# Bently Nevada 330130-040-03-CN

Engineering Installation, Diagnostic and Acceptance Guide

Bently Nevada 330130-040-03-CN is a 4.0 m 75 ohm triaxial extension cable with stainless-steel armor, a connector protector and CN approval suffix for a matched 3300 XL 8 mm chain.

## 01 Job scope and identity

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| **Complete model** | 330130-040-03-CN |
| **Product type** | 3300 XL 8 mm extension cable |
| **Manufacturer** | Bently Nevada |
| **Technical source** | Bently Nevada 3300 XL 8 mm Proximity Transducer System Datasheet, 141194 Rev. AL |

## Field decisions

### 1 Reconcile electrical length

Probe lead plus the selected 4.0 m cable equals the installed Proximitor system length, with the CN marking reconciled to the project record.

### 2 Survey the route

Map every armor clamp and 25.4 mm bend transition so the sheath cannot twist the triaxial core or load the protected joint.

### 3 Inspect both joints

Inspect both ClickLoc contacts and verify the selected protector is fully seated, dry and not used as a pulling point.

### 4 Isolate the cable

With both ends isolated, compare center and shield continuity and cable behavior before disturbing the probe or Proximitor.

### 5 Return the channel

Reconnect the verified chain, restore the established gap or bias and compare Proximitor and monitor response with the baseline.

## Installation relationships

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| **Electrical length** | Add the marked probe lead to 4.0 m and match the total to the installed Proximitor option. |
| **Mechanical route** | Provide 25.4 mm minimum bend radius, independent support and the protection required by stainless-steel armor. |
| **Joint inspection** | Connector protector is selected; inspect both ClickLoc interfaces for moisture, debris and strain. |

## Pre-work evidence

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| **Chain record** | Probe lead plus the selected 4.0 m cable equals the installed Proximitor system length, with the CN marking reconciled to the project record. |
| **Route record** | Map every armor clamp and 25.4 mm bend transition so the sheath cannot twist the triaxial core or load the protected joint. |
| **Probe-side joint** | Inspect both ClickLoc contacts and verify the selected protector is fully seated, dry and not used as a pulling point. |
| **Proximitor-side joint** | Inspect both ClickLoc contacts and verify the selected protector is fully seated, dry and not used as a pulling point. |
| **As-found output** | Reconnect the verified chain, restore the established gap or bias and compare Proximitor and monitor response with the baseline. |

## 02 Pre-installation readiness

## Model-specific installation decisions

### Exact identity

330130-040-03-CN and every delivered revision or approval marking must be recorded before removal.

### Installed system

3300 XL 8 mm proximity transducer system companion components, channel assignment and approved machine reference must remain traceable.

### Mechanical baseline

Record the as-found mounting datum, reach, lock position, target clearance, routing and connector support.

### Electrical baseline

Record the applicable stopped-machine gap, bias, continuity or channel value together with test conditions.

### As-left configuration

Document the final mechanical position, cable protection, connector condition and complete companion-component identities.

### Functional release

Compare the final monitor indication and controlled operating response with the approved baseline before handover.

## Installation precautions

### Calculate the installed total

Add the probe lead to 4.0 m and match the Proximitor system-length option before connection.

### Control armor at both ends

Use clamps that support the sheath without crushing the triaxial cable or twisting the connectors.

### Protect the protected joint

A connector protector is mechanical protection, not permission to leave contaminated contacts in service.

### Maintain the 25.4 mm radius

Avoid sharp transitions where the armor leaves a clamp or enters the protector.

### Verify the CN label

Check the delivered approval marking against the project requirement.

### Separate cable tests from calibration

Continuity or capacitance alone cannot establish matched-system scale and linearity.

## Pre-installation release gates

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| **Length accepted** | Probe lead plus the selected 4.0 m cable equals the installed Proximitor system length, with the CN marking reconciled to the project record. |
| **Route accepted** | Map every armor clamp and 25.4 mm bend transition so the sheath cannot twist the triaxial core or load the protected joint. |
| **Joints accepted** | Inspect both ClickLoc contacts and verify the selected protector is fully seated, dry and not used as a pulling point. |
| **Cable-only test accepted** | With both ends isolated, compare center and shield continuity and cable behavior before disturbing the probe or Proximitor. |
| **Matched-channel proof accepted** | Reconnect the verified chain, restore the established gap or bias and compare Proximitor and monitor response with the baseline. |

## 03 Installation and commissioning

## Controlled installation sequence

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| **01 Identify** | Probe lead plus the selected 4.0 m cable equals the installed Proximitor system length, with the CN marking reconciled to the project record. |
| **02 Lay out** | Map every armor clamp and 25.4 mm bend transition so the sheath cannot twist the triaxial core or load the protected joint. |
| **03 Protect** | Map every armor clamp and 25.4 mm bend transition so the sheath cannot twist the triaxial core or load the protected joint. |
| **04 Mate** | Inspect both ClickLoc contacts and verify the selected protector is fully seated, dry and not used as a pulling point. |
| **05 Test** | With both ends isolated, compare center and shield continuity and cable behavior before disturbing the probe or Proximitor. |
| **06 Prove** | Reconnect the verified chain, restore the established gap or bias and compare Proximitor and monitor response with the baseline. |

## Commissioning acceptance criteria

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|---|---|
| **Electrical-length result** | Probe lead plus the selected 4.0 m cable equals the installed Proximitor system length, with the CN marking reconciled to the project record. |
| **Mechanical-route result** | Map every armor clamp and 25.4 mm bend transition so the sheath cannot twist the triaxial core or load the protected joint. |
| **Connector result** | Inspect both ClickLoc contacts and verify the selected protector is fully seated, dry and not used as a pulling point. |
| **Cable diagnosis** | With both ends isolated, compare center and shield continuity and cable behavior before disturbing the probe or Proximitor. |
| **System response** | Reconnect the verified chain, restore the established gap or bias and compare Proximitor and monitor response with the baseline. |

## 04 Diagnostics and escalation

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| **How does the armor on 330130-040-03-CN change route design?** | It requires controlled clamp points and bend transitions so sheath stiffness cannot twist either ClickLoc or load the connector protector. |
| **What is the purpose of the connector protector selected on 330130-040-03-CN?** | It shields the probe-side joint mechanically; the contacts still need to be clean, dry, fully mated and accessible for inspection. |
| **How is total electrical length verified for 330130-040-03-CN?** | Add the marked probe lead to the 4.0 m extension and compare the sum with the installed Proximitor system-length option. |
| **Where is the minimum bend radius most critical on 330130-040-03-CN?** | Check the exit from each clamp, both connector approaches and any transition where armor stiffness could force a bend below 25.4 mm. |

## Additional diagnostic decisions

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| **What does the CN suffix require for 330130-040-03-CN acceptance?** | Retain and compare the delivered approval label with the project record; do not infer site suitability from the suffix alone. |
| **How can 330130-040-03-CN be tested without disturbing the probe gap?** | Isolate both ends under the approved maintenance state and check center and shield continuity plus joint condition before reconnecting the matched chain. |
| **Why is 330130-040-00-00 not a route-equivalent substitute for 330130-040-03-CN?** | The plain cable lacks both armor and the connector protector, so abrasion protection, clamp behavior and joint handling are different. |
| **Which evidence should close a 330130-040-03-CN replacement?** | Record the full CN marking, length calculation, armor clamps, bend transitions, protector condition, isolated test results and returned channel response. |

# 05 Handover and evidence package

## Model-specific handover evidence

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| **Complete identity** | Photograph the full 330130-040-03-CN marking and both connector ends. |
| **Chain calculation** | Probe lead plus the selected 4.0 m cable equals the installed Proximitor system length, with the CN marking reconciled to the project record. |
| **Route photographs** | Map every armor clamp and 25.4 mm bend transition so the sheath cannot twist the triaxial core or load the protected joint. |
| **Joint photographs** | Inspect both ClickLoc contacts and verify the selected protector is fully seated, dry and not used as a pulling point. |
| **Acceptance record** | Reconnect the verified chain, restore the established gap or bias and compare Proximitor and monitor response with the baseline. |

## Model-specific application limits

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| **Cable length** | 4.0 m |
| **Cable option** | Armored standard cable with connector protector |
| **Capacitance** | 69.9 pF/m typical |
| **Minimum bend radius** | 25.4 mm |
| **System rule** | Probe lead + cable = Proximitor length |

## Verified related product references

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|---|---|
| **Related product** | Bently Nevada 330980-70-CN |
| **Related product** | Bently Nevada 330930-040-03-00 |
| **Related product** | Bently Nevada 84661-96 |
| **Related product** | Bently Nevada 330102-00-28-10-02-05 |

## Engineering contact

Discuss the exact marking and installed application with Apter Power.
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