Bently Nevada 330910-00-12-10-02-00

01 / ARMORED NSv PROBE

Bently Nevada 330910-00-12-10-02-00 is an armored M10 x 1 proximity probe with a 1 m standard lead for the 3300 XL NSv system. A selected NSv extension and matching Proximitor complete the 5 m or 7 m channel for non-contact shaft vibration and position measurements.

Selected model execution

330910	NSv probe; M10 x 1; with armor
AA00 / BB12	Retained fully threaded mechanical execution
CC10	1.0 m total probe length
DD02	Standard cable and ClickLoc; no included protector
EE00	Agency approval not required

Matched NSv signal chain

Probe	Extension	Proximitor
1 m armored NSv lead	4 m or 6 m NSv cable	Matching 5 m or 7 m NSv system

Sensing role

The probe senses the gap to a conductive target; its companion NSv Proximitor supplies the conditioned signal to the monitor. Armor provides mechanical lead protection, while the selected extension length and target calibration determine the assembled channel configuration.

Selection boundary

Keep the full AA00 / BB12 execution when selecting the mounting arrangement. Armor does not establish FluidLoc sealing or hazardous-area approval. Match the NSv electrical length and assess the actual target geometry.

Related Bently Nevada monitoring portfolio

Bently Nevada 330180-51-05	Related component; verify full configuration

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Probe materials and interfaces

Nominal Probe DC Resistance	4.2 +/-0.5 ohm; center to outer conductor
Standard Probe Cable	75 ohm coaxial; FEP insulated
Probe Tip Material	Polyphenylene sulfide (PPS)
Probe Case Material	AISI 304 stainless steel
Recommended Case Torque	11.3 N m; standard forward mounting
Maximum Case Torque	33.9 N m; standard forward mounting
First-Three-Threads Torque	7.5 N m recommended; 22.6 N m maximum
Maximum Thread Engagement	15 mm; matching internal fit class
Minimum Cable Bend Radius	25.4 mm
Maximum Connector Torque	0.56 N m
ClickLoc Connector Practice	Finger tight
Standard Probe Temperature	-52 to +177 deg C; operating and storage

Isolated resistance interpretation

The 1 m probe has a nominal center-to-outer resistance of 4.2 +/-0.5 ohm. This is a probe measurement, not an extension end-to-end conductor value or a specification for a connected energized channel.

Connector protection

DD02 specifies standard cable and a miniature coaxial ClickLoc connector without an included protector. Protect the exposed junction according to the installed environment. The stated condensing-humidity capability requires protected connectors and does not allow submersion; standard cable does not imply FluidLoc sealing.

Mechanical strength

The documented maximum rated tensile strength is 220 N from case to lead and at the probe-to-extension connection. Keep normal installed tension off the lead and connector; a strength rating is not a recommended continuous routing load.

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Match the selected extension

5 m NSv system	1 m probe + 4 m extension + matching 5 m Proximitor
7 m NSv system	1 m probe + 6 m extension + matching 7 m Proximitor

Matched channel response

Matched System Linear Range	1.5 mm; approximately 0.25 to 1.75 mm
Radial Vibration Gap Setting	1.0 mm; recommended gap
Nominal System Scale Factor	7.87 V/mm (200 mV/mil)
System Frequency Response	0 to 10 kHz; +0 / -3 dB typical

Reference conditions

Published reference conditions use an NSv Proximitor, extension and probe at 0 to +45 deg C, altitude no greater than 2000 m, -24 VDC supply and 10 kohm load. The Bently Nevada AISI 4140 target is at least 31 mm in diameter and the gap is 1.0 mm. A different target calibration changes the applicability of the accuracy and interchangeability figures.

Accuracy interpretation

Nominal incremental scale factor is 7.87 V/mm (200 mV/mil), with +12.5% / -20% limits including interchangeability error. It is measured in 0.25 mm increments across the 1.5 mm linear range. Deviation from best-fit straight line is less than +/-0.06 mm under the stated reference conditions.

Frequency response

The typical frequency response is 0 to 10 kHz, +0 / -3 dB, with up to 305 m of field wiring under the documented conditions. Evaluate the actual route against the published response curves.

Related Bently Nevada monitoring portfolio

Bently Nevada 330103-00-06-10-02-00	Related component; verify full configuration

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Target and counterbore

For a flat target, minimum diameter is 8.9 mm and the recommended minimum is 13 mm. The counterbore minimum is 9.5 mm, with 13 mm recommended. Smaller targets or counterbores can alter scale factor and usable range; consult the geometry response curves before adopting a nominal calibration.

Shaft and cross-talk

The standard X-Y configuration has a 30 mm minimum shaft diameter. A 20 mm shaft requires the documented 23 mm axial offset. Maintain at least 25 mm tip separation for axial-position measurements or 23 mm for radial vibration to limit cross-talk. Radial measurements below 20 mm shaft diameter generally change average scale factor by more than 10%.

Separate conditioner supply

Without barriers	-17.5 to -26 VDC
With barriers	-23 to -26 VDC
Maximum Proximitor consumption	12 mA
Conditioner output resistance	50 ohm

Monitor field wiring

The Proximitor-to-monitor circuit is separate from the probe-plus-extension length. Use 0.2 to 1.5 mm2 conductors, or 0.25 to 0.75 mm2 with ferrules. Three-conductor shielded triad is recommended. The documented maximum run is 305 m; use the response curves to evaluate high-frequency rolloff for the actual field wiring.

Temperature locations

The probe and extension operate and store at -52 to +177 deg C. The conditioner operates at -52 to +100 deg C and stores at -52 to +105 deg C. Sustained probe exposure below -34 deg C may cause premature pressure-seal failure. Assess each installed location and containment requirement separately.

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Case versus connector torque

Normal M10 forward mount	11.3 N m recommended; 33.9 N m maximum
First three threads only	7.5 N m recommended; 22.6 N m maximum
ClickLoc connection	Finger tight; 0.56 N m maximum

What does the armor on 330910-00-12-10-02-00 establish?

It identifies the armored probe execution. It does not select FluidLoc cable, include a DD02 connector protector, or establish an environmental sealing rating for an unprotected joint.

Does the final 00 on 330910-00-12-10-02-00 prove hazardous-area suitability?

No. EE00 means agency approval not required in the ordering selection. Determine suitability from the actual installed equipment requirements and supplied markings.

Related Bently Nevada monitoring portfolio

Bently Nevada 330104-00-06-05-02-00	Related component; verify full configuration
Bently Nevada 330104-00-10-10-02-00	Related component; verify full configuration
Bently Nevada 330103-03-08-10-01-00	Related component; verify full configuration
Bently Nevada 330103-04-10-10-02-05	Related component; verify full configuration

Recommendation boundary

The linked products are broader Bently Nevada monitoring portfolio references. Their family, thread, electrical length and approval choices must be checked independently. A recommendation link does not establish compatibility with an NSv channel or a replacement for this model.

Manufacturer references

3300 XL NSv Proximity Transducer System, 147385 Rev. R: component resistance and system performance p. 3; target geometry p. 4; materials and torque p. 5; engagement and temperature p. 6; probe and extension ordering pp. 11-13. Site checks organize these facts for the installed machine procedure.

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