

INDUSTRIAL AUTOMATION PRODUCT

330101-37-57-10-02-05

3300 XL 8 mm Standard Proximity Probe

330101-37-57-10-02-05 senses shaft-to-bearing relative displacement without mechanical contact and passes the probe signal to a matched Proximitor Sensor for machinery-monitoring measurement.

| IDENTITY      | VERIFIED VALUE                                         |
|---------------|--------------------------------------------------------|
| Manufacturer  | Bently Nevada                                          |
| System family | Bently Nevada 3300 XL 8 mm Proximity Transducer System |
| Part number   | 330101-37-57-10-02-05                                  |
| 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                      |
|---------------------------------|----------------------------|
| Complete order number           | 330101-37-57-10-02-05      |
| Probe construction              | Without armor              |
| Thread                          | 3/8-24 UNF                 |
| Unthreaded length               | 3.7 in                     |
| Case length                     | 5.7 in                     |
| Total probe length              | 1.0 m                      |
| Connector option                | Miniature coaxial ClickLoc |
| Probe-cable type                | Standard cable             |
| Approval option                 | CSA, ATEX and IECEx        |
| Probe-tip diameter              | 8.0 mm                     |
| System linear range             | 2.0 mm (80 mils)           |
| Approximate linear-range limits | 0.25 to 2.3 mm             |
| Approximate output span         | -1 to -17 V DC             |
| Recommended gap                 | 1.27 mm (50 mils)          |

| PARAMETER                            | VALUE                                     |
|--------------------------------------|-------------------------------------------|
| Nominal output at recommended gap    | -9 V DC                                   |
| Incremental scale factor             | 7.87 V/mm (200 mV/mil)                    |
| Frequency response                   | 0 to 10 kHz, +0/-3 dB                     |
| Minimum flat-target diameter         | 15.2 mm                                   |
| Minimum shaft diameter               | 50.8 mm                                   |
| Recommended shaft diameter           | 76.2 mm                                   |
| Probe-cable impedance                | 75 ohm                                    |
| Standard probe-cable temperature     | -52 to +177 degC                          |
| Proximitors Sensor supply            | -17.5 to -26 V DC                         |
| Proximitors Sensor current           | 12 mA maximum                             |
| Proximitors Sensor output resistance | 50 ohm                                    |
| Field-wiring conductor range         | 0.2 to 1.5 mm <sup>2</sup> (16 to 24 AWG) |
| Maximum field-wiring length          | 305 m                                     |

## VERIFIED PRODUCT RECORD

| DATA GROUP                 | VERIFIED VALUE                                                              |
|----------------------------|-----------------------------------------------------------------------------|
| Installed host / carrier   | 3300 XL 8 mm Proximitors Sensor                                             |
| Companion hardware         | Matched 3300 XL extension cable when required                               |
| Field connection           | AISI 4140 steel target or validated equivalent                              |
| Primary system function    | Uses the without armor probe construction selected by 330101-37-57-10-02-05 |
| Controlled acceptance duty | Radial shaft-vibration measurement                                          |

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# System Role and Architecture

330101-37-57-10-02-05 senses shaft-to-bearing relative displacement without mechanical contact and passes the probe signal to a matched Proximitor Sensor for machinery-monitoring measurement.

**FUNCTION 1**  
Uses the without armor probe construction selected by 330101-37-57-10-02-05

**FUNCTION 2**  
Fits the documented 3/8-24 UNF mounting thread

**FUNCTION 3**  
Carries the eddy-current signal through the selected standard cable lead

**FUNCTION 4**  
Forms the sensing element of a matched 3300 XL 8 mm transducer system

## Matched system components

- 3300 XL 8 mm Proximitor Sensor
- Matched 3300 XL extension cable when required
- AISI 4140 steel target or validated equivalent
- Compatible Bently Nevada monitor channel

## SYSTEM INTEGRATION RECORD

| INTEGRATION ITEM           | DOCUMENTED ROLE                                                             |
|----------------------------|-----------------------------------------------------------------------------|
| Installed host / carrier   | 3300 XL 8 mm Proximitor Sensor                                              |
| Companion hardware         | Matched 3300 XL extension cable when required                               |
| Field connection           | AISI 4140 steel target or validated equivalent                              |
| Primary system function    | Uses the without armor probe construction selected by 330101-37-57-10-02-05 |
| Controlled acceptance duty | Radial shaft-vibration measurement                                          |

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Applications and Engineering Context

Radial shaft-vibration measurement

Uses the without armor probe construction selected by 330101-37-57-10-02-05

Axial position and thrust monitoring

Fits the documented 3/8-24 UNF mounting thread

Machine shaft centerline observation

Carries the eddy-current signal through the selected standard cable lead

Probe replacement in a matched 3300 XL 8 mm loop

Forms the sensing element of a matched 3300 XL 8 mm transducer system

TECHNICAL NOTE

Match 330101-37-57-10-02-05 to a 3300 XL 8 mm Proximitior Sensor and the approved total system length. Set the static gap in the linear region, route the probe lead without tensile loading, and verify polarity and response before enabling protection logic.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

| CHECK              | ACCEPTANCE CONDITION                                                        |
|--------------------|-----------------------------------------------------------------------------|
| Identity           | 330101-37-57-10-02-05 / 330101-37-57-10-02-05 recorded                      |
| Physical interface | 3300 XL 8 mm Proximitior Sensor                                             |
| Companion check    | Matched 3300 XL extension cable when required                               |
| Functional proof   | Uses the without armor probe construction selected by 330101-37-57-10-02-05 |
| Application test   | Radial shaft-vibration measurement                                          |

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## Engineering Precautions

1

Verify the full 330101-37-57-10-02-05 marking and the 5.7 in case length before disturbing the bracket.

2

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

3

Protect the 8 mm PPS probe tip and keep the 3/8-24 UNF thread free from burrs and contamination.

4

Route the 1.0 m standard cable probe lead without sharp bends, crushing or tensile loading.

5

Secure the miniature coaxial clickloc connection and keep exposed coaxial interfaces clean and dry.

### RELATED PRODUCTS ON APTER POWER

| MODEL                 | SYSTEM ROLE                            | APTER POWER PAGE                                |
|-----------------------|----------------------------------------|-------------------------------------------------|
| 330171-00-08-10-01-05 | 3300 XL 5/8 mm proximity probe         | <a href="#">View 330171-00-08-10-01-05 page</a> |
| 330172-00-08-10-01-05 | 3300 XL 5/8 mm armored proximity probe | <a href="#">View 330172-00-08-10-01-05 page</a> |
| 330103-00-04-10-02-00 | 3300 XL 8 mm metric proximity probe    | <a href="#">View 330103-00-04-10-02-00 page</a> |
| 330103-00-12-10-02-00 | 3300 XL 8 mm metric proximity probe    | <a href="#">View 330103-00-12-10-02-00 page</a> |
| 330103-00-16-10-02-05 | 3300 XL 8 mm metric proximity probe    | <a href="#">View 330103-00-16-10-02-05 page</a> |
| 330106-05-30-05-02-00 | 3300 XL 8 mm reverse-mount probe       | <a href="#">View 330106-05-30-05-02-00 page</a> |
| 330130-045-00-00      | 3300 XL standard extension cable       | <a href="#">View 330130-045-00-00 page</a>      |
| 330130-080-02-05      | 3300 XL extension cable                | <a href="#">View 330130-080-02-05 page</a>      |

### MANUFACTURER SOURCE RECORD

Bently Nevada 3300 XL 8 mm Proximity Transducer System Datasheet

141194 Rev. AM

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