Bently Nevada 190501-07-00-04

Low-Frequency Casing Velocity Transducer

Bently Nevada 190501-07-00-04 is a low-frequency Velomitor CT with a 3/8-24 plate stud and two-pin MIL-C-5015 interface.

Sourcing Support | 12-Month Warranty

Product summary

Manufacturer part number	190501-07-00-04
Shipping	Swift global dispatch
Condition	New, original product
Shipping size (est.)	10.2cm x 4cm x 3.4cm
Country of Origin	USA
Manufacturer	Bently Nevada
Product Category	Machinery Monitoring Systems
Spare Part Number	190501-07-00-04
Weight	0.35 kg

Buyer information / Overview

Low-frequency cooling-tower velocity measurement. Evaluate low-frequency running-speed vibration transmitted to a rigid housing.

Low-speed fan response

The CT design captures vibration associated with slow cooling-tower machinery.

Integrated velocity signal

The piezoelectric sensing path supplies casing velocity for the receiving monitor.

Isolated electronics

Internal circuitry is isolated from the case to support the documented wiring arrangement.

The Velomitor CT measures casing velocity on cooling-tower and air-cooled heat-exchanger fans, including low running speeds. The selected plate stud establishes the machine interface; the connection option is the two-pin MIL-C-5015 interface.

Its useful low-frequency response differs from the standard 330500 Velomitor. The broader velocity range or higher-temperature rating of another sensor must not be transferred to this CT execution.

A casing measurement represents rotor condition only where vibration is transmitted to the mounting point. Choose a rigid bearing-housing location and compare fan, motor and gearbox components within the documented response and amplitude limits.

Controller platform reference: 190501 Velomitor CT. Use the specified system configuration.

Technical Specifications

Velocity sensitivity	3.94 mV/(mm/s) / 100 mV/(in/s), +/-5%
Frequency response	1.5 Hz to 1 kHz (+/-3 dB)
Tighter response band	3 to 900 Hz (+/-1 dB)
Peak velocity range	63.5 mm/s
Amplitude linearity	+/-2% to 63.5 mm/s peak
Transverse response	<5%
Mounted resonance	>=9 kHz (stud mount, excluding quick disconnect)
Output bias	10.1 +/-1 V DC (A relative to B)
Dynamic output impedance	<400 ohm typical
Operating temperature	-40 to +85 deg C
Shock limit	5000 g peak
Connector contacts	2
Mounting interface	3/8-24 to 3/8-24 plate stud
Mounting torque	4.5 +/-0.6 N m
Maximum cable length	305 m (02173006 cable)

Technical source: Bently Nevada 190501 Velomitor CT Transducer Datasheet 141636 Rev. AF. Electrical values are specified at +20 to +30 deg C and 100 Hz unless otherwise stated. Cable performance also depends on capacitance, frequency and signal amplitude. CT velocity range can be reduced by high-frequency acceleration components.
Apter Power product summary. Selected original manufacturer pages and a separate field guide are available in Downloads.

Applications / Compatibility

System and supply context: The CT velocity family addresses slow cooling-tower and heat-exchanger fan machinery.

Application scope: Choose a casing point that transmits rotor vibration and retains the low-frequency components of interest at the receiving input.

Cooling-tower fan casing
Trend slow-fan vibration at a transmitting casing.

Fan speed reducer
Observe reducer response within the CT band.

Air-cooled heat exchanger
Choose a rigid point that carries fan vibration.

Plate-stud installation
Fit the plate stud to the prepared machine surface.

Product Precautions

Select a transmitting location
Retain the approved bearing or casing point for the slow fan.

Inspect the plate stud
Verify both thread interfaces and rigid seating before attaching the sensor.

Trace two-pin polarity
Identify A and B against the receiving monitor diagram.

Establish the low-frequency baseline
Compare fan operating speed and representative casing response after installation.

Low fan component is absent
Check mounting-point transmissibility and input high-pass filtering before condemning the sensor.

Clipping during high-frequency activity
Review the CT velocity limit and acceleration components above the useful band.

Lifecycle Status

The factory lifecycle designation for 190501-07-00-04 is not confirmed.

Replacement evaluation should preserve the cooling-tower low-frequency measurement task, the selected plate-stud interface and the receiving channel. The standard 330500 is not a named successor for this order; its response and operating limits are different.

Available Unit Details

Transducer and mounting item	The order specifies the CT transducer with the selected plate stud. It does not identify a complete fan-monitoring installation or a quick-disconnect mounting kit.
Cable supply boundary	Connection option 00 defines the MIL-C-5015 interface. It must not be described as the separate cable-included option; a mating cable requires its own itemized supply record.
Delivered-unit evidence	The actual approval marking, plate-stud delivery and serial identification require confirmation on the allocated transducer. A datasheet response curve is not an individual calibration result for that unit.

Request available-unit photos and details: sales13@apterpower.com

Technical notes

CT response	The low-frequency velocity band addresses slow fan machinery and differs from the standard Velomitor band.
Machine transmission	A casing point is useful only when it transmits relevant rotor vibration to the mounted transducer.
Cable qualification	The stated cable maximum and recommended high-frequency/amplitude condition are distinct limits; evaluate the actual route capacitance.

Alternative Names

190501 07 00 04; 190501/07/00/04

Frequently Asked Questions (FAQ)

1. What should be reviewed before using 190501-07-00-04 on a fan turning below 90 rpm?

The manufacturer describes this CT design for fan assemblies operating at or above 90 rpm. For a slower machine, review the intended vibration frequencies, input filtering and sensor suitability rather than extending the published application downward from the product name alone.

2. How can high-frequency activity reduce usable velocity measurement with 190501-07-00-04?

The specified CT velocity range can be significantly reduced by acceleration components above 1 kHz exceeding the stated high-frequency condition. Review the complete vibration spectrum and operating-range curves when clipping or unexpected amplitude occurs; a low fundamental fan speed does not exclude high-frequency acceleration.

3. Why do the 305-metre maximum and the condition-based cable recommendation differ for 190501-07-00-04?

They describe different performance conditions. The recommendation considers vibration amplitude, frequency and cable capacitance, while the maximum uses the specified interconnect cable. Review the actual route capacitance and signal duty; do not treat the largest length as an unconditional design allowance.

4. Can the minimum mounted resonance be assumed after adding quick-disconnect hardware to 190501-07-00-04?

The stated minimum resonance is for the stud-mounted condition and explicitly excludes quick disconnect. The ordered plate-stud interface and a proposed quick-disconnect assembly therefore need separate mechanical review. Do not carry the stud-mounted resonance claim across an added mounting stack without applicable evidence.

5. What should be investigated when 190501-07-00-04 reports little vibration at a visibly moving fan assembly?

Check whether the chosen mounting point transmits the relevant rotor vibration into the casing measurement. The manufacturer identifies that mechanical transmission as essential. Compare the mounting location and receiving-channel filtering before concluding that either the transducer or the machine is healthy.

6. How should phase polarity be checked when connecting 190501-07-00-04 to an existing channel?

Use the documented base-to-top motion and Pin A relative to Pin B convention, then compare it with the receiving input wiring and any channel inversion. Correct amplitude alone cannot establish matching phase polarity. Preserve the chosen mechanical orientation in the acceptance record.

7. Why can a very small low-frequency indication from 190501-07-00-04 require a noise-floor review?

The CT datasheet includes a frequency-dependent low-frequency noise-floor curve. Compare the observed level with the applicable sensor and channel conditions before interpreting a small indication as machine motion. A valid sensitivity number does not imply unlimited resolution near the low-frequency end.

8. Does a normal bias reading certify the mechanical installation of 190501-07-00-04?

Bias is an electrical condition referenced between the specified pins; it does not establish mounting-point transmission, plate-stud seating or the useful frequency response of the installed assembly. Confirm those mechanical conditions and compare a controlled operating response before releasing the fan-monitoring function.

Downloads

190501-07-00-04 Official Technical Reference Excerpt (PDF)	Original CT velocity specifications and applicable assembly drawings.
190501-07-00-04 Installation and Commissioning Guide (PDF)	Model-specific installation decisions, fault distinctions and acceptance evidence for 190501-07-00-04.

What happens after you enquire

Review your reference	Send the full marking, quantity and label photos. We review the item and any version details that need clarification.
Confirm the offer	Check the quoted reference, condition, included items and expected dispatch date before approving your order.
Arrange dispatch	Confirm delivery details and receive the tracking number when it becomes available.

Ordering checks

Include 190501-07-00-04 and every revision or approval marking visible on the item. Keep the exact reference on your enquiry and quotation.

Request available label and interface photos. Have your maintenance team compare the offered 190501-07-00-04 reference with the installed equipment and applicable Bently Nevada documentation.

Service and support

Dispatch Planning	Confirm stock and lead time with our team.
Dedicated Manager	Personalized one-to-one VIP service
ISO 9001:2015 Certified	Trusted quality management
Warranty Policy	Review the applicable warranty coverage and claim process.
Return Notice	Check the return process and obtain approval before sending an item back.
Shipping Method	Review shipping arrangements, transit estimates and delivery responsibilities.
Parts Availability	Browse stock listings and confirm current availability with our team.
How to order	See how to submit an enquiry, review a quotation and confirm an order.

Discuss your requirement

Send the full marking, label photos, quantity and required date. Our team will review the available sourcing options with you.

WhatsApp / Phone: +86 18030235313 | sales13@apterpower.com

Related product references

Separate supply references; listing does not establish interchangeability.

- Bently Nevada 330701-00-15-10-02-05
- Bently Nevada 330780-51-05

Discuss 190501-07-00-04 and the installed application with Apter Power. sales13@apterpower.com | +86 18030235313