

INDUSTRIAL AUTOMATION PRODUCT

990-04-50-01-00

990 Vibration Transmitter

Bently Nevada 990-04-50-01-00 is a DIN-rail 990 Vibration Transmitter configured for a 5 m 3300 NSv system and a 0–100 um peak-to-peak range. It sends proportional shaft-vibration data to a control system over a two-wire 4–20 mA loop.

IDENTITY	VERIFIED VALUE
Manufacturer	Bently Nevada
System family	990 Vibration Transmitter System
Part number	990-04-50-01-00
Country	USA
HS code	8537101190

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Technical Specifications

Technical values below are limited to the named Bently Nevada product record.

PARAMETER	VALUE
Full-scale vibration range	0 to 100 μ m peak-to-peak
System length	5.0 m
Mounting	35 mm DIN rail clips
Agency approval option	Not required
Input channels	1
Accepted transducer	3300 NSv proximity probe and extension cable
Supply voltage	+12 to +35 Vdc
Loop output	4 to 20 mA _{dc} , 2-wire
Loop accuracy	+/-1.5% of full scale
Probe operating gap	0.5 to 1.75 mm
Maximum loop resistance	1000 Ohm at 35 Vdc
Current limiting	23 mA typical

PARAMETER	VALUE
Not-OK output	Less than 3.6 mA within 100 μ s
Power-up inhibit	2 to 3 s
Prox Out impedance	10 kOhm for 10 MOhm load
Prox Out linear range	1.4 mm
Prox Out scale factor	7.87 mV/ μ m typical
Frequency response	5 Hz to 6000 Hz, +0/-3 dB
Minimum target diameter	9.5 mm
Maximum Prox Out cable	3 m
Transmitter operating temperature	-35 to +85 degC
Transmitter storage temperature	-52 to +100 degC
Relative humidity	100% condensing, non-submerged
Probe cable	75 Ohm coaxial, FEP insulated

VERIFIED PRODUCT RECORD

DATA GROUP	VERIFIED VALUE
Manufacturer	Bently Nevada
Product family	990 Vibration Transmitter System
Origin	USA
HS code	8537101190
Shipping origin	Xiamen, Fujian, China
Source document	990 Vibration Transmitter Datasheet — 141612 Rev. Y

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System Role and Architecture

Bently Nevada 990-04-50-01-00 is a DIN-rail 990 Vibration Transmitter configured for a 5 m 3300 NSv system and a 0–100 um peak-to-peak range. It sends proportional shaft-vibration data to a control system over a two-wire 4–20 mA loop.

FUNCTION 1

Converts proximity-probe vibration into a two-wire 4–20 mA loop

FUNCTION 2

Scales peak-to-peak shaft vibration for direct control-system acquisition

FUNCTION 3

Provides a diagnostic Prox Out connection and a test input

FUNCTION 4

Suppresses the loop below 3.6 mA when the transducer circuit is Not OK

Matched system components

- 3300 NSv proximity probe
- 3300 NSv extension cable
- 24 Vdc-class loop supply
- control-system analog input

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	3300 NSv proximity probe
Companion hardware	3300 NSv extension cable
Field connection	24 Vdc-class loop supply
Primary system function	Converts proximity-probe vibration into a two-wire 4–20 mA loop
Controlled acceptance duty	Pump shaft-vibration trending

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Applications and Engineering Context

Pump shaft-vibration trending

Converts proximity-probe vibration into a two-wire 4–20 mA loop

Compressor proximity monitoring

Scales peak-to-peak shaft vibration for direct control-system acquisition

DCS vibration input

Provides a diagnostic Prox Out connection and a test input

Condition-monitoring diagnostic test point

Suppresses the loop below 3.6 mA when the transducer circuit is Not OK

TECHNICAL NOTE

Set zero and span only after the 5 m NSv probe system is correctly gapped, then verify the two-wire loop across the actual load. Use isolated portable equipment at Prox Out when the test instrument is grounded.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	990-04-50-01-00 / 990-04-50-01-00 recorded
Physical interface	3300 NSv proximity probe
Companion check	3300 NSv extension cable
Functional proof	Converts proximity-probe vibration into a two-wire 4–20 mA loop
Application test	Pump shaft-vibration trending

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Engineering Precautions

1

Confirm 990-04-50-01-00 and the 0–100 um full-scale range before loop work.

2

Isolate the loop supply and process input before removing the DIN-rail transmitter.

3

Verify the installed probe and extension cable form the specified 5.0 m NSv system.

4

Gap the probe within the documented operating region before zero/span adjustment.

5

Keep loop resistance within the limit established by the actual supply voltage.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
3500/20 125744-02	Rack interface module	Open product page
3500/40M 176449-01	Proximitior monitor	Open product page
3500/45 140072-04	Position monitor configuration	Open product page
3500/60 163179-01	Temperature monitor	Open product page
3500/64M 140734-05	Dynamic pressure monitor	Open product page

MANUFACTURER SOURCE RECORD

990 Vibration Transmitter Datasheet

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