Product dashboard

Bently Nevada 3300/50 is a 3300 XL 50 mm proximity transducer system for differential expansion and rotor expansion measurement on large steam-turbine generators, with a maximum linear range of 27.9 mm (1100 mil).

Exact model	Product type	System family	Functional role
3300/50	3300 XL 50 mm Proximity Transducer System	3300 XL 50 mm Proximity Transducer System	Proximity Transducer System

PARAMETER	DOCUMENTED VALUE
Complete product marking	3300/50
Product family	3300 XL 50 mm Proximity Transducer System
System components	50 mm probe, extension cable and 50 mm Proximitor Sensor
Primary measurement	Differential expansion or rotor expansion
Maximum linear range	27.9 mm (1100 mil)
Output scale factor	0.394 V/mm (10 mV/mil)
Reference target	AISI 4140 steel
Probe operating range	-35 to +200 °C

Release basis: verify the exact identity, retained host relationship, connected interfaces and controlled functional result.

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3300/50

System overview

At a turbine supervisory instrumentation boundary, Bently Nevada 3300/50 combines a large-diameter probe, extension cable and 50 mm Proximitor Sensor to measure rotor-to-stator expansion over an extended range.

Steam-turbine differential expansion

Measures the growth difference between the turbine rotor and casing through the approved collar or ramp arrangement.

Rotor expansion measurement

Tracks axial rotor growth over the extended 27.9 mm linear range.

Complementary-input arrangement

Uses opposing transducers when the required differential-expansion range exceeds one single-input span.

Legacy 50 mm system renewal

Provides a physical replacement path for a standard 7200 50 mm measurement position when the complete transducer chain is changed.

SYSTEM POSITION	RECORD
Installed identity	3300/50
Host relationship	3300 XL 50 mm Proximity Transducer System
Controlled function	extended-range differential and rotor expansion measurement

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Technical data map

PARAMETER	VERIFIED VALUE
Complete product marking	3300/50
Product family	3300 XL 50 mm Proximity Transducer System
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Primary measurement	Differential expansion or rotor expansion
Maximum linear range	27.9 mm (1100 mil)
Output scale factor	0.394 V/mm (10 mV/mil)
Reference target	AISI 4140 steel
Probe operating range	-35 to +200 °C
Probe short-term limit	+250 °C for less than 24 hours
Extension-cable range	-51 to +200 °C

CONTROL BAND	VERIFICATION RECORD
Identity	Exact model and complete label
Mechanical	Form, seating and retention
Interfaces	Power, wiring, communication and protection
Configuration	Settings, project and revision
Release	extended-range differential and rotor expansion measurement

Technical evidence record: 3300 XL 50 mm Proximity Transducer System Datasheet 174014 Rev. L

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Applications and precautions

1. Confirm the 3300/50 system identity, probe style, thread, target geometry and measurement direction before work.
2. Record the collar or ramp dimensions, probe positions, gap values and indicated expansion before removal.
3. Replace the probe, extension cable and Proximitor Sensor as one matched 3300 XL 50 mm chain.
4. Keep high-temperature FluidLoc cable, ClickLoc connectors and seals clean, dry and mechanically supported.
5. Verify single-input or complementary-input geometry against the required differential-expansion range.
6. Set probe gaps by moving the transducer through the approved sliding-bracket travel where fitted.
7. Check scale factor and linearity across the controlled mechanical travel before enabling protection logic.
8. Confirm channel direction, alarms, trip logic and recorded rotor-to-casing movement before service release.

Complete each check against the installed record; hold release when any identity, connection, configuration or diagnostic result differs.

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3300/50

Buyer and engineering FAQ

What does Bently Nevada 3300/50 measure?

It measures differential expansion or rotor expansion on large steam-turbine generators.

Which components make up Bently Nevada 3300/50?

The system uses a separate 50 mm probe, extension cable and 3300 XL 50 mm Proximitor Sensor.

What is the maximum linear range of Bently Nevada 3300/50?

Its maximum linear range is 27.9 mm (1100 mil).

What output scale factor applies to Bently Nevada 3300/50?

The system output scale factor is 0.394 V/mm (10 mV/mil).

Related Apter Power pages

- Bently Nevada 168209-0317-127-90-05-01
- Bently Nevada 16925-20
- Bently Nevada 21504-000-020-05-02

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