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Operation Manual

Bently Nevada™ Asset Condition Monitoring



330400 and 330425 Accelerometer

imagination at work

Part Number 127088-01
Rev. H (08/07)

Contact Information

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Additional Information

Notice:

This manual does not contain all the information required to operate and maintain the product. Refer to the following manuals for other required information.

3300/25 Dual Accelerometer Input Monitor (Peak) Maintenance Manual (Part Number 80181-01)

3300/26 Dual Accelerometer Input Monitor (RMS) Maintenance Manual (Part Number 86800-01)

2201 Operation and Maintenance Manual (Part Number 100875-01)

3500/42 Proximitor/Seismic Monitor Module Operation and Maintenance Manual (Part Number 129773-01)

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1. Operating Information

This section contains information that will help you prepare for the installation of the Accelerometer Systems. General information for typical applications, principles of operation, and monitoring compatibility of the Accelerometers are presented in this section.

1.1 Application

Accelerometers are very effective when used for the measurement of high frequency vibrations. Supplemental high frequency casing measurements are typically required for measuring gear mesh and blade pass frequencies. Section 2 explains the proper installation of the Accelerometers.

Application Advisory: If casing acceleration measurements are being made for the overall protection of a machine, thought should be given to the usefulness of the measurement for each application. Most common machine malfunctions, such as unbalance, misalignment, etc., occur on the rotor and originate as an increase or a change in rotor vibration. For any casing measurement alone to be effective for overall machine protection, a significant amount of rotor vibration must be faithfully transmitted to the machine casing or mounting location of the transducer. In addition, care should be exercised in the physical installation of the acceleration transducer on the bearing housing or machine casing. Improper installation may result in a decrease of the transducer amplitude and frequency response and the generation of false signals that do not represent vibration on that particular machine.

1.2 Principle of Operation

The Accelerometer is made up of a piezoelectric shear-mode element and electronics. When subjected to machinery vibration, this mass/spring system exerts a force on the piezoelectric ceramic, which generates a charge proportional to that force. The electronics converts the charge to a voltage that can be sent to a Bently Nevada monitoring system.

The 330400 and 330425 Accelerometers are designed to monitor vibration frequencies ranging from 10 Hz to 15 kHz. The calibrated scale factor and maximum acceleration for the Accelerometers are shown in Table 1.

Table 1-1.

Transducer Model	Scale Factor (mV/g ± 5%)	Maximum Acceleration
330400	100	50
330425	25	75

The 330400 and 330425 Accelerometers are three wire transducers which require external power supplies. The power supply voltage is -24 Vdc. A simplified schematic block diagram of the 330400 and 330425 Accelerometer appears in Figure 1-1.

The internal circuitry of the 330400 and 330425 accelerometers automatically sets the output dc bias when power is supplied. The dc bias and ac signal appears across pin "A" and "C".

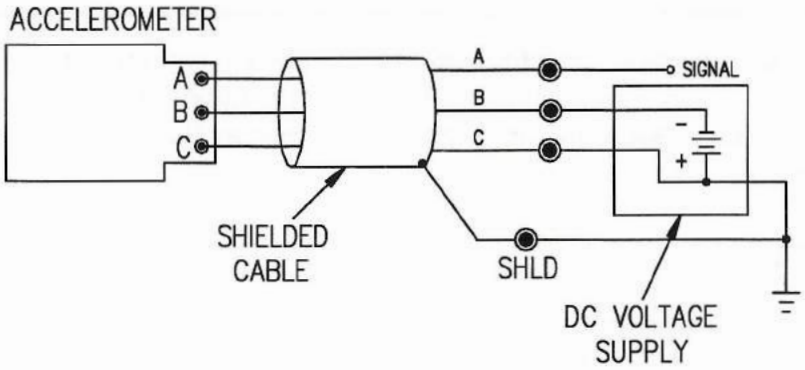


Figure 1-1 Schematic Block Diagram

1.3 Compatible Monitoring Systems

Compatible Bently Nevada monitoring systems can power the 330400 and 330425 Accelerometer without additional external circuitry.

The flexibility of the 3300 Dual Accelerometer Monitor, the 2201 Monitor and 3500/42 (or 3500/42M) Monitor makes them ideally suited for use with the 330400 and 330425 Accelerometers. The Alert and Danger setpoints and filtering can be adjusted to isolate, eliminate, or emphasize specific vibration frequencies. The monitor can also be configured to integrate each channel to provide output in terms of velocity. OK circuitry continuously monitors field wiring for open and short circuits and for Accelerometer malfunctions.

The monitoring systems and full-scale range options that are compatible with the 330400 and 330425 Accelerometers are shown in Table 1-1 and Table 1-2.

Table 1-2. Compatible Full-Scale Range Options for the 330400 Accel

Monitoring System	Compatible Full-scale with No Integration		Full-Scale with Integration	
	pk	rms	pk	rms
3300/25	Compatible with all full-scale range options		Compatible with all full-scale range options	
3300/26	0 to 5 g	0 to 2 g 0 to 10 g 0 to 20 m/s^2 0 to 50 m/s^2 0 to 100 m/s^2	0 to 1 in/s 0 to 2 in/s 0 to 25 mm/s 0 to 50 mm/s	
2201	0 to 2 g 0 to 5 g 0 to 10 g 0 to 20 m/s^2 0 to 50 m/s^2 0 to 100 m/s^2	0 to 2 g 0 to 5 g 0 to 10 g 0 to 20 m/s^2 0 to 50 m/s^2 0 to 100 m/s^2	0 to 1 in/s 0 to 2 in/s 0 to 25 mm/s 0 to 50 mm/s	0 to 1 in/s 0 to 2 in/s 0 to 25 mm/s 0 to 50 mm/s
3500/42 or 3500/42M	See manual part number 129773-01 for more details			

Table 1-3. Compatible Full-scale Range Options for the 330425 Accel

Monitoring System	Compatible Full-Scale with No Integration		Full-Scale with Integration	
	pk	rms	pk	rms
3300/26	0 to 20 g 0 to 25 g 0 to 40 g 0 to 50 g 0 to 200 m/s^2 0 to 250 m/s^2 0 to 400 m/s^2 0 to 500 m/s^2			0 to 100 mm/s
2201	0 to 20 g 0 to 25 g 0 to 40 g 0 to 50 g 0 to 200 m/s^2 0 to 250 m/s^2 0 to 400 m/s^2 0 to 500 m/s^2	0 to 20 g 0 to 25 g 0 to 40 g 0 to 50 g 0 to 200 m/s^2 0 to 250 m/s^2 0 to 400 m/s^2 0 to 500 m/s^2	0 to 100 mm/s	0 to 100 mm/s
3500/42 or 3500/42M	See manual part number 129773-01 for more details			

2. Installation

2.1 Receiving Inspection

Inspect the components of the order when they are received to see if there was any damage during shipping. Keep all shipping forms and invoices. If any shipping damage is apparent, file a claim with the carrier and submit a copy to Bently Nevada. Include all model numbers and serial numbers with the claim. We will either repair or replace damaged parts according to the terms and conditions of the sale.

The Accelerometers are shipped in a protected box and the connector is protected with a plastic cap. The Accelerometers are sensitive instruments and these precautions help to prevent damage during shipping.

2.2 Installing the Accelerometer

2.2.1 Positioning

For optimum performance and accurate measurements, place the accelerometer at a position on the machine casing that is most responsive to vibration. Proper placement often depends on the application. Bently Nevada offers Machinery Diagnostic Services that can help you find the optimum location for your application.

2.2.2 Mounting

Follow these steps to install the Accelerometer:

Step 1: Check that the ambient and surface temperatures of the installation location are within the temperature rating of the Accelerometer: -55° to 121°C (-67° to 250°F).

Step 2: Check that the mounting site is flat, clean and dry. The accelerometer requires a flat area that is 28.6 mm dia. (1.125 in. dia.) for mounting. For best results the mounting surface should have a roughness of no more than 0.813 µm (32 µin) rms and a flatness of at least 25.4 µm (0.001 in) TIR.

Step 3: Drill and tap a hole in the mounting center of the prepared surface as required by the integral mounting stud. The 330400 and 330425 Accelerometers have two mounting stud options: 1/4-28 UNF-2B X 0.35 in and M8X1-6g X 8.89 mm thread. The hole should be perpendicular to the mounting surface within ± 6 minutes.

Step 4: This step only required for accelerometers with a serial number not preceded by the letter "G". Lightly grease the lower face of the mounting adapter

with Dow Corning 340 or equivalent grease and then screw the adapter into the mounting surface. The grease is required to ensure good coupling between the adapter and the mounting surface at high frequencies. A light oil may also be used.

Step 5: This step only required for accelerometers with a serial number not preceded by the letter "G". Use a torque wrench with a 1" hex socket. Tighten the adapter to the mounting surface with a torque of 6.8 ± 1.4 N·m (60 ± 12 inAlb). To remove the adapter, apply a counterclockwise torque to its hex base.

Step 6: Lightly grease the accelerometer mating surface with Dow Corning 340 or equivalent grease and then screw the accelerometer into the mounting surface. The grease is required to ensure good coupling between the accelerometer and the mounting surface at high frequencies. A light oil may also be used.

Step 7: Use a torque wrench with a 15/16" hex socket. Tighten the accelerometer to the mounting surface with a torque of 3.3 ± 0.56 N·m (30 ± 5 in·lb). To remove the accelerometer, apply a counterclockwise torque to its hex base.

2.2.3 Routing Cable

When installing the interconnect cable, route it away from the moving components of the machine and avoid small bending radii. To minimize noise, avoid routing cables near or in the same conduit, raceway, or cable tray with power lines. Prevent the cable from bending sharply, twisting, knotting, or straining. Route the cable through the conduit to prevent physical damage. If the cable must be routed inside lubrication oil lines, be sure it will not be subjected to temperatures exceeding its specified operating range.

2.2.4 Routing Conduit

To route cable through the conduit, connect one end of the conduit to the protective enclosure or other structure in which the monitor is mounted. Connect the other end of the conduit rigidly to a structure near the accelerometer. Before pulling cable through the conduit, protect the terminal lugs by wrapping the cable with tape or a similar covering. Be sure that the cable does not rub against rough or sharp surfaces.

2.2.5 Routing Armored Cable

Use armored cable if the cable is not routed inside conduit. Secure the cable to the supporting surfaces with clips or similar devices. Connect one end of the armor directly to the enclosure or other structure in which the monitor is mounted. Connect the other end of the armor rigidly to a structure near the 330400 and the 330425 Accelerometer. The recommended minimum bend radius for armored cable is 38.1 mm (1.5 in).

2.2.6 Sealing the Interconnect Cable

> **⚠ CAUTION**
>
> **When the conduit is routed through hazardous areas, the ends of the conduit must be sealed to prevent hazardous gases from escaping into non-hazardous areas. Consult local authorities for approved sealing methods in hazardous areas.**

If the differential pressure between the ends of the connector cable is less than one atmosphere, use one of the following cable sealing techniques:

1. ZY5 cable seal similar to Bently Nevada part number 10076-AA.
2. Bently Nevada low-pressure cable seal, part number 43501.

2.3 Power and Signal Connections

Bently Nevada supplies interconnect cables with terminal lugs and a 3-socket mating connector for the 330400 and the 330425 Accelerometer. Interconnect cables are sold separately (see 1for the cable options).

At the accelerometer end, tighten the 3-socket mating connector to the accelerometer's MIL-C-5015 connector. At the monitor end of the cable, use the wiring instructions for the appropriate monitoring system below.

Note: the wiring instructions assume that the interconnect cable is the standard Bently Nevada cable part number 16925 - XX.

2.3.1 3300 MONITORING SYSTEM

Connect the cable "A" lead to the "IN" terminal on the monitor, the "B" lead to the "PWR" terminal, and the "C" lead to the "COM" terminal. The terminal connections for the 3300 Dual Acceleration Monitor appear in Figure 2-1. Refer to the 3300/25 Peak and 3300/26 RMS Dual Acceleration Input Monitor Maintenance Manual (part number 80181-01 and 86801-01) for further information.

2.3.2 2201 MONITORING SYSTEM

Connect the cable "A" lead to "SIG/A" terminal on the monitor, the "B" lead to "PWR/B", and the "C" lead to "COM". The terminal connections for the 2201 Monitoring System appear in Figure 2-2. Refer to the 2201 Monitoring System Operation and Maintenance Manual (part number 100875-01) for further information.

2.3.3 3500 MONITORING SYSTEM

Connect the cable "A" lead to "SIG/A" terminal on the monitor, the "B" lead to "PWR/B", and the "C" lead to "COM". The terminal connections for the 3500/42 Monitoring System appear in Figure 2-3 and Figure 2-4. Refer to the 3500/42 Operation and Maintenance Manual (part number 129773-01) and 3500 Field Wiring Diagram Package (part number 130432-01) for further information.

Application Alert: Miswiring the accelerometer to an external power supply without limiting the current to be less than 15 mA will permanently damage the accelerometer.

2.3.4 EXTERNAL POWER SUPPLY

Using the 16925 interconnect cable, connect the "B" lead to the " - " terminal of the power supply and the "C" lead to the " + " terminal of the power supply. The "A" lead of the cable is the output of the Accelerometer. Turn on the power supply. Adjust the voltage to -24 ± 0.5 Vdc. Set the current limit of the power supply to be less than 15 mA. Measure the dc voltage across the "A" and "C" lead. The voltage should be between -8 and -9 Vdc. If it is not, turn off the power supply immediately and check for proper connections. The terminal connections of the external power supply appear in figure 2-4.

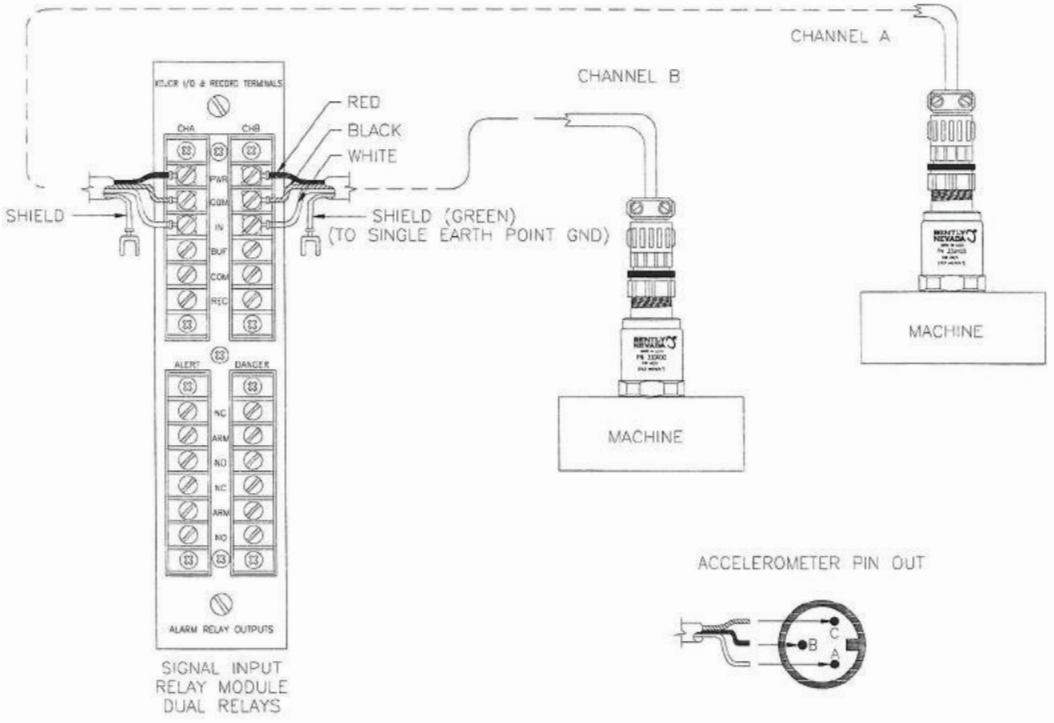


Figure 2-1 Accelerometer/3300 System Connections Using 16925 Interconnect Cable

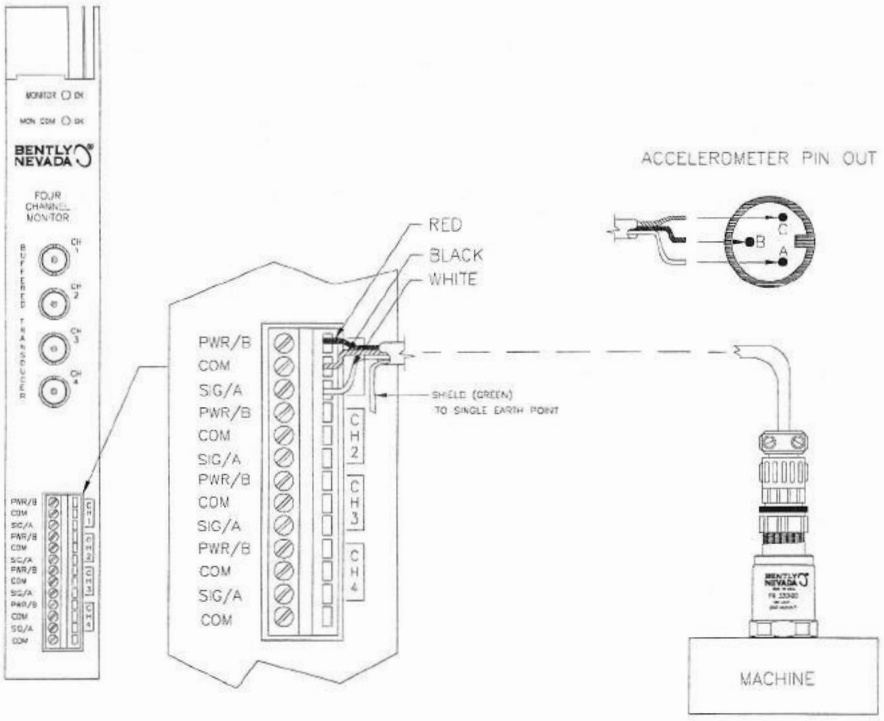


Figure 2-2 Accelerometer/2201 System Connections Using 16925 Interconnect Cable

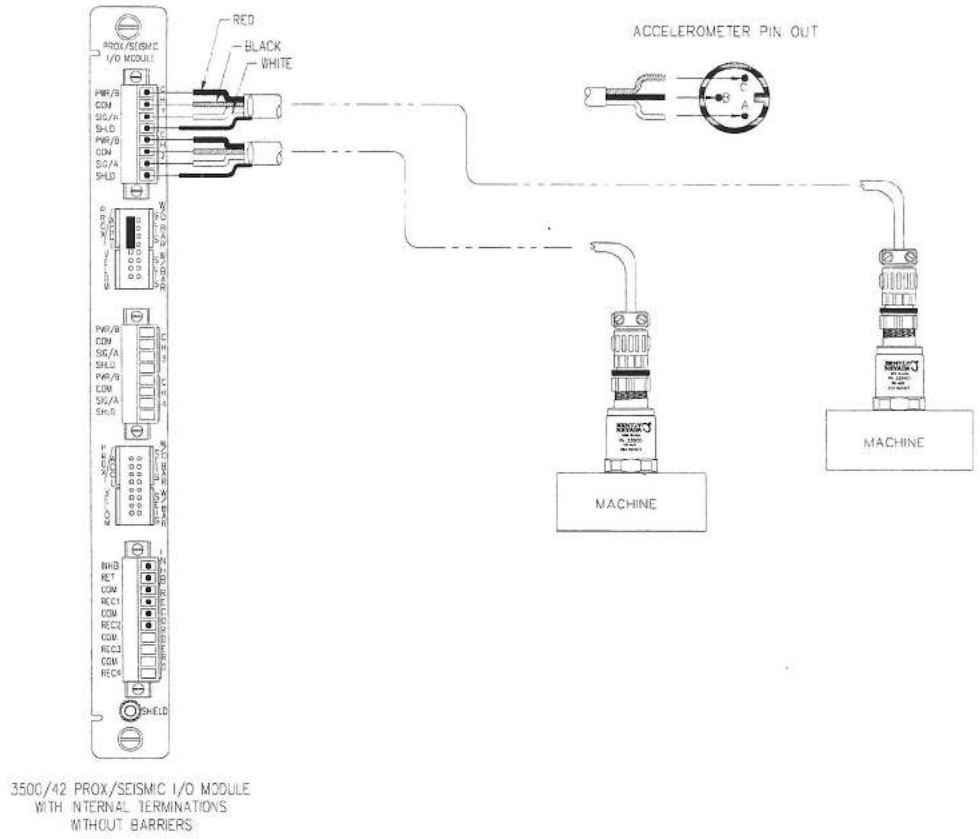


Figure 2-3 Accelerometer/3500 System Connections Using 16925 Interconnect Cable

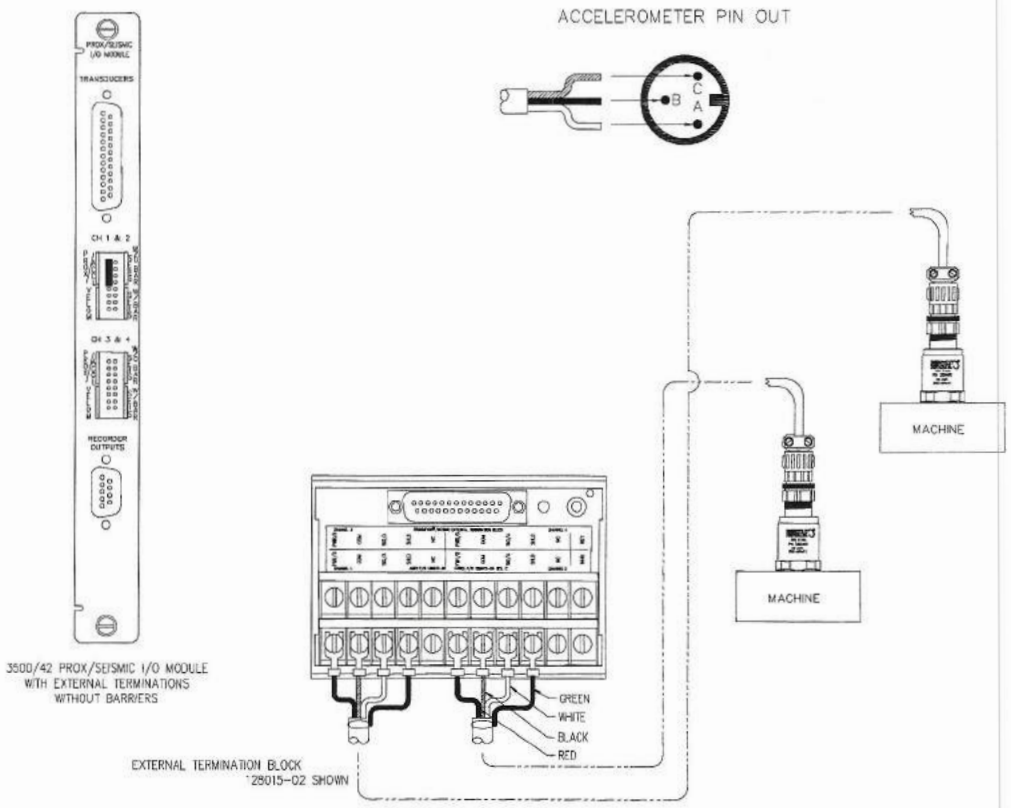


Figure 2-4 Accelerometer/3500 System Connections Using 16925 Interconnect Cable and External Termination Block.

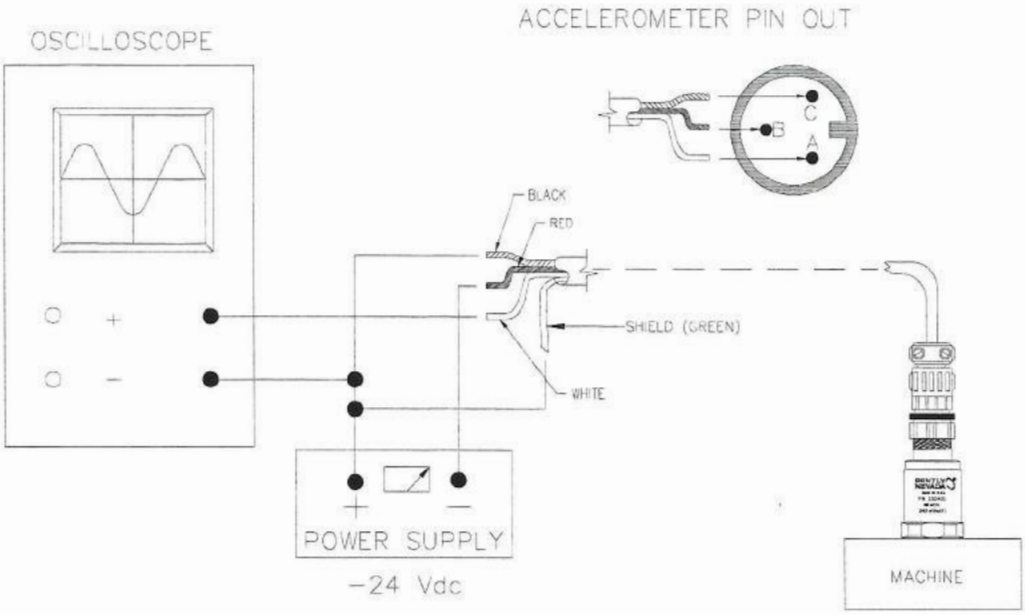


Figure 2-5 Accelerometer/External Power Supply Connections Using 16925 Interconnect Cable

3. Maintenance

This section shows how to check the performance of the 330400 and 330425 Accelerometers. Table 3-1 lists the recommended maintenance equipment. If the equipment is not available, contact the nearest Bently Nevada field office, or return the transducer to the factory or a testing laboratory for testing.

Table 3-1. Recommended Maintenance Equipment

Recommended Equipment	Specification
A Shake Table	
Bently Nevada Monitoring Systems:	
3300, 2201, or 3500	
A Voltmeter	

3.1 Performance Test Procedure

Step 1: Mount the accelerometer on a shake table.

Step 2: Connect the cable to the accelerometer and the monitor as shown in section 2.

Step 3: Shake the accelerometer at 100 Hz with a known acceleration level.

Step 4: Verify the accelerometer output on the monitor or a Voltmeter.

> **Note:** The accuracy of the system can be improved by calibrating the monitor and the shake table separately before performing the system loop check.

3.2 Polarity Test Procedure

Use this test to verify the proper phase response. An improper phase will adversely affect the use of the accelerometer for machinery diagnostics.

Step 1: Power up the accelerometer as shown in Figure 2-5.

Step 2: Set the time base on the oscilloscope to 20 milliseconds/division.

Step 3: Hold the transducer in hand and tap the bottom. Observe that the waveform on the oscilloscope first goes positive as shown in Figure 3-1. If the wave form goes negative first, contact the nearest Bently Nevada office for assistance.

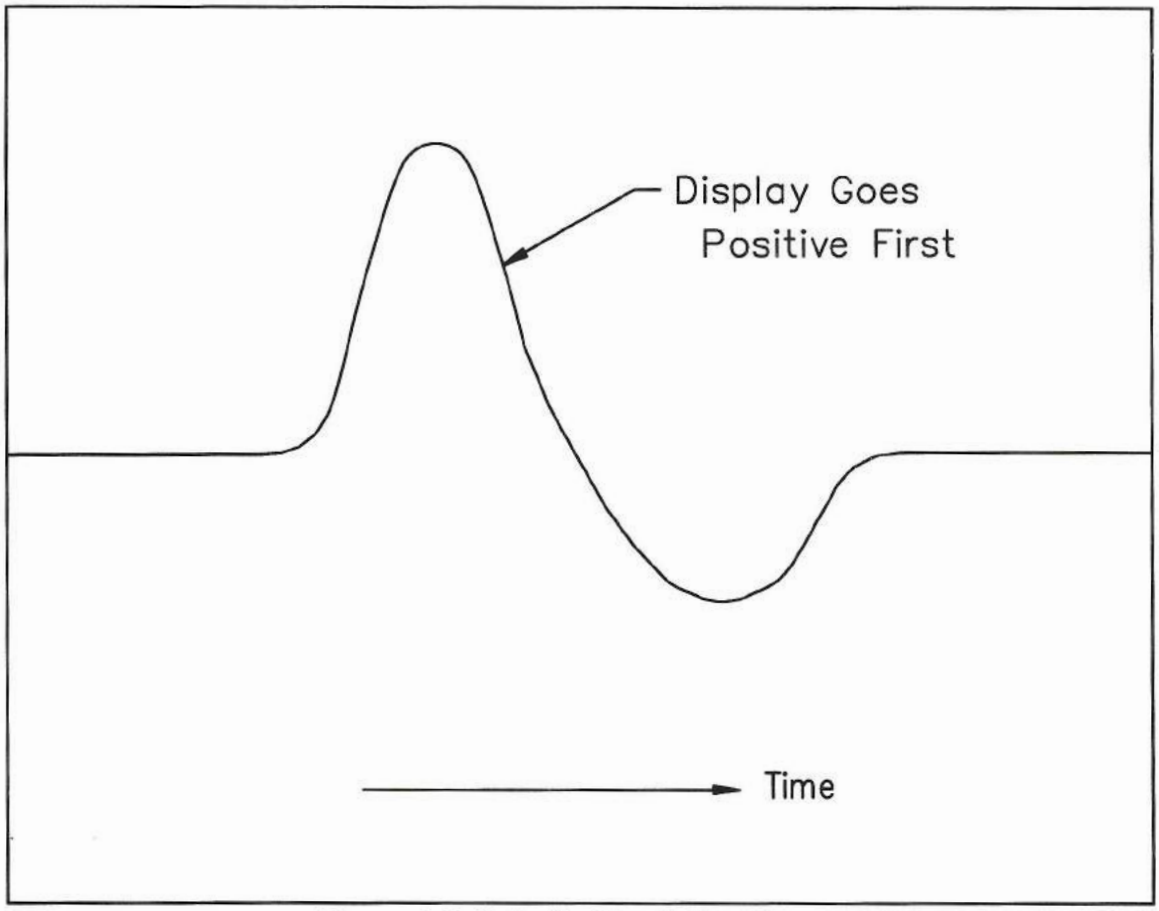


Figure 3-1 Polarity Check Oscilloscope Display

4. Field Testing and Troubleshooting

Use the following procedures to test an installed 330400 and 330425 Accelerometer and isolate a suspected malfunction. The 330400 and 330425 Accelerometers are hermetically-sealed units with no adjustments or field repairable components. If you determine that the accelerometer is not functioning properly, contact the nearest Bently Nevada office for assistance.

When the 330400 and 330425 Accelerometers are used with a Bently Nevada monitoring system, a fault may be due to an accelerometer malfunction, a malfunction in the field wiring, a malfunction in the monitor itself, or a level of vibration that exceeds the OK limit. Before placing a call to our service group, use the steps below to troubleshoot the suspected problems.

4.1 Fault Indication #1 Cause/Solution

4.1.1.1 Bently Nevada Monitor OK LED is off

The vibration level has exceeded the OK limit

Connect a voltmeter to the "IN" and "COM" on the SIRM terminals on the back of the monitor rack. Measure the dc voltage. The voltage should be between -8.0 and -9.0 Vdc.

Monitor Power is off.

Check that the monitor power supply is plugged in and that the power is on.

Interconnect cable is disconnected, connected loosely, connected to the wrong monitor or mis-wired.

Verify that the accelerometer is connected to the correct monitor and to the correct monitor terminals. Check that the screws on the Signal Input Relay Module are tight.

Interconnect cable is not connected or connection is loose at the accelerometer.

Verify that the accelerometer is connected to the cable.

Interconnect Cable is Damaged: Shorted

Visually inspect the interconnect cable for apparent damage. Disconnect the interconnect cable at both ends and measure the resistance among the three conductors of the interconnect cable. If intermittent or shorted, replace the cable.

Interconnect Cable is Damaged: Open

Disconnect the interconnect cable at both ends. Short two conductors together at one end at a time and measure the resistance of the cable at the other end. If open circuited, replace the cable.

Cable conductors are switched

With the accelerometer and the interconnect cable connected to the monitor measure the DC voltage across terminals "IN" and "COM" for the 3300 Monitoring System and "SIG/A" and "COM" for the 2201 and 3500 Monitoring Systems. The voltage should be between -8.0 and -9.0 Vdc. If it is not, check for proper connections.

4.2 Fault Indication #2 Cause/Solution

4.2.1.1 Monitor showing vibration on the front panel when the machine is off line.

Noise is coupled to the Accelerometer signal.

Check that the shield wire is connected to earth or chassis ground.

Check that the accelerometer and the machine case are properly grounded.

5. Specifications

5.1 330400 Accelerometer

Parameters are specified at 25°C (77°F) unless otherwise specified.

Note: Operation outside the specified limits will result in false readings or loss of machine monitoring.

5.1.1 Electrical

Scale factor
10.2 mV/(m/s^2) (100 mV/g) ± 5% @ 100Hz

Frequency Response
± 10%, 30 Hz to 10 kHz
± 3.0 dB, 10 Hz to 15 kHz

Acceleration Range
490 m/s^2 pk (50 g pk)

Transverse Sensitivity
5% maximum of axial

Amplitude linearity
± 1% to 490 m/s^2 pk (50 g pk), above noise floor

Mounted Resonant Frequency
30 kHz minimum

Power Requirement
DC Voltage
-24 ± 4 Vdc.

Bias Current
2 mA

Output Bias Voltage
-8.5±0.5 Vdc, Pin A referenced to Pin C

Dynamic Output Impedance
50 ohms, typical

Broadband Noise Floor (10 to 15k Hz)
0.020 m/s^2 rms (0.002 g rms), typical

Grounding
Internal electronics are isolated from case

Maximum Cable Length
305 m (1000 ft) with no degradation of signal

Base Strain Sensitivity
0.005 g/με

5.2 330425 Accelerometer

Parameters are specified at 25°C (77°F) unless otherwise specified.

Note: Operation outside the specified limits will result in false readings or loss of machine monitoring.

5.2.1 Electrical

Scale factor
2.55 mV/(m/s^2) (25 mV/g) ±5% @ 100Hz

Frequency Response
± 10% 30 Hz to 10 kHz
± 3.0 dB 10 Hz to 15 kHz

Acceleration Range
735 m/s^2 pk (75 g pk)

Transverse Sensitivity
5% maximum of axial

Amplitude linearity
± 1% to 735 m/s^2 pk (75 g pk), above noise floor

Mounted Resonant Frequency
30 kHz minimum

Power Requirement
DC Voltage
-24 ± 4 Vdc

Bias Current
2 mA

Output Bias Voltage
-8.5±0.5 Vdc, Pin A referenced to Pin C

Dynamic Output Impedance
50 ohms, typical

Broadband Noise Floor (10 to 15k Hz)
0.078 m/s^2 rms (0.008 g rms), Typical

Grounding
Internal electronics are isolated from case

Maximum Cable Length
305 m (1000 ft) with no degradation of signal

Base Strain Sensitivity
0.005 g/με

5.2.2 Environmental for the 330400 and the 330425 Accelerometer

Operating Temperature Range

-55° to 121°C (-67° to 250°F)

Shock Limit

49030 m/s^2 pk (5000 g pk) maximum

Humidity Limit

100% condensing, non-submerged. Case is hermetically-sealed

5.2.3 Mechanical for the 330400 and 330425 Accelerometer

Dimensions

See Figure 5-1

Mounting Surface

28.6 mm (1.125 in) diameter

Mounting Torque of Accelerometer

3.3 ± 0.6 N-m (30 ± 5 in-lb)

Case Material

304L stainless steel

Connector

3 pin, MIL-C-5015, hermetically-sealed

Polarity

Pin A goes positive with respect to pin C when acceleration is from base to connector of the transducer.

Weight

3.5 oz. typical

Mounting angles

Any Orientation

5.2.4 Interconnect Cable for the 330400 and 330425 Accelerometer

Standard Interconnect Cable:

Size

0.5 mm^2 (22 AWG)

Materials

Conductor

Silver Tinned Copper

Insulation

Teflon Jacket

Shield

Braided Silver Tinned Copper

Jacket

Teflon

Voltage Rating

600 V

Bend Radius (Unarmored)

25.4 mm (1.00 in)

Operating Temperature Range

-55° to 200°C (-67° to 392°F)

Maximum O.D

4.06 mm (0.0160 in)

5.2.5 Standard Armored Interconnect Cable:

Armored

Materials

Hose Material

AISI 302 or 304 Stainless Steel

Joint Material

Silver Solder or Welded

Hose Diameter

Outside Diameter

Max. 6.99 mm (0.275 in)

Min. 6.68 mm (0.263 in)

Inside Diameter

Max. 5.16 mm (0.203 in)

Min. 4.65 mm (0.183 in)

Bend Radius

38.1 mm (1.50 in)

Operating Temperature Range

-34° to 204°C (-29° to 400°F)

Cable

See the cable specifications for the standard interconnect cable.

Splash Resistance Cable/Connector

Cable Size

1.00 mm^2 (18 AWG)

Materials

Connector

Silver Tinned Copper

Insulation

Teflon Jacket

Shield

Braided Silver Tinned Copper

Jacket

Teflon

Voltage Rating

600 V

Bend Radius
Unarmored

25.4 mm (1.00 in)

Operating Temperature Range

-55° to 200°C (-67° to 392°F)

Boot

Material

Fluorosilicone Elastomer

Operating Temperature

-57° to 177°C (-70° to 350°F)

Maximum I.D

21.34 mm (0.840 in)

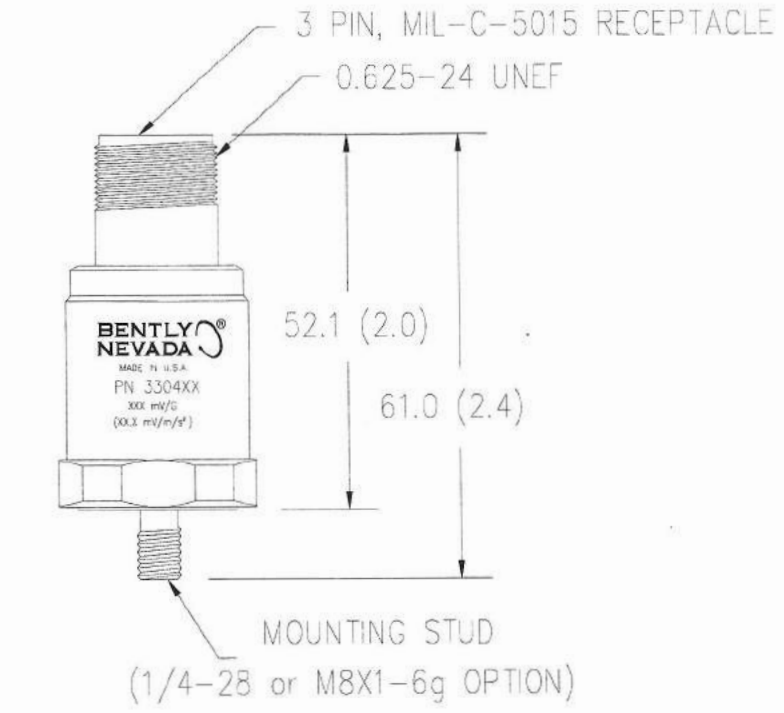
Maximum O.D

28.19 mm (1.11 in)

Maximum Length

95.25 mm (3.75 in)

5.3 Mechanical Outline



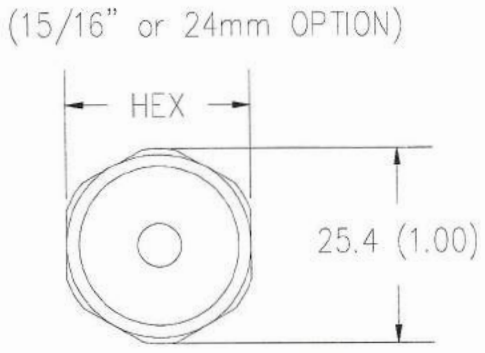
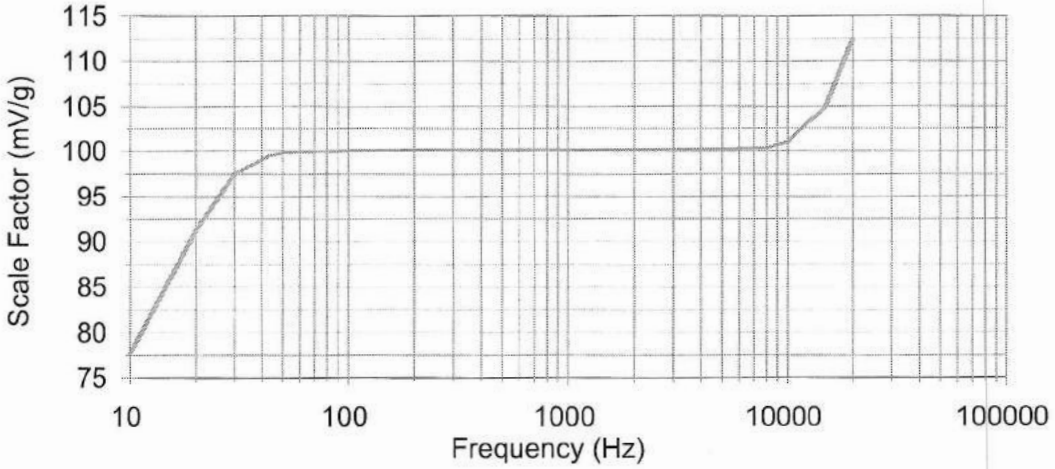


Figure 5-1

Note: The units in this drawing are mm (in).



5.4 330400 Accelerometer Frequency Response

Figure 5-2 Typical 330400 Accelerometer Frequency Response (English Units)

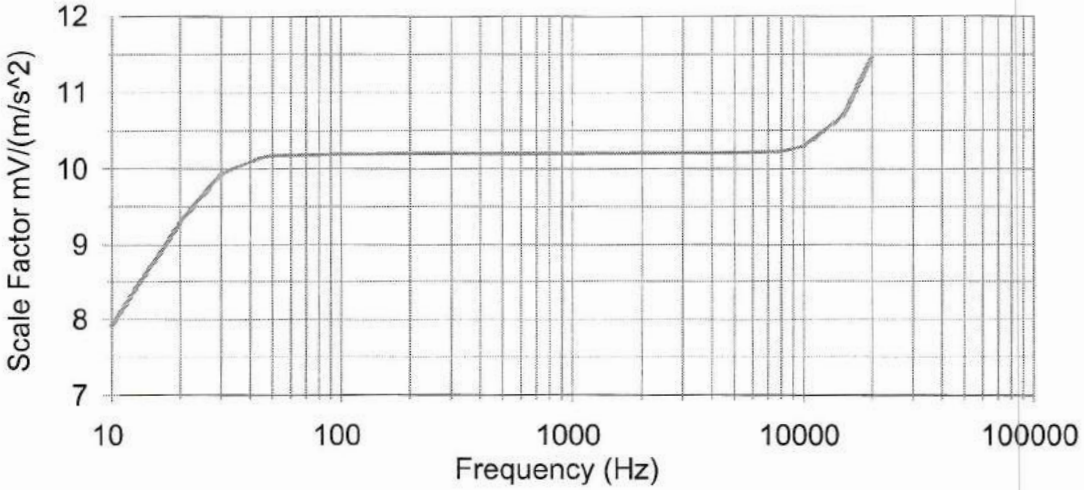
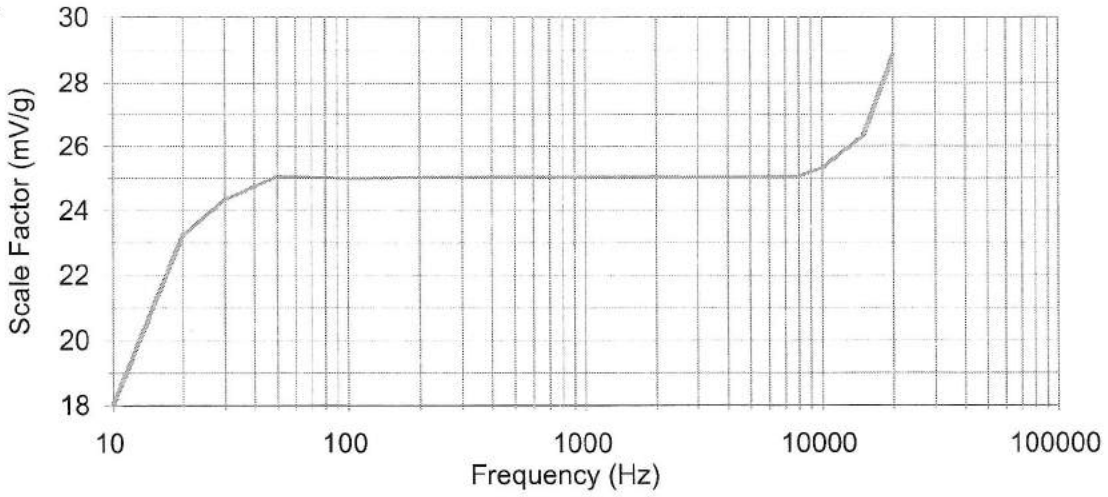


Figure 5-3 Typical 330400 Accelerometer Frequency Response (Metric Units)



5.5 330425 Accelerometer Frequency Response

Figure 5-4 Typical 330425 Accelerometer Frequency Response (English Units)

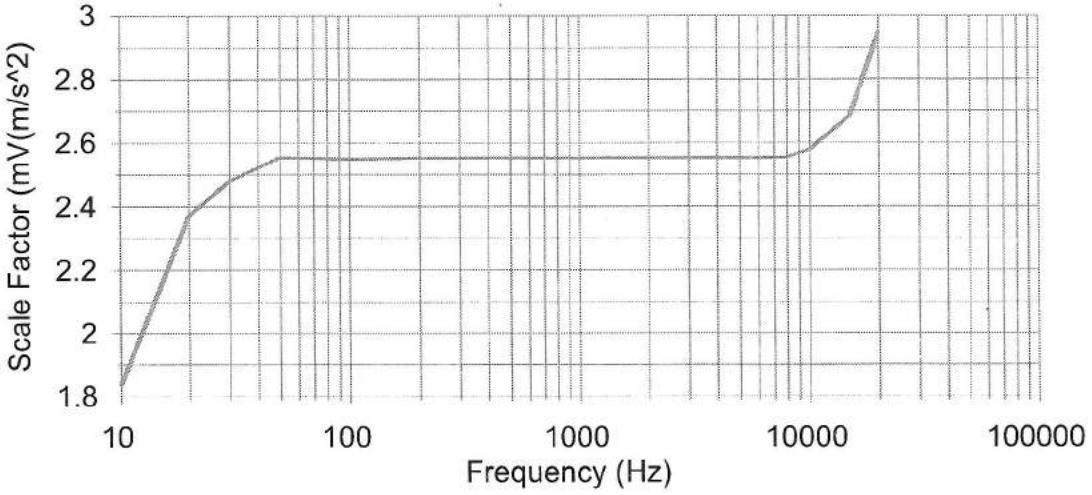


Figure 5-5 Typical 330425 Accelerometer Frequency Response (Metric Units)

6. Accessories and Spare Parts

6.1 330400 Accelerometer Options

When ordering the 330400 Accelerometer, you may choose from the following list of options:

6.1.1 330400 Accelerometer

330400-AXX-BXX

A: Mounting Stud
- **0 1** 1/4- 28 Integral Stud
- **0 2** M8X1-6g integral Stud

B: Agency Approval Option
- **0 0** Not required
- **0 5** Multiple Approvals

6.1.2 Mounting Stud: Option A

The 330400 Accelerometer provides two mounting stud options, the English 1/4-28 UNF-2A and Metric M8X1-6g stud.

6.1.3 Agency Approvals: Option B

The 330400 Accelerometer is agency approved. Consult with your local Bently Nevada sales representative for information regarding approvals.

6.2 330425 Accelerometer Options

When ordering the 330425 Accelerometer, you may choose from the following list of options:

6.2.1 330425 Accelerometer

330425-AXX-BXX

A: Mounting Stud
- **0 1** 1/4- 28 Integral Stud
- **0 2** M8X1-6g integral Stud

B: Agency Approval Option
- **0 0** Not required
- **0 5** Multiple Approvals

6.2.2 Mounting Stud C Option A

The 330425 Accelerometer provides two mounting stud options, the English 1/4-28 UNF-2A and Metric M8X1-6g stud.

6.2.3 Agency Approvals C Option B

The 330425 Accelerometer is agency approved. Consult with your local Bently Nevada sales representative for information regarding approvals.

6.3 Transducer Housing

The 330400 and 330425 Accelerometers are compatible with the 43217-02 Accelerometer Housing. Other versions of the 43217 do not include the necessary extension.

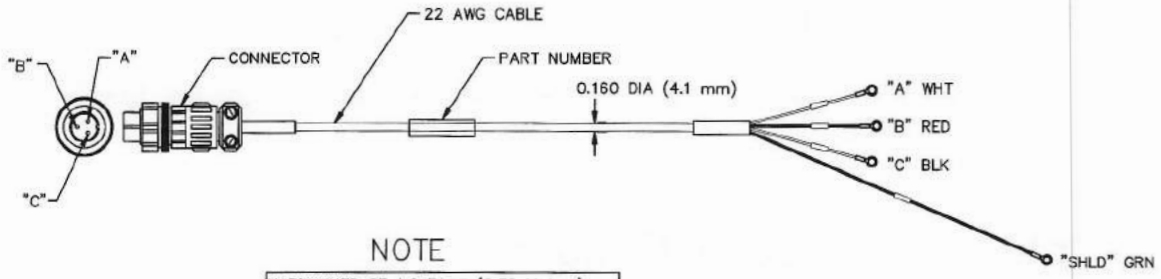
6.4 Interconnect Cable Options

The Accelerometers require a three-conductor cable. We recommend using shielded cable to minimize noise interference. You may use the Bently Nevada cable or another comparable cable. Table 6-1 shows all of the Bently Nevada cables that are compatible with the Accelerometers.

Table 6-1 Interconnect Cable

APPLICATION	PART NUMBER	DESCRIPTION
Standard Interconnect Cable (see Figure B-1)	16925 – XX	3-wire shielded 0.5 mm^2 (22 AWG) cable with a female connector at the 330400 Accelerometer end and terminal lugs at the monitor end.
Standard Amored Interconnect Cable (see Figure B-2)	16710 – XX	3-wire stainless steel armor over shielded 0.5 mm^2 (22 AWG) cable with a female connector at the 330400 Accelerometer end and terminal lugs at the monitor end.
Standard Interconnect with splash proof environmental boot (see Fighure B-3)	130539 - XX	3-wire shielded 1.00 mm^2 (18 AWG) cable with a female connector and a splash proof environmental boot at the 330400 Accelerometer end and terminal lugs at the monitor end.
XX – Specifies the length of cable required in feet		

PART NUMBER 16925 – ☐☐ (SEE NOTE)



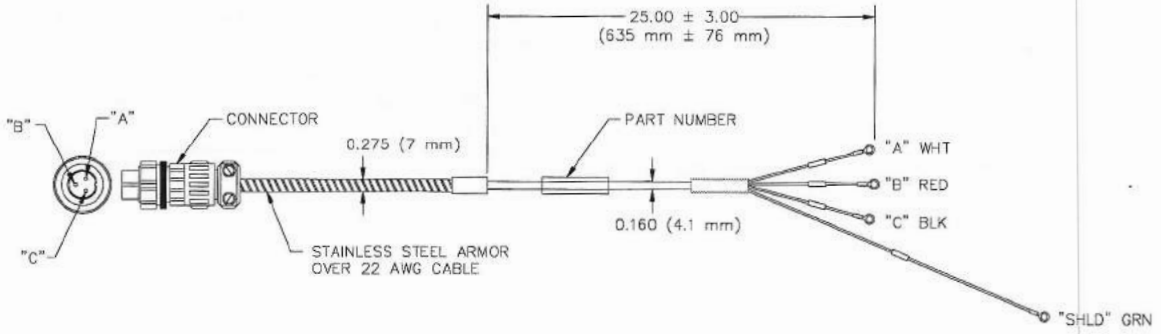
NOTE

INCREMENTS OF 1.0 FOOT (0.30 Metres)
EXAMPLE: 02 = 2 FEET (0.61 Metres) 25 = 25 FEET (7.62 Metres)
MIN LENGTH = 2.0 FEET (0.61 Metres) MAX LENGTH = 99 FEET (30.18 Metres)

*ALL DIMENSION ARE IN INCHES (MILLIMETRES) UNLESS OTHERWISE SPECIFIED.

Figure 6-1 Standard Interconnect Cable

PART NUMBER 16710 – ☐☐ (SEE NOTE)



NOTE

INCREMENTS OF 1.0 FOOT (0.30 Metres)
EXAMPLE: 03 = 3 FEET (0.91 Metres) 25 = 25 FEET (7.62 Metres)
MIN LENGTH = 3.0 FEET (0.91 Metres) MAX LENGTH = 99 FEET (21.34 Metres)

*ALL DIMENSIONS ARE IN INCHES (MILLIMETRES) UNLESS OTHERWISE SPECIFIED.

Figure 6-2 Standard Armored Interconnect Cable

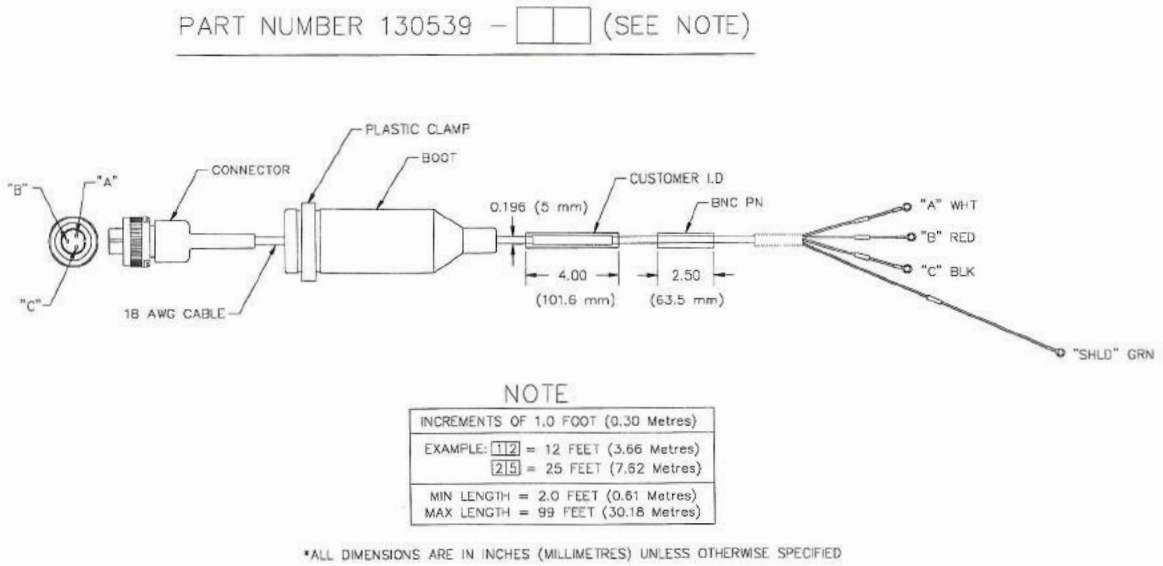


Figure 6-3 Splash Resistant Interconnect Cable

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