

Identity and System Position

Bently Nevada 330104-08-14-10-02-05

Armored metric 3300 XL 8 mm proximity probe. It is one element of the probe, extension cable and Proximitor sensor chain used for non-contact shaft measurements.

Documented Role

IDENTITY	MANUFACTURER-DOCUMENTED FACT
Probe family	3300 XL 8 mm; 330104 identifies the armored M10 x 1 metric probe.
Connection	Option 02 identifies a miniature coaxial ClickLoc connector with standard cable.
Approval selection	Final option 05 identifies CSA, ATEX and IECEx approvals.
Installed system	A probe, 3300 XL extension cable and 3300 XL Proximitor sensor form the transducer system.

Measurement boundary

The completed system produces a voltage proportional to probe-tip distance from a conductive target and measures both static position and dynamic vibration. The probe alone does not carry the published complete-system performance ratings.

Primary application

The manufacturer identifies vibration and position measurements on fluid-film bearing machines, along with Keyphasor reference and speed measurement applications.

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System and Signal Architecture

Sensing Chain

STAGE	ROLE	ENGINEERING CHECK
330104 probe	Non-contact eddy-current sensing at the machine shaft	Confirm armored metric identity and connector option.
Extension cable	Mates the probe to the conditioning sensor	Match the documented system configuration and ClickLoc interface.
Proximator sensor	Conditions the transducer output for the monitor	Check the approved power, load and calibration target.
Monitoring channel	Uses static position or dynamic vibration output	Verify input configuration and controlled functional response.

Matched-System Characteristics

DOMAIN	PUBLISHED CONDITION / VALUE
Power	Proximator sensor requires -17.5 to -26 Vdc under the stated non-incendive installation conditions; barrier installations require -23 to -26 Vdc.
Output resistance	50 ohms for the conditioned system output.
Nominal scale factor	7.87 V/mm (200 mV/mil) for the standard matched system under stated test conditions.
Frequency response	0 to 10 kHz, +0/-3 dB for the standard matched system with approved field wiring.
Calibration target	Manufacturer's standard calibration is to AISI 4140 steel; other target materials require the proper calibration.

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Construction and Operating Conditions

Probe and Connector Data

ITEM	VALUE / LIMIT
Probe tip	Polyphenylene sulfide (PPS).
Probe case	AISI 303 or 304 stainless steel.
Cable armor	Flexible AISI 302 or 304 stainless steel with FEP outer jacket.
Standard probe cable	75-ohm triaxial cable with FEP insulation.
Connector	Gold-plated miniature coaxial ClickLoc; finger-tight until the connection clicks.
Standard probe temperature	-52 to +177 degrees C for operating and storage temperature.

Connection and Compatibility Notes

Positive-locking interface

ClickLoc mating connectors are corrosion resistant and do not need a special installation tool. Connector protectors are recommended to improve environmental protection.

Interchange boundary

3300 XL 8 mm components are electrically and physically interchangeable with specified non-XL 3300 5 mm and 8 mm components, but a mixed system is limited by non-XL performance specifications.

Related Products on Apter Power

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Engineering Decisions and Source Configuration and Acceptance Matrix

DECISION	ACCEPTANCE BASIS
Exact identity	Retain the complete 330104-08-14-10-02-05 marking and armored M10 x 1 construction.
Mating interface	Use the standard-cable miniature coaxial ClickLoc option documented by code 02.
Target material	Use the AISI 4140 calibration basis or an approved calibration for another target material.
System pairing	Confirm extension cable and Proximator sensor match the intended system configuration.
Condition check	Verify static gap and controlled dynamic response after installation.

Questions Relevant to This Probe

QUESTION	ANSWER
Which connector does 330104-08-14-10-02-05 use?	Option 02: miniature coaxial ClickLoc with standard cable.
What does code 05 specify for 330104-08-14-10-02-05?	The final code 05 is the CSA, ATEX and IECEx approval selection.
Can 330104-08-14-10-02-05 use non-XL components?	Under the manufacturer's interchangeability limits; non-XL ratings govern a mixed chain.

Manufacturer source record

Bently Nevada 3300 XL 8 mm Proximity Transducer System Datasheet, 141194 Rev. AN. Applicable ordering and technical sections: pages 1-2, 4-9 and 13-14.

Related Products on Apter Power

Bently Nevada 330104-01-09-10-11-05

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