

Bently Nevada 3500/42M 135489-01

Four-channel Proximitors/Seismic monitor component

Product identity and system role

The Bently Nevada 3500/42M is a four-channel Proximitors/Seismic Monitor that accepts proximity, velocity or acceleration signals for shaft and casing vibration, position and combined shaft-absolute measurements.

01 / FUNCTION

Accepts one to four proximity, velocity or acceleration transducer signals.

02 / FUNCTION

Supports radial vibration, thrust, acceleration, velocity and shaft-absolute measurements.

03 / FUNCTION

Programs channels in pairs with separate or identical measurement configurations.

04 / FUNCTION

Provides buffered transducer and 4-20 mA recorder outputs for commissioning and trending.

IDENTITY FIELD	VERIFIED VALUE
Exact I/O identity	Internal barriers; internal terminations; four Prox/Accel channels
Channels	1 to 4 proximity, velocity or acceleration inputs
Power consumption	7.7 W typical
Standard Prox/Accel input impedance	10 kOhm

Official technical parameters

Bently Nevada 3500/42M 135489-01 / manufacturer-published values

PARAMETER	OFFICIAL VALUE
Exact I/O identity	Internal barriers; internal terminations; four Prox/Accel channels
Channels	1 to 4 proximity, velocity or acceleration inputs
Power consumption	7.7 W typical
Standard Prox/Accel input impedance	10 kOhm
Transducer supply	-24 Vdc nominal
Buffered-output impedance	550 Ohm
Recorder output	4-20 mA per channel
Recorder load	0 to 600 Ohm
Recorder update	100 ms or less
Channel programming	Pairs may use separate or identical configurations
Measurement types	Radial vibration, REBAM, thrust, acceleration, differential expansion, shaft absolute, eccentricity and velocity
Operating temperature	-30 to +65 degrees C
Storage temperature	-40 to +85 degrees C

Official evidence boundary

Official evidence: 3500/42M Proximitors/Seismic Monitor Datasheet, 143694 Rev. AC. Technical statements in this document are limited to that manufacturer publication and the exact ordering identity shown.

Applications and engineering checks

Bently Nevada 3500/42M 135489-01

Shaft-relative vibration

Use proximity inputs for radial shaft vibration and position channels.

Casing seismic vibration

Use the documented seismic transducer type for velocity or acceleration measurements.

Shaft-absolute vibration

Combine compatible shaft-relative and casing signals in the configured channel pair.

Machine-position measurements

Apply thrust, eccentricity or differential-expansion channel types as documented.

01 / PRECAUTION

Confirm the exact I/O module and its transducer population before replacement.

02 / PRECAUTION

Preserve paired-channel assignments when moving or restoring the module.

03 / PRECAUTION

Match proximity, Seismoprobe, Velomitor or accelerometer wiring to the selected input type.

04 / PRECAUTION

Verify transducer sensitivity and supply requirements before energizing.

05 / PRECAUTION

Review gap, bias and buffered outputs before accepting the processed measurement.

06 / PRECAUTION

Keep recorder loads within 0-600 Ohm and verify output scaling.

07 / PRECAUTION

Function-test Alert, Danger and Not-OK paths with controlled signals.

08 / PRECAUTION

Record final channel type, filter, full scale, alarm setpoints and acceptance response.

Model-specific engineering FAQ

Eight evidence-mapped decisions

What channel population is built into 3500/42M 135489-01?

135489-01 provides internal barriers, internal terminations and four Prox/Accel channels for the 3500/42M assembly.

Why must a complete 3500/42M identity accompany 3500/42M 135489-01?

The base part number is used in other monitor families, so the monitor family and four-channel Prox/Accel population prevent a wrong replacement.

How is shaft-relative vibration checked through 3500/42M 135489-01?

Verify the proximity system, gap/bias, sensitivity and buffered signal before comparing the processed radial-vibration value.

What acceleration-interface requirement applies to 3500/42M 135489-01?

Use the documented Prox/Accel input and -24 Vdc transducer-supply arrangement with the configured accelerometer channel type.

How should internal barriers influence signal-injection testing on 3500/42M 135489-01?

Use an approved method that preserves the barrier circuit; do not bypass the internal isolation to force an alarm.

Which combined measurement can be built from channels using 3500/42M 135489-01?

A configured shaft-absolute channel combines compatible shaft-relative and casing seismic measurements in the paired-channel arrangement.

What output comparison reveals configuration errors on 3500/42M 135489-01?

Compare raw buffered signals with processed values and 4-20 mA scaling to detect sensitivity, channel-type or full-scale mismatches.

Which protected-circuit evidence should be archived for 3500/42M 135489-01?

Record barrier I/O identity, Prox/Accel assignments, bias, scaling, alarms, recorder outputs and acceptance authorization.

EVIDENCE MAP A

FAQ 01 — pp. 19-22

FAQ 03 — pp. 3-12

FAQ 05 — pp. 18-22

FAQ 07 — pp. 3-12

EVIDENCE MAP B

FAQ 02 — pp. 19-22

FAQ 04 — pp. 3-6

FAQ 06 — pp. 1-12

FAQ 08 — pp. 18-22

Related products and contact

Verified ApterPower navigation links; not approved substitutes

NO.	RELATED APTERPOWER PRODUCT	LINK
01	Bently Nevada 3500-42M-176449-02	Bently Nevada 3500-42M-176449-02
02	Bently Nevada 3500-53-133388-01	Bently Nevada 3500-53-133388-01
03	Bently Nevada 3500-92-136180-01	Bently Nevada 3500-92-136180-01
04	Bently Nevada 9200-09-01-02-00	Bently Nevada 9200-09-01-02-00
05	Bently Nevada 3500-22M-288055-01	Bently Nevada 3500-22M-288055-01
06	Bently Nevada 3500-63-163179-04	Bently Nevada 3500-63-163179-04

Navigation boundary

These links provide nearby catalogue references only. Confirm the complete machine, rack, I/O, transducer and ordering-code requirements before selecting any alternate article.

Official evidence boundary

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APTER POWER CONTACT

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com



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