

Velomitor CT / Technical Reference

Exact article: 190501-09-00-04

LOW-FREQUENCY CASING VIBRATION

The 190501 execution measures casing vibration velocity on cooling-tower and air-cooled heat-exchanger fan assemblies operating at or above 90 rpm.

PRODUCT IDENTITY

Velomitor CT velocity transducer

ORDER CODE / MOUNT 09

Plate stud, 3/8-24 to 1/4 NPT

ORDER CODE / CONNECTION 00

MIL-C-5015, two-pin interface

ORDER CODE / APPROVAL 04

01–04 approval group; site conditions govern

SIGNAL AND SERVICE POSITION



ENGINEERING BOUNDARY

The selected casing point must transmit rotor vibration. A poorly mounted sensor can reduce amplitude or alter frequency response; document the location and verify the channel after work.

Measurement and Electrical Data

Sensitivity	3.94 mV/mm/s (100 mV/in/s), $\pm 5\%$
Response, ± 1 dB	3 to 900 Hz
Response, ± 3 dB	1.5 Hz to 1 kHz
Velocity range	63.5 mm/s peak
Amplitude linearity	$\pm 2\%$ to 63.5 mm/s peak
Transverse response	<5% of axial sensitivity
Mounted resonance	At least 9 kHz, stud mounted
Output bias	10.1 Vdc ± 1.0 Vdc, A relative to B
Dynamic impedance	<400 ohms, typical
Broadband noise	0.229 mm/s peak, 1.5 Hz to 1 kHz

REFERENCE CONDITIONS

Manufacturer parameters are specified at +20 to +30 C and 100 Hz unless otherwise indicated. Vibration above 10 g peak and 1 kHz can reduce the stated velocity range.

Order Code and Installation Interfaces

Product identity	Velomitor CT velocity transducer
Order code / mount 09	Plate stud, 3/8-24 to 1/4 NPT
Order code / connection 00	MIL-C-5015, two-pin interface
Order code / approval 04	01–04 approval group; site conditions govern
Operating temperature	-40 to +85 C
Storage temperature	-40 to +100 C
Humidity	100% condensing, non-submerged
Case	316L stainless steel
Mounting torque	4.5 ±0.6 N m

POLARITY / MOUNT

Pin A becomes positive relative to pin B when velocity is directed from the base toward the top. The mounting angle may be any orientation; the selected point must provide a sound mechanical path.

Applications, Limits and Decisions

Cooling tower fan

Casing-mounted velocity measurement for fan assemblies at or above 90 rpm.

Air-cooled exchanger

Monitor fan-bearing housing or casing vibration where rotor motion is transmitted.

Speed reducer

Track vibration frequency components generated by the reducer in the fan train.

Fan motor

Capture motor-related vibration components in the selected casing measurement.

MODEL-SPECIFIC ENGINEERING QUESTIONS

What does 190501-09-00-04 sense?

Casing vibration velocity at the selected machine mounting point.

What is the 09 mounting execution?

A plate stud from 3/8-24 at the transducer to 1/4 NPT at the machine.

How is 190501-09-00-04 connected?

The 00 connection is a two-pin MIL-C-5015 interface.

What is its low-frequency response?

1.5 Hz to 1 kHz within ± 3 dB; 3 to 900 Hz within ± 1 dB.

Evidence and Related Products

RELATED BENTLY NEVADA PRODUCT PAGES	
01 Bently Nevada 330101-00-30-50-02-00	02 Bently Nevada 330930-040-02-00
03 Bently Nevada 330105-00-05-10-02-00	04 Bently Nevada 330901-11-25-10-01-00
05 Bently Nevada 330102-00-70-10-02-05	06 Bently Nevada 330905-14-19-10-02-05
07 Bently Nevada 330905-00-07-10-02-05	08 Bently Nevada 330905-00-05-10-12-CN
09 Bently Nevada 330909-00-80-10-02-05	10 Bently Nevada 330850-51-CN
11 Bently Nevada 330101-00-10-10-02-00	12 Bently Nevada 330105-02-12-15-02-CN
13 Bently Nevada 330905-08-13-10-12-05	14 Bently Nevada 330905-00-10-10-02-CN

Related links are navigation only, not evidence for technical parameters.

MANUFACTURER SOURCE RECORD
Baker Hughes / Bently Nevada, 190501 Velomitor CT Transducer Datasheet, 141636 Rev. AF (2026).

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