Bently Nevada 991-25-70-01-01

01 Function and selected configuration

Product function

Bently Nevada 991-25-70-01-01 brings shaft thrust position into the machinery controller through a powered current loop, while retaining a separate diagnostic connection for the probe signal.

Selected configuration

The selected configuration combines a 25-0-25 mils measurement span, a 7.0 m transducer system and 35 mm din-rail clips. The integrated proximity conditioner accepts one compatible 3300 NSv probe with its matched extension cable; the probe lead and extension together establish the calibrated length.

Functional path

NSv probe / shaft gap	Matched 7.0 m chain	991 conditioner	4-20 mA receiver

Measurement span	25-0-25 mils
Transducer system	7.0 m, compatible 3300 NSv probe and cable
Mounting	35 mm DIN-rail clips

The two-wire loop supplies power and transmits axial shaft position as 4-20 mA. The receiving control system supplies the alarm and protection logic. Non-interacting zero and span adjustments support loop calibration, while the TEST input accepts a variable DC voltage source for controlled output checks.

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02 Technical operating envelope

Measurement	Axial position
Full-scale span	25-0-25 mils
Electrical system length	7.0 m
Signal output	4-20 mA; two-wire
Terminal supply	+12 to +35 VDC

Maximum loop resistance	1000 ohms at 35 VDC; includes cable
Current limit	23 mA typical
Mounting	35 mm DIN-rail clips
Transmitter temperature	-35 to +85 degrees C
Fault current	Below 3.6 mA

Loop supply and burden apply at the transmitter terminals. Temperature and performance are conditional on the matched components; probe limits are not transmitter-body limits.

Signal interpretation

The 25-0-25 mils range is the selected process-loop measurement. The separate dynamic output is a diagnostic signal, not a second isolated process loop.

Interface boundary

The 7.0 m electrical length belongs to probe plus extension. Loop wiring, diagnostic lead length and probe cable length are different constraints.

Can 991-25-70-01-01 share a grounded oscilloscope connection without isolation?

PROX OUT and COM are non-isolated. Use the specified test adapter when connecting grounded AC-powered equipment so that the diagnostic instrument does not disturb the measurement circuit.

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03 System integration and applications

Machine-point signal conditioning

Convert one axial position measurement into a 4-20 mA input for the controller.

Calibrated loop renewal

Retain the 25-0-25 mils receiver range and 7.0 m electrical chain when replacing the transmitter.

Probe-signal diagnosis

Observe the dynamic and gap signal with the specified diagnostic connection and instrument isolation.

Protection-loop verification

Use the TEST input with a variable DC voltage source to compare signal output and receiving indication.

System and supply context

991-25-70-01-01 connects a matched NSv probe and extension to a powered current-loop receiver. Probe, cable, test adapter and receiving control equipment are separate unless included in the quotation.

Application boundary

Use the 25-0-25 mils scale for axial-position supervision of the assigned machine point. Protective alarm logic remains in the receiving system.

Does 991-25-70-01-01 report radial vibration amplitude on its main loop?

No. Its 4-20 mA signal represents axial shaft position. Dynamic probe information is available separately at the non-isolated PROX OUT connection.

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04 Engineering selection decisions

Where is the electrical midpoint of 991-25-70-01-01?

The 25-0-25 mil axial range places the zero-position reference at midspan. Verify both movement directions and the configured control-system indication when calibrating the loop.

Which total transducer length is required by 991-25-70-01-01?

The selected electrical system length is 7.0 m. Combine the compatible 3300 NSv probe and extension cable to that total; the external loop wiring is a separate circuit.

What test stimulus is appropriate for the TEST input of 991-25-70-01-01?

Use a variable DC voltage source under the transmitter test procedure. This exercises the axial-position loop; an AC vibration generator is the corresponding test method for a 990 vibration transmitter.

Which mounting and area selections belong to 991-25-70-01-01?

The 01 mounting selection uses 35 mm DIN-rail clips, and the final 01 selects CSA Division 2. Match the supplied markings and installation conditions before using that area classification.

Keep test grounding controlled	The diagnostic connection is non-isolated.
Recognize Not OK	Distinguish below-3.6 mA fault and startup states from valid measurements.

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05 Configuration boundary and references

Lifecycle and support

The current manufacturing and factory-support phase of 991-25-70-01-01 is not confirmed. Apter Power availability is assessed separately from manufacturer lifecycle status.

Replacement assessment

Match the 25-0-25 mils scale, 7.0 m length, 35 mm din-rail clips and supplied approval markings. Keep the receiver alarm scale with the measurement.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains selection and system context. The separate installation guide covers preparation, connection, tests and handover; it does not replace manufacturer instructions.

Technical basis

Bently Nevada 991 Thrust Transmitter, 141618 Rev. R.

Related product navigation

- Bently Nevada 990-04-70-02-00
- Bently Nevada 990-05-50-01-00

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries