

INDUSTRIAL AUTOMATION PRODUCT

330876-01-50-01-05

3300 XL 50 mm 1 1/2-20 threaded proximity probe

Large-range non-contact eddy-current displacement signal

| IDENTITY      | VERIFIED VALUE                            |
|---------------|-------------------------------------------|
| Manufacturer  | Bently Nevada                             |
| System family | 3300 XL 50 mm Proximity Transducer System |
| Part number   | 330876-01-50-01-05                        |
| Country       | USA                                       |
| HS code       | 8537101190                                |

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## Technical Specifications

Technical values below are limited to the named Bently Nevada product record.

| PARAMETER              | VALUE                            |
|------------------------|----------------------------------|
| Probe model            | 330876                           |
| Probe case             | 1 1/2-20 threaded                |
| Total probe length     | 5.0 m (16.4 ft)                  |
| Probe cable            | High-temperature FluidLoc        |
| Armor                  | Stainless-steel                  |
| Agency approval option | Multiple approvals               |
| Probe tip material     | PPS                              |
| Probe case material    | AISI 304 stainless steel         |
| Probe cable impedance  | 75 Ohm                           |
| Power without barriers | -17.5 to -26 V DC; 12 mA maximum |
| Power with barriers    | -23 to -26 V DC                  |

| PARAMETER                    | VALUE                                     |
|------------------------------|-------------------------------------------|
| Output resistance            | 50 Ohm                                    |
| Field-wire conductor range   | 0.2 to 1.5 mm <sup>2</sup> (16 to 24 AWG) |
| Maximum field-wire length    | 305 m (1000 ft)                           |
| Linear range                 | 27.9 mm (1100 mils)                       |
| Linear-range limits          | 1.3 to 29.2 mm (50 to 1150 mils)          |
| Average scale factor         | 394 mV/mm (10 mV/mil)                     |
| Deviation from straight line | <+/-0.74 mm (+/-29 mils)                  |
| Minimum target diameter      | 102 mm (4.0 in)                           |
| Extension-cable capacitance  | 69.9 pF/m typical                         |
| Minimum bend radius          | 25.4 mm (1.0 in)                          |

### VERIFIED PRODUCT RECORD

| DATA GROUP                 | VERIFIED VALUE                             |
|----------------------------|--------------------------------------------|
| Installed host / carrier   | 3300 XL 50 mm Proximitor Sensor            |
| Companion hardware         | matched extension cable when required      |
| Field connection           | 102 mm or larger steel target              |
| Primary system function    | Uses the documented 1 1/2-20 threaded body |
| Controlled acceptance duty | Turbine differential expansion             |

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# System Role and Architecture

Large-range non-contact eddy-current displacement signal

**FUNCTION 1**  
Uses the documented 1 1/2-20 threaded body

**FUNCTION 2**  
Carries the signal over a 5.0 m (16.4 ft) FluidLoc lead

**FUNCTION 3**  
Provides the large-range 50 mm sensing interface

**FUNCTION 4**  
Operates only as part of a matched 3300 XL 50 mm system

## Matched system components

- 3300 XL 50 mm Proximator Sensor
- matched extension cable when required
- 102 mm or larger steel target
- compatible displacement monitor

## SYSTEM INTEGRATION RECORD

| INTEGRATION ITEM           | DOCUMENTED ROLE                            |
|----------------------------|--------------------------------------------|
| Installed host / carrier   | 3300 XL 50 mm Proximator Sensor            |
| Companion hardware         | matched extension cable when required      |
| Field connection           | 102 mm or larger steel target              |
| Primary system function    | Uses the documented 1 1/2-20 threaded body |
| Controlled acceptance duty | Turbine differential expansion             |

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Applications and Engineering Context

Turbine differential expansion

Uses the documented 1 1/2-20 threaded body

Large axial-position measurement

Carries the signal over a 5.0 m (16.4 ft) FluidLoc lead

Valve and rotor travel monitoring

Provides the large-range 50 mm sensing interface

50 mm transducer-loop renewal

Operates only as part of a matched 3300 XL 50 mm system

TECHNICAL NOTE

Confirm the 1 1/2-20 threaded body, 5.0 m (16.4 ft) lead, stainless-steel and multiple approvals; match the probe and extension cable to the Proximitor system length before full-travel calibration.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

| CHECK              | ACCEPTANCE CONDITION                             |
|--------------------|--------------------------------------------------|
| Identity           | 330876-01-50-01-05 / 330876-01-50-01-05 recorded |
| Physical interface | 3300 XL 50 mm Proximitor Sensor                  |
| Companion check    | matched extension cable when required            |
| Functional proof   | Uses the documented 1 1/2-20 threaded body       |
| Application test   | Turbine differential expansion                   |

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## Engineering Precautions

1

Verify the complete 330876-01-50-01-05 marking and 1 1/2-20 threaded execution before work.

2

Place the monitored machine and protection channel in the approved maintenance state.

3

Protect the sensing tip, threads and mounting surface from impact, burrs and contamination.

4

Route and support the 5.0 m (16.4 ft) lead without sharp bends, crushing, tensile load or contact with moving parts.

5

Keep coaxial connector faces clean, dry and mechanically unloaded during handling.

### RELATED PRODUCTS ON APTER POWER

| MODEL                 | SYSTEM ROLE                   | APTER POWER PAGE                                |
|-----------------------|-------------------------------|-------------------------------------------------|
| 330130-080-01-CN      | Related Bently Nevada product | <a href="#">View 330130-080-01-CN page</a>      |
| 74712-06-05-03-00     | Related Bently Nevada product | <a href="#">View 74712-06-05-03-00 page</a>     |
| 330850-90-05          | Related Bently Nevada product | <a href="#">View 330850-90-05 page</a>          |
| 330104-00-06-05-02-00 | Related Bently Nevada product | <a href="#">View 330104-00-06-05-02-00 page</a> |
| 330850-90-00          | Related Bently Nevada product | <a href="#">View 330850-90-00 page</a>          |
| 330105-02-12-50-02-00 | Related Bently Nevada product | <a href="#">View 330105-02-12-50-02-00 page</a> |
| 330103-00-04-05-02-00 | Related Bently Nevada product | <a href="#">View 330103-00-04-05-02-00 page</a> |
| 330104-00-08-10-02-00 | Related Bently Nevada product | <a href="#">View 330104-00-08-10-02-00 page</a> |

### MANUFACTURER SOURCE RECORD

Bently Nevada 3300 XL 50 mm Proximity Transducer System Datasheet

174014 Rev. L

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