

INDUSTRIAL AUTOMATION PRODUCT

990-04-70-01-01

990 two-wire vibration transmitter

Radial vibration converted to a 4–20 mA current-loop signal

IDENTITY	VERIFIED VALUE
Manufacturer	Bently Nevada
System family	990 vibration transmitter system
Part number	990-04-70-01-01
Country	USA
HS code	8537101190

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Technical Specifications

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

PARAMETER	TECHNICAL VALUE
Complete model	990-04-70-01-01
Full-scale range	0 to 100 um peak-to-peak
System length	7.0 m
Mounting	DIN-rail clip
Agency approval	CSA Division 2
Transmitter type	2-wire, loop powered
Supply voltage	+12 to +35 V DC
Process output	4 to 20 mA
Input system	3300 NSv proximity transducer system
Frequency response	5 Hz to 6 kHz, +0/-3 dB
Loop accuracy	+/-1.5%
Prox Out scale factor	7.87 mV/um (200 mV/mil)
Prox Out impedance	10 kohm for 10 Mohm load
Maximum loop lead resistance	1000 ohm at 35 V DC
Current limit	23 mA typical
Not OK current	Below 3.6 mA
Power-up inhibit	3.6 mA for 2 to 3 s

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System Role and Architecture

Radial vibration converted to a 4–20 mA current-loop signal

FUNCTION 1

Accepts a matched 3300 NSv transducer signal

FUNCTION 2

Provides a loop-powered 4–20 mA vibration output

FUNCTION 3

Offers a buffered Prox Out for waveform checks

FUNCTION 4

Adds CSA Division 2 approval to the 100 um configuration

Matched system components

- 3300 NSv probe
- matched extension cable and Proximitior Sensor
- 12 to 35 VDC current loop
- PLC or DCS analog input

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	3300 NSv probe
Companion hardware	matched extension cable and Proximitior Sensor
Field connection	12 to 35 VDC current loop
Primary system function	Accepts a matched 3300 NSv transducer signal
Controlled acceptance duty	Pump radial-vibration monitoring

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Applications and Engineering Context

Pump radial-vibration monitoring

Accepts a matched 3300 NSv transducer signal

Compressor shaft-vibration trending

Provides a loop-powered 4–20 mA vibration output

DCS machinery condition input

Offers a buffered Prox Out for waveform checks

990 transmitter replacement

Adds CSA Division 2 approval to the 100 um configuration

TECHNICAL NOTE

Verify 990-04-70-01-01, the selected full-scale vibration range, total transducer length, mounting hardware, loop polarity and alarm scaling before removal; confirm Prox Out waveform and 4–20 mA scaling after installation.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	990-04-70-01-01 / 990-04-70-01-01 recorded
Physical interface	3300 NSv probe
Companion check	matched extension cable and Proximitior Sensor
Functional proof	Accepts a matched 3300 NSv transducer signal
Application test	Pump radial-vibration monitoring

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Engineering Precautions

- 1 Verify the complete 990-04-70-01-01 marking and its assigned 990 vibration transmitter system position before work.
- 2 Place the connected pump radial-vibration monitoring process in the approved maintenance state.
- 3 Isolate applicable power and radial vibration converted to a 4–20 ma current-loop signal field energy before disconnecting conductors.
- 4 Record connector, conductor, address, firmware and software identities before removal.
- 5 Use ESD controls and protect keyed interfaces, exposed contacts and electronic assemblies.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Bently Nevada 21000 28 05 00 056 04 02	Related Bently Nevada machinery-monitoring product	View Bently Nevada 21000 28 05 00 056 04 02 page
Bently Nevada 330130 060 00 05	Related Bently Nevada machinery-monitoring product	View Bently Nevada 330130 060 00 05 page
Bently Nevada 330901 05 11 05 01 05	Related Bently Nevada machinery-monitoring product	View Bently Nevada 330901 05 11 05 01 05 page
Bently Nevada 330101 39 47 10 02 05	Related Bently Nevada machinery-monitoring product	View Bently Nevada 330101 39 47 10 02 05 page
Bently Nevada 330854 040 00 00	Related Bently Nevada machinery-monitoring product	View Bently Nevada 330854 040 00 00 page
Bently Nevada 330851 02 00 080 10 00 00	Related Bently Nevada machinery-monitoring product	View Bently Nevada 330851 02 00 080 10 00 00 page
Bently Nevada 330103 045 00 00	Related Bently Nevada machinery-monitoring product	View Bently Nevada 330103 045 00 00 page
Bently Nevada 330930 065 04 BR	Related Bently Nevada machinery-monitoring product	View Bently Nevada 330930 065 04 BR page

MANUFACTURER SOURCE RECORD

Bently Nevada 990 Vibration Transmitter Datasheet

141612 Rev. Y

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