

330500-02-CN

330500 Velomitor Piezo-velocity Sensor

330500-02-CN converts absolute casing or bearing-housing vibration into a velocity-proportional electrical signal for machinery-condition monitoring.

PRODUCT SNAPSHOT

BRAND

Bently Nevada

FAMILY

Bently Nevada 330500 Velomitor Piezo-veloc

PART

330500-02-CN

ORIGIN / HS

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PRODUCT OVERVIEW

330500-02-CN converts absolute casing or bearing-housing vibration into a velocity-proportional electrical signal for machinery-condition monitoring.

- 1

Measures absolute vibration on a mounted machine surface
- 2

Uses integrated solid-state electronics for velocity output
- 3

Provides an isolated stainless-steel sensor case
- 4

Connects through a two-pin MIL-C-5015 interface

SYSTEM COMPONENTS

- M8 x 1 mounting point
- Two-pin MIL-C-5015 mating cable
- Compatible Bently Nevada monitor channel
- Prepared flat machine surface

TECHNICAL NOTE

Mount 330500-02-CN on a clean prepared surface using the M8 x 1 adapter and documented torque. Preserve connector polarity, route the cable away from mechanical strain and verify bias voltage plus vibration response before enabling alarms.

TECHNICAL DATA

PARAMETER	VALUE
Complete order number	330500-02-CN
Mounting-adapter code	02
Mounting adapter	M8 x 1
Sensitivity	3.94 mV/mm/s (100 mV/in/s), +/-5%
Frequency response	4.5 Hz to 5 kHz, +/-3 dB
Precision frequency response	6 Hz to 2.5 kHz, +/-0.9 dB
Velocity range	1270 mm/s (50 in/s) peak
Amplitude linearity	+/-2% to 152 mm/s peak
Mounted resonance	Greater than 12 kHz
Output bias	-12 +/-3 V

PARAMETER	VALUE
Dynamic output impedance	Less than 2400 ohm
Noise floor	0.004 mm/s RMS nominal
Case isolation	Isolated
Operating temperature	-55 to +121 degC
Maximum shock	5000 g peak
Housing material	316L stainless steel
Connector	2-pin MIL-C-5015
Mounting torque	32 to 46 kg-cm (24 to 40 in-lb)
Recommended cable length	Up to 63 m under stated datasheet conditions
Signal polarity	Motion toward connector: Pin A positive relative to Pin B

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
330103-00-16-10-02-05	3300 XL 8 mm metric proximity probe	View 330103-00-16-10-02-05 page
330106-05-30-05-02-00	3300 XL 8 mm reverse-mount probe	View 330106-05-30-05-02-00 page
330130-045-00-00	3300 XL standard extension cable	View 330130-045-00-00 page
330130-080-02-05	3300 XL extension cable	View 330130-080-02-05 page
330850-50-00	3300 XL NSv extension cable	View 330850-50-00 page
330171-00-12-50-01-05	3300 XL 5/8 mm proximity probe	View 330171-00-12-50-01-05 page
330171-00-12-05-01-05	3300 XL 5/8 mm proximity probe	View 330171-00-12-05-01-05 page
330171-00-33-50-01-05	3300 XL 5/8 mm proximity probe	View 330171-00-33-50-01-05 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Bearing-housing vibration monitoring

Measures absolute vibration on a mounted machine surface

Machine-casing vibration measurement

Uses integrated solid-state electronics for velocity output

Structural vibration observation

Provides an isolated stainless-steel sensor case

Velocity-sensor replacement and verification

Connects through a two-pin MIL-C-5015 interface

PRODUCT PRECAUTIONS

- 1 Verify the full 330500-02-CN marking and M8 x 1 adapter before disturbing the installed sensor.
- 2 Place the monitored machine and vibration channel in the approved maintenance state.
- 3 Clean the mounting surface and adapter threads without damaging the sensor base.
- 4 Apply the documented mounting torque and do not use the connector body as a tightening point.
- 5 Preserve Pin A and Pin B polarity when reconnecting the two-pin MIL-C-5015 cable.
- 6 Route and clamp the sensor cable so it cannot transmit movement or impact into the housing.
- 7 Confirm output bias and monitor-channel scaling before dynamic testing.
- 8 Prove velocity response and alarm action before returning the machine to service.

ENGINEER FAQ

Q1 Does 330500-02-CN match M8 x 1 mounting point in a Bearing-housing vibration monitoring installation?

Verify the complete 330500-02-CN marking, the documented Bently Nevada 330500 Velomitor Piezo-velocity Sensor position and the installed M8 x 1 mounting point before fitting the assembly.

Q3 Which Bently Nevada 330500 Velomitor Piezo-velocity Sensor records should be captured before removing 330500-02-CN?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with 330500-02-CN before disconnection.

Q5 Which Two-pin MIL-C-5015 mating cable condition should be checked when 330500-02-CN reports an abnormal state?

Check the Two-pin MIL-C-5015 mating cable supply, seating and connection first, then compare channel diagnostics with the recorded 330500-02-CN baseline.

Q7 What maintenance evidence is required after 330500-02-CN is used for Structural vibration observation?

Retain the nameplate record, corrective action, final diagnostics and a controlled structural vibration observation functional-test result for 330500-02-CN.

Q2 How should 330500-02-CN be wired when it must measures absolute vibration on a mounted machine surface?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for 330500-02-CN; then continuity-test the affected path.

Q4 What controlled test confirms that 330500-02-CN can uses integrated solid-state electronics for velocity output?

Apply the approved field or simulated stimulus, observe the Bently Nevada 330500 Velomitor Piezo-velocity Sensor indication and confirm the intended response without bypassing the normal interlocks.

Q6 Can 330500-02-CN be moved directly into Machine-casing vibration measurement without validating Prepared flat machine surface?

No. Confirm the Prepared flat machine surface, revision, connection scheme and Bently Nevada 330500 Velomitor Piezo-velocity Sensor configuration before transferring 330500-02-CN to that duty.

Q8 How should 330500-02-CN be returned to service in Velocity-sensor replacement and verification?

Restore power under control, verify provides an isolated stainless-steel sensor case, exercise the intended signal path and release 330500-02-CN only after the Bently Nevada 330500 Velomitor Piezo-velocity Sensor remains in its approved operating state.

SOURCE Bently Nevada 330500 Velomitor Piezo-velocity Sensor Datasheet | 141632 Rev. V

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