190501-00-00-CN

Low-Frequency Piezo-Velocity Transducer

Engineering installation, diagnostic and acceptance guidance for the exact supplied identity and its documented installed relationship.

01 Job scope and identity

Complete model	190501-00-00-CN
Product type	Low-Frequency Piezo-Velocity Transducer
Manufacturer	Bently Nevada
Technical source	Bently Nevada 190501 Velomitor CT Transducer Datasheet 141636 Rev. AF

Field decisions

1 Verify the delivered identity

Record the complete 190501-00-00-CN marking and every delivered option or approval label before removal.

2 Preserve the decisive interface

Machine target, mounted probe, extension cable, Proximitor Sensor and receiving channel; retain the installed mechanical and electrical reference.

3 Check the selected limits

Compare the documented order-code values with the installed drawing and actual service conditions.

4 Prove the intended function

Slow-roll runout and the intended vibration, position or phase response agree with the accepted machine baseline.

5 Retain traceable evidence

Record the full marking, insertion datum, locknut position, target relationship, cable route and companion component identities.

Installation relationships

Installed relationship	Machine target, mounted probe, extension cable, Proximitor Sensor and receiving channel
Static acceptance	Installed datum, thread engagement, cable support and stable live gap agree with the approved work record.
Functional acceptance	Slow-roll runout and the intended vibration, position or phase response agree with the accepted machine baseline.

Pre-work engineering values

Transducer family	190501 Velomitor CT
Mounting hardware option	00 - No stud
Connection option	00 - MIL-C-5015 interface
Sensitivity	3.94 mV/mm/s (100 mV/in/s), +/-5%
Frequency response	3.0 to 900 Hz, +/-1.0 dB
Extended frequency response	1.5 Hz to 1.0 kHz, +/-3.0 dB
Velocity range	63.5 mm/s peak

02 Pre-installation readiness

Model-specific installation decisions

Select mounting hardware deliberately

Option 00 includes no stud; verify the approved adapter before installation.

Preserve polarity

Record Pin A and Pin B orientation relative to the measurement axis.

Control the cable load

Use the approved cable and protect the MIL-C-5015 connector from strain.

Avoid rigid local resonance

Mount on the bearing housing or machine casing with a prepared surface.

Retain the CN identity

Photograph the complete marking and certification label.

Validate low-speed response

Compare bias and velocity trend at representative operating speed with the accepted baseline.

Pre-installation release gates

Select mounting hardware deliberately	Option 00 includes no stud; verify the approved adapter before installation.
Preserve polarity	Record Pin A and Pin B orientation relative to the measurement axis.
Control the cable load	Use the approved cable and protect the MIL-C-5015 connector from strain.
Avoid rigid local resonance	Mount on the bearing housing or machine casing with a prepared surface.
Retain the CN identity	Photograph the complete marking and certification label.
Validate low-speed response	Compare bias and velocity trend at representative operating speed with the accepted baseline.

03 Installation and commissioning

01 Capture and isolate	Record the full marking, insertion datum, locknut position, target relationship, cable route and companion component identities.
02 Controlled removal	Isolate the channel, protect the sensing face, release the ClickLoc joint and withdraw the probe without twisting or side loading.
03 Position and connect	Reproduce the approved mechanical datum, preserve thread and cable condition, and reconnect the verified matched-system components.
04 Restore support	Restore clamps, strain relief, route separation and mechanical protection before energization.
05 Static proof	Installed datum, thread engagement, cable support and stable live gap agree with the approved work record.
06 Functional proof	Slow-roll runout and the intended vibration, position or phase response agree with the accepted machine baseline.

04 Diagnostics and escalation

Model-path fault isolation

Gap cannot be reached	Stop and compare insertion datum, target position, case geometry and companion hardware.
Bias is noisy or unstable	Inspect the ClickLoc joint, cable route, nearby conductive surfaces and channel wiring.
Dynamic response differs	Re-check target condition, probe orientation, total system length and monitor configuration.

Engineering decision questions

Why can 190501-00-00-CN resolve low-speed fan-train vibration?	Its response extends to 1.5 Hz at the wider tolerance band, covering the running-speed region of machines operating at or above 90 rpm.
How should the receiving channel for 190501-00-00-CN be scaled?	Use 100 mV/in/s sensitivity, verify the 10.1 Vdc bias and confirm a known velocity response through the complete installed circuit.
Which mounting decision remains open for 190501-00-00-CN?	Option 00 supplies no stud, so the maintenance team must verify the installed thread, adapter and surface from the approved drawing.
How is polarity retained when installing 190501-00-00-CN?	Record the original axis and pin identity; motion from base toward the top makes Pin A positive relative to Pin B.

05 Handover and evidence package

Source revision	Record the revision of Bently Nevada 190501 Velomitor CT Transducer Datasheet 141636 Rev. AF used for the work review.
Applicability record	Retain the exact order code and the documented system conditions that govern the installed use.
Installed evidence	Record the full marking, insertion datum, locknut position, target relationship, cable route and companion component identities.
Functional evidence	Slow-roll runout and the intended vibration, position or phase response agree with the accepted machine baseline.
Deviation record	Record any identity, interface or measured-result difference and its approved disposition.

Commissioning acceptance criteria

Identity acceptance	The complete 190501-00-00-CN marking agrees with the released work order and photographs.
Mechanical acceptance	Installed position, route, support, connector condition and protection agree with the approved record.
Electrical acceptance	Installed datum, thread engagement, cable support and stable live gap agree with the approved work record.
Functional acceptance	Slow-roll runout and the intended vibration, position or phase response agree with the accepted machine baseline.

06 Product-specific engineering record

Amplitude linearity	+/-2% to 63.5 mm/s peak
Transverse response	Less than 5% of axial
Mounted resonant frequency	9 kHz minimum
Output bias voltage	10.1 +/-1.0 Vdc
Dynamic output impedance	Less than 400 ohms typical
Noise floor	0.229 mm/s peak, 1.5 Hz to 1 kHz

Maximum cable length	305 m
Operating temperature	-40 to +85 deg C
Connector	2-pin 316L stainless-steel MIL-C-5015
Mounting torque	4.5 +/-0.6 N m
Configuration suffix	CN - retain exact delivered marking

Lifecycle and replacement decisions

Lifecycle decision	190501-00-00-CN is the no-stud, MIL-C-5015 execution of the low-frequency Velomitor CT transducer. The CN-marked complete reference has no asserted factory phase in the applicable technical record.
Replacement decision	Preserve the 100 mV/in/s velocity scale, 10.1 Vdc bias, two-pin connection and the installed mounting adaptor selected for option 00. A conventional moving-coil sensor or a studded variant changes both circuit behavior and mechanical installation.
Supply boundary	The offered item is the 190501-00-00-CN transducer body. Because option 00 supplies no mounting stud, the adaptor, mating cable and any housing parts must be confirmed separately in the quotation.

Verified related product references

Recommended product	Bently Nevada 330980-70-05
Recommended product	Bently Nevada 330425-01-00
Recommended product	Bently Nevada 330500-07-00
Recommended product	Bently Nevada 330706-005-046-10-02-00
Recommended product	Bently Nevada 200355-00-00-00

Discuss the exact marking and installed relationship with Apter Power.
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