

INDUSTRIAL AUTOMATION PRODUCT

3500/72M 176449-08

3500/72M Recip Rod Position Monitor

Bently Nevada 3500/72M 176449-08 is a four-channel reciprocating-rod position monitor. It conditions proximity signals and calculates rod-position and rod-drop measurements for compressor protection.

IDENTITY	VERIFIED VALUE
Manufacturer	Bently Nevada
System family	3500 machinery protection system
Part number	3500/72M 176449-08
Country	USA
HS code	8537101190

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313
EMAIL sales13@apterpower.com
WEBSITE www.apterpower.com



2

Technical Specifications

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

PARAMETER	TECHNICAL VALUE
Part number	176449-08
Input channels	1 to 4 proximity probe signals
Input impedance	10 kOhm
Power consumption	7.7 W nominal
Rod-position scale factors	0.79 / 3.94 / 7.87 mV/um
Front buffered outputs	1 coaxial connector per channel
Buffered-output impedance	510 Ohm
Transducer supply	-24 V DC
Peak-to-peak filter	1 to 600 Hz
Gap filter	-3 dB at 0.09 Hz
Position amplitude accuracy	+/-0.33% FS typical; +/-1% maximum
Position angle accuracy	+/-1 degree typical; +/-3 degrees maximum

ENGINEERING DATA SUMMARY

DATA GROUP	VERIFIED ASSIGNMENT
Installed host / carrier	3500 rack and power supply
Companion hardware	compatible proximity transducers
Field connection	keyphasor or crank-reference input
Primary system function	Conditions up to four proximity-probe signals on reciprocating compressors
Controlled acceptance duty	Reciprocating-compressor rod position

3

System Role and Architecture

Bently Nevada 3500/72M 176449-08 is a four-channel reciprocating-rod position monitor. It conditions proximity signals and calculates rod-position and rod-drop measurements for compressor protection.

FUNCTION 1

Conditions up to four proximity-probe signals on reciprocating compressors

FUNCTION 2

Calculates rod position, rod drop, gap, crank angle, and harmonic data

FUNCTION 3

Compares conditioned measurements with configured alarm setpoints

FUNCTION 4

Returns dynamic and static values through the 3500 rack communication path

Matched system components

- 3500 rack and power supply
- compatible proximity transducers
- keyphasor or crank-reference input
- approved internal or external I/O module

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Installed host / carrier	3500 rack and power supply
Companion hardware	compatible proximity transducers
Field connection	keyphasor or crank-reference input
Primary system function	Conditions up to four proximity-probe signals on reciprocating compressors
Controlled acceptance duty	Reciprocating-compressor rod position

4

Applications and Engineering Context

Reciprocating-compressor rod position

Conditions up to four proximity-probe signals on reciprocating compressors

Rod-drop trending

Calculates rod position, rod drop, gap, crank angle, and harmonic data

Hyper compressor displacement monitoring

Compares conditioned measurements with configured alarm setpoints

Compressor rider-band and clearance assessment

Returns dynamic and static values through the 3500 rack communication path

TECHNICAL NOTE

Configure channel pairs for the selected rod-position function, match transducer scale factor and crank reference, and prove gap, phase, alarm, and trip behavior during controlled compressor commissioning.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	3500/72M 176449-08 / 3500/72M 176449-08 recorded
Physical interface	3500 rack and power supply
Companion check	compatible proximity transducers
Functional proof	Conditions up to four proximity-probe signals on reciprocating compressors
Application test	Reciprocating-compressor rod position

5

Engineering Precautions

- 1
- Verify 3500/72M 176449-08 and its I/O module before rack work.
- 2
- Place compressor protection in the approved maintenance state.
- 3
- Record channel pairing, full-scale range, scale factor, and alarms.
- 4
- Preserve probe polarity and crank-reference assignment.
- 5
- Use ESD controls and inspect rack and I/O connectors.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
330171-00-12-05-01-05	3300 XL proximity probe	Open product page
200150-09-CN	General-purpose accelerometer	Open product page

MANUFACTURER SOURCE RECORD

3500/72M Recip Rod Position Monitor Datasheet
146478 Rev. M

APTER POWER SALES TEAM

WHATSAPP / PHONE +86 180 3023 5313
EMAIL sales13@apterpower.com
WEBSITE www.apterpower.com

