

APTER POWER

COMPLETE PRODUCT INFORMATION

3500/40M 140734-01

3500/40M Four-Channel Proximitors Monitor Module

3500/40M 140734-01 accepts up to four Bently Nevada proximity-transducer inputs and derives configured radial-vibration, thrust-position, differential-expansion, eccentricity or REBAM measurements for alarm comparison.

PRODUCT SNAPSHOT

BRAND

Bently Nevada

FAMILY

Bently Nevada 3500 Machinery Protection Sy

PART

140734-01

ORIGIN / HS

USA / 8537101190

APTER POWER SALES TEAM

WHATSAPP / PHONE

+86 180 3023 5313

EMAIL

sales13@apterpower.com

WEBSITE

www.apterpower.com



PRODUCT OVERVIEW

3500/40M 140734-01 accepts up to four Bently Nevada proximity-transducer inputs and derives configured radial-vibration, thrust-position, differential-expansion, eccentricity or REBAM measurements for alarm comparison.

- 1 Conditions four proximity-transducer channels in one rack position
- 2 Programs channels as two independently assigned pairs
- 3 Compares active measurement values with alert and danger setpoints
- 4 Provides protected front-panel buffered transducer outputs

SYSTEM COMPONENTS

3500 rack and rack power supplies

Compatible Proximitors sensors and proximity probes

Selected 3500/40M I/O module

3500 Rack Configuration Software

TECHNICAL NOTE

Install 3500/40M 140734-01 with the documented I/O module and recorded channel-pair configuration. Before returning protection service, restore transducer type, scale, filters, alert/danger values and time delays, then prove the buffered outputs and rack diagnostics.

TECHNICAL DATA

PARAMETER	VALUE
Monitor family	3500/40M
Input channels	1 to 4
Input signal	Proximity transducer
Typical power consumption	7.7 W
Standard I/O input impedance	10 kohm
Radial-vibration sensitivity	3.94 or 7.87 mV/um
Thrust-position sensitivity	3.94 or 7.87 mV/um
Eccentricity sensitivity	3.94 or 7.87 mV/um
Differential-expansion sensitivity	0.394 or 0.787 mV/um
REBAM sensitivity	40 or 80 mV/um
Buffered outputs	1 coaxial connector per channel
Buffered-output impedance	550 ohm
Transducer power supply	-24 V DC
Radial direct-filter range	4 to 4000 Hz or 1 to 600 Hz

PARAMETER	VALUE
Radial gap filter	-3 dB at 0.09 Hz
Smax tracking range	0.125 to 15.8 times running speed
Vector-valid speed range	60 to 60000 cpm
Direct and gap accuracy	+/-0.33% FS typical; +/-1% FS maximum
Thrust direct filter	-3 dB at 1.2 Hz
Thrust gap filter	-3 dB at 0.41 Hz
Eccentricity direct filter	-3 dB at 15.6 Hz
Eccentricity gap filter	-3 dB at 0.41 Hz
Operating temperature	-30 to +65 degC with standard I/O
Storage temperature	-40 to +85 degC
Humidity	95%, noncondensing
Alarm setpoint range	0 to 100% of full scale
Alarm-setpoint accuracy	Within 0.13% of desired value
Channel programming	Two channel pairs

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
330171-00-33-50-01-05	3300 XL 5/8 mm proximity probe	View 330171-00-33-50-01-05 page
330172-00-08-10-01-05	3300 XL 5/8 mm armored proximity probe	View 330172-00-08-10-01-05 page
330103-00-12-10-02-00	3300 XL 8 mm metric proximity probe	View 330103-00-12-10-02-00 page
330103-00-16-10-02-05	3300 XL 8 mm metric proximity probe	View 330103-00-16-10-02-05 page
330130-045-00-00	3300 XL standard extension cable	View 330130-045-00-00 page
330130-080-02-05	3300 XL extension cable	View 330130-080-02-05 page
330850-50-00	3300 XL NSv Proximitor Sensor	View 330850-50-00 page
330171-00-12-50-01-05	3300 XL 5/8 mm proximity probe	View 330171-00-12-50-01-05 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Radial shaft-vibration protection

Conditions four proximity-transducer channels in one rack position

Thrust-position supervision

Programs channels as two independently assigned pairs

Differential-expansion monitoring

Compares active measurement values with alert and danger setpoints

Rolling-element bearing REBAM channels

Provides protected front-panel buffered transducer outputs

PRODUCT PRECAUTIONS

- 1 Verify the complete 3500/40M 140734-01 marking and installed hardware revision before removal.
- 2 Place the monitored machine and all affected protection channels in the approved maintenance state.
- 3 Isolate rack and transducer-loop energy and apply ESD controls before handling the module.
- 4 Record both channel-pair functions, transducer types, full-scale ranges, filters and setpoints.
- 5 Keep the selected internal, external or barrier I/O arrangement matched to the installed wiring.
- 6 Inspect backplane and buffered-output connectors and do not touch exposed contacts.
- 7 Restore software revisions and the approved rack configuration before enabling alarms.
- 8 Prove channel polarity, static values, buffered outputs, alerts, dangers and relay action under controlled conditions.

ENGINEER FAQ

Q1 Does 3500/40M 140734-01 match 3500 rack and rack power supplies in a Radial shaft-vibration protection installation?

Verify the complete 3500/40M 140734-01 marking, the documented Bently Nevada 3500 Machinery Protection System position and the installed 3500 rack and rack power supplies before fitting the assembly.

Q3 Which Bently Nevada 3500 Machinery Protection System records should be captured before removing 3500/40M 140734-01?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with 3500/40M 140734-01 before disconnection.

Q5 Which Compatible Proximitors sensors and proximity probes condition should be checked when 3500/40M 140734-01 reports an abnormal state?

Check the Compatible Proximitors sensors and proximity probes supply, seating and connection first, then compare channel diagnostics with the recorded 3500/40M 140734-01 baseline.

Q7 What maintenance evidence is required after 3500/40M 140734-01 is used for Differential-expansion monitoring?

Retain the nameplate record, corrective action, final diagnostics and a controlled differential-expansion monitoring functional-test result for 3500/40M 140734-01.

Q2 How should 3500/40M 140734-01 be wired when it must conditions four proximity-transducer channels in one rack position?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for 3500/40M 140734-01; then continuity-test the affected path.

Q4 What controlled test confirms that 3500/40M 140734-01 can programs channels as two independently assigned pairs?

Apply the approved field or simulated stimulus, observe the Bently Nevada 3500 Machinery Protection System indication and confirm the intended response without bypassing the normal interlocks.

Q6 Can 3500/40M 140734-01 be moved directly into Thrust-position supervision without validating 3500 Rack Configuration Software?

No. Confirm the 3500 Rack Configuration Software, revision, connection scheme and Bently Nevada 3500 Machinery Protection System configuration before transferring 3500/40M 140734-01 to that duty.

Q8 How should 3500/40M 140734-01 be returned to service in Rolling-element bearing REBAM channels?

Restore power under control, verify compares active measurement values with alert and danger setpoints, exercise the intended signal path and release 3500/40M 140734-01 only after the Bently Nevada 3500 Machinery Protection System remains in its approved operating state.

SOURCE Bently Nevada 3500/40M Proximitors Monitor Datasheet | 141535 Rev. R

+86 180 3023 5313 | sales13@apterpower.com | www.apterpower.com