

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

3300 SYSTEM

ASSY78462-01 84145-01

MACHINERY MONITORING COMPONENT

Used with the applicable 3300 System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Bently Nevada ASSY78462-01 84145-01 manufacturer documentation

3300/65 Dual Probe Monitor

Bently Nevada™ Asset Condition Monitoring

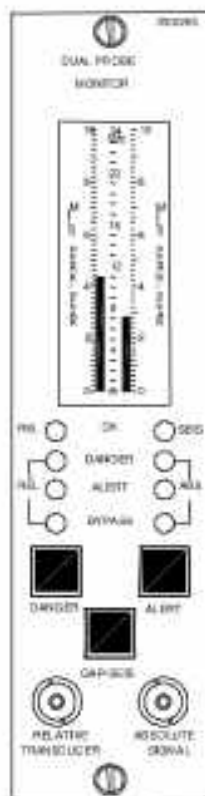
Description

The 3300/65 Dual Probe Monitor combines the shaft relative displacement signal of a Bently Nevada proximity transducer and casing vibration from a velocity transducer, both of which are installed in the same axis on the machine, into one measurement of shaft absolute vibration.

Dual Probe Monitors are designed for machines with fluid film bearings, such as large steam and gas turbines, where a significant amount of shaft vibration is transmitted to the case. If you are uncertain as to whether your machine transmits significant vibration to the casing, we can provide engineering services to determine the characteristics of your machine and recommend an appropriate monitoring system.

Four distinct measurements are provided by the Dual Probe Monitor:

- Shaft relative vibration - A proximity probe measurement of shaft vibration relative to the bearing housing.
- Bearing housing vibration - A seismic measurement of the bearing housing vibration relative to free space.
- Shaft absolute vibration - A vector summation of shaft relative vibration and bearing housing vibration.
- Shaft average radial position relative to the bearing clearance - A proximity probe dc gap measurement.



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Specifications and Ordering Information
Part Number 141518-01
Rev. H (05/07)

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Specifications

Inputs

Signal:

Accepts two signals, one from a 600 cpm 2-wire velocity Seismoprobe®, a Velomitor®, or Velomitor XA and one from a proximity transducer.

Input Impedance

Relative Transducer:

10 k Ω .

Seismic Transducer:

(2-wire) 10 k Ω .

Signal Scale Factor

Proximity Probe:

200 mV/mil (7.87 V/mm),

100 mV/mil (3.94 V/mm)

Jumper-selectable.

Seismic Input: Seismoprobe:

500 mV/(in/s) (19.69 mV/(mm/s)).

Velomitor

100 mV/(in/s) (3.94 mV/(mm/s))

Note: The buffered output of the seismic signal is integrated velocity with the same output scale factor as the proximity signal.

Power Consumption:

Nominal consumption of 1.5 watts.

Signal Conditioning

Accuracy:

Within $\pm 0.33\%$ of full-scale typical.

$\pm 1\%$ maximum

$\pm 2\%$ maximum with 2X Trip Multiply.

$\pm 3\%$ maximum with 3X Trip Multiply.

Specified at ambient temperature of +25°C (+77°F).

Frequency response:

Nominal -3dB corners. User-programmable for 4 to 4,000 Hz (240 to 240,000 cpm), or 1 to 600 Hz (60 to 36,000 cpm) for proximity transducer; 4 to 4,000 Hz (240 to 240,000 cpm) for Seismic; 10 to 4000 Hz (600 to 240,000 cpm) for Absolute (or to 36,000 cpm if 1-600 Hz relative option selected)

Note: The 1 to 600 Hz (60 to 36,000 cpm) option is not recommended for machine applications with rapid startup and coastdown rates where acceleration/deceleration exceeds 1,000 rpm per second. Because of the extended low frequency range to 60 cpm, the monitor circuitry will retain vibration transients normally experienced during fast startups (such as with motor driven equipment). This can hold vibration levels above alarm setpoints beyond alarm time delays. This may result in Danger relay actuation after the internal time delay has lapsed even if actual vibration has decreased below the Danger alarm setpoint level. If, based on this explanation, the standard 4 Hz (240 cpm) low frequency limit is not satisfactory for your application, contact your sales professional. The 1 Hz (60 cpm) option is recommended for applications where shaft rotative speed is less than 1,000 rpm.

Outputs

Recorder:

User-programmable for +4 mA to +20 mA, 0 Vdc to -10 Vdc, or +1 Vdc to +5 Vdc. Outputs are proportional to programmed full-scale range. Recorder outputs are provided for relative and absolute or relative and seismic readings. Monitor operation is unaffected by short-circuits on recorder outputs.