00-04-05-02-05	Related XL probe; compare full execution

Manufacturer references

3300 XL 8 mm Proximity Transducer System, 141194 Rev. AN: resistance and reference conditions p. 4; performance pp. 5-6; construction and torque p. 7; engagement p. 8; temperatures p. 9; metric probe family/options pp. 13-14. Approvals Quick Reference Guide 108M1756 Rev. AV: CN explanation p. 10 and 330104 applicability p. 26. Field checks follow the installed machine procedure.

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