

INDUSTRIAL AUTOMATION PRODUCT

330876-01-90-00-05

3300 XL 50 mm Extended-Range Proximity Probe

Bently Nevada 330876-01-90-00-05 is a 3300 XL 50 mm extended-range proximity probe with a 1/2-20 threaded straight-exit case and 9.0 m High Temperature FluidLoc cable. It is used with the matched 3300 XL 50 mm transducer system for large steam-turbine differential-expansion and rotor-expansion measurement.

CONTROLLED ENGINEERING COPY

IDENTITY	VERIFIED VALUE
Manufacturer	Bently Nevada
System family	Bently Nevada 3300 XL 50 mm Proximity Transducer System
Part number	330876-01-90-00-05
Origin / HS	USA / 8537101190
Shipping origin	Xiamen,Fujian,China

DOCUMENT SCOPE

Exact article identity, official technical data, host matching, installation checks, applications, precautions and controlled acceptance evidence.

MODEL-SPECIFIC ENGINEERING NOTE

Install Bently Nevada 330876-01-90-00-05 only with the documented 3300 XL 50 mm probe, 9.0 m cable and matched Proximitor Sensor arrangement. Verify the 1/2-20 thread engagement, 102 mm target, 1.3-29.2 mm linear range, cable bend radius and

System Role and Architecture

Bently Nevada 330876-01-90-00-05 is a 3300 XL 50 mm extended-range proximity probe with a 1/2-20 threaded straight-exit case and 9.0 m High Temperature FluidLoc cable. It is used with the matched 3300 XL 50 mm transducer system for large steam-turbine differential-expansion and rotor-expansion measurement.

FUNCTION 1
Identifies the 3300 XL 50 mm straight-exit probe configuration

FUNCTION 2
Provides the 9.0 m high-temperature FluidLoc signal path

FUNCTION 3
Supports long-range differential-expansion measurement

FUNCTION 4
Pairs with the matched 3300 XL 50 mm cable and Proximitor Sensor

MATCHED SYSTEM COMPONENTS

NO.	DOCUMENTED COMPONENT / ROLE
01	Bently Nevada 3300 XL 50 mm Proximity Transducer System
02	Matched 330877 extension cable and ClickLoc connector loop
03	330878-90-00 or 330878-91-00 Proximitor Sensor
04	Bently Nevada AISI 4140 steel target, minimum 102 mm diameter

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Host identity	Bently Nevada 3300 XL 50 mm Proximity Transducer System
Interface role	Noncontact differential-expansion and rotor-expansion measurement
Field / power context	-17.5 to -26 Vdc Proximitor Sensor supply; shielded three-conductor triad wiring
Commissioning evidence	Identity, gap, polarity, response and alarm diagnostics recorded

INSTALLATION AND CONNECTION CHECKS

- 1

Confirm the complete 330876-01-90-00-05 marking and the 3300 XL 50 mm probe configuration before work.
- 2

Place the turbine and protection channel in the approved maintenance state.
- 3

Match the 9.0 m probe length with the 330878-90-00 or 330878-91-00 sensor arrangement.
- 4

Inspect the 1/2-20 mounting thread, locknut, cable route and FluidLoc jacket before fitting.

Technical Specifications

Technical values below are limited to the named Bently Nevada product record and directly applicable manufacturer documentation.

PARAMETER	VALUE	PARAMETER	VALUE
Complete order number	330876-01-90-00-05	Recommended minimum target	102 mm (4.0 in) diameter flat target
Product family	3300 XL 50 mm Proximity Transducer System	Probe tip material	Polyphenylene sulfide (PPS)
Probe case option	01: 1/2-20 English thread, straight exit	Probe case material	AISI 304 stainless steel
Total probe length	90: 9.0 m (29.5 ft)	Probe cable	75 ohm triaxial PFA-insulated FluidLoc; 1, 5 or 9 m
Cable / armor option	00: High Temperature FluidLoc cable, no armor	System length	5 or 9 m including extension cable
Agency approval option	05: Multiple Approvals	Maximum threaded-case torque	45 N m (400 in-lbf)
Proximator Sensor input	One 3300 XL 50 mm probe and extension cable	Connector maximum torque	0.565 N m (5 in-lbf)
Power	-17.5 to -26 Vdc without barriers; 12 mA maximum	Minimum bend radius	25.4 mm (1.0 in)
Output resistance	50 ohm	Thread engagement limit	1/2-20: 0.750 in
Extension cable capacitance	69.9 pF/m (21.3 pF/ft), typical	Probe operating temperature	-35 to +200 deg C; +250 deg C short-term under 24 h
Field wiring	0.2 to 1.5 mm2 (16 to 24 AWG); 3-conductor shielded	Probe cable temperature	-51 to +200 deg C
Linear range	27.9 mm (1100 mils), from 1.3 to 29.2 mm	Proximator Sensor temperature	-51 to +100 deg C operating
Average Scale Factor	394 mV/mm (10 mV/mil) nominal	Measurement role	Differential expansion and rotor expansion on large steam

ENGINEERING BOUNDARY

Confirm Bently Nevada 330876-01-90-00-05, 3300 XL 50 mm host components, 9.0 m system length, 1/2-20 mounting, target geometry, gap, cable routing, grounding, approvals and controlled differential-expansion response before commissioning.

PRE-INSTALLATION CHECKS

- 1

Confirm the complete 330876-01-90-00-05 marking and the 3300 XL 50 mm probe configuration before work.
- 2

Place the turbine and protection channel in the approved maintenance state.
- 3

Match the 9.0 m probe length with the 330878-90-00 or 330878-91-00 sensor arrangement.
- 4

Inspect the 1/2-20 mounting thread, locknut, cable route and FluidLoc jacket before fitting.

Applications and Engineering Context

Large steam-turbine differential expansion

Measures rotor-to-casing growth differences where long linear travel is required.

Rotor expansion and axial displacement

Provides a noncontact displacement channel for large turbine supervisory instrumentation.

High-temperature turbine monitoring

Uses the 50 mm probe and FluidLoc cable construction in demanding steam-turbine environments.

Extended-range transducer verification

Supports controlled gapping and verification with the documented target and system components.

TECHNICAL NOTE

Install Bently Nevada 330876-01-90-00-05 only with the documented 3300 XL 50 mm probe, 9.0 m cable and matched Proximitor Sensor arrangement. Verify the 1/2-20 thread engagement, 102 mm target, 1.3-29.2 mm linear range, cable bend radius and temperature/approval requirements before turbine service.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	330876-01-90-00-05 recorded
Host / carrier	Bently Nevada 3300 XL 50 mm Proximity Transducer System
Physical interface	Probe, cable and Proximitor Sensor matched
Configuration	Review supply, gap, polarity and monitor diagnostics
Functional proof	Complete controlled response and alarm test

IMPORTANT NOTICE

Confirm Bently Nevada 330876-01-90-00-05, 3300 XL 50 mm host components, 9.0 m system length, 1/2-20 mounting, target geometry, gap, cable routing, grounding, approvals and controlled differential-expansion response before commissioning.

Related Products and Source Record

Brand-qualified Apter Power navigation links are provided for system planning only; manufacturer evidence remains the named source record.

RELATED PRODUCTS ON APTER POWER	
01	Bently Nevada 330173-00-06-10-02-00
02	Bently Nevada 330780-91-05
03	Bently Nevada 330709-000-050-10-12-05
04	Bently Nevada 330706-005-046-10-02-00
05	Bently Nevada 330704-0-50-10-02-05
06	Bently Nevada 330500-07-00
07	Bently Nevada 330705-02-18-10-02-00
08	Bently Nevada 330701-00-10-10-02-00

Navigation links only - not manufacturer evidence for technical parameters.

MANUFACTURER SOURCE RECORD

3300 XL 50 mm Proximity Transducer System Datasheet | 174014 Rev. L

APTER POWER SALES TEAM

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