Bently Nevada 330930-045-04-05

Engineering Installation, Diagnostic and Acceptance Guide

Bently Nevada 330930-045-04-05 is a 4.5 m armored NSv extension cable with FEP jacket and connector protector. It connects an NSv probe to the matching Proximitor Sensor inside a documented 5 m or 7 m chain.

01 Work package

Complete model	330930-045-04-05
Product type	3300 XL NSv extension cable
Manufacturer	Bently Nevada
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.

Pre-work evidence

Installed drawing	Record the drawing, machine location and channel designation that govern 330930-045-04-05.
Probe marking	Capture the complete order identity and any tag or revision visible on the delivered item.
Mechanical reference	Record thread or sleeve datum, insertion depth, lock position and expected target travel.
Cable identity	Confirm lead construction, connector condition, routing, strain relief and electrical-length relationship.
Companion electronics	Record the matching extension cable, Proximitor or signal conditioner and monitor channel.

Selected order-code snapshot

Selected cable	4.5 m NSv extension cable with AISI 302 stainless-steel armor.
Protection package	FEP armor jacket and connector protector selected.
Electrical construction	69.9 pF/m typical capacitance; 0.220 ohm/m center-conductor resistance.

02 Interface and configuration map

Cable family	3300 XL NSv
Cable length	4.5 m
Cable armor	AISI 302 stainless-steel armor
Armor jacket	FEP outer jacket
Connector protection	Selected at the cable joints
Agency approval option	Multiple approvals
Cable DC resistance - center	0.220 ohm/m
Cable DC resistance - shield	0.066 ohm/m
Cable capacitance	69.9 pF/m typical
Connector material	Gold-plated brass
Minimum bend radius	25.4 mm
Maximum connector torque	0.56 N m; finger-tight recommended
Cable temperature range	-52 to +177 deg C, operating and storage
Supported matched-system lengths	5 m or 7 m
Matched-system linear range	1.5 mm under stated reference conditions
Matched-system scale factor	7.87 V/mm (200 mV/mil)

Application checks

Radial shaft vibration

Use a documented bearing location and matched transducer chain to measure shaft motion relative to the probe mounting.

Axial position

Aim the probe at an approved conductive thrust target and keep the full expected travel inside the characterized working region.

Phase or speed reference

Use only with an approved once-per-turn target feature and a monitoring channel configured for phase or speed reference.

Installed-channel maintenance

Preserve the exact probe, cable, Proximitor, mounting geometry and machine baseline recorded for the existing channel.

Interpretation boundaries

Probe-only limit	Do not present complete-system range, scale or linearity as a standalone output of 330930-045-04-05.
Target influence	Material, geometry, finish and nearby conductive surfaces can change the installed response.
Length influence	Probe lead and extension cable form part of the calibrated electrical relationship.
Temperature influence	Apply component temperature limits at their actual locations and compare with process transients.
Mechanical influence	Thread engagement, rigidity, target travel and cable support affect repeatability and service life.
Acceptance rule	Use the approved machine baseline and maintenance procedure for the final as-left decision.

03 Installation workflow

Confirm the complete marking

Match every field of 330930-045-04-05 with the installed spare-parts record before removal or installation.

Protect the sensing face

Keep the probe tip, connector and cable free from impact, moisture, metal chips and unsupported loading.

Preserve the mechanical datum

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

Control the cable route

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

Restore the operating point

Use the approved stopped-machine procedure to restore gap or bias and verify expected target travel.

Prove the complete channel

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

Controlled sequence

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture 330930-045-04-05, the installed datum, connector, route and companion-component markings.
03 Measure	Record mechanical position and the applicable stopped-machine electrical reading before removal.
04 Compare	Check delivered identity, interfaces and evidence against the approved drawing and spare-parts record.
05 Install	Fit without twisting the lead; preserve thread engagement, target clearance, bend radius and strain relief.
06 Set point	Establish the operating gap or datum only with the approved stopped-machine procedure.
07 Prove	Compare local reading, monitor indication and controlled operating response with the accepted baseline.
08 Handover	Record as-left values, photographs, deviations, responsible technician and release approval.

Release review

Electrical relationship	Use the 4.5 m cable only where probe lead plus extension cable equals the installed Proximitor system length.
Mechanical relationship	Maintain the 25.4 mm minimum bend radius and protect both ClickLoc joints from contamination and unsupported load.
Technical reference	Bently Nevada 3300 XL NSv Proximity Transducer System Datasheet, 147385 Rev. R.

Installation evidence package

Nameplate evidence	Overall and close photographs showing 330930-045-04-05, revision, approval and serial details where present.
Installation evidence	Views of the rack position, mechanical datum, terminal assignment, cable route and strain relief.
Configuration evidence	Export or screenshots identifying the approved hardware assignment and parameters without exposing credentials.
Baseline evidence	As-found readings with units, test conditions, machine state and the instrument used.
Inspection evidence	Connector, contact, insulation, fastener, contamination and heat-condition observations.

04 Diagnostic decision table

Which probe lead completes the intended chain with 330930-045-04-05?	Add the installed NSv probe lead to the 4.5 m cable and require the total to equal the 5 m or 7 m Proximitor selection. Preserve every component marking in the channel record.
How should the armored route of 330930-045-04-05 be installed?	Support the stainless-steel armor independently, keep bends at or above 25.4 mm radius, and prevent abrasion, crushing or tensile loading at either connector.
What connector checks apply before mating 330930-045-04-05?	Inspect the gold-plated ClickLoc contacts for moisture, debris and damage, align them fully, connect finger-tight and do not exceed 0.56 N m.
How is 330930-045-04-05 accepted after replacement?	Confirm the total chain length, restore the documented gap or bias, compare the monitor response with the accepted baseline, and record the final cable route and connector protection.
What evidence should be captured before removing 330930-045-04-05?	Photograph the complete 330930-045-04-05 marking, installed datum, connector, cable route and companion electronics. Record the stopped-machine baseline for the 3300 XL NSv extension cable.
How should connector integrity be checked on 330930-045-04-05?	Isolate the channel, inspect the coaxial contacts for moisture and damage, verify continuity only with an approved method, and provide strain relief so the connector carries no cable load.
What commissioning record is required for 330930-045-04-05?	Retain the exact markings, mechanical datum, companion-component identities, as-left gap or bias, monitor indication and the accepted operating response.
When should 330930-045-04-05 be withheld from service?	Do not release the channel if the complete identity, mechanical fit, cable construction, connector, approval marking or measured response differs from the approved installed record.

Escalation triggers

Identity conflict	Stop if the complete marking, suffix, revision or approval identity differs from the approved record.
Host mismatch	Escalate if the rack, carrier, backplane, terminal unit or controller assignment is not documented for 330930-045-04-05.
Interface damage	Do not energize with bent contacts, damaged insulation, loose retainers, contamination or heat discoloration.
Environmental breach	Review any exposure beyond the documented temperature, vibration, humidity, contamination or enclosure boundary.
Unapproved substitution	Do not transfer ratings or compatibility from an adjacent order code without manufacturer evidence.
Configuration conflict	Stop if hardware settings, firmware, channel assignment or project configuration disagree with the installed record.
Unstable measurement	Investigate noise, drift, intermittent status or inconsistent readings before replacing another component.
Failed functional proof	Keep the asset in the approved maintenance state until the complete acceptance sequence is passed and recorded.

Evidence quality controls

Traceability	Each value is tied to 330930-045-04-05, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.
Change control	Every changed setting, connection or mechanical datum has an approved reason and reviewer.
Retention	Evidence remains accessible with the maintenance record for future troubleshooting and replacement review.

05 Acceptance, handover and support

Release the channel only after the exact marking, installed-chain identities, mechanical datum, electrical baseline and controlled operating proof have all been recorded.

As-left verification worksheet

Exact delivered marking	330930-045-04-05; photograph and record any additional label detail.
Installed asset reference	Machine, bearing, train, channel and drawing identifiers.
Mechanical as found	Reach, lock position, gap reference, cable route and connector support.
Static reading as found	Gap, bias, continuity or channel value appropriate to the installed system.
Companion identities	Extension cable, Proximitor or conditioner and monitor channel markings.
Mechanical as left	Final reach, lock position, target clearance and route protection.
Static reading as left	Final gap, bias, continuity or channel value with test conditions.
Operating proof	Monitor response and machine observation accepted by the responsible authority.
Deviation record	Any difference from drawing or baseline, disposition and approval reference.
Release signatures	Technician, reviewer, operations owner and date.

Lifecycle status

Exact order identity	330930-045-04-05 is the 4.5 m armored NSv extension cable with FEP jacket and connector protector; the reviewed manufacturer data identifies it within the current 3300 XL NSv cable ordering family.
Installed-base support	Replacement planning must preserve the 4.5 m length selection, armored FEP construction, connector protection and multiple-approval boundary.
Replacement boundary	A different cable length or protection code changes the ordered NSv chain and requires a fresh total-length and installation review.

Available unit details

Offered cable	One 330930-045-04-05, configured as a 4.5 m armored NSv extension cable with FEP jacket and connector protector.
Selected construction	4.5 m; AISI 302 stainless-steel armor; FEP outer jacket; connector protector.
Separate components	NSv probe, NSv Proximitor Sensor, monitor and mounting hardware are separate unless itemized in the quotation.

Model-specific application limits

Center-conductor resistance	0.220 ohm/m
Shield resistance	0.066 ohm/m
Capacitance	69.9 pF/m typical
Minimum bend radius	25.4 mm
Connector torque	Finger-tight; 0.56 N m maximum

Verified related product references

Related product	330102-00-28-10-02-05
Related product	330104-00-16-10-02-00
Related product	330500-00-01
Related product	330980-70-CN

Engineering contact

Discuss the exact marking and installed application with Apter Power.
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