

INDUSTRIAL AUTOMATION PRODUCT

3500/42M-SIL2-09-01

3500/42M Proximitoꖑ Seismic Monitor

Bently Nevada 3500/42M-SIL2-09-01 is preserved as the complete supplied identity for a 3500/42M four-channel Proximitoꖑ Seismic Monitor arrangement. The documented 09 I/O option accepts Prox/Accel, Velomitoꖑ and HTVS inputs through internal terminations.

| IDENTITY      | VERIFIED VALUE                                 |
|---------------|------------------------------------------------|
| Manufacturer  | Bently Nevada                                  |
| System family | Bently Nevada 3500 Machinery Protection System |
| Part number   | 3500/42M-SIL2-09-01                            |
| Product role  | Monitors four configured machinery channels    |
| Lifecycle     | Installed product record                       |

DOCUMENT SCOPE

Exact-article identity, technical data, host role, installation checks, applications, precautions and engineering verification.

MODEL-SPECIFIC ENGINEERING NOTE

Before removing 3500/42M-SIL2-09-01, record the complete marking, installed position, mating hardware, connectors, wiring and configured channel role. Restore the documented arrangement, review system diagnostics and complete a controlled functional test before release.

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3500/42M-SIL2-09-01

# Technical Specifications

Technical values below are limited to the named Bently Nevada product record and directly applicable manufacturer documentation.

| PARAMETER                  | VALUE               | PARAMETER           | VALUE                          |
|----------------------------|---------------------|---------------------|--------------------------------|
| Complete supplied identity | 3500/42M-SIL2-09-01 | Input compatibility | Prox/Accel, Velomitor and HTVS |
| Monitor channels           | 4                   | Termination         | Internal                       |
| I/O option                 | 09                  | Approval option     | 01 cNRTLus Class I, Division 2 |
| I/O module                 | 140471-01           |                     |                                |

## Verified Product Record

| DATA GROUP                 | VERIFIED VALUE                                                                                                                                                                                                                                                                 |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Installed host / carrier   | Bently Nevada 3500 Machinery Protection System                                                                                                                                                                                                                                 |
| Primary system role        | Monitors four configured machinery channels                                                                                                                                                                                                                                    |
| Connection boundary        | Before removing 3500/42M-SIL2-09-01, record the complete marking, installed position, mating hardware, connectors, wiring and configured channel role. Restore the documented arrangement, review system diagnostics and complete a controlled functional test before release. |
| Controlled acceptance duty | Radial vibration protection                                                                                                                                                                                                                                                    |

### ENGINEERING BOUNDARY

Confirm 3500/42M-SIL2-09-01, 3500 rack and slot, monitor and I/O hardware revisions, option 09 internal terminals, four transducer types, wiring, grounding, rack firmware, channel configuration, setpoints and controlled alarm-test results before commissioning.

## Pre-Installation Checks

- 1

Confirm the complete 3500/42M-SIL2-09-01 supplied identity and rack position.
- 2

Place every associated protection channel in the approved maintenance state.
- 3

Record all four channel types, alarm setpoints and voting or relay actions.
- 4

Isolate rack and field energy according to the approved procedure.

## Documented Service Record

| RECORD ITEM        | REQUIRED ENTRY                                 |
|--------------------|------------------------------------------------|
| As-found article   | 3500/42M-SIL2-09-01                            |
| Installed host     | Bently Nevada 3500 Machinery Protection System |
| Connection record  | Capture before removal                         |
| Controlled release | Diagnostics and functional proof               |

# System Role and Architecture

Bently Nevada 3500/42M-SIL2-09-01 is preserved as the complete supplied identity for a 3500/42M four-channel Proximitor Seismic Monitor arrangement. The documented 09 I/O option accepts Prox/Accel, Velomitor and HTVS inputs through internal terminations.

**FUNCTION 1**  
Monitors four configured machinery channels

**FUNCTION 2**  
Supports proximity, acceleration and velocity transducers

**FUNCTION 3**  
Uses the documented internal-termination I/O module

**FUNCTION 4**  
Provides alarm and protection processing in the 3500 rack

## Matched System Components

| NO. | DOCUMENTED COMPONENT / ROLE                                                                                                                                                                                                                                                    |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Bently Nevada 3500 Machinery Protection System                                                                                                                                                                                                                                 |
| 2   | 4                                                                                                                                                                                                                                                                              |
| 3   | Radial vibration protection                                                                                                                                                                                                                                                    |
| 4   | Before removing 3500/42M-SIL2-09-01, record the complete marking, installed position, mating hardware, connectors, wiring and configured channel role. Restore the documented arrangement, review system diagnostics and complete a controlled functional test before release. |

## System Integration Record

| INTEGRATION ITEM       | DOCUMENTED ROLE                                                                                                                                                                                                                                                                                               |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host identity          | Bently Nevada 3500 Machinery Protection System                                                                                                                                                                                                                                                                |
| Interface role         | Monitors four configured machinery channels                                                                                                                                                                                                                                                                   |
| Field / power context  | 3500/42M-SIL2-09-01 is installed only in the documented Bently Nevada 3500 Machinery Protection System arrangement with its matching host, terminal, cable or field interface. Commissioning preserves the as-found configuration and uses controlled identity, connection, diagnostic and functional checks. |
| Commissioning evidence | Inject controlled signals and prove every affected alarm path before release.                                                                                                                                                                                                                                 |

## Installation and Connection Checks

1

Confirm I/O option 09 and internal terminal assignments before removal.

2

Restore channel transducer types, scales, filters and alarm logic.

3

Review monitor, rack and communication diagnostics after startup.

4

Inject controlled signals and prove every affected alarm path before release.

**MANUFACTURER SOURCE RECORD**  
  
3500/42M Proximitor Seismic Monitor Datasheet  
Baker Hughes publication 143694 Rev. AE

# Applications and Engineering Context

### Radial vibration protection

Processes configured proximity or seismic signals for rotating machinery.

### Axial position supervision

Uses matched proximity inputs for thrust-position protection logic.

### Casing vibration monitoring

Accepts documented Velomitor or HTVS velocity signals.

### Four-channel monitor replacement

Restores the assigned 3500 rack monitor and I/O positions.

## TECHNICAL NOTE

Before removing 3500/42M-SIL2-09-01, record the complete marking, installed position, mating hardware, connectors, wiring and configured channel role. Restore the documented arrangement, review system diagnostics and complete a controlled functional test before release.

## Model-Specific Acceptance Evidence

| CHECK              | ACCEPTANCE CONDITION                                                          |
|--------------------|-------------------------------------------------------------------------------|
| Identity           | 3500/42M-SIL2-09-01 recorded                                                  |
| Host / carrier     | Bently Nevada 3500 Machinery Protection System                                |
| Physical interface | Monitors four configured machinery channels                                   |
| Configuration      | Review monitor, rack and communication diagnostics after startup.             |
| Functional proof   | Inject controlled signals and prove every affected alarm path before release. |

## IMPORTANT NOTICE

Confirm 3500/42M-SIL2-09-01, 3500 rack and slot, monitor and I/O hardware revisions, option 09 internal terminals, four transducer types, wiring, grounding, rack firmware, channel configuration, setpoints and controlled alarm-test results before commissioning.

## Controlled Release Summary

| RELEASE ITEM     | MODEL-SPECIFIC CONDITION                                                      |
|------------------|-------------------------------------------------------------------------------|
| Article identity | 3500/42M-SIL2-09-01                                                           |
| Approved role    | Radial vibration protection                                                   |
| Final validation | Inject controlled signals and prove every affected alarm path before release. |

## Engineering Precautions

|   |                                                                               |   |                                                                               |
|---|-------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------|
| 1 | Confirm the complete 3500/42M-SIL2-09-01 supplied identity and rack position. | 2 | Place every associated protection channel in the approved maintenance state.  |
| 3 | Record all four channel types, alarm setpoints and voting or relay actions.   | 4 | Isolate rack and field energy according to the approved procedure.            |
| 5 | Confirm I/O option 09 and internal terminal assignments before removal.       | 6 | Restore channel transducer types, scales, filters and alarm logic.            |
| 7 | Review monitor, rack and communication diagnostics after startup.             | 8 | Inject controlled signals and prove every affected alarm path before release. |

## Related Products on Apter Power

| MODEL                 | SYSTEM ROLE                      | APTER POWER PAGE                                |
|-----------------------|----------------------------------|-------------------------------------------------|
| 3500/25               | Keyphasor module                 | <a href="#">View 3500/25 page</a>               |
| 3500/40M              | Proximitor monitor               | <a href="#">View 3500/40M page</a>              |
| 3500/42M              | monitor I/O module               | <a href="#">View 3500/42M page</a>              |
| 130118-0050-02        | host-to-rack communication cable | <a href="#">View 130118-0050-02 page</a>        |
| 3500/53               | overspeed detection module       | <a href="#">View 3500/53 page</a>               |
| 3500/72M              | reciprocating-rod monitor        | <a href="#">View 3500/72M page</a>              |
| 330101-00-08-05-02-05 | 8 mm proximity probe             | <a href="#">View 330101-00-08-05-02-05 page</a> |
| 330103-00-04-10-02-00 | metric proximity probe           | <a href="#">View 330103-00-04-10-02-00 page</a> |

## MANUFACTURER SOURCE RECORD

3500/42M Proximitor Seismic Monitor Datasheet  
Baker Hughes publication 143694 Rev. AE

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