

330500-00-02

Velomitor Piezo-Velocity Sensor

Bently Nevada 330500-00-02 is an ATEX-approved Velomitor piezo-velocity sensor without a mounting adapter. It measures absolute machine-case vibration velocity for compatible monitoring channels.

PRODUCT SNAPSHOT

BRAND

Bently Nevada

FAMILY

Bently Nevada absolute vibration measureme

PART

330500-00-02

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PRODUCT OVERVIEW

Bently Nevada 330500-00-02 is an ATEX-approved Velomitor piezo-velocity sensor without a mounting adapter. It measures absolute machine-case vibration velocity for compatible monitoring channels.

- 1

Converts absolute machine-case velocity into a conditioned electrical signal
- 2

Provides a DC bias used for transducer and wiring supervision
- 3

Supports long field wiring to compatible monitoring inputs
- 4

Operates as a hermetically sealed industrial vibration sensor

SYSTEM COMPONENTS

- compatible Velomitor monitor input
- approved mounting stud
- two-conductor shielded cable
- rigid bearing-housing surface

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
330171-00-12-05-01-05	3300 XL proximity probe	Open product page
200150-09-CN	General-purpose accelerometer	Open product page

TECHNICAL DATA

PARAMETER	VALUE
Sensitivity	3.94 mV/mm/s +/-5%
Frequency response	4.5 Hz to 5 kHz, +/-3 dB
Precision response	6 Hz to 2.5 kHz, +/-0.9 dB
Velocity range	1270 mm/s peak
Transverse sensitivity	5% maximum
Linearity	+/-2% to 152 mm/s peak
Mounted resonance	>12 kHz
Bias voltage	-12 +/-3 V DC

PARAMETER	VALUE
Output impedance	2400 Ohm maximum
Noise	0.004 mm/s rms
Maximum cable length	305 m
Operating temperature	-55 to +121 degC
Shock resistance	5000 g
Humidity	100%, non-submerged
Mounting-adapter option	None
Agency approval option	ATEX

TECHNICAL NOTE

Prepare a clean rigid mounting surface, use the approved stud and torque, preserve case isolation and shield practice, and verify bias voltage, noise floor, polarity, and velocity response.

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Compressor casing velocity monitoring

Converts absolute machine-case velocity into a conditioned electrical signal

Pump bearing-housing vibration

Provides a DC bias used for transducer and wiring supervision

Motor absolute-vibration measurement

Supports long field wiring to compatible monitoring inputs

Gearbox condition monitoring

Operates as a hermetically sealed industrial vibration sensor

PRODUCT PRECAUTIONS

- 1 Verify 330500-00-02 and the ATEX approval marking before work.
- 2 Place the monitored machine and channel in maintenance state.
- 3 Prepare a flat, clean, rigid mounting surface.
- 4 Use the approved mounting hardware without side-loading the sensor.
- 5 Maintain case isolation and the documented shield termination.
- 6 Protect the connector and cable from moisture and mechanical load.
- 7 Confirm stable bias voltage and broadband noise.
- 8 Record the as-left velocity response and alarm test.

ENGINEER FAQ

Q1 Can 330500-00-02 be replaced by a visually similar model without review?

No. Verify the complete part number, electrical execution, connector arrangement, companion hardware, and approved software or rack configuration.

Q2 What commissioning evidence should be retained for 330500-00-02?

Retain the full 330500-00-02 identity, as-left wiring and settings, measured functional-test results, final diagnostics, and authorization to return the affected equipment to service.

Q3 Which installed hardware must be matched before fitting 330500-00-02?

Match the complete 330500-00-02 marking to compatible Velomitor monitor input and approved mounting stud, then confirm the assigned Bently Nevada absolute vibration measurement position and approved system configuration.

Q4 How should the field connections for 330500-00-02 be recorded before replacement?

Record terminal or connector identity, polarity, shield, cable tag, channel assignment, and the as-found diagnostic state before disconnecting 330500-00-02.

Q5 What isolation is required before installing 330500-00-02?

Place compressor casing velocity monitoring in the approved maintenance state, isolate every applicable power, signal, and stored-energy source, and prove the work area safe.

Q6 Which configuration check is essential when commissioning 330500-00-02?

Restore only the approved model-specific channel, range, address, scale, or interface settings and compare them with the physical installation before enabling the process function.

Q7 How can an engineer function-test 330500-00-02 after installation?

Apply a controlled input, reference, or limited output appropriate to velomitor piezo-velocity sensor, observe the system indication and diagnostics, and confirm the intended process response.

Q8 What should be checked if 330500-00-02 reports an unstable or incorrect value?

Check seating, supply, grounding, shielding, matched components, mechanical installation, and the signal path before changing configuration or replacing additional hardware.