Bently Nevada 3500/50M 286566-02

Installation & Commissioning Guide

Bently Nevada 3500/50M 286566-02 is a two-channel 3500/50M tachometer-family module for speed, rotor acceleration, zero-speed or reverse-rotation monitoring in a 3500 rack.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Accepts up to two speed-related transducer signals.

Feature 2

Supports speed, acceleration, zero-speed and reverse-rotation channel types.

Feature 3

Provides buffered transducer and proportional recorder outputs.

Feature 4

Can route conditioned Keyphasor signals through the 3500 backplane.

VERIFIED DATA SNAPSHOT

Monitor family	3500/50M tachometer
Input channels	Two
Accepted signal families	Proximity probes or compatible magnetic pickups
Measured functions	Speed, rotor acceleration, zero speed and reverse rotation

SYSTEM RELATIONSHIP

Speed sensor → **Input channel** → **Speed processing** → **Monitoring output**

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Pre-installation readiness

READINESS GATE

Identity

Compare the complete marking with the approved work order and installed record.

System match

Confirm the receiving channel, mating components and controlled configuration.

Physical condition

Inspect mounting surfaces, connectors, terminals, cable and support hardware.

Work controls

Apply authorized isolation, bypass, access and restoration procedures.

TECHNICAL PROFILE FOR THE WORK

Monitor family 3500/50M tachometer	**Input channels** Two
Accepted signal families Proximity probes or compatible magnetic pickups	**Measured functions** Speed, rotor acceleration, zero speed and reverse rotation
Maximum input frequency 20 kHz	**Maximum full scale** 99,999 rpm
Recorder output 4–20 mA per channel	**Configuration** 3500 Rack Configuration software

IMPORTANT NOTICE Resolve every unmatched interface, configuration or receiving-system condition before removal or installation.

CONFIGURATION AND WORK CONTROLS

Configuration identity	Bently Nevada 3500/50M 286566-02
Technical boundary	Apply only the functions and interfaces shown for this product or its identified system family.
Selection control	Match the complete ordering string and installed interfaces before purchase or installation.

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Installation sequence

CONTROLLED WORK STEPS

01	Verify the paired I/O module, rack slot and channel configuration before replacement.
02	Do not use the tachometer module alone for machine speed control or overspeed protection.
03	Confirm transducer type, polarity, amplitude and events-per-revolution before energizing.
04	Set manual or automatic thresholds to suit the installed pickup signal.
05	Verify full scale, alarm delays and recorder-output scaling in the rack configuration.
06	Inspect buffered-output and rear I/O connections for correct channel assignment.
07	Simulate speed, zero-speed and reverse-direction conditions as applicable to the configuration.
08	Record peak-value reset, alarm response and host-system indication before release.

CONNECTION RECORD

As found	Photograph and label every connection and installed orientation before removal.
Mechanical	Record mounting position, support, clearance and connector engagement.
Electrical	Record polarity, common, shield, channel assignment and cable route.
Configuration	Preserve approved settings, scaling, alarm logic and acceptance limits.
As left	Record the final physical condition and any controlled deviation.



WORK HOLD POINTS

Before removal	Identity, position, wiring, orientation and controlled settings recorded.
Before connection	Mating interfaces, condition and routing reviewed.
Before power-up	Mechanical work, wiring, shielding and configuration independently checked.
Before release	Static value, dynamic response and protection behavior accepted.

Commissioning and functional proof

COMMISSIONING SEQUENCE

Initial state

Observe status at power-up and check for unexpected fault or alarm indication.

Static value

Verify the expected bias, gap, loop, contact or channel value for the application.

Dynamic response

Apply the approved machine or test stimulus and confirm response and scaling.

Protection path

Verify the configured alarm, relay, data or receiving-system behavior.

APPLICATION-SPECIFIC EVIDENCE

Shaft-speed monitoring

Measures rotational speed from proximity or magnetic-pickup pulse trains.

Rotor-acceleration alarming

Calculates speed change for configured acceleration channels.

Zero-speed supervision

Detects loss of rotation within the configured channel logic.

Reverse-rotation detection

Counts and reports reverse motion using the selected input arrangement.

ACCEPTANCE RECORD

Identity	Complete marking and final installed position recorded.
Physical inspection	Mounting, connectors, terminals and routing checked.
Channel status	Expected status and configured measurement confirmed.
Functional test	Required output or protection response demonstrated.
Restoration	Bypasses removed and operating state approved.

COMMISSIONING QUESTIONS

How many transducer inputs are processed by 3500/50M 286566-02?	It processes up to two proximity-probe or magnetic-pickup signals.
Which channel functions can be configured on 3500/50M 286566-02?	The family supports speed, rotor acceleration, zero-speed and reverse-rotation functions.
What maximum input frequency is supported by 3500/50M 286566-02?	The tachometer family accepts up to 20 kHz.
Why must not serve as the only overspeed device 3500/50M 286566-02?	The manufacturer warns that it is not an independent speed-control or overspeed-protection system.

Release record and technical references

CLOSEOUT QUESTIONS

How are events per revolution used by 3500/50M 286566-02?	They convert incoming pulse frequency into shaft speed and affect channel setup.
Which output permits local transducer-signal inspection on 3500/50M 286566-02?	Buffered outputs expose the conditioned channel input for testing.
What should be checked before enabling reverse-rotation logic on 3500/50M 286566-02?	Verify channel pairing, pulse direction assumptions and controlled forward/reverse response.
How is a commissioned channel on accepted 3500/50M 286566-02?	Confirm speed accuracy, alarm thresholds, delay behavior, recorder current and the connected system indication.

RELATED MODELS FOR INSTALLATION PLANNING

Bently Nevada 3500/45	Installation-planning reference. Review the complete ordering string before selection.
Bently Nevada 3500/50 133388-02	Installation-planning reference. Compare the required interface and system position.
Bently Nevada 3500/50E	Installation-planning reference. Confirm the execution independently for the intended task.

CONFIGURATION AND FINAL CONTROL

Configuration identity	Bently Nevada 3500/50M 286566-02
Technical boundary	Apply only the functions and interfaces shown for this product or its identified system family.
Selection control	Match the complete ordering string and installed interfaces before purchase or installation.

IMPORTANT NOTICE	Release the equipment only after the responsible site authority accepts the recorded result.

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