Bently Nevada 330104-03-09-10-02-00

01 / ARMORED METRIC PROXIMITY PROBE

Bently Nevada 330104-03-09-10-02-00 is an armored 3300 XL 8 mm proximity probe with an M10 x 1 mounting thread and a 1 m standard cable. Its ClickLoc connection supports a selected XL system for non-contact shaft vibration and position measurements.

Selected order-code execution

330104	XL 8 mm probe; M10 x 1; armored
AA03 / BB09	Retained partial-thread mechanical execution
CC10	1.0 m total probe length
DD02	Standard cable; ClickLoc without included protector
EE00	Agency approval not required

Probe and electrical-length selection

Probe	Length choice	Proximitor
1 m armored XL probe	Direct 1 m, or 4 m / 8 m extension	Matching 1 m, 5 m or 9 m XL sensor

Measurement role

The probe responds to the distance from a conductive target while a separate Proximitor supplies the conditioned measurement output. Armor protects the lead mechanically; the selected extension and conditioner determine the complete electrical length. Mounting fit, cable option and calibration remain independent selection checks.

Selection boundary

Retain the complete AA03 / BB09 mechanical execution and the matching XL electrical length. Armor does not select FluidLoc or supply a connector protector. EE00 must not be presented as a hazardous-area approval.

Related proximity-probe portfolio

Bently Nevada 330103-00-08-10-01-00	Related XL probe; compare full execution
Bently Nevada 330103-00-08-10-02-00	Related XL probe; compare full execution

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Probe-specific interfaces

Nominal Probe DC Resistance	7.59 +/-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
Recommended Case Torque	11.2 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	0.565 N m
Two XL ClickLoc Connectors	Finger tight
Standard Probe Temperature	-52 to +177 deg C; operating and storage

Probe resistance measurement

The 7.59 +/-0.50 ohm value is measured between center and outer conductors of the isolated 1 m probe. Do not apply extension end-to-end resistance values to this measurement, and keep the disconnected component check separate from the powered system response.

Connection protection

DD02 selects standard cable and a miniature coaxial ClickLoc connector without an included protector. Choose suitable connector protection for the local environment. Silicone tape supplied with XL extension cables is not recommended at probe-to-extension joints exposed to turbine oil. Optional FluidLoc cable must not be assumed from the base family.

Probe construction

TipLoc molding bonds the probe tip to the body, while CableLoc secures the lead-to-tip connection. The documented maximum rated tensile strengths are 330 N from case to lead and 270 N at the lead-to-extension connector. These are strength ratings, not acceptable continuous routing loads.

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03 / ELECTRICAL LENGTH AND ACCURACY

Three supported system lengths

1 m system	1 m probe; no extension; matching 1 m Proximitor
5 m system	1 m probe + 4 m extension; matching 5 m Proximitor
9 m system	1 m probe + 8 m extension; matching 9 m Proximitor

Complete-channel measurement

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

Reference conditions

The reference channel consists entirely of XL 8 mm components with an AISI 4140 steel target, -24 VDC supply, 10 kohm load and 1.27 mm probe gap. Unless another row states otherwise, components are +18 to +27 deg C and altitude is no greater than 2000 m. A different target calibration changes the applicability of the stated system accuracy.

Select the correct accuracy row

For standard 1 m and 5 m systems at 0 to +45 deg C, ISF is 7.87 V/mm within +/-5% and DSL is below +/-0.025 mm. For the standard 9 m system at the same temperature interval, the corresponding values are +/-6.5% and below +/-0.038 mm. These are complete-channel limits, not an isolated probe calibration.

Extended-temperature performance

With the probe at -35 to +120 deg C and the conditioner and extension at 0 to +45 deg C, the standard 1 m / 5 m performance row allows ISF within +/-10% and DSL within +/-0.076 mm. The 9 m row instead allows +/-18% and +/-0.152 mm. Apply each temperature condition to the appropriate component.

Related proximity-probe portfolio

Bently Nevada 330102-00-28-10-02-05	Related XL probe; compare full execution

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Different torque interfaces

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 ClickLoc connectors	Finger tight; 0.565 N m connector maximum

Thread engagement

Use the matching M10 x 1 internal fit and remain within the 15 mm engagement limit. Excessive engagement can bind during mounting. The case-support condition determines which case-torque row applies; connector torque is a separate limit.

Companion power interface

Non-incendive circuit per drawing 140979	-17.5 to -26 VDC
Circuit with barriers	-23 to -26 VDC
Maximum Proximitor current	12 mA
Output resistance	50 ohm

Monitor field wiring

The Proximitor-to-monitor path is separate from the probe-plus-extension electrical length. The field circuit uses 0.2 to 1.5 mm2 conductors; a three-conductor shielded triad with tinned wiring is recommended. The documented maximum is 305 m, with high-frequency rolloff evaluated against the published response curves.

Separate temperature locations

The standard probe operates and stores at -52 to +177 deg C. The Proximitor operates at -52 to +100 deg C and stores at -52 to +105 deg C. Exposure below -34 deg C can cause premature pressure-seal failure; the broad electrical temperature range is not a pressure-containment guarantee.

Pressure-seal boundary

The probe uses a Viton O-ring and is not pressure tested before shipment. Required pressure-seal testing and containment provisions belong to the specific application; the part number does not establish a tested pressure rating.

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What mechanical execution is selected by 330104-03-09-10-02-00?

330104 identifies an armored M10 x 1 XL probe. Retain the AA03 / BB09 partial-thread execution and verify the machine mounting fit before choosing a replacement.

Which M10 engagement and support checks apply to 330104-03-09-10-02-00?

Maximum engagement is 15 mm with a matching internal fit. Normal support uses 11.2 N m recommended case torque, while first-three-threads support uses 7.5 N m; investigate binding before tightening further.

Is 330104-03-09-10-02-00 supplied with a connector protector or FluidLoc cable?

Neither is selected by DD02. It provides standard cable and a ClickLoc connector without an included protector. The armored execution is a separate mechanical selection.

What does the final 00 on 330104-03-09-10-02-00 mean for approvals?

EE00 is the agency-approval-not-required selection. It is not evidence that a particular hazardous-area installation is certified; check the actual equipment requirements and supplied marking.

Related proximity-probe portfolio

Bently Nevada 330103-00-08-05-02-CN	Related XL probe; compare full execution
Bently Nevada 330104-00-06-05-01-05	Related XL probe; compare full execution

Portfolio boundary

The linked XL probes have different mounting and order-code executions. Review the full mechanical, cable, electrical-length and approval selection independently; a related listing is not evidence of a replacement match.

Manufacturer reference

3300 XL 8 mm Proximity Transducer System, Datasheet 141194 Rev. AN. System role pp. 1-3; resistance and reference conditions p. 4; gap and accuracy p. 5; response p. 6; mechanical interfaces p. 7; engagement and connector practice p. 8; temperatures p. 9; metric probe ordering pp. 13-14; extension ordering pp. 18-19. Field checks organize these facts for the installed machine procedure.

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