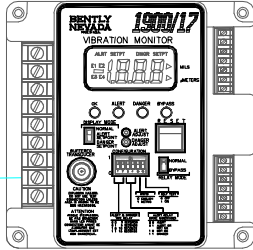


1900/17 Proximator® Monitor

Bently Nevada™ Asset Condition Monitoring



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 our Trendmaster® 2000 system, but does not require a 4-20 mA interface to other systems, consider the use of our 1900/15 monitor instead (consult Specifications and Ordering document number 148679-01 for details)..



Performance Specifications

Power

AC/High DC Version

AC Voltage Range

85 to 264 Vac

DC Voltage Range

110 to 370 Vdc

Frequency Range

DC, or 47 Hz to 440 Hz

Current Draw

60 mA typical, 120 mA Max

Inrush

20A typ @ $V_{in} = 100$ Vac

40A typ @ $V_{in} = 200$ Vac

74 VDC Version

DC Voltage Range

60 to 80 Vdc

Current Draw

150 mA Max

24 VDC Version

DC Voltage Range

18 to 36 Vdc

Current Draw

300 mA Max

Input

Compatible Transducers

The Bently Nevada 3300 XL NSv™
and 3300 XL 8 mm Proximity
Transducer Systems Sensitivity

7.87 mV/ μ m (200 mV/mil).

Input Impedance

10 k Ω .

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 Mills peak-to-peak

Metric Units

508 μ m peak-to-peak

Frequency Response

Specifications and Ordering Information
Part Number 148680-01
Rev. E (03/07)

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±1% of full scale range maximum
@ 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

StorageSpecifications and Ordering Information
Part Number 148680-01
Rev. E (03/07)

Relative Humidity
-30 to 90 °C
To 95%, non-condensing

Radio Telephone

ENV 50204, Criteria A

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)

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.

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

Ordering Information and Accessories

1900/17 Options

1900/17-AXX

01	85 to 264 Vac, 110 - 370 Vdc
02	60 to 80 Vdc
03	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 our cost-effective, automated data collection and diagnostics system, the Trendmaster, via the Rack Buffered Output Transducer Interface Module.

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.

**Weather Proof Enclosure
190100-01**

Non-conductive weatherproof enclosure for one 1900/17 vibration monitor. When properly installed, meets NEMA 4X watertight specifications.

04344022

Screws for mounting 03636315 housing back panel to enclosure.

04344054

Screws for mounting 1900 monitor to 03636315 housing back panel.

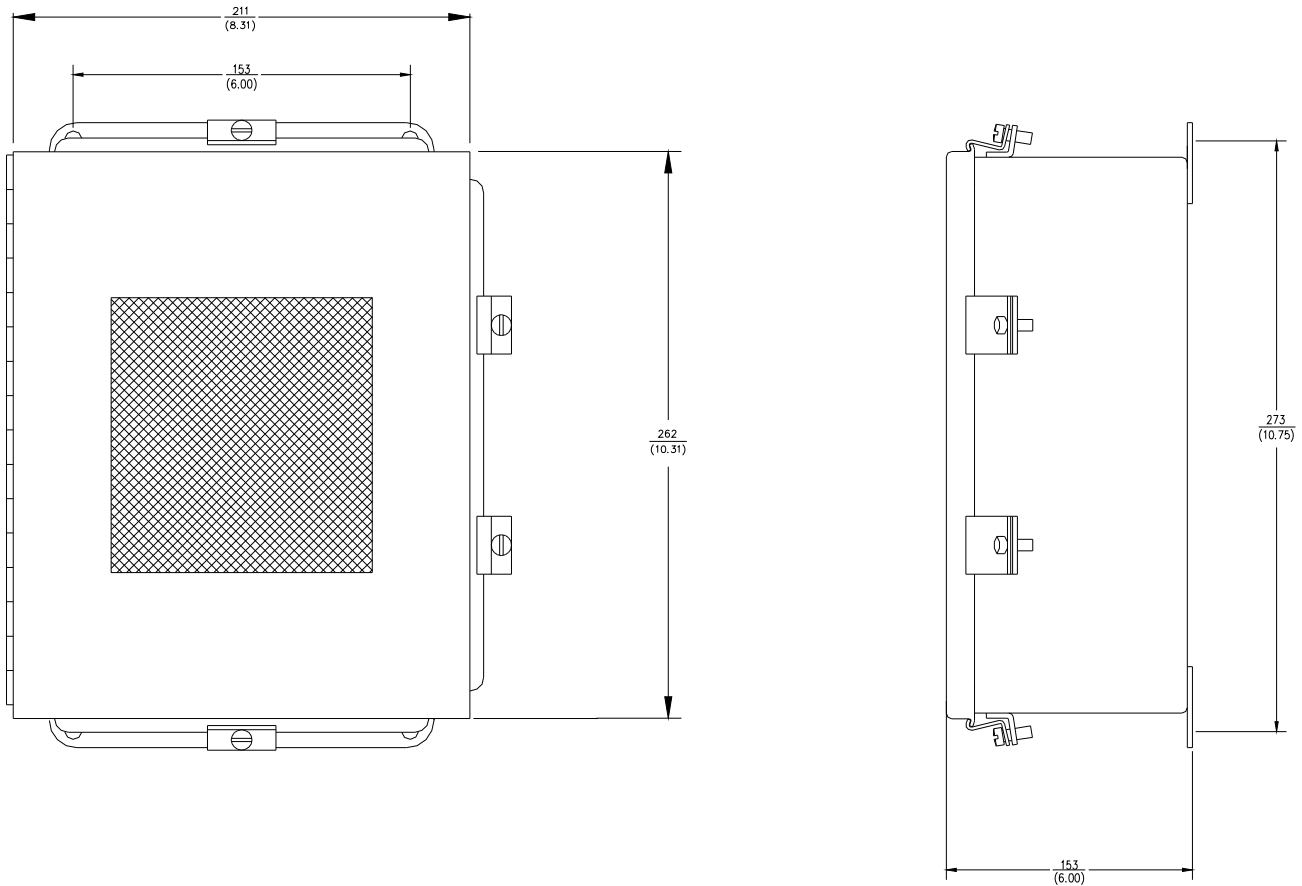


Figure 4: Stainless Steel Housing

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