# Bently Nevada 330901-00-15-05-02-05

Engineering Installation, Diagnostic and Acceptance Guide

Bently Nevada 330901-00-15-05-02-05 is a unarmored 3300 xl nsv proximity probe for restricted-clearance eddy-current measurements. This configuration uses 1/4-28 UNF-2A, a 1.5 in case and 0.5 m integral lead.

## 01 Work package

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| **Complete model** | 330901-00-15-05-02-05 |
| **Product type** | Unarmored 3300 XL NSv proximity probe |
| **Manufacturer** | Bently Nevada |
| **Supply condition** | New, original product |
| **Technical source** | Bently Nevada 3300 XL NSv Proximity Transducer System Datasheet, 147385 Rev. R |

## Field decisions

**1 Establish identity**

Capture the full marking, installed companion components and baseline before disconnection.

**2 Inspect interfaces**

Verify mounting, cable, connector, armor, approval and environmental boundaries.

**3 Fit the exact chain**

Preserve the documented probe-cable-Proximitor or sensor-monitor relationship.

**4 Prove response**

Use the approved stopped-machine and operating acceptance procedure.

**5 Record as left**

Save markings, configuration, test values and operating observations.

## 02 Interface and configuration map

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|---|---|
| **Product type** | Unarmored 3300 XL NSv proximity probe |
| **Case thread** | 1/4-28 UNF-2A |
| **Armor** | No armor |
| **Unthreaded length** | 0.0 in |
| **Overall case length** | 1.5 in |
| **Integral lead length** | 0.5 m |
| **Connector** | Miniature ClickLoc coaxial connector |

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| **Approval selection** | Multiple approvals selection |
| **Matched-system linear range** | 1.5 mm under the stated target and calibration conditions |
| **Matched-system scale factor** | 7.87 V/mm (200 mV/mil) under the stated conditions |
| **Reference target** | AISI 4140 steel unless the installation is separately characterized |
| **Probe temperature range** | -52 to +177 deg C |
| **Proximitor operating range** | -52 to +100 deg C |
| **Probe tip material** | Polyphenylene sulfide (PPS) |
| **Integral cable** | 75 ohm triaxial cable with FEP insulation |
| **System-length rule** | Probe lead plus extension cable must match the selected 5 m or 7 m NSv Proximitor system |

## 03 Installation workflow

### Confirm the complete marking

Match every field of 330901-00-15-05-02-05 with the installed record before removal or installation.

### Protect sensing and interfaces

Keep the sensing face, connector and cable free from impact, moisture, metal chips and unsupported loading.

### Preserve the mechanical datum

Record reach, thread engagement, locknut position and target relationship before disturbing the installed component.

### Control the cable route

Maintain approved bend radius, separation and strain relief; do not twist or crush the coaxial path.

### Restore the operating point

Use the approved stopped-machine procedure and confirm expected target travel remains in the documented working region.

### Prove the complete channel

Verify the as-left electrical reading, monitor indication and operating response before return to service.

## Application checks

### Radial shaft vibration

Use the approved bearing location and matched transducer chain to observe shaft motion relative to the probe mounting.

### Axial position

Orient the probe toward a suitable conductive thrust target and keep expected travel inside the calibrated working region.

### Speed or phase reference

Use an approved target feature and monitor configuration when the channel provides a once-per-turn reference.

### Maintenance replacement

Preserve the exact mechanical identity, cable construction, system length and approval selection recorded for the installed channel.

## 04 Diagnostic decision table

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|---|---|
| **Why is the restricted-space geometry important for 330901-00-15-05-02-05?** | NSv was developed for small counterbores and sideview or rearview targets. Confirm tip access, target width and full travel before setting the final gap. |
| **Which extension cable completes the installed chain for 330901-00-15-05-02-05?** | Use the 0.5 m probe lead and the installed 5 m or 7 m NSv Proximitor identity to determine the required NSv extension cable; do not substitute 8 mm family cable. |
| **How should the temperature boundary of 330901-00-15-05-02-05 be applied?** | Separate probe and cable temperature capability from the lower Proximitor limit, and evaluate the actual temperature at each component rather than applying one rating to the entire route. |
| **How can target geometry affect the response of 330901-00-15-05-02-05?** | A narrow, curved or off-center target can change scale and linearity. Confirm the manufacturer target rules and prove the installed travel against the approved machine baseline. |

## Release review

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|---|---|
| **Installation relationship** | Use the 1/4-28 UNF-2A mounting and 0.0 in / 1.5 in geometry to establish the approved target relationship. |
| **Temperature boundary** | Apply probe, extension-cable and Proximitor temperature limits to their actual installed locations. |
| **Technical reference** | Bently Nevada 3300 XL NSv Proximity Transducer System Datasheet, 147385 Rev. R. |

## Engineering questions

| | |
|---|---|
| **Why is the restricted-space geometry important for 330901-00-15-05-02-05?** | NSv was developed for small counterbores and sideview or rearview targets. Confirm tip access, target width and full travel before setting the final gap. |
| **Which extension cable completes the installed chain for 330901-00-15-05-02-05?** | Use the 0.5 m probe lead and the installed 5 m or 7 m NSv Proximitor identity to determine the required NSv extension cable; do not substitute 8 mm family cable. |
| **How should the temperature boundary of 330901-00-15-05-02-05 be applied?** | Separate probe and cable temperature capability from the lower Proximitor limit, and evaluate the actual temperature at each component rather than applying one rating to the entire route. |
| **How can target geometry affect the response of 330901-00-15-05-02-05?** | A narrow, curved or off-center target can change scale and linearity. Confirm the manufacturer target rules and prove the installed travel against the approved machine baseline. |
| **How should the complete marking of 330901-00-15-05-02-05 be recorded before removal?** | Photograph the full order identity, installed position, companion components and cable route. Save the stopped-machine baseline so the replacement can be returned to the same documented configuration. |
| **Which compatibility check is most important before installing 330901-00-15-05-02-05?** | Confirm that every companion component belongs to the documented 3300 XL NSv proximity transducer system. Connector fit alone does not establish electrical calibration or mechanical compatibility. |
| **How should cable and connector integrity be tested for 330901-00-15-05-02-05?** | Isolate the channel, inspect contacts for moisture, contamination and damage, verify continuity and insulation with an approved method, and support the cable so the connector carries no tensile load. |
| **What commissioning evidence should be retained for 330901-00-15-05-02-05?** | Retain full markings, mechanical datum, companion identities, wiring or chain-length checks, as-left measurements and the operating response accepted by the maintenance authority. |

## Acceptance and support

Retain the full marking, installed-chain identities, test readings and approved machine configuration. Confirm the exact offered item and included scope in the written quotation.

Discuss the exact marking and installed application with Apter Power.
sales13@apterpower.com | +86 18030235313

## Verified related product references

| | |
|---|---|
| **Related product** | 330104-00-16-10-02-00 |
| **Related product** | 330500-00-01 |
| **Related product** | 330980-70-CN |
| **Related product** | 330930-040-03-00 |

## Commissioning record template

| | |
|---|---|
| **Installed asset** | Machine, bearing, channel or cabinet reference |
| **Companion identities** | Probe, cable, sensor, interface or monitor markings |
| **Mechanical datum** | Mounting reference, reach, alignment or sealing condition |
| **Electrical datum** | Chain length, connector, shield, supply or input assignment |
| **Before-work baseline** | Gap, bias, vibration, continuity or channel observation |
| **As-left result** | Final measured value and functional proof |
| **Approval basis** | Applicable drawing, control requirement or site procedure |
| **Handover** | Technician, date, revision and maintenance-record location |

## Handover note

A replacement is complete only after the installed identity, physical interfaces, measured response and configuration record agree. Escalate any mismatch before the channel returns to protection or monitoring service.

## Release checklist

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|---|---|
| **Identity accepted** | Complete marking agrees with the order, photographs and installed asset record. |
| **Interfaces accepted** | Mechanical fit, connector, wiring and companion components match the approved design. |
| **Environment accepted** | Temperature, contamination, vibration and route protection remain inside documented limits. |
| **Configuration accepted** | Hardware assignment, chain length or supply settings agree with the installed configuration. |