

01 PRODUCT IDENTITY

Bently Nevada 330180-X1-05 MOD:143945-05

Proximitoꖑ Sensor

Signal-conditioning sensor in a 3300 XL 8 mm proximity transducer system.



DOCUMENTED IDENTITY AND ORDERING

330180 denotes the Proximitoꖑ Sensor family. The standard 05 approval option is listed for CSA, ATEX and IECEx.

SYSTEM POSITION

The complete 3300 XL 8 mm system combines a probe, extension cable and Proximitoꖑ Sensor. The sensor output varies with target gap.

MEASUREMENT ROLE

The system supports static position and dynamic vibration; it can also support Keyphasoꖑ reference and speed measurement.

INTEGRATION NOTE

The published XL system permits component interchange with older 3300-series components; the mixed system follows the older system's performance specifications.

02 SYSTEM AND INTERFACES



Interface / purpose / controlled check

Probe path	3300-series 5 mm or 3300 XL 8 mm probe plus matching cable
Field wiring	Shielded, three-conductor triad and tinned conductors
Connector	Gold-plated ClickLoc; finger-tight when both sides are XL
Test access	148722-01 test plug uses the sensor terminal-strip test holes

ASSEMBLY CHECK

For matched 3300 XL gold ClickLoc connectors, use finger-tight assembly until the locking click. Verify probe, cable, sensor and monitor routing against the installed system record.

REFERENCE CONDITION

The manufacturer publishes system specifications under controlled supply, load, target material and temperature conditions. Evaluate a replacement against the actual configured installation.

03 TECHNICAL DATA

System input	One compatible probe and extension cable
Supply	-17.5 to -26 Vdc; barrier use has a narrower range
Output resistance	50 ohms
Field connection	SpringLoc terminals; ClickLoc sensor connector
Reference target	Factory calibration to AISI 4140 steel
Nominal radial gap	-9 Vdc at the stated reference conditions

Supply condition

The published general specification is -17.5 to -26 Vdc; barrier-connected installations use -23 to -26 Vdc.

Signal envelope

The complete 3300 XL 8 mm system has a 2 mm linear measurement range and a 0 to 10 kHz frequency response under its published conditions.

04 INTEGRATION AND SERVICE

Radial vibration

Conditions the probe signal for dynamic shaft vibration measurement.

Axial position

Converts probe-to-target gap into a static position signal.

Keyphasor reference

Supports a rotating-machine phase reference when the system is applied appropriately.

Speed observation

Supports speed measurement through the transducer system's probe signal.

Controlled work sequence

STEP 01

Isolate and verify the sensor supply before handling field terminals.

STEP 02

Match the installed probe and extension cable to the intended system configuration.

STEP 03

Inspect the ClickLoc joint; seat matched XL connectors finger-tight until they click.

STEP 04

Protect exposed cable connectors from the machine environment.

STEP 05

Use the mounting arrangement documented for the installed sensor hardware.

STEP 06

Use shielded triad field wiring and tinned conductors at SpringLoc terminals.

05 ENGINEERING QUESTIONS

01 What is the role of 330180-X1-05 in the sensing chain?

The 330180 family is the Proximity Sensor stage between the probe/cable assembly and the monitor.

02 Which transducer elements feed this Proximity Sensor?

The 3300 XL 8 mm system uses a proximity probe and an extension cable ahead of the sensor.

03 What does the standard 05 agency option identify?

The published 330180 ordering table lists option 05 for CSA, ATEX and IECEx approvals.

04 What supply must be checked at the sensor?

The published 3300 XL system specification gives -17.5 to -26 Vdc, with a narrower barrier-connected condition.

05 How is the sensor's field wiring terminated?

The 3300 XL Proximity Sensor uses SpringLoc terminal strips.

MANUFACTURER SOURCE RECORD

Bently Nevada, 3300 XL 8 mm Proximity Transducer System Datasheet, 141194 Rev. AN, pp. 1-5, 8-9, 18, 20.

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