Bently Nevada 3500 Series Service Manual

3500/40M-01-00

1. Description

3500/40M-01-00

3. Product Information

3500/40M-01-00 | Bently Nevada | Proximitor Monitor

Manufacturer : Bently Nevada

Product No. : 3500/40M-01-00

Product Type : Proximitor Monitor

Made in U.S.A

Ordering Information

3500/40M-01-00

3500/40M-AA-BB

I/O Module Type : 01 = Proximitor I/O Module with Internal Terminations

Agency Approval Option : 00 = None

Dimensions (LxWxH) : 24.13cm x 2.44cm x 24.18cm

Weight : 0.91 Kg

Inputs

Signal Accepts from 1 to 4 proximity transducer signals

Power consumption 7.7 Watts, typical

Input Impedance

Standard I/O 10 kΩ (Proximitor and acceleration inputs

Sensitivity

Radial Vibration 3.94 mV/µm (100 mV/mil) or 7.87 mV/µm (200 mV/mil)

Thrust 3.94 mV/µm (100 mV/mil) or 7.87 mV/µm (200 mV/mil)

Eccentricity 3.94 mV/µm (100 mV/mil) or 7.87 mV/µm (200 mV/mil)

Differential Expansion 0.394 mV/µm (10 mV/mil) or 0.787 mV/µm (20 mV/mil)

REBAM 40 mV/µm (1000 mV/mil) or 80 mV/µm (2000 mV/mil)

Front Panel LEDs

OK LED Indicates when the 3500/40M SIL Proximitor is operating properly.

TX/RX LED Indicates when the 3500/40M SIL Proximitor is communicating with other modules in the 3500 rack.

Bypass LED Indicates when the 3500/40M SIL Proximitor is in Bypass Mode.

Front Panel LEDs

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

Frequency Response

Direct filter User-programmable Single-pole 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

Smax 0.125 to 15.8 times running speed

1X and 2X vector filter Constant Q Filter Minimum rejection in stopband of -57.7 dB

Accuracy

Direct and Gap Exclusive of filtering Within ±0.33% of full-scale typical ±1% maximum

1X and 2X Within ±0.33% of full-scale typical

±1% maximum

Smax Within ±5% maximum

Not 1X ±3% for machine speeds less than 30,000 cpm ±8.5% for machine speeds greater than 30,000 cpm

Thrust and Differential Expansion

Accuracy Within ±0.33% of full-scale typical ±1% maximum

Frequency Response

Direct filter -3 dB at 1.2 Hz

Gap filter -3 dB at 0.41 Hz

Eccentricity

Accuracy Within ±0.33% of full-scale typical ±1% maximum

Frequency Response

Direct filter -3 dB at 15.6 Hz

Gap filter -3 dB at 0.41 Hz

Physical

Monitor Module (Main Board)

Dimensions

(Height x Width x

Depth)

241.3 mm x 24.4 mm x

241.8 mm

(9.50 in x 0.96 in x 9.52 in)

Weight 0.91 kg (2.0 lb)

I/O Modules (non-barrier)

Dimensions

(Height x Width x

Depth)

241.3 mm x 24.4 mm x 99.1

mm

(9.50 in x 0.96 in x 3.90 in)

Weight 0.20 kg (0.44 lb)

I/O Modules (barrier)

Dimensions

(Height x Width x

Depth)

241.3 mm x 24.4 mm x

163.1 mm

(9.50 in x 0.96 in x 6.42 in)

Weight 0.46 kg (1.01 lb)

Rack Space Requirements

Monitor 1 full-height front slot

I/O Modules 1 full-height rear slot