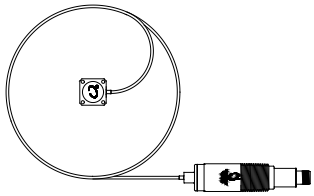
330750 and 330752 High Temperature Velomitor* System

Bently Nevada* Asset Condition Monitoring



Description

The standard 330500 Velomitor* Piezo-velocity Sensor has a limited temperature range it can be exposed to, due to its signal conditioning electronics being located in the same case as the sensing element. Temperature limitations of the electronics limit its maximum operating temperature to +121°C (+250°F).

The 330750 and 330752 High Temperature Velomitor System (HTVS) has a fundamentally different construction to solve this problem. Its design segregates the sensing element from the signal conditioning electronics, with the two permanently connected via a hardline cable. Current versions (see note below) of these sensors allow the sensing head to be mounted on surfaces with temperatures as high as +400°C (+752°F). Due to the segregated design, the signal conditioning electronics can be installed in a cooler location. This achieves overall transducer system performance comparable to other Velomitor transducers, but permits use at significantly higher temperatures. By eliminating connections between the sensing head and its associated signal conditioning electronics, a significant source of potential transducer failures (connector problems) is eliminated.

⚠ Caution

If housing measurements are being made for overall protection of the machine, thought should be given to the usefulness of the measurement for each application. Most common machine malfunctions (imbalance, misalignment, etc.) originate at the rotor and cause an increase (or at least a change) in rotor vibration. In order for any housing measurement alone to be effective for overall machine protection, a significant amount of rotor vibration must be faithfully transmitted to the bearing housing or machine casing, or more specifically, to the mounting location of the transducer.

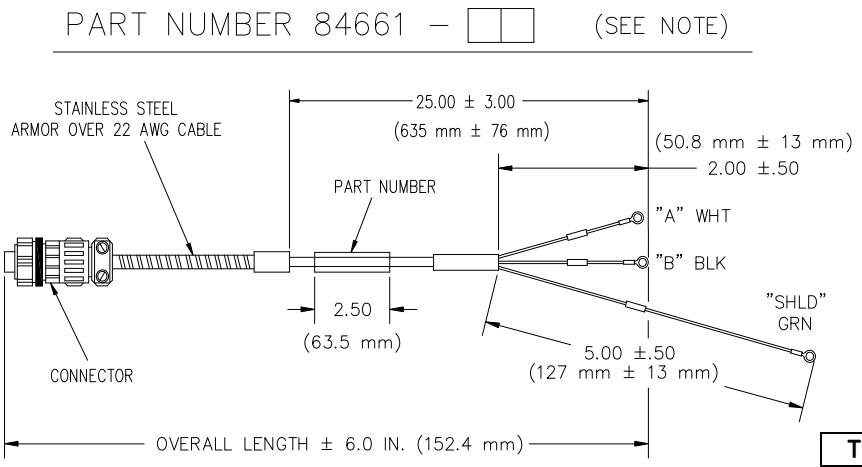
In addition, care should be exercised in the physical installation of the transducer. Improper installation can result in a degradation of the transducer's performance, and/or the generation of signals which do not represent actual machine vibration.

Upon request, Bently Nevada can provide engineering services to determine the appropriateness of housing measurements for the machine in question and/or to provide installation assistance.

Note: The previous version limited the sensor head to +300°C (+572°F). The current versions will have the letter "G" preceding the serial number.

Table 1: Interconnection Cables and Accessories

APPLICATION	PART NUMBER	DESCRIPTION
†Note: AA - Specifies the length (in feet) of cable required		
Standard Interconnect Cable	9571-AA†	Shielded 0.382 mm^2 (22 AWG) cable with a moisture resistant female connector at the HTVS end and ring lugs at the monitor end. Temperature range -29 to 121°C (-20 to 250°F). See Figure 5
Standard Armored Interconnect Cable	84661-AA†	Stainless steel armor over shielded 0.382 mm^2 (22 AWG) cable with a moisture resistant female connector at the HTVS end and ring lugs at the monitor end. Temperature range -29 to 121°C (-20 to 250°F). See Figure 6
Right Angle Interconnect Cable	89477-AA†	Shielded 0.963 mm^2 (18 AWG) cable with a moisture resistant right angle female connector at the HTVS end and ring lugs at the monitor end. Temperature range -29 to 121°C (-20 to 250°F). See Figure 7
Short Run Interconnect Cable	122129-AA†	Shielded 0.963 mm^2 (18 AWG) cable with a moisture resistant female connector at the HTVS end and ring lugs at the monitor end. Temperature range -29 to 121°C (-20 to 250°F). See Figure 8
CE Installation Interconnect Cable (**Required for CE Installations)	02173034	Shielded 0.382 mm^2 (22 AWG) cable with a splash-proof boot over a female connector at the HTVS end and flush cut at the monitor end. Temperature range -55 to 125°C (-67 to 257°F). See Figure 9
0.963 mm^2 (18 AWG) Bulk Cable	02173006	Shielded twisted pair. Same cable as used on 89477-AA and 122129-AA. Specify number of feet.
0.382 mm^2 (22 AWG) Bulk Cable	02173007	Shielded twisted pair. Same cable as used on 9571-AA and 84661-AA. Specify the number of feet. The maximum length that should be used with the HTVS is 305 m (1000 ft)



NOTE

ORDER IN INCREMENTS OF 1.0 FOOT (0.30 m)
EXAMPLE: 03 = 3 FEET (0.91 m) 25 = 25 FEET (7.6 m)
MIN LENGTH = 3.0 FEET (0.91 m) MAX LENGTH = 96 FEET (29 m)

The following are standard lengths	
Feet	**Metres (approx.)**
6	1.8
8	2.4
10	3.0
12	3.6
15	4.5
17	5.0
20	6.0
25	7.6
30	9.0
33	10.0
50	15.2
99	30.0
NOTE: Non-standard/custom lengths can also be ordered at additional cost	

Figure 6: Standard Armored Interconnect Cable