

INDUSTRIAL AUTOMATION PRODUCT

3500/40M 176449-01

Four-Channel Proximito

Bently Nevada 3500/40M 176449-01 is a four-channel Proximito Monitor for a 3500 machinery-protection rack. It conditions proximity-transducer signals and generates position, vibration and bearing-condition values for alarm processing.

IDENTITY	VERIFIED VALUE
Manufacturer	Bently Nevada
System family	3500 Machinery Protection System
Part number	176449-01
Country	USA
HS code	8537101190

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3500/40M 176449-01

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Technical Specifications

Technical values below are limited to the named Bently Nevada product record.

PARAMETER	VALUE
Input channels	1 to 4
Accepted signals	Proximity transducer
Power consumption	7.7 W typical
Standard I/O input impedance	10 kOhm
Radial vibration sensitivity	3.94 or 7.87 mV/um
Diff. expansion sensitivity	0.394 or 0.787 mV/um
REBAM sensitivity	40 or 80 mV/um
Buffered output impedance	550 Ohm
Transducer power supply	-24 Vdc
Radial direct filter	4-4000 Hz or 1-600 Hz

PARAMETER	VALUE
Radial gap filter	-3 dB at 0.09 Hz
Thrust direct filter	-3 dB at 1.2 Hz
Thrust gap filter	-3 dB at 0.41 Hz
Direct and gap accuracy	+/-0.33% FS typical; +/-1% maximum
Alarm setpoint accuracy	Within 0.13% of desired value
Operating temperature	-30 to +65 degC
Storage temperature	-40 to +85 degC
Humidity	95% non-condensing
Front rack space	1 full-height slot
Required config. software	3500/01 Version 2.50 or later

VERIFIED PRODUCT RECORD

DATA GROUP	VERIFIED VALUE
Installed host / carrier	3500 rack
Companion hardware	125680-01 or other approved Proximitor I/O module
Field connection	Bently Nevada proximity transducer system
Primary system function	Conditions four proximity-transducer channels for machinery protection
Controlled acceptance duty	Radial shaft vibration monitoring

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System Role and Architecture

Bently Nevada 3500/40M 176449-01 is a four-channel Proximitor Monitor for a 3500 machinery-protection rack. It conditions proximity-transducer signals and generates position, vibration and bearing-condition values for alarm processing.

FUNCTION 1

Conditions four proximity-transducer channels for machinery protection

FUNCTION 2

Supports radial vibration, thrust, eccentricity, differential expansion and REBAM duties

FUNCTION 3

Compares active measured values with configured Alert and Danger setpoints

FUNCTION 4

Provides short-circuit-protected buffered transducer outputs at the front panel

Matched system components

- 3500 rack
- 125680-01 or other approved Proximitor I/O module
- Bently Nevada proximity transducer system
- 3500 Rack Configuration Software

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	3500 rack
Companion hardware	125680-01 or other approved Proximitor I/O module
Field connection	Bently Nevada proximity transducer system
Primary system function	Conditions four proximity-transducer channels for machinery protection
Controlled acceptance duty	Radial shaft vibration monitoring

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Applications and Engineering Context

Radial shaft vibration monitoring

Conditions four proximity-transducer channels for machinery protection

Axial thrust-position protection

Supports radial vibration, thrust, eccentricity, differential expansion and REBAM duties

Differential-expansion supervision

Compares active measured values with configured Alert and Danger setpoints

REBAM rolling-element bearing monitoring

Provides short-circuit-protected buffered transducer outputs at the front panel

TECHNICAL NOTE

Configure channel pairs for the installed measurement duty, confirm transducer scale and gap polarity, then prove Alert and Danger operation with controlled signal injection before returning protection service.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	3500/40M 176449-01 / 176449-01 recorded
Physical interface	3500 rack
Companion check	125680-01 or other approved Proximitor I/O module
Functional proof	Conditions four proximity-transducer channels for machinery protection
Application test	Radial shaft vibration monitoring

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Engineering Precautions

1

Match 176449-01 to the documented 3500 rack slot and rear I/O-module execution.

2

Isolate the rack and connected transducer circuits before removing the monitor.

3

Use ESD controls and protect all four buffered-output connectors during handling.

4

Record channel-pair functions, full-scale ranges, transducer sensitivities and alarm delays.

5

Confirm the rear I/O module is compatible with internal, external or barrier termination requirements.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
125680-01	Internal-termination Proximitor I/O module	Open product page
125720-01	Four-channel relay output module	Open product page
125760-01	3500 Data Manager I/O module	Open product page
125768-01	3500 RIM RS232/RS422 I/O module	Open product page
128240-01	External-termination Prox/Seismic I/O	Open product page

MANUFACTURER SOURCE RECORD

3500/40M Proximitor Monitor Datasheet

141535 Rev. R

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