

01

Identity, prerequisites and work boundary

APTER POWER / MODEL-SPECIFIC INSTALLATION & COMMISSIONING GUIDE

Bently Nevada 3500/46M 176449-06

Exact product identity

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.

PRE-WORK CHECK	OFFICIAL BASIS
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
Multimode positive input	50 kOhm
Hydro velocity sensitivity	20 mV per mm/s

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.

Bently Nevada 3500/46M 176449-06

01 / INSTALLATION

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

02 / INSTALLATION

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

03 / INSTALLATION

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

04 / INSTALLATION

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

05 / INSTALLATION

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

06 / INSTALLATION

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

07 / INSTALLATION

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

08 / INSTALLATION

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

Hold point

Do not energize until the exact article, matching I/O or termination hardware, field wiring, grounding, transducer type and approved configuration have been independently checked.

03

Configuration and signal verification

APTER POWER / MODEL-SPECIFIC INSTALLATION & COMMISSIONING GUIDE

Bently Nevada 3500/46M 176449-06

CONFIGURATION ITEM	REQUIRED MATCH
Hydro acceleration sensitivity	1.02 or 2.55 mV per m/s2
Buffered-output impedance	550 Ohm
Recorder output	4-20 mA; 0-600 Ohm load; 100 ms or less
Transducer supply	-23 Vdc nominal for Prox/Velom I/O; +23 Vdc nominal for positive-input I/O
Hydro radial direct filter	0.104 to 500 Hz
Hydro radial rotor-speed range	25 to 1,500 cpm
Multimode alarm sets	Up to eight sets per configured multimode channel

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.

Signal-path acceptance
Compare the raw or buffered signal with the processed measurement, recorder output and configured alarm behavior. Resolve polarity, sensitivity, scaling or channel-type differences before proceeding.

Bently Nevada 3500/46M 176449-06

RELEASE ITEM	REQUIRED EVIDENCE
Identity	Exact article and installed position recorded
Interfaces	I/O, termination, sensor and cable identities verified
Configuration	Channel type, sensitivity, range, filters and logic restored
Raw signal	Bias, gap, waveform or buffered output accepted
Processed value	Measured value and scaling compared with controlled input
Alarms	Alert, Danger, Not-OK or relay behavior proved as applicable
Outputs	Recorder or relay circuit checked against the installed load
Release	Final baseline, diagnostics and authorization retained

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.

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.

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.

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.

Acceptance boundary

This guide organizes official product facts but does not replace the manufacturer datasheet, installed machine drawings, site procedures or authorized proof-test requirements.

Verified catalogue navigation; not approved substitutes

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

Selection notice

Do not infer compatibility from family naming or a shared spare-part number. Confirm the complete monitor, I/O, transducer, approval and termination identity.

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.

APTER POWER CONTACT

WHATSAPP / PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com



3500/46M 176449-06