

Bently Nevada 3500/46M 176449-06

Four-channel hydro machinery monitor

Overview

Bently Nevada 3500/46M 176449-06 is a Hydro Monitor that accepts proximity, seismic, dynamic-pressure and air-gap sensor inputs for vibration, position, pressure and multimode hydro measurements.

01 / FUNCTION

Accepts one to four proximity, air-gap, velocity or acceleration sensor signals.

02 / FUNCTION

Provides hydro radial vibration, air gap, velocity, acceleration, thrust and dynamic-pressure functions.

03 / FUNCTION

Supports up to eight alarm parameter sets for configured multimode channels.

04 / FUNCTION

Switches machine-mode alarm sets through multimode I/O contacts or gateway commands.

PUBLIC PRODUCT FIELD	OFFICIAL VALUE
Exact article	176449-06 / 3500/46M Hydro Monitor
Channels	1 to 4 sensor signals
Accepted sensors	Proximity, seismic, dynamic pressure and air gap
Power consumption	7.7 W typical
Prox/Accel input impedance	10 kOhm
Velomitor input impedance	3.5 MOhm

Technical parameter dashboard

Bently Nevada 3500/46M 176449-06

PARAMETER	OFFICIAL VALUE	PARAMETER	OFFICIAL VALUE	PARAMETER	OFFICIAL VALUE
Exact article	176449-06 / 3500/46M Hydro Monitor	Velomitor input impedance	3.5 MOhm	Recorder output	4-20 mA; 0-600 Ohm load; 100 ms or less
Channels	1 to 4 sensor signals	Multimode positive input	50 kOhm	Transducer supply	-23 Vdc nominal for Prox/Velom I/O; +23 Vdc nominal for positive-input I/O
Accepted sensors	Proximity, seismic, dynamic pressure and air gap	Hydro velocity sensitivity	20 mV per mm/s	Hydro radial direct filter	0.104 to 500 Hz
Power consumption	7.7 W typical	Hydro acceleration sensitivity	1.02 or 2.55 mV per m/s2	Hydro radial rotor-speed range	25 to 1,500 cpm
Prox/Accel input impedance	10 kOhm	Buffered-output impedance	550 Ohm	Multimode alarm sets	Up to eight sets per configured multimode channel

Official evidence boundary

Official evidence: 3500/46M Hydro Monitor Datasheet, 144408 Rev. AD. Technical statements in this document are limited to that manufacturer publication and the exact ordering identity shown.

Common applications and Product Precautions

Bently Nevada 3500/46M 176449-06

Hydro radial vibration

Combine shaft gap movement and NX amplitude for hydro-unit protection measurements.

Hydro air-gap monitoring

Condition compatible air-gap sensor signals for static and dynamic assessment.

Multimode operation

Select mode-specific alarm sets as operating state changes.

Dynamic pressure and SEW

Monitor configured pressure or stator-end-winding vibration inputs.

01 / CHECK

Verify 176449-06 and the installed Hydro I/O type before replacement.

02 / CHECK

Confirm firmware and rack software meet the minimum revision for every configured hydro application.

03 / CHECK

Preserve each paired-channel configuration and the selected machine-mode logic.

04 / CHECK

Match every sensor to its documented sensitivity, polarity and power-supply type.

05 / CHECK

For external multimode termination, use the documented recorder ET block and signal cable 129525.

06 / CHECK

Do not mix external termination blocks with internal-termination I/O modules.

07 / CHECK

Prove mode changes and all applicable Alert/Danger sets with controlled conditions.

08 / CHECK

Record active mode, static values, alarms, buffered outputs and final acceptance results.

Engineering FAQ

Eight exact-model answers with official evidence

Which sensor families can 3500/46M 176449-06 accept for hydro monitoring?

The Hydro Monitor accepts proximity, seismic, dynamic-pressure and air-gap sensor inputs; the installed I/O and channel type must match the sensor.

Why does 3500/46M 176449-06 require a machine-mode verification during commissioning?

A multimode channel can hold up to eight alarm parameter sets and select the applicable set through I/O contacts or communications commands.

Which termination rule is critical for external multimode use with 3500/46M 176449-06?

Use the documented multimode recorder ET block and cable 129525; external termination blocks cannot be paired with internal-termination I/O modules.

Why must firmware and software revisions be checked for 3500/46M 176449-06?

Minimum revisions differ by hydro application, so the configured measurement type must be compared with the ordering-considerations matrix.

How many input channels are available to 3500/46M 176449-06?

The monitor accepts one to four sensor signals and programs the channels in pairs.

What restriction applies to the Hydro Velocity function of 3500/46M 176449-06?

The datasheet states Hydro Velocity is valuable for warning and diagnosis but is not suitable for automated machinery protection because of its low-frequency, high-amplitude event behavior.

What recorder-output envelope should be tested on 3500/46M 176449-06?

Each channel provides 4-20 mA proportional to full scale with 0-600 Ohm load capability and a 100 ms or faster update.

Which evidence should close a multimode acceptance test for 3500/46M 176449-06?

Record active mode, selected alarm set, static values, buffered and recorder outputs, Alert/Danger response and mode-transition behavior.

Related products and contact

Catalogue navigation separate from technical evidence

NO.	RELATED APTERPOWER PRODUCT	LINK
01	Bently Nevada 9200-06-02-10-00	Bently Nevada 9200-06-02-10-00
02	Bently Nevada 3500-15-DC	Bently Nevada 3500-15-DC
03	Bently Nevada 136719-01	Bently Nevada 136719-01
04	Bently Nevada 172109-01	Bently Nevada 172109-01
05	Bently Nevada 133323-01	Bently Nevada 133323-01
06	Bently Nevada 3500-15-106M1081-01	Bently Nevada 3500-15-106M1081-01

Compatibility notice

A related ApterPower page is not an approved substitute. Verify the exact manufacturer ordering code, installed interfaces and configuration before procurement or maintenance release.

APTER POWER CONTACT

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