MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

3300 SYSTEM

3300/46-XX-XX-01-00

MACHINERY MONITORING MODULE

Used with the applicable 3300 System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Bently Nevada 3300/46-XX-XX-01-00 manufacturer documentation

3300/46 Ramp Differential Expansion Monitor

Bently Nevada™ Asset Condition Monitoring

Description

Many large machines requiring differential expansion monitoring do not have a convenient location for mounting the large proximity probes required to make this important measurement. Extremely large machines may require a monitoring range beyond the linear range of even the largest available transducers. The 3300/46 Ramp Differential Expansion Monitor provides for an alternate measurement technique that allows increased monitoring ranges from standard transducers. It is also extremely useful when conventional methods from a collar are not possible.

Two proximity probes are used to observe ramp surfaces, on the rotor, in order to provide one channel of differential expansion. Using ramp surfaces allows increased monitor range with smaller transducers. The monitor's ability to use ramp surface targets also provides added flexibility when choosing a transducer mounting location.

Both the magnitude and direction of differential expansion are displayed on the LCD. The monitor provides four alarm setpoints (two over and two under alarms).

Specifications

Inputs

Signal:

Accepts two proximity probe transducer signals.

Input Impedance:

10 k Ω.

Signal Scale Factor:

100 m/mil (4 V/mm), 20 mV/mil (0.787 V/mm) or

10 mV/mil (3.92 V/mm). Jumper-selectable.

Power Consumption:

Nominal consumption of 1.5 watts.

Signal Conditioning

Accuracy:

Within ±0.33% of full-scale typical, ±1% maximum.

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

Outputs

Recorder:

User-programmable for +4 mA to +20 mA, 0 to -10 Vdc, or +1 Vdc to +5 Vdc. Voltage or current outputs are proportional to programmed monitor full-scale. A single composite recorder output is provided on Channel A. Monitor operation is unaffected by short circuits on recorder outputs.

Recorder accuracy (in addition to signal conditioning accuracy):

All specified at +25°C (+77°F).

- **+4 to +20 mA:** ±0.7% of signal, ±0.09 mA offset.
- **+1 to +5 Vdc:** ±1.1% of signal, ±10 mV offset.
- **0 to -10 Vdc:** ±1.1% of signal, ±15 mV offset.

Output Impedance (voltage outputs):

100 Ω. Minimum load resistance is 10 k Ω.

Voltage Compliance (current outputs):

0 to +12 Vdc range across load. Load resistance is 0 to 600 Ω when using +4 to +20 mA option.

Buffered Transducer Outputs:

One coaxial connector per transducer on the front panel and one terminal connection per channel on the rear panel. All are short circuit protected.

Output Impedance:

100 Ω.

Transducer Supply Voltage:

-24 Vdc voltages are current limited per channel on individual monitor circuit board.

Alarms

Alarm Setpoints:

Both alarms (Alert and Danger) are digitally adjustable from 0 to 100% of full-scale and can be set within LCD resolution (±1.6% of full-scale) to a desired level. Once set, alarms are repeatable within ±0.4% of full-scale.