Bently Nevada 109548-01 P1407030-00100

Technical reference | identity, system and verified data

3300 XL NSv proximity probe identified by the complete label

The combined 109548-01 P1407030-00100 marking identifies a 3300 XL NSv probe. Published NSv performance values apply to a matched probe, extension cable, Proximitor Sensor and calibration target. Verify the offered unit's fitted case, lead length and approval marking before replacement.

01 | Identity and system architecture

Element	Verified engineering meaning
Published label	3300 XL NSv; BN P/N 109548-01; additional marking P1407030-00100.
System composition	3300 NSv probe + matching NSv extension cable + 3300 XL NSv Proximitor Sensor.
System length	The current OEM system is configured for 5 m or 7 m total length including extension cable; confirm installed components.
System role	Noncontact radial vibration/position, axial position, phase reference or speed measurement when correctly installed.

Signal path

Stage	Function in the documented chain
109548-01 probe	Senses the conductive target; its label identifies the NSv family.
Matched extension cable	Completes the selected total electrical length and protects the coaxial connection.
NSv Proximitor Sensor	Conditions the probe signal; its output goes to the configured machine monitor.

02 | Interface and technical boundaries

Topic	Manufacturer-supported system information
System calibration target	Published accuracy assumes a Bently Nevada AISI 4140 steel target and the stated test conditions.
Nominal system scale	7.87 V/mm (200 mV/mil) applies to the complete matched NSv system, not to the probe alone.
System linear span	1.5 mm nominal, approximately 0.25 to 1.75 mm from target in the OEM test arrangement.
Initial gap reference	1.0 mm (40 mils) recommended for the documented NSv system; confirm on the actual machine.
Proximitor power	-17.5 to -26 Vdc without barriers; this is a conditioner requirement, not a power input to the probe.
Probe lead	OEM NSv family uses 75-ohm FEP-insulated coaxial cable; exact lead length of the offered 109548-01 is not established.

03 | Diagnostic decisions

Observation	Engineering response
Restricted target	Check counterbore, side-view and rear-view clearance; nearby metal can change sensitivity.
Small shaft or flat target	The NSv family is designed for constrained targets, but actual shaft or target geometry still affects scale.
Paired probes	Check probe-tip separation and cross-talk for close axial or X-Y mounts.
Different target alloy	Do not transfer AISI 4140 calibration accuracy without target-specific verification.
Moist connector	Protect the probe-to-extension and extension-to-Proximitor ClickLoc junctions against liquid ingress.
Unclear part equivalence	Use the full 109548-01 P1407030-00100 marking plus case, lead, connector and complete chain; family membership alone is not interchangeability.

Questions an engineer should resolve

Question	Answer
Why is 109548-01 P1407030-00100 not a complete measuring chain?	The NSv system has three components: probe, extension cable and Proximitor Sensor. The single probe has no stand-alone calibrated voltage scale.
What target affects 109548-01 P1407030-00100 calibration?	The OEM system accuracy assumes its AISI 4140 steel reference target. Other alloys or geometry require a site-specific calibration check.
What can alter readings near 109548-01 P1407030-00100?	Counterbore side metal, a small target, rear clearance and adjacent probes can change scale or introduce cross-talk.

04 | Quantitative system checks

These values describe the associated manufacturer system and must be checked against the fitted configuration.

Check	Published reference value
Flat target	Minimum diameter 8.9 mm; recommended at least 13 mm for the documented NSv system.
Counterbore	Minimum 9.5 mm; recommended at least 13 mm. Smaller bores can affect far-gap sensitivity.
Adjacent axial tips	Maintain at least 25 mm tip separation to control cross-talk.
Adjacent radial tips	Maintain at least 23 mm tip separation to control cross-talk.
Cable bend	Minimum radius 25.4 mm with or without stainless-steel armor; verify the actual installed lead arrangement.

05 | Verification sequence

Stage	Required evidence
01 | Record	Capture the full 109548-01 P1407030-00100 label, current gap, target material and installed monitor baseline.

Stage	Required evidence
02 | Isolate	Put the monitoring channel in its approved maintenance state before disturbing the probe.
03 | Inspect	Check tip, case, lead and ClickLoc connector for damage or contamination.
04 | Pair	Confirm matching NSv extension cable, total system length and Proximitor identity.
05 | Install	Verify case thread and engagement against the machine drawing; avoid binding or damaged lead routing.

Environmental and connector boundaries

These published NSv family limits depend on the fitted component and are not proof of the offered probe variant.

Component	Manufacturer system boundary
Probe operating range	-52 to +177 °C; sustained use below -34 °C may shorten pressure-seal life.
Extension cable range	-52 to +177 °C operating and storage range for the documented NSv cable family.
Proximitor operating range	-52 to +100 °C; locate the conditioner within its own environmental limit.
Connector tightening	Mate the ClickLoc connectors finger tight; published maximum is 0.56 N·m.

Technical basis

Bently Nevada 3300 XL NSv Proximity Transducer System Datasheet, 147385 Rev. R

Other Bently Nevada references

These listings help locate other Bently Nevada parts. Confirm each complete model for its own installation.

Bently Nevada 330103-01-04-10-02-05	3300 XL 8 mm Proximity Probe
Bently Nevada 330101-36-80-10-02-00	3300 XL 8 mm Proximity Probe
Bently Nevada 330101-29-52-10-02-00	3300 XL 8 mm Proximity Probe
Bently Nevada 330101-33-60-10-02-00	3300 XL 8 mm Proximity Probe
Bently Nevada 330709-000-090-10-02-00	3300 XL 11 mm Proximity Probe

Discuss the complete fitted marking with Apter Power.
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