

Bently Nevada 3500/70M 135489-01

Four-channel reciprocating impulse/velocity monitor I/O module

Product identity and system role

Bently Nevada 3500/70M 135489-01 is an internal-barrier I/O module with four Prox/Accel channels for a reciprocating impulse/velocity monitoring assembly.

01 / FUNCTION

Supports impulse acceleration, acceleration 2, reciprocating velocity and low-frequency velocity functions.

02 / FUNCTION

Accepts one to four signals with channels programmed in pairs.

03 / FUNCTION

Provides buffered transducer outputs and per-channel 4-20 mA recorder signals.

04 / FUNCTION

Applies to crankcase and crosshead vibration monitoring on reciprocating machinery.

IDENTITY FIELD	VERIFIED VALUE
Exact I/O identity	135489-01 internal barriers; internal terminations; four Prox/Accel channels
Channels	1 to 4 signals; programmed in pairs
Channel functions	Impulse acceleration, acceleration 2, reciprocating velocity and low-frequency reciprocating velocity
Acceleration input impedance	10 kOhm

Official technical parameters

Bently Nevada 3500/70M 135489-01 / manufacturer-published values

PARAMETER	OFFICIAL VALUE
Exact I/O identity	135489-01 internal barriers; internal terminations; four Prox/Accel channels
Channels	1 to 4 signals; programmed in pairs
Channel functions	Impulse acceleration, acceleration 2, reciprocating velocity and low-frequency reciprocating velocity
Acceleration input impedance	10 kOhm
Velocity input impedance	Greater than 1 MOhm
Special-inhibit input	5 Vdc at 390 microampere
Power consumption	7.7 W typical
Transducer supply	-22 Vdc minimum; 40 mA maximum
Buffered-output impedance	550 Ohm
Recorder output	4-20 mA; 12 V maximum; 600 Ohm maximum; under 100 ms

Official evidence boundary

Official evidence: 3500/70M Recip Impulse/Velocity Monitor Datasheet, 166766 Rev. L. Technical statements in this document are limited to that manufacturer publication and the exact ordering identity shown.

Applications and engineering checks

Bently Nevada 3500/70M 135489-01

Crankcase impulse monitoring

Detect impact-like acceleration events on reciprocating machinery.

Crosshead vibration

Measure reciprocating velocity at a documented casing or crosshead location.

Low-frequency velocity

Apply the low-frequency channel type for the intended reciprocating operating band.

Channel-pair protection

Configure paired channels for matching or separate functions as the machine design requires.

01 / PRECAUTION

Confirm 135489-01 belongs to the 3500/70M assembly and not another monitor family using the same base part number.

02 / PRECAUTION

Preserve the four internal-barrier Prox/Accel channel assignments.

03 / PRECAUTION

Match acceleration or velocity input impedance to the configured transducer type.

04 / PRECAUTION

Restore paired-channel functions and special-inhibit logic from the approved record.

05 / PRECAUTION

Verify transducer supply, bias and buffered outputs before commissioning alarms.

06 / PRECAUTION

Check recorder load and output scaling on every active channel.

07 / PRECAUTION

Prove impulse or velocity alarm behavior with a controlled test appropriate to the selected channel type.

08 / PRECAUTION

Retain baseline vibration, alarm response, inhibit state and acceptance evidence.

Model-specific engineering FAQ

Eight evidence-mapped decisions

How is 3500/70M 135489-01 distinguished from identical base-number I/O modules used by other 3500 monitors?

Confirm the complete 3500/70M identity and the four internal-barrier Prox/Accel channel configuration rather than relying on the 135489-01 number alone.

Which measurements can the installed 3500/70M assembly perform with 3500/70M 135489-01?

Configured functions include impulse acceleration, acceleration 2, reciprocating velocity and low-frequency reciprocating velocity.

Why must channel pairing be preserved when replacing 3500/70M 135489-01?

The monitor programs channels in pairs, and paired channels may carry matching or different reciprocating measurement functions.

What input-impedance distinction matters for 3500/70M 135489-01?

Acceleration inputs use 10 kOhm while velocity inputs exceed 1 MOhm; the I/O and transducer configuration must agree.

What is the documented special-inhibit input condition for 3500/70M 135489-01?

The special-inhibit input is specified at 5 Vdc and approximately 390 microampere; verify the installed logic before relying on inhibition.

Which transducer-supply limit should be checked on 3500/70M 135489-01?

The published supply is -22 Vdc minimum with a 40 mA maximum; verify bias and current for each active channel.

How should the recorder interface from 3500/70M 135489-01 be accepted?

Confirm 4-20 mA scaling, no more than 600 Ohm load, 12 V maximum compliance and response under 100 ms.

What final evidence proves the reciprocating channels using 3500/70M 135489-01?

Retain the channel type, paired configuration, baseline waveform, inhibit state, alarm response and recorder-output results.

EVIDENCE MAP A

FAQ 01 — pp. 1, 10-12

FAQ 03 — pp. 1-3

FAQ 05 — pp. 3-4

FAQ 07 — pp. 4-5

EVIDENCE MAP B

FAQ 02 — pp. 1-3

FAQ 04 — pp. 3-4

FAQ 06 — pp. 3-4

FAQ 08 — pp. 1-12

Related products and contact

Verified ApterPower navigation links; not approved substitutes

NO.	RELATED APTERPOWER PRODUCT	LINK
01	Bently Nevada 3500-23E	Bently Nevada 3500-23E
02	Bently Nevada 3500-50E	Bently Nevada 3500-50E
03	Bently Nevada 3500-42E	Bently Nevada 3500-42E
04	Bently Nevada 149992-01	Bently Nevada 149992-01
05	Bently Nevada 140471-01	Bently Nevada 140471-01
06	Bently Nevada 3500-77M-140734-07	Bently Nevada 3500-77M-140734-07

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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