Bently Nevada 330850-51-00

Complete Product Information

Bently Nevada 330850-51-00 conditions the signal from a matched 3300 XL 25 mm probe chain for long-range differential-expansion measurement.

WHAT THIS PRODUCT DOES

Bently Nevada 330850-51-00 is a DIN-mounted 3300 XL 25 mm Proximitor Sensor calibrated for a 5.0 m transducer-system electrical length. It converts the matched probe signal into the voltage output used for differential-expansion monitoring.

Product characteristic 1

Matches a 5.0 m 3300 XL 25 mm probe-and-extension-cable electrical path.

Product characteristic 2

Uses a DIN-rail mounting configuration for high-density cabinet installation.

Product characteristic 3

Provides a nominal 0.787 V/mm output across a 12.7 mm linear range.

Product characteristic 4

Uses SpringLoc terminals for field power, common and output wiring.

PRODUCT-PAGE TECHNICAL SNAPSHOT

Transducer family	3300 XL 25 mm
Product role	Proximitor Sensor
System electrical length	5.0 m
Mounting option	DIN rail

IMPORTANT NOTICE

Confirm the 5.0 m matched electrical length and DIN-rail mounting before installation. Verify bias, polarity and proportional response after connection.

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Features and technical data

TECHNICAL DATA SHOWN ON THE PRODUCT PAGE

Transducer family	3300 XL 25 mm
Product role	Proximitor Sensor
System electrical length	5.0 m
Mounting option	DIN rail
Agency approval option	No approvals
Power requirement	-17.5 to -26 V DC without barriers; -23 to -26 V DC with barriers
Maximum current consumption	12 mA
Linear measurement range	12.7 mm (500 mil)
Nominal scale factor	0.787 V/mm (20 mV/mil)
Frequency response	0 to 2.7 kHz, +0/-3 dB typical
Output resistance	50 ohms
Field wiring distance	Up to 305 m between sensor and monitor
Operating temperature	-51 to +100 °C
Terminal style	SpringLoc terminal strips

FEATURE INTERPRETATION

Product identity

Matches a 5.0 m 3300 XL 25 mm probe-and-extension-cable electrical path.

System role

Uses a DIN-rail mounting configuration for high-density cabinet installation.

Service context

Provides a nominal 0.787 V/mm output across a 12.7 mm linear range.

Return-to-service focus

Uses SpringLoc terminals for field power, common and output wiring.

SIGNAL OR CONTROL PATH

Field device → **Product interface** → **System channel** → **Verified response**

The sensor forms the electronic end of the three-part transducer chain. Its probe input, field wiring and monitor connection must retain the calibrated system length and documented polarity.

PRODUCT-PAGE TECHNICAL QUESTIONS

Which mounting arrangement is specified by Bently Nevada 330850-51-00?	The 51 option specifies a 5.0 m system electrical length with DIN-rail mounting.

Common applications

The application groups below reproduce the model-specific uses presented on the product page and connect each use to a practical verification point.

Steam-turbine differential expansion

Measures rotor-to-casing growth differences through the extended 25 mm transducer range.

Turbine supervisory instrumentation

Supplies a conditioned proximity signal to a configured TSI monitoring channel.

Long-range axial position

Supports non-contact position measurement where the 12.7 mm linear range is required.

DIN-rail cabinet installation

Fits the sensor into a high-density DIN-rail arrangement near the machine-monitoring wiring.

APPLICATION VERIFICATION MAP

Steam-turbine differential expansion	Confirm the documented system position and the required operating function.
Turbine supervisory instrumentation	Compare the restored connection or control path with the approved record.
Long-range axial position	Check the physical interface and the retained configuration before startup.
DIN-rail cabinet installation	Record diagnostics and the final controlled response before release.

INFORMATION CARRIED INTO THE WORK RECORD

Identity record

Complete marking and assigned system position.

Connection record

Connector, conductor and interface arrangement as found.

Configuration record

Controlled settings, application data and option state.

Acceptance record

Observed status, response and release decision.

IMPORTANT NOTICE Use the complete product identifier for every application review; a related product link is not evidence of interchangeability.

APPLICATION QUESTIONS

What measurement range does Bently Nevada 330850-51-00 support?	The matched 3300 XL 25 mm system provides a 12.7 mm (500 mil) linear measurement range.
Why is Bently Nevada 330850-51-00 used for differential-expansion monitoring?	Its extended linear range and 0.787 V/mm nominal scale factor support long-range rotor-to-casing displacement measurement.
Which supply should power Bently Nevada 330850-51-00?	The sensor requires -17.5 to -26 V DC without barriers or -23 to -26 V DC when barriers are used, at no more than 12 mA.

Product precautions and questions

EIGHT MODEL-SPECIFIC PRECAUTIONS

01	Match the complete 330850-51-00 marking to the approved differential-expansion channel before removal.
02	Confirm that the installed probe and extension cable total the required 5.0 m electrical length.
03	De-energize the negative DC supply and place the associated protection channel in its approved maintenance state.
04	Label power, common, output and shield conductors before releasing the SpringLoc terminals.
05	Inspect the probe connector and DIN-rail retention for contamination, damage or incomplete engagement.
06	Keep the signal wiring separated from high-energy conductors and preserve the documented shield termination.
07	Set the probe gap within the calibrated linear region before restoring alarms or trips.
08	Verify bias voltage, polarity, proportional target response and monitor indication before service release.

FREQUENTLY ASKED TECHNICAL QUESTIONS

Which mounting arrangement is specified by Bently Nevada 330850-51-00?	The 51 option specifies a 5.0 m system electrical length with DIN-rail mounting.
How long must the matched transducer chain be for Bently Nevada 330850-51-00?	The probe lead and extension cable must total 5.0 m to match the sensor calibration.
What measurement range does Bently Nevada 330850-51-00 support?	The matched 3300 XL 25 mm system provides a 12.7 mm (500 mil) linear measurement range.
Why is Bently Nevada 330850-51-00 used for differential-expansion monitoring?	Its extended linear range and 0.787 V/mm nominal scale factor support long-range rotor-to-casing displacement measurement.

IMPORTANT NOTICE	Keep Bently Nevada 330850-51-00 paired with the documented 3300 XL 25 mm probe and extension cable, then complete a controlled channel-response test before release.

RELEASE CHECKLIST

Identity accepted	The complete product marking and assigned system position agree.
Interfaces accepted	Connections, retention and controlled configuration match the recorded condition.
Response accepted	Diagnostics and the intended technical response have been documented.

FAQ, configuration control and related models

ADDITIONAL TECHNICAL QUESTIONS

Which supply should power Bently Nevada 330850-51-00?	The sensor requires -17.5 to -26 V DC without barriers or -23 to -26 V DC when barriers are used, at no more than 12 mA.
Does Bently Nevada 330850-51-00 include an agency-approval selection?	No. The final 00 code identifies the no-approvals option.
How are field conductors connected to Bently Nevada 330850-51-00?	SpringLoc terminal strips accept the power, common and output conductors without special installation tools.
Which commissioning checks confirm Bently Nevada 330850-51-00 operation?	Verify the installed gap, bias voltage, polarity, proportional response, monitor indication and configured alarm path.

CONFIGURATION CONTROL RECORD

Configuration identity	Bently Nevada 330850-51-00
Technical boundary	Apply only the functions and interfaces shown for this product or its identified system family.
Selection control	Match the complete ordering string and installed interfaces before purchase or installation.

RELATED MODELS ON APTERPOWER

Bently Nevada 330850-50-00	Related product reference. Review the complete ordering string before selection.
Bently Nevada 330850-91-00	Related product reference. Compare the required interface and system position.
Bently Nevada 330850-90-00	Related product reference. Confirm the execution independently for the intended task.

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