Bently Nevada 330500-07-02

Engineering Installation, Diagnostic and Acceptance Guide

Bently Nevada 330500-07-02 is a Velomitor piezo-velocity sensor with the 3/8-16 UNC mounting-adapter option and ATEX approval selection.

01 Job scope and identity

Complete model	330500-07-02
Product type	Velomitor piezo-velocity sensor
Manufacturer	Bently Nevada
Technical source	Bently Nevada 330500 Velomitor Piezo-velocity Sensor Datasheet, 141632 Rev. V

Field decisions

1 Establish identity

Capture the full marking and baseline before disconnection.

Installation relationships

Mounting interface	Prepare a rigid, flat 3/8-16 UNC location and apply the documented 32 to 46 kg cm mounting torque.
Electrical boundary	Confirm current-limited input, connector polarity and -12 +/-3 V DC bias before interpreting vibration output.
Velocity acceptance	Compare local velocity and monitor indication with the approved machine baseline under a controlled operating state.

Pre-work evidence

Installed drawing	Record the approved cabinet, rail, slot, terminal, cable and system references that govern 330500-07-02.
Complete marking	Capture the complete order identity and every revision or approval marking on the delivered item.
Mechanical reference	Record mounting position, fasteners, connector orientation, access clearance and support points.
Electrical interfaces	Confirm supply, signal, bus, terminal and protective-conductor assignments against the installed drawing.
Configuration state	Record jumpers, switches, addresses, firmware or project settings that apply to this hardware.

02 Pre-installation readiness

Model-specific installation decisions

Exact identity

330500-07-02 and every delivered revision or approval marking must be recorded before removal.

Installed system

330500 Velomitor piezo-velocity sensor family companion components, channel assignment and approved machine reference must remain traceable.

Mechanical baseline

Record the as-found mounting datum, reach, lock position, target clearance, routing and connector support.

Electrical baseline

Record the applicable stopped-machine gap, bias, continuity or channel value together with test conditions.

As-left configuration

Document the final mechanical position, cable protection, connector condition and complete companion-component identities.

Functional release

Compare the final monitor indication and controlled operating response with the approved baseline before handover.

Installation precautions

Prepare the 3/8-16 surface

A flexible, painted or uneven point can distort high-frequency response.

Control mounting torque

Use the documented 32 to 46 kg cm range and record the installation method.

Verify polarity and bias

Confirm the 2-pin connector, current-limited input and -12 +/-3 V DC bias before release.

Support the signal cable

Prevent cable motion or connector strain from transferring force into the sensor body.

Check approval evidence

Compare the delivered ATEX marking with the project requirement before energization.

Prove the velocity channel

Compare local velocity and monitor indication with the accepted operating baseline.

Pre-installation release gates

Identity gate	The delivered marking is 330500-07-02 and all visible revision or approval details have been photographed.
Drawing gate	The installed asset, channel, mounting reference and companion-component assignments are identified on the approved record.
Mechanical gate	Mounting surface, thread or support points, access clearance and target relationship are suitable for the selected configuration.
Interface gate	Connector, conductor, shield, terminal and protective-conductor condition have been inspected before connection.
Route gate	Cable or lead routing preserves bend radius, strain relief, contamination protection and separation from damaging surfaces.
Baseline gate	The applicable stopped-machine reading and operating observation have been captured with units and test conditions.

03 Installation and commissioning

Controlled installation sequence

01 Isolate	Place the monitored machine and channel in the approved maintenance state; prove the required isolation.
02 Photograph	Capture 330500-07-02, the installed datum, connector, route and companion-component markings.
03 Measure	Record mechanical position and the applicable stopped-machine electrical reading before removal.
04 Compare	Check delivered identity, interfaces and evidence against the approved drawing and spare-parts record.
05 Install	Fit without twisting the lead; preserve thread engagement, target clearance, bend radius and strain relief.
06 Set point	Establish the operating gap or datum only with the approved stopped-machine procedure.
07 Prove	Compare local reading, monitor indication and controlled operating response with the accepted baseline.
08 Handover	Record as-left values, photographs, deviations, responsible technician and release approval.

Commissioning acceptance criteria

Mechanical fit	Absolute vibration from a piezoelectric element with embedded velocity integration. Confirm the installed datum and available target travel before final tightening.
Lead or interface fit	3/8-16 UNC mounting adapter; rigid surface preparation and torque govern high-frequency coupling. Inspect the mating interface and provide independent route support.
System position	The offered item uses the 3/8-16 unc mounting adapter; mounting stiffness, connector, current-limited input and machine baseline govern application.
As-found reference	Record the applicable stopped-machine reading and the exact companion-component identities before disconnection.
Static acceptance	Restore the documented gap, bias, continuity or channel value with the machine in the approved test state.
Functional acceptance	Compare local indication, monitor response and the controlled operating observation with the accepted machine baseline.
Deviation control	Withhold release when the delivered marking, mounting datum, interface, system length or response differs from the approved record.
Release evidence	Retain the complete marking, test conditions, measured results, photographs, reviewer and maintenance-record reference.

04 Diagnostics and escalation

Which mounting adapter is selected for 330500-07-02?	Option 07 selects a 3/8-16 UNC mounting adapter; verify thread condition, surface flatness and rigidity.
Which approval option applies to 330500-07-02?	Option 02 selects ATEX; retain the delivered marking and compare it with the approved project record.
What sensitivity applies to 330500-07-02?	The Velomitor sensitivity is 3.94 mV/mm/s (100 mV/in/s) +/-5% under the stated loading and mounting conditions.

What bias voltage is expected from 330500-07-02?	Use the compatible current-limited input and compare the measured bias with -12 +/-3 V DC before interpreting vibration output.

Additional diagnostic decisions

Which frequency bands are documented for 330500-07-02?	The manufacturer gives 4.5 Hz to 5 kHz at +/-3 dB and a 6 Hz to 2.5 kHz precision band at +/-0.9 dB.
How should the mounting of 330500-07-02 be accepted?	Record the prepared 3/8-16 UNC surface, 32 to 46 kg cm torque method, connector polarity and stable bias.
When must 330500-07-02 be withheld from service?	Withhold release if mounting stiffness, label, connector, bias, polarity or controlled velocity response differs from the record.
What handover evidence is required for 330500-07-02?	Retain the full marking, adapter and torque method, approval label, cable condition, bias voltage and monitor comparison.

05 Handover and evidence package

Model-specific handover evidence

Traceability	Each value is tied to 330500-07-02, the asset location, test state, instrument and date.
Repeatability	The same approved method and comparable operating state are used for before-and-after readings.
Resolution	Recorded precision does not exceed the capability of the instrument or source document.
Reference state	Stopped, energized, loaded and process-running observations are clearly distinguished.
Change control	Every changed setting, connection or mechanical datum has an approved reason and reviewer.
Retention	Evidence remains accessible with the maintenance record for future troubleshooting and replacement review.

Model-specific application limits

Mounting adapter	3/8-16 UNC
Approval	ATEX; verify delivered marking
Sensitivity	3.94 mV/mm/s +/-5%
Output bias	-12 +/-3 V DC
Mounting torque	32 to 46 kg cm

Verified 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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