

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

3500 SYSTEM

3500/40 125672-01

MACHINERY MONITORING MODULE

Used with the applicable 3500 System configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Bently Nevada 3500/40 125672-01 manufacturer documentation

3500/40M Proximator* Monitor

Bently Nevada* Asset Condition Monitoring



Description

The 3500/40M Proximator Monitor is a 4-channel monitor that accepts input from Bently Nevada proximity transducers, conditions the signal to provide various vibration and position measurements, and compares the conditioned signals with user-programmable alarms. The user can program each channel of the 3500/40M with the 3500 Rack Configuration Software to perform any of the following functions:

- Radial Vibration
- Thrust Position
- Differential Expansion
- Eccentricity
- REBAM®

Note: The monitor channels are programmed in pairs and can perform up to two of these functions at a time. Channels 1 and 2 can perform one function, while channels 3 and 4 perform another (or the same) function.

The primary purpose of the 3500/40M monitor is to provide:

1. Machinery protection by continuously comparing monitored parameters against configured alarm setpoints in order to drive alarms.
2. Essential machine information for both operations and maintenance personnel.

Each channel, depending on configuration, typically conditions its input signal into various parameters called "static values". The user can configure alert setpoints for each active static value and Danger setpoints for any two of the active static values.



imagination at work

Specifications and Ordering Information
Part Number 141535-01
Rev. G (06/13)

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Specifications

Inputs

Signal

Accepts from 1 to 4 proximity transducer signals.

Input Impedance

Standard I/O

10 k Ω

TMR I/O

The effective impedance of three Bussed TMR I/O channels wired in parallel to one transducer is 50 k Ω .

Power Consumption

7 watts typical

Sensitivity

Radial Vibration

3.94 mV/ μ m (100 mV/mil) or
7.87 mV/ μ m (200 mV/mil).

Thrust

3.94 mV/ μ m (100 mV/mil) or
7.87 mV/ μ m (200 mV/mil).

Eccentricity

3.94 mV/ μ m (100 mV/mil) or
7.87 mV/ μ m (200 mV/mil).

Differential Expansion

0.394 mV/ μ m (10 mV/mil) or
0.787 mV/ μ m (20 mV/mil).

REBAM

40 mV/ μ m (1000 mV/mil) or
80 mV/ μ m (2000 mV/mil).

Outputs

Front Panel LEDs

OK LED

TX/RX LED

Indicates when the 3500/40M is operating properly.

Bypass LED

Indicates when the 3500/40M is communicating with other modules in the 3500 rack.

Buffered Transducer Outputs

The front of each monitor has one coaxial connector for each channel. Each connector is short-circuit protected.

Output Impedance

550 Ω

Transducer Power Supply

-24 Vdc

Signal Conditioning

Note: Specified at +25 °C (+77 °F) unless otherwise noted

Radial Vibration

Frequency Response

Direct filter

User programmable, 4 Hz to 4000 Hz or 1 Hz to 600 Hz.

Gap filter

-3 dB at 0.09 Hz.

Not 1X filter

60 cpm to 15.8 times running speed. Constant Q notch filter. Minimum rejection in stopband of -34.9 dB. (See Note that follows)

S_{max}

0.125 to 15.8 times running speed. (See Note that follows)

1X and 2X Vector filter