9200 and 74712 Seismoprobe Velocity Transducers

Datasheet

Cordant™

141626 Rev. V

Description

Bently Nevada™ Seismoprobe Velocity Transducer Systems are designed to measure absolute (relative to free space) bearing housing, casing, or structural vibration. The two-wire systems consist of a transducer and appropriate cable.

The Seismoprobe family of velocity transducers is a two-wire design that uses moving-coil technology. It provides a voltage output directly proportional to the transducer's vibration velocity.

Moving-coil transducers are less sensitive to impact or impulsive excitation than solid-state velocity transducers, which are inherently accelerometers with embedded integration electronics.

Moving-coil transducers are less sensitive to impact or impulsive excitation and can represent a good choice for certain applications. Because they don't require external power, they are convenient for portable measurement applications.

For most installations, Bently Nevada's Velomitor family of velocity transducers, which incorporate solid-state technology, provide improved performance and ruggedness for casing velocity measurement applications.

Baker Hughes

High-temperature Two-wire Transducer

Standard Temperature -20°F to +400°F (-29°C to +204°C)

74712-AA-BB-CC-DD

A: Transducer Mounting Angle/Minimum Operating Frequency Option	
01	0 ±2.5, 4.5 Hz (270 cpm)
02	45 ±2.5, 4.5 Hz (270 cpm)
03	90 ±2.5, 4.5 Hz (270 cpm)
06	0 ±100, 10 Hz (600 cpm)
07	0 ±180, 15 Hz (900 cpm)
B: Mounting Base Option	
01	Circular; 1/4-20 UNC stud
02	Circular; 1/4-28 UNF stud
03	Rectangular flange
04	Circular; with three 8-32 threaded studs on a 44 mm (1.75 in) diameter bolt circle
05	No base; 1/2-20 UNF-3A stud
06	Isolated circular 1/4-20 UNC stud
07	Isolated circular 1/4-28 UNF stud
08	Isolated rectangular flange
09	Isolated circular 5/8-18 UNF stud
10	Circular; M10X1 stud
11	Isolated circular M10X1
12	Isolated circular 1/2-20 UNF-2A
C: Connector Option	
02	Top Mount
03	Terminal block top mount
04	Side mount

D: Agency Approval Option	
00	No Approvals
01	CSA
04	ATEX/IECEx

Interconnection Cables

The standard cable lengths below are available. You can order custom cable lengths in increments of one foot at additional cost. Some cables have a minimum and maximum length. For details, see each part description below.

Standard Cable Lengths

Feet	Meters (approximate)
6 ft	1.8 m
8 ft	2.4 m
10 ft	3.0 m
12 ft	3.6 m
15 ft	4.5 m
17 ft	5.0 m
20 ft	6.0 m
25 ft	7.6 m
30 ft	9.0 m
33 ft	10.0 m
50 ft	15.2 m
99 ft	30.0 m

Cable Part Numbers

Part Number	Description
	Use 'NN' in these part numbers to specify the length (in feet) of the cable you want to order.
Standard Cables	
9571-NN	2-conductor twisted, shielded 22 AWG (0.5 mm2) cable with 2-socket moisture-resistant female connector at one end, terminal lugs at the other end (used with monitors or vibration data collectors). Cable operating temperature is -50˚C to 120˚C. Minimum length of 2.0 ft (0.6 m); maximum length of 99 ft (30 m).
84661-NN	2-conductor twisted, shielded 22 AWG (0.5 mm2) armored cable with 2-socket moisture-resistant female connector at one end, terminal lugs at the other end (used with monitors or vibration data collectors). Cable operating temperature is -50˚C to 120˚C. Minimum length of 3.0 ft (0.9 m); maximum length of 99 ft (30 m).
9755-NN	2-wire shielded 22 AWG (0.5 mm2) cable with 2-pin female connectors at each end (connects 9200 or 74712 Seismoprobe Velocity Transducers to Bently Nevada test kits). Cable operating temperature is -70˚C to 150˚C. Minimum length of 1.0 ft (0.3 m); maximum length of 99 ft (30 m).
83968-NN	2-wire straight cable with 2-pin female connector at one end and coaxial connector in the other end (used with instruments with BNC connector input jacks). Minimum length of 2.0 ft (0.6 m); maximum length of 99 ft (30 m).
High-Temperature Cables	
84508-NN	2-wire shielded 22 AWG (0.5 mm2) cable with terminal lugs at each end. Minimum length of 1.0 ft (0.3 m); maximum length of 99 ft (30 m).
84509-NN	2-wire shielded 22 AWG (0.5 mm2) armored cable with terminal lugs at each end. Minimum length of 3.0 ft (0.9 m); maximum length of 70 ft (21 m).
84660-NN	2-wire shielded 22 AWG (0.5 mm2) cable with 2-socket female connector at one end, terminal lugs at the other end. Minimum length of 3.0 ft (0.9 m); maximum length of 99 ft (30 m).

Part Number	Description
84510-NN	2-wire shielded 22 AWG (0.5 mm^2) armored cable with 2-socket female connector at one end, terminal lugs at the other end. Minimum length of 3.0 ft (0.9 m); maximum length of 70 ft (21 m).
87143-NN	2-wire shielded 18 AWG (1.0 mm^2) cable with terminal lugs at each end. Withstands 200°C (392°F). Minimum length of 3.0 ft (0.9 m); maximum length of 99 ft (30 m).

Accessories

Part number	Description
46000-01	Magnetic Base for portable mounting of Seismoprobe Velocity Transducers.
46122-01	Quick connect for semi-permanent mounting of Seismoprobe Velocity Transducers.
02173006	Bulk cable; 2-conductor, twisted, shielded. 18 AWG (1.0 mm^2) cable without connectors or terminal lugs. Specify number of feet. Withstands +200°C (+392°F).
00531061	Mating connector for 9200 and 74712 Seismoprobe Velocity Transducers.
00530574	Cable Mounting Clamp

Graphs and Figures

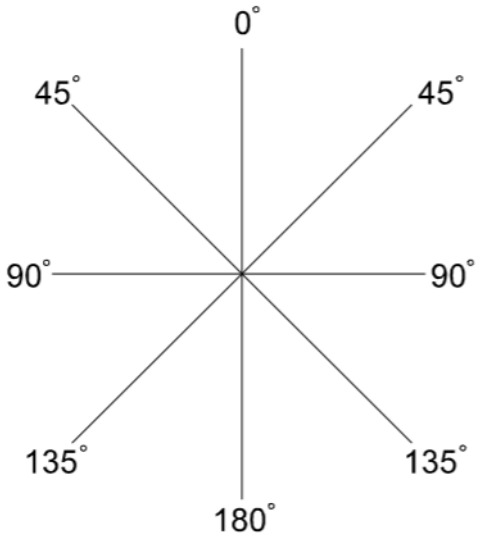
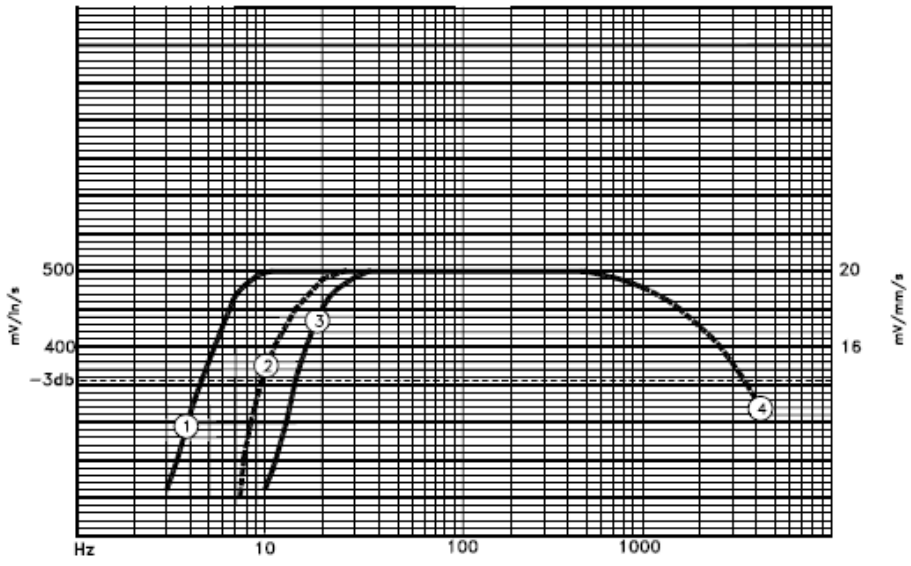


Figure 1: Seismoprobe Orientation

All Seismoprobe Velocity Transducers are specified for the mounting orientations shown here. 0° is vertical, as viewed from driver end of the monitored machine.



1. 270 CPM (4.5 Hz)
2. 600 CPM (10 Hz)
3. 900 CPM (15 Hz)
4. All versions

Figure 2: Theoretical Velocity Seismoprobe Frequency Response