Bently Nevada 3500 Series Service Manual

3500/77M 176449-07

1. Description

176449-07

3. Product Information

176449-07 | Bently Nevada | 3500/77M Pressure Monitor

Manufacturer : Bently Nevada

Product No. :3500/77M 176449-07

Product Type : Pressure Monitor

Made in U.S.A

Inputs

Signal Accepts 1 to 4 channels of Bently Nevada approved positive voltage 3rd-party pressure transducers (psia)

Scale Factor

range† 95,000 mV/psi for 100 psia

range† 38,000 mV/psi for 250 psia

range† 19,000 mV/psi for 500 psia

range† 9,500 mV/psi for 1000 psia

range† 3,800 mV/psi for 2500 psia

range† 1,900 mV/psi for 5000 psia

range† 950 mV/psi for 10,000 psia

Signal Conditioning

Frequency Response 0 to 5.5 kHz on all configured pressure channels

Pressure Accuracy Within ± 0.5% of pressure transducer full-range (9.5 Volts: From +0.5 to +10.0 Volts) @ +25°C (77º F)

Within ± 1.0% of pressure transducer full-range (9.5 Volts: From +0.5 to +10.0 Volts) over –30°C to +65°C (-22ºF to 150ºF)

Measured Variables

Cylinder Pressure Discharge Pressure, Suction Pressure, Maximum Pressure, Minimum Pressure, Compression Ratio, Peak Rod Compression, Peak Rod Tension, Degree of Rod Reversal

Input Impedance

Internal/External Termination Cylinder Pressure I/O 50 kΩ

Power Consumption 7.8 Watts with transducer supplies at full load.

Outputs

Front Panel LEDs

OK LED Indicates when the 3500/77M is operating properly.

TX/RX LED Indicates when the 3500/77M is communicating with other modules in the 3500 rack.

Bypass LED Indicates when the 3500/77M is in Bypass Mode.

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

The Buffered Transducer Outputs on monitors using the Cylinder Pressure I/O module will be inverted and offset by -2.265 Vdc.

Output Impedance 550 Ω

Transducer Power Supply +23.0 ± 0.8 Vdc with 24.5 ma current limiting on each channel.

Environmental Limits

Operating Temperature

When used with Internal/External Termination Cylinder Pressure I/O Module: -30°C to +65°C (-22°F to +150°F)

Storage Temperature -40°C to +85°C (-40°F to +185°F)

Humidity 95%, non-condensing

Physical

Monitor Module

Dimensions (Heightx Width x Depth)

241.3 mm x 24.4 mm x241.8 mm

(9.50 in x 0.96 in x 9.52in)

Weight 0.91 kg (2.0 lb.)

I/O Modules

Dimensions (Heightx Width x Depth)

241.3 mm x 24.4 mm x99.1 mm

(9.50 in x 0.96 in x 3.90in)

Weight 0.20 kg (0.44 lb.)

Rack Space Requirements

Monitor Module 1 full-height front slot

I/O Modules 1 full-height rear slot