

Bently Nevada 330907-05-30-10-02-00

01 / REVERSE-MOUNT CONFIGURATION

Bently Nevada 330907-05-30-10-02-00 is an M10 x 1 reverse-mount NSv probe with a 1 m standard ClickLoc lead. Its matched 3300 XL NSv system measures shaft-relative vibration and position in restricted installations.

Complete execution

Base 330907	NSv reverse-mount probe; M10 x 1
Fixed code 05-30	Reverse-mount case configuration; preserve the code
CC = 10	1.0 m total electrical probe length
DD = 02	Standard cable and miniature ClickLoc
EE = 00	Agency approval not required

Transducer relationship

Shaft target Position or reference feature	330907 probe Non-contact NSv sensing	NSv Proximator Conditioned monitor signal
---	---	--

Electrical-length plan

5 m NSv system	1 m probe + 4 m NSv extension
7 m NSv system	1 m probe + 6 m NSv extension

Why NSv is selected

The family is intended for centrifugal air, refrigeration and process-gas compressors and other fluid-film bearing machines with tight counterbore, side-view or rear-view constraints. It provides radial vibration, radial or thrust position, tachometer, zero-speed and phase-reference signals through the configured channel.

Specific construction boundary

The final -00 selection does not request agency approval. Reverse-mount probes are unavailable with armor or connector-protector options; assess the actual junction protection and independent process containment.

Selecting the complete chain

The 1 m probe lead does not define a 1 m NSv system. The conditioner length, extension selection, target material and installed channel function form one configuration record.

Connect with ApterPower

Phone: +86 180 3023 5313

Email: sales13@apterpower.com

www.apterpower.com



Bently Nevada 330907-05-30-10-02-00

02 / ELECTRICAL AND SIGNAL BASIS

Probe and conditioner electrical data

Isolated 1 m probe resistance	4.2 +/- 0.5 ohm, center to outer conductor
Probe / extension impedance	75 ohm coaxial
Extension center conductor	0.220 ohm/m
Extension shield	0.066 ohm/m
Conditioner output resistance	50 ohm
Conditioner maximum demand	12 mA
Supply without barriers	-17.5 to -26 VDC
Supply with barriers	-23 to -26 VDC

NSv transfer characteristics

Matched-system linear span	1.5 mm; target distance approximately 0.25 to 1.75 mm
Voltage across stated span	Approximately -1 to -13 VDC
Recommended probe gap	1.0 mm
Nominal scale factor	7.87 V/mm (200 mV/mil)
Incremental scale factor tolerance	+12.5% / -20%, including interchangeability error
Deviation from best-fit straight line	Less than +/-0.06 mm
Frequency response	DC to 10 kHz: +0 / -3 dB typical

Performance conditions

System specifications use an NSv Proximitior, extension and probe between 0 and +45 deg C, at a maximum altitude of 2000 m, with a -24 VDC supply, 10 kohm load, AISI 4140 steel target at least 31 mm in diameter and 1.0 mm probe gap, unless noted otherwise. The stated accuracy and interchangeability do not automatically apply to calibration for another target material.

Supply sensitivity and range

Output sensitivity is less than 2 mV per supply volt. A supply more positive than -23.5 VDC may reduce linear range.

Connect with ApterPower

Phone: +86 180 3023 5313

Email: sales13@apterpower.com

www.apterpower.com



330907-05-30-10-02-00

Bently Nevada 330907-05-30-10-02-00

03 / CONSTRUCTION AND HANDLING

Recognize the components

Probe tip	Polyphenylene sulfide (PPS)
Probe case	AISI 304 stainless steel
Probe / extension insulation	FEP
Connector	Gold-plated brass ClickLoc

Reverse-mount service limits

Reverse-mount case torque	7.5 N m recommended; 22.6 N m maximum
ClickLoc joint	Finger tight recommended; 0.56 N m maximum
Minimum cable bend radius	25.4 mm
Case-to-lead tensile rating	220 N maximum rated
Lead-to-extension joint tensile rating	220 N maximum rated
Protector and armor selections	Unavailable on reverse-mount NSv probes

Temperature by component

Probe operation and storage	-52 to +177 deg C
Extension operation and storage	-52 to +177 deg C
Conditioner operation	-52 to +100 deg C
Conditioner storage	-52 to +105 deg C

Pressure-bearing installations

An NSv probe uses a Viton O-ring to seal differential pressure between tip and case. Probes are not pressure-tested before shipment. Establish any application-specific seal test and independent containment of liquids or gases if leakage occurs. High- or low-pH solutions can erode the tip assembly.

Turbine-oil connection protection

Silicone tape is provided with NSv extension cables as an alternative protective material, but it is not recommended where a probe-to-extension joint is exposed to turbine oil. Evaluate a suitable arrangement for the actual reverse-mount junction.

Connect with ApterPower

Phone: +86 180 3023 5313

Email: sales13@apterpower.com

www.apterpower.com



330907-05-30-10-02-00

Bently Nevada 330907-05-30-10-02-00

04 / TARGET GEOMETRY AND FIELD CIRCUIT

Geometry affects calibrated response

Flat target diameter	8.9 mm minimum; 13 mm recommended minimum
Standard X-Y shaft arrangement	30 mm minimum shaft diameter
Axially offset X-Y arrangement	20 mm minimum shaft diameter with 23 mm axial offset
Probe-tip separation, axial measurement	At least 25 mm to avoid cross-talk
Probe-tip separation, radial measurement	At least 23 mm to avoid cross-talk
Counterbore opening	9.5 mm minimum; 13 mm recommended minimum

Interpreting small targets

Target and mounting geometry are calibration inputs. Axial targets below 13 mm generally change scale factor; radial shafts below 20 mm generally change the average scale factor by more than 10%. Counterbores below 13 mm can affect far-gap scale factor. Review the appropriate NSv curves and reduced working range before accepting the installed reading.

Monitor wiring

The sensor-to-monitor circuit accepts 0.2 to 1.5 square-mm conductors (16 to 24 AWG), or 0.25 to 0.75 square-mm conductors with ferrules. A three-conductor shielded triad is recommended. Up to 305 m is documented; check Figures 16 and 17 for magnitude and phase rolloff at the actual field-wiring length.

Reference distance and motion

The 1.0 mm recommended gap is the initial NSv operating point. Intended shaft motion must remain within the applicable calibrated region; speed and Keyphasor target features require the receiving monitor to interpret their time-varying signal appropriately.

Migration boundaries

An upgrade from a 3300 RAM system may retain its existing probe, extension and monitoring system with an NSv Proximator. A 3000-series or 7000-series 190 upgrade requires NSv probe, extension and conditioner replacement. Neither statement grants blanket interchangeability with an XL 8 mm chain or proves that every mechanical probe execution fits an existing position.

Connect with ApterPower

Phone: +86 180 3023 5313

Email: sales13@apterpower.com

www.apterpower.com



Bently Nevada 330907-05-30-10-02-00

05 / QUESTIONS AND RELATED EXECUTIONS

Does 330907-05-30-10-02-00 use the standard forward-mount M10 case torque?

Use the reverse-mount row: 7.5 N m recommended and 22.6 N m maximum. The 11.3 N m recommendation for standard M10 cases is a different support condition.

Can armor or a connector-protector option be selected on 330907-05-30-10-02-00?

Reverse-mount NSv probes are not available with either option. The -02 connection is a miniature coaxial ClickLoc on standard cable; provide application-appropriate protection without implying an included factory protector.

How does a small shaft affect a measurement using 330907-05-30-10-02-00?

Radial measurements on shafts below 20 mm diameter generally change the average scale factor by more than 10%. Target geometry and probe separation need review against the NSv curves before using the nominal scale.

Related NSv models

Bently Nevada 330908-21-35-10-02-00	Compare full NSv code
Bently Nevada 330908-00-19-10-02-05	Compare full NSv code
Bently Nevada 330907-05-30-05-02-CN	Compare full NSv code
Bently Nevada 330907-05-30-10-02-05	Compare full NSv code

Related-model selection

Each linked item has a different complete execution. Compare the mounting family, cable length, connector and approval selection before specification. These recommendations are browsing references and do not establish a drop-in replacement.

Manufacturer reference

3300 XL NSv Proximity Transducer System | Datasheet 147385 Rev. R. Applications and migration: pp. 1-2; electrical and target behavior: pp. 3-4; materials and handling: pp. 5-6; pressure sealing: p. 7; exact reverse-mount ordering: p. 12; construction note: p. 33. These organized facts and field checks do not replace the machine installation procedure.

Connect with ApterPower

Phone: +86 180 3023 5313
Email: sales13@apterpower.com
www.apterpower.com

