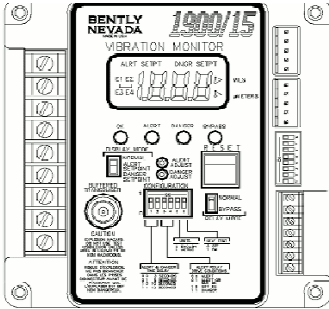


1900/15 Proximator® Monitor

Bently Nevada™ Asset Condition Monitoring

Description



The 1900/15 is a single-channel, stand-alone, locally-mounted vibration monitor. It provides a built-in Transducer Interface Module (TIM) for connectivity with Bently Nevada's Trendmaster® 2000 system and allows the user to apply machinery protection capabilities to selected vibration points of their Trendmaster 2000 system. It can also be used independently of the Trendmaster 2000 system as a stand-alone machinery protection device, suitable for general-purpose or some essential machinery. The 1900/15 accepts a single transducer input from compatible Bently Nevada proximity transducers, and conditions the signal into peak-to-peak displacement units. The monitor also provides local display and status indication as well as alarm relay contact outputs for connection to an external annunciation.

Note: If your application calls for a 4-20 mA interface consider the use of Bently Nevada's 1900/17 monitor instead (consult BN part number 148680-01 for details).

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 @ Vin = 100 Vac 40A typ @ Vin = 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

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

Sensitivity

7.87 mV/u.m (200 mV/mil).

Input Impedance

10 kΩ

Outputs

Buffered Transduce

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

Trendmaster 2000 Interface

Operating Range

0.254 mm to 1.78 mm (10 to 70 mils)

Galvanic Isolation

Trendmaster 2000 Interface is optically isolated to 500 Vac or 707 Vdc

Frequency Response

0 to 3 kHz

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
±1% of full scale range typical @ 25 °C
±3% of full scale range maximum @ 25 °C

Trendmaster 2000 interface
±1% of full scale range typical @ 25 °C

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

1900/15 Options

1900/15-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

148681-01

1900/15 Operation and
Maintenance Manual

**Transducer
Systems**

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.

**Weather Proof
Enclosures**

190100-01

Non-conductive weatherproof
enclosure for one 1900/15
vibration monitor. When
properly installed, meets
NEMA 4X watertight
specifications.

03636315

Stainless Steel weatherproof
enclosure for one 1900/15
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.

Trendmaster 2000 Accessories

00523103

5-pin (18 AWG) IDC connectors
for interfacing line to 1900.

00523104

5-pin IDC connector covers.
Covers wire connections in IDC
connector. Must be ordered
with IDC connector.

85718-01

IDC connector tool. Use to
install connectors on system
cable. Does not require wires
to be stripped.

85033-AA-BB

Trendmaster system cable.
Available in 1000 feet or 500
feet rolls, and can be ordered
with or without SPA mating
connector.

Figures

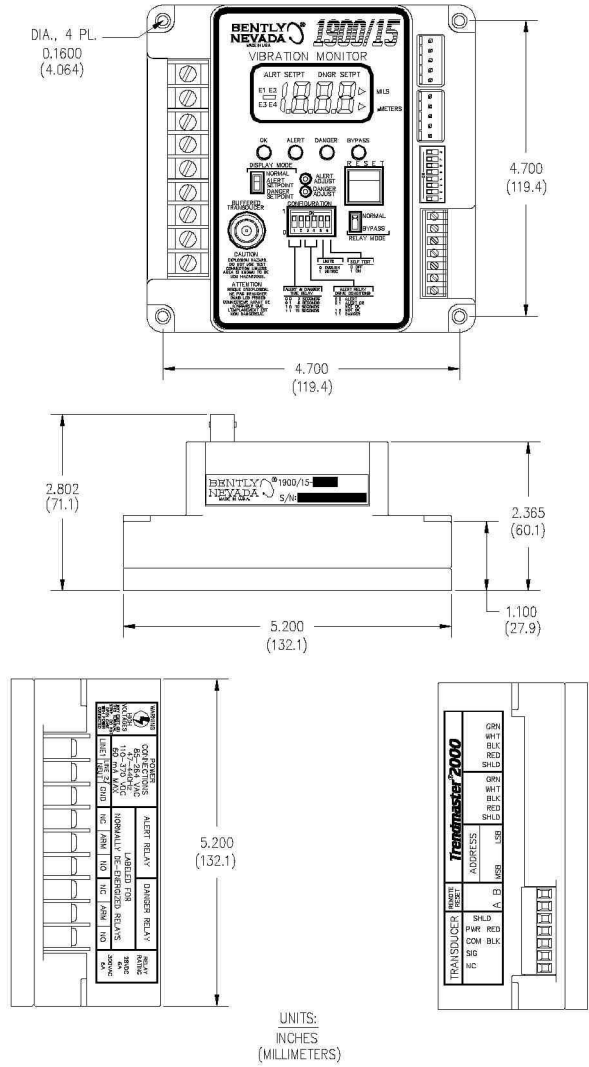


Figure 1. Package Dimensions

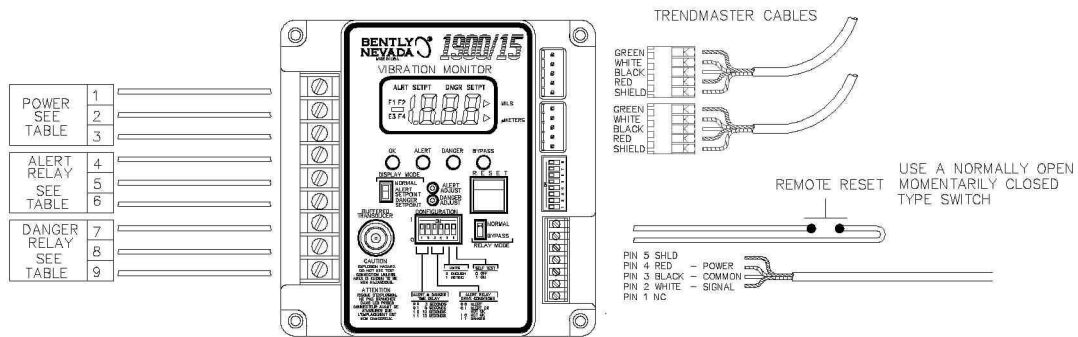


Figure 2. Wiring Diagram

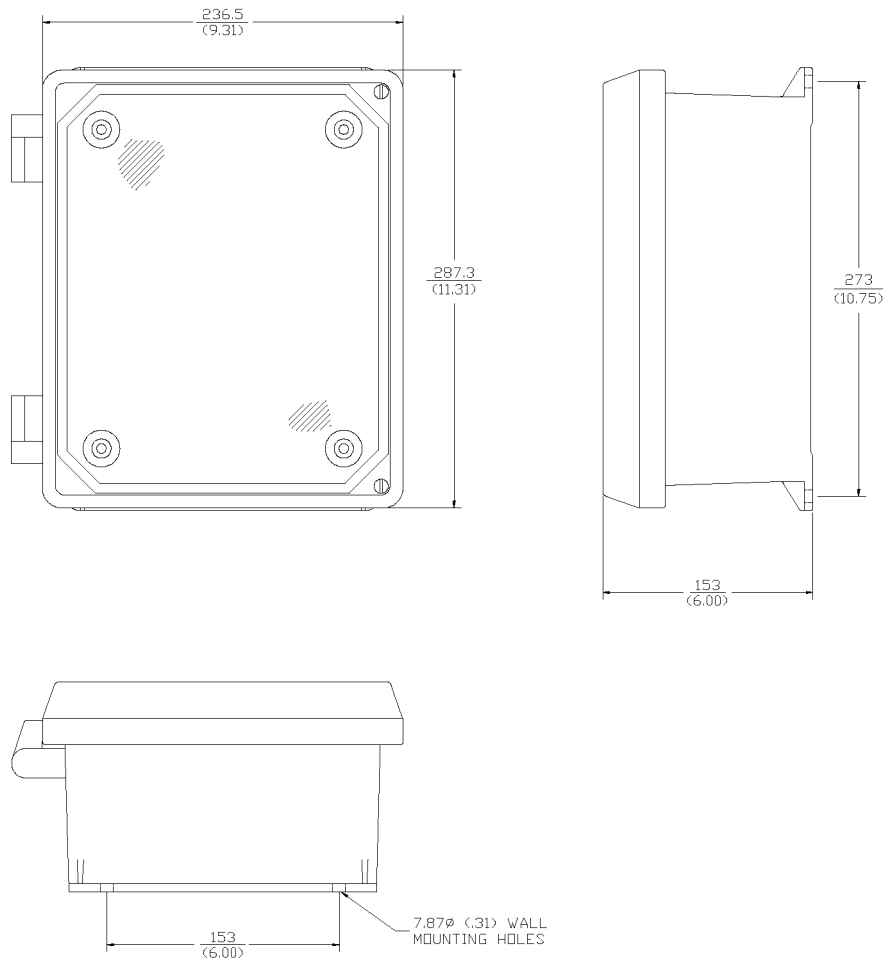


Figure 3. Non-metallic Housing

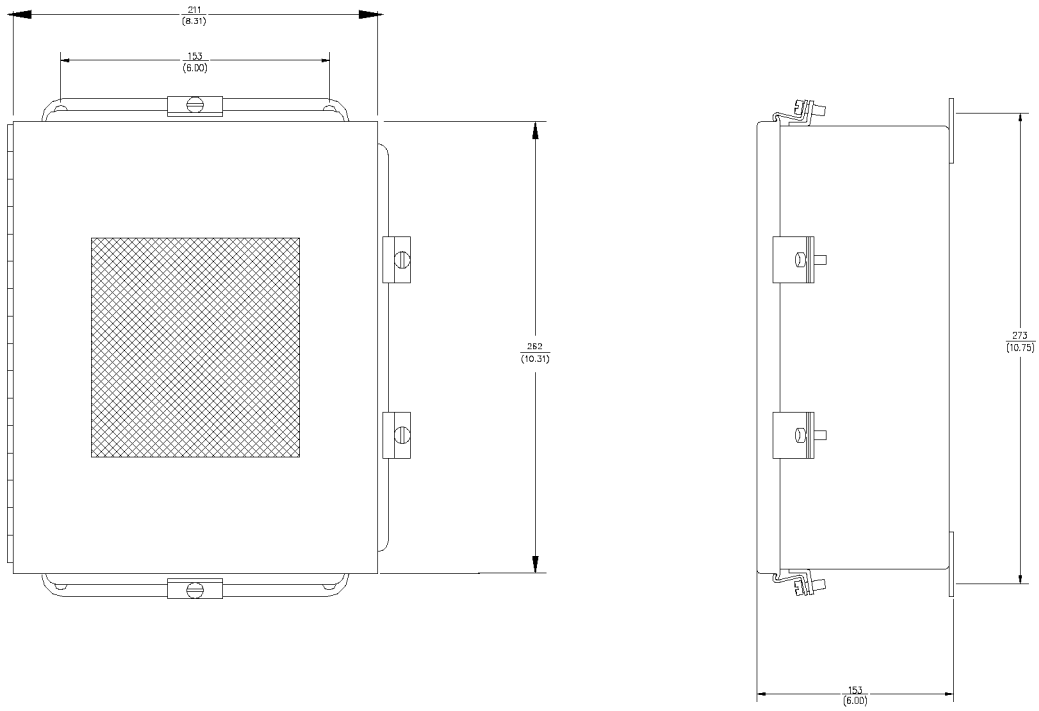


Figure 4. Stainless Steel Housing

Bently Nevada, Trendmaster and NSv are a trademarks of General Electric Company.

Copyright 2001. Bently Nevada LLC.
 1631 Bently Parkway South, Minden, Nevada USA 89423
 Phone: 775.782.3611 Fax: 775.215.2873
www.ge-energy.com/bently
 All rights reserved.