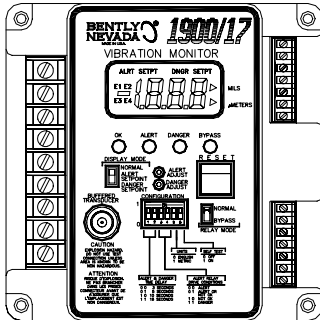


1900/17 Proximator® Monitor



Description

The 1900/17 is a single-channel vibration monitor that accepts input from compatible Bently Nevada proximity transducers. The monitor conditions the signal into peak-to-peak displacement units, and provides local display and status indication as well as alarm relay contact outputs. This monitor also provides a 4 to 20 mA interface for trending the monitored parameter in plant control and automation systems. It can be locally mounted to provide stand-alone machinery protection, and is suitable for general-purpose or some essential machinery.

Note: If your application calls for connectivity to Bently Nevada's Trendmaster® 2000 system, but does not require a 4-20 mA interface to other systems, consider the use of Bently Nevada's 1900/15 monitor instead (consult BN part number 148679-01 for details).

Performance Specifications

Power

AC/High DC Version

<i>AC Voltage Range</i>	85 to 264 Vac
<i>DC Voltage Range</i>	110 to 370 Vdc
<i>Frequency Range</i>	DC, or 47 Hz to 440 Hz
<i>Current Draw</i>	60 mA typical, 120 mA Max
<i>Inrush</i>	20A typ @ Vin = 100 Vac 40A typ @ Vin = 200 Vac

74 VDC Version

<i>DC Voltage Range</i>	60 to 80 Vdc
<i>Current Draw</i>	150 mA Max

24 VDC Version

<i>DC Voltage Range</i>	18 to 36 Vdc
<i>Current Draw</i>	300 mA Max



±1% of full scale range maximum
@ 25 °C

Input

Compatible Transducers

Bently Nevada's 3300 XL NSv™ and 3300 XL 8 mm Proximity Transducer Systems.

Sensitivity 7.87 mV/μm (200 mV/mil).

Input Impedance 10 kΩ.

Outputs

Buffered Transducer Provides access to the transducer signal. Signal does not have gain, and is not scaled. Signal is buffered to provide short circuit protection.

Output Impedance: 600 Ω

Transducer Power -24 Vdc

4 to 20 mA Interface

Proportional Value 4 to 20 mA values are proportional to the monitor full-scale.

Galvanic Isolation 4 to 20 mA interface is optically isolated to 500 Vac or 707 Vdc

Loop Power 14 to 30 Vdc

Signal Conditioning

Monitor Full Scale Range

English Units 20 Mils peak-to-peak

Metric Units 508 μm peak-to-peak

Frequency Response

High Pass Corner -3 dB nominal @ 4 Hz

Low Pass Corner -3 dB nominal @ 4 kHz

Accuracy @ 25 °C

Display ±0.3% of full scale range typical @ 25 °C

±1% of full scale range maximum @ 25 °C

4 to 20 mA interface ±0.3% of full scale range typical @ 25 °C

Alarms

Setpoints

The alert and danger setpoints are adjustable from 25 μm to 480 μm (1 mil to 19 mils)

Time Delay

Time delays are programmable with the dip switch on the front of the monitor. The options are 3, 5, 10, and 15 seconds.

Relays

Configuration

The alert relay is configured with the dip switches on the front panel, and can be activated from 4 different conditions: The alert setpoint, the alert setpoint OR'ed with NOT OK, NOT OK, or the danger setpoint. The danger relay is activated from the danger setpoint only.

Type

Single-pole, double-throw

Switched Power

180 watts, 1800 VA Maximum

Contact Voltage

300 Vac, 28 Vdc Maximum

Switched Current

6 Amps Maximum

Isolation

Contact to Contact: 750 Vrms

Contact to coil: 1500 Vrms

Displays

Liquid Crystal Display

Size 50.8 mm wide x 22.8 mm high (2.0 inches wide x 0.9 inches high)

Refresh Rate 0.8 s

Front Panel LEDs

OK LED: Indicates when the monitor is functioning properly.

Alert LED: Indicates an alert condition.

Danger LED: Indicates a danger condition.

Bypass LED: Indicates that the monitor is in bypass mode.

Environmental Limits

Temperature

Operating -20 to 70 °C

Storage -30 to 90 °C

Relative Humidity To 95%, non-condensing

Physical

Dimensions

Length 132 mm (5.20 inches)

Width 132 mm (5.20 inches)

Depth 71.1 mm (2.80 inches)

Weight 400 grams (0.85 lbs)

CE Mark Directives

EMC Directives

EN 50081-2

*Radiated and
conducted
Emissions*

EN 55011, Class A

EN 50082-2

*Electrostatic
Discharge*

EN 61000-4-2, Criteria B

*Radiated
Susceptibility*

EN 61000-4-3, Criteria A

*Conducted
Susceptibility*

EN 61000-4-6, Criteria A

*Electrical Fast
Transient*

EN 61000-4-4, Criteria B

Surge Capability

EN 61000-4-5, Criteria B

Magnetic Field

EN 61000-4-8, Criteria A

Power Supply Dip

EN 61000-4-11, Criteria B, C

Radio Telephone

ENV 50204, Criteria A

Low Voltage Directive

EN 61010-1 Safety Requirements

Hazardous Area Approvals

CSA/NRTL/C

*Standard with -01
Option*

Class 1, Division 2, Groups A
through D, T4 @ Ta = 70 °C

*Standard with -03
Option*

Class 1, Division 2, Groups A
through D, T4 @ Ta = 70 °C

Note: Hazardous area approvals are not available
with -02 option.

Ordering Information and Accessories

1900/17 Options

1900/17-AXX

Option Descriptions

0 1 85 to 264 Vac, 110 – 370 Vdc

0 2 60 to 80 Vdc

0 3 18 to 36 Vdc

Accessories

148682-01

1900/17 Operation and Maintenance Manual

*3300 XL NSv™
Proximity Transducer
System*

See Specification and Ordering
Information sheet for transducer
ordering information.

*3300 XL 8 mm
Proximity Transducer
System*

See Specification and Ordering
Information sheet for transducer
ordering information.

*Rack Buffered Output
Transducer Interface
Module (TIM) 101281-
01*

The 1900/17 can be used with
Bently Nevada's cost-effective,
automated data collection and
diagnostics system, the Trendmas-
ter® via the Rack Buffered Output
Transducer Interface Module.

Weather Proof Enclosure

190100-01	Non-conductive weatherproof enclosure for one 1900/17 vibration monitor. When properly installed, meets NEMA 4X watertight specifications.
03636315	Stainless Steel weatherproof enclosure for one 1900/17 vibration monitor. When properly installed, meets NEMA 4X watertight specifications, and provides RFI/EMI shielding.
104795-01	Back panel for 03636315.
04344022	Screws for mounting 03636315 housing back panel to enclosure.
04344054	Screws for mounting 1900 monitor to 03636315 housing back panel.

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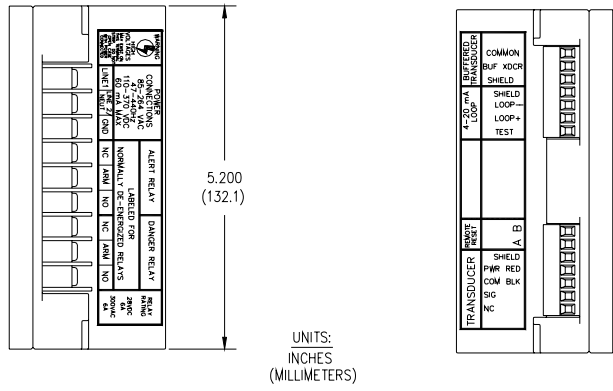
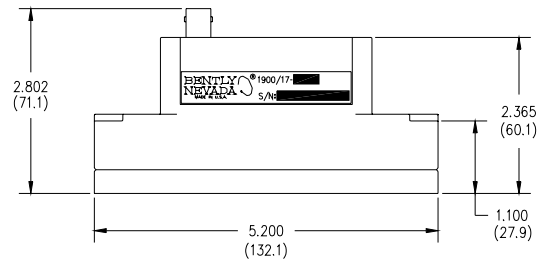
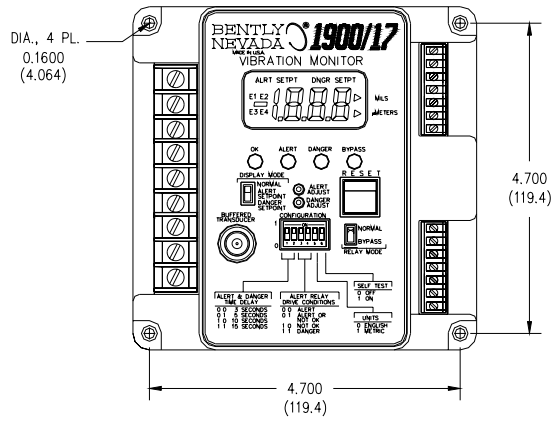


Figure 1. Package Dimensions

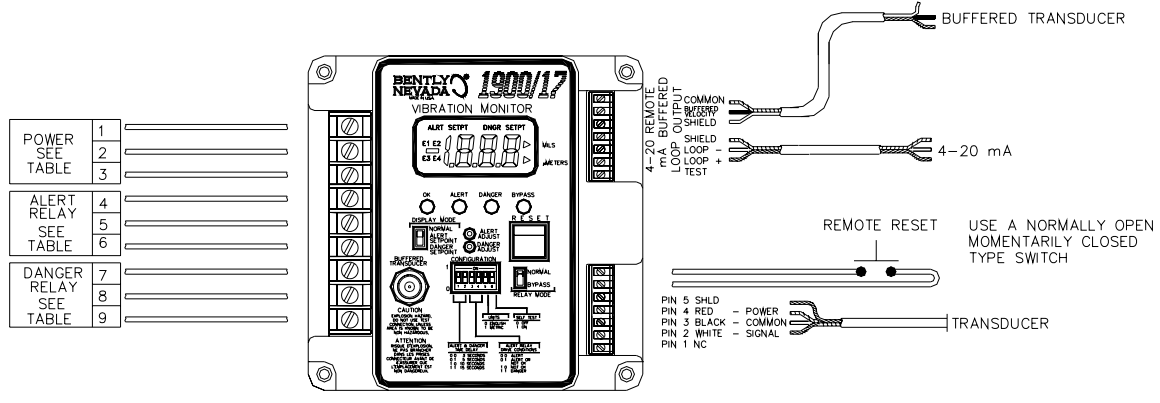


Figure 2. Wiring Diagram

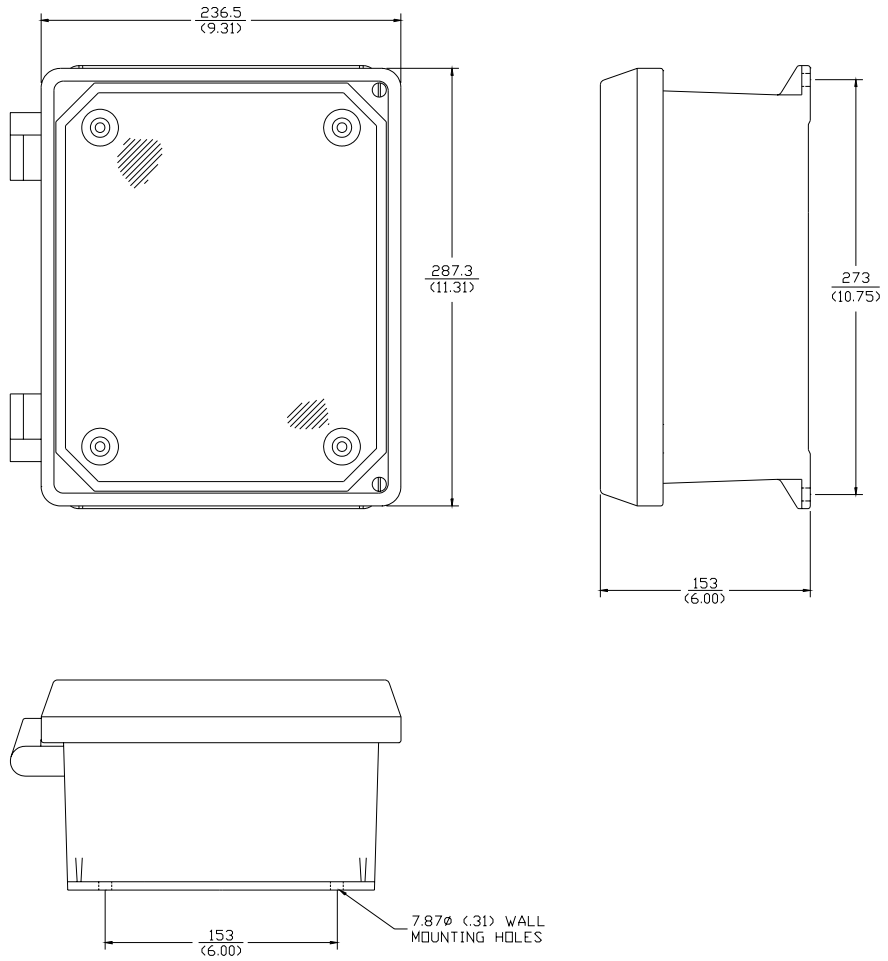


Figure 3. Non-metallic Housing

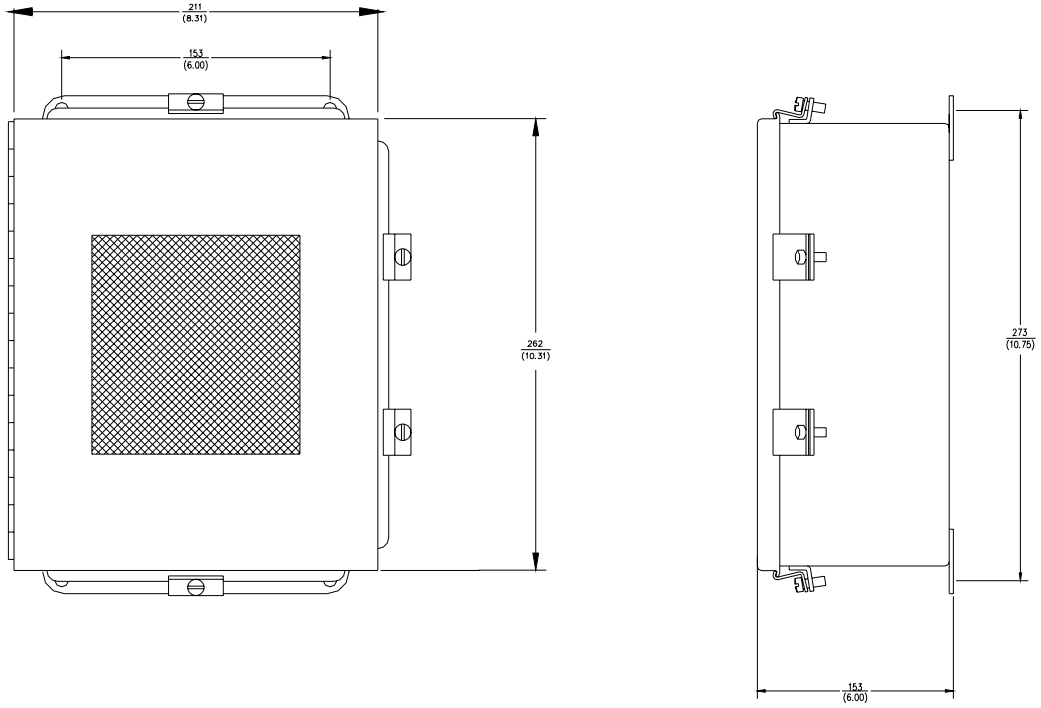


Figure 4. Stainless Steel Housing