

Product dashboard

Velomitor CT Low-Frequency Velocity Transducer

Bently Nevada 190501-09-99-01 is a Velomitor CT velocity transducer configured for low-frequency casing-vibration velocity on cooling-tower or air-cooled heat-exchanger fan assemblies.

PRODUCT & TRADE RECORD	DETAIL
Manufacturer	Bently Nevada
Model	190501-09-99-01
Country of origin	USA
HS code	8537101190
Shipping origin	Xiamen, Fujian, China
Availability	Stock 1 3-day lead time Fast shipping

Velocity output

Conditioned dynamic signal with DC bias for the compatible monitoring channel.

Installation identity

Plate stud 3/8-24 to 1/4-in NPT with included 32 ft cable.

Approval identity

Option 01 is North America cNRTLus per 108M1756.

Performance and configuration

PARAMETER	VALUE
Transducer type	Velomitor CT velocity transducer
Primary application	Low-frequency casing vibration on cooling-tower or air-cooled heat-exchanger fans
Sensitivity	3.94 mV/mm/s (100 mV/in/s), +/-5%
Frequency response	3.0 to 900 Hz, +/-1 dB
Extended frequency response	1.5 Hz to 1 kHz, +/-3 dB
Velocity range	63.5 mm/s peak (2.5 in/s peak)
Transverse sensitivity	Less than 5%
Amplitude linearity	+/-2%
Mounted resonance	9 kHz minimum
Bias voltage	10.1 Vdc +/-1 Vdc
Dynamic impedance	Less than 400 ohm
Broadband noise floor	0.229 mm/s peak

PARAMETER	VALUE
Maximum cable length	305 m (1000 ft)
Operating temperature	-40 to +85 degC
Storage temperature	-40 to +100 degC
Shock resistance	5000 g
Humidity	100% condensing, non-submerged
Case material	316L stainless steel
Connector	2-pin MIL-C-5015
Mounting interface	Plate stud 3/8-24 to 1/4-in NPT
Mounting torque	4.5 +/-0.6 N m
Mounting orientation	Any orientation
Agency approval option	01, North America cNRTLus option per approvals guide 108M1756

Applications and precautions

Cooling-tower fan velocity

Measures low-frequency casing motion on fan assemblies for condition assessment.

Air-cooled heat exchangers

Supports vibration monitoring on air-cooled heat-exchanger fan assemblies.

Low-frequency measurement

Velocity response extends to the low-frequency fan operating region.

Installed monitoring channel

Provides a dynamic velocity signal with DC bias for the compatible monitor input.

NO.	INSTALLATION CONTROL
1	Verify the complete 190501-09-99-01 marking, plate-stud execution and approval option before work.
2	Place the fan assembly and associated protection or condition-monitoring channel in the approved maintenance state.
3	Use a rigid, clean mounting surface and preserve the documented 3/8-24 to 1/4-in NPT interface.
4	Apply mounting torque of 4.5 +/-0.6 N m without side-loading the transducer body.

NO.	INSTALLATION CONTROL
5	Route the included 32 ft cable with support and bend control; protect the 2-pin connector from contamination.
6	Maintain the shield and signal termination exactly as shown on the installed monitor drawing.
7	Verify bias voltage, broadband noise and polarity before accepting the low-frequency velocity signal.
8	Compare the controlled fan response with the established baseline and record the final alarm action.

Technical notes and FAQ

Install the plate-stud transducer on the documented rigid fan-assembly structure, torque the 3/8-24 to 1/4-in NPT interface to 4.5 +/-0.6 N m, and verify the 32 ft cable routing. Confirm bias voltage, polarity, frequency response and the cNRTLus approval option before returning the monitoring channel to service.

QUESTION	ANSWER
Which fan assemblies use 190501-09-99-01?	The 190501-09-99-01 Velomitor CT is intended for low-frequency casing-vibration velocity on cooling-tower and air-cooled heat-exchanger fan assemblies.
What mounting interface is supplied on 190501-09-99-01?	The ordering code specifies a plate stud with a 3/8-24 thread to 1/4-in NPT interface; preserve that exact mechanical execution during replacement.
What cable arrangement must be checked on 190501-09-99-01?	The -99 option is supplied as a unit with an included 32 ft cable; verify the cable route, connector condition and monitor termination before removal.
What velocity signal does 190501-09-99-01 provide?	It provides 3.94 mV/mm/s (100 mV/in/s) sensitivity with a 3 to 900 Hz response at +/-1 dB and an extended 1.5 Hz to 1 kHz response at +/-3 dB.

QUESTION	ANSWER
What torque should be used for 190501-09-99-01?	Use the manufacturer mounting torque of 4.5 +/-0.6 N m for the plate-stud interface, with a rigid, clean mounting surface.
How is the approval option in 190501-09-99-01 interpreted?	Option 01 is the North America cNRTLus approval option listed in the 108M1756 approvals quick-reference guide; confirm the installed site approval drawing.
What electrical checks are required after replacing 190501-09-99-01?	Confirm the 10.1 Vdc +/-1 Vdc bias, broadband noise floor, polarity, stable connector termination and a controlled fan-response trend before release.
What should be recorded for 190501-09-99-01 maintenance?	Retain the complete model code, mounting torque, cable route, approval option, bias and noise checks, diagnostic state and final alarm-response evidence.

Related products and source record

BRAND + MODEL	PRODUCT ROLE	APTER POWER PAGE
Bently Nevada 190501-02-99-00	Velomitor CT velocity transducer	View Bently Nevada 190501-02-99-00 page
Bently Nevada 190501-10-00-00	Velomitor CT velocity transducer	View Bently Nevada 190501-10-00-00 page
Bently Nevada 190501-12-00-01	Velomitor CT velocity transducer	View Bently Nevada 190501-12-00-01 page
Bently Nevada 190501-01-00-04	Velomitor CT velocity transducer	View Bently Nevada 190501-01-00-04 page
Bently Nevada 190501-12-00-02	Velomitor CT velocity transducer	View Bently Nevada 190501-12-00-02 page
Bently Nevada 330500-07-00	Velomitor CT velocity transducer	View Bently Nevada 330500-07-00 page
Bently Nevada 330500-01-00	Velomitor CT velocity transducer	View Bently Nevada 330500-01-00 page
Bently Nevada 330525-00	Velocity transducer system accessory	View Bently Nevada 330525-00 page

SOURCE IDENTIFIERS

Bently Nevada 190501 Velomitor CT Transducer Datasheet - 141636 Rev. AF.
Approvals Quick Reference Guide - 108M1756.
Related Apter Power pages are navigation aids, not manufacturer evidence.

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