Bently Nevada 330500-04-01

Complete Product Information

Bently Nevada 330500-04-01 is a solid-state piezo-velocity sensor for absolute bearing-housing, casing or structural vibration.

01 Product identity and verified data

Complete model	330500-04-01
Product type	Velomitor piezo-velocity sensor
Manufacturer	Bently Nevada
Technical source	Bently Nevada 330500 Velomitor Piezo-velocity Sensor Datasheet, 141632 Rev. V
Measurement	Absolute bearing-housing, casing or structural vibration
Sensitivity	3.94 mV/mm/s (100 mV/in/s) +/-5%
Frequency response	4.5 Hz to 5 kHz, +/-3 dB
Precision frequency band	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 (6 in/s) peak
Mounted resonant frequency	>12 kHz
Output bias voltage	-12 +/-3 V DC

Engineering purpose

Bently Nevada 330500-04-01 is a solid-state piezo-velocity sensor for absolute bearing-housing, casing or structural vibration.

Selected order-code snapshot

Measurement role	Absolute vibration from a piezoelectric element with embedded velocity integration.
Selected mounting	1/4-20 UNC mounting adapter; rigid surface preparation and torque govern high-frequency coupling.
Electrical output	3.94 mV/mm/s sensitivity with -12 +/-3 V DC output bias.

02 Technical capability and engineering overview

Dynamic output impedance	<2400 ohm
Maximum signal cable length	305 m under stated cable conditions
Operating temperature	-55 to +121 deg C
Case material	316L stainless steel

Connector	2-pin MIL-C-5015, hermetically sealed
Mounting torque	32 to 46 kg cm maximum
Mounting adapter selection	1/4-20 UNC mounting adapter
Approval selection	CSA/US/C approval

Evidence boundary

Order-code values apply to the selected part. Published system performance applies only to the complete matched chain under the stated reference conditions.

Engineering overview

330500-04-01 integrates a piezoelectric acceleration signal inside a solid-state 316L stainless-steel sensor to provide velocity-proportional output for absolute machine-housing vibration.

The selected 1/4-20 unc mounting adapter must be seated on a rigid prepared surface. Preserve connector polarity, cable support and the monitor current-limiting arrangement, and keep mounting torque within 32 to 46 kg cm.

Published sensitivity and frequency response assume the stated loading and mounting conditions. Final acceptance compares the installed velocity response with the established machine baseline across a controlled operating state.

Application map

Bearing-housing vibration

Measure absolute vibration at a rigid bearing-housing point that transfers the machine motion of interest.

Casing vibration

Use on a prepared casing location where mounting stiffness and local resonances have been reviewed.

Structural vibration

Apply on documented structural points where the velocity signal supports condition assessment.

Installed-channel maintenance

Preserve the mounting adapter, polarity, current-limited input, cable route and accepted baseline.

03 System interpretation and selection boundaries

Product boundary	Apply the listed facts to 330500-04-01 and the documented 330500 Velomitor piezo-velocity sensor family context only.
Interface boundary	Connector, terminal, bus, cable and companion-device assignments must match the installed drawing.
Electrical boundary	Use exact-model values only; system-level ratings remain conditional on the complete installed configuration.
Configuration boundary	Switches, jumpers, addresses, firmware and project settings must be reconciled before energization.
Diagnostic boundary	Interpret indicators and fault states together with measured inputs, outputs and host-system status.
Acceptance rule	Use the approved system baseline and maintenance procedure for the final as-left decision.

Installed-system context

The offered item uses the 1/4-20 unc mounting adapter; mounting stiffness, connector, current-limited input and machine baseline govern application.

04 Lifecycle, offered scope and related references

Lifecycle status

Exact-model status	A separate manufacturing or support phase is not assigned to the complete 330500-04-01 order identity.
Installed-family context	Service planning must preserve the documented 330500 Velomitor piezo-velocity sensor family relationship for this installed channel.
Replacement boundary	Confirm the complete marking and every installed companion component before approving a replacement.
Supply boundary	Apter Power availability is confirmed independently from the manufacturer lifecycle phase.

Available unit details

Offered reference	Bently Nevada 330500-04-01, 1/4-20 UNC mounting adapter Velomitor configuration.
Identity check	Confirm the 330500 marking, 1/4-20 unc mounting adapter, approval suffix and 2-pin connector.
Included items	Sensor only; signal cable, monitor input and mounting hardware not integral to the selected code are separate unless itemized.

Source and applicability record

Verified source	Bently Nevada 330500 Velomitor Piezo-velocity Sensor Datasheet, 141632 Rev. V
Applicability boundary	Order-code values apply to the selected part. Published system performance applies only to the complete matched chain under the stated reference conditions.
Product family	330500 Velomitor piezo-velocity sensor family

Additional related product references

Related product	Bently Nevada 330500-00-01
Related product	Bently Nevada 330980-70-CN
Related product	Bently Nevada 330930-040-03-00
Related product	Bently Nevada 84661-96

Engineering contact

Discuss the exact marking and installed application with Apter Power.
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