# Bently Nevada 3300/52-01-00-00

Complete Product Information

Bently Nevada 3300/52-01-00-00 detects reverse shaft rotation from two proximity-transducer signals and provides forward/reverse speed indication in a 3300 rack.

## Operating context

Forward rotation is established by the target notch reaching transducer A and then transducer B. The mounting arrangement must preserve the required overlap between the probe signals; an axially offset probe arrangement can be used to obtain the prescribed spacing. Incorrect signal order can reverse the interpretation of machine direction.

With one event per revolution, the indicated speed range is 0.05-20,000 rpm; with two events per revolution it is 0.05-10,000 rpm. The two-event option is valid only for external transducer inputs. At +25°C, speed indication accuracy is ±(0.02% of reading + 1 rpm). Trigger threshold is adjustable from 0 to -24 Vdc, with selectable hysteresis from 0.2 to 2.0 V.

A contact closure at the signal-input module enables the reverse-rotation and reverse-speed alarms. Separate recorder outputs represent forward and reverse speed, with 4-20 mA, 1-5 Vdc or 0 to -10 Vdc formats. Reverse rotation alarm delay is three shaft revolutions or one second, whichever is longer. This monitor is not intended for speed control or overspeed protection.

## Configuration snapshot

| | |
|---|---|
| Monitor function | Reverse rotation and forward/reverse speed |
| Alert relay option | 01 - Epoxy sealed |
| Agency approval option | 00 - Not required |
| Barrier option | 00 - None |
| Transducer family | Bently Nevada 3300, 7200 or 3000 proximity systems |
| Reverse alarm enable | External contact closure at signal-input module |
| Speed range, 1 event/revolution | 0.05-20,000 rpm |

# 02 Signal path, configuration and acceptance

| | |
|---|---|
| Speed range, 2 events/revolution | 0.05-10,000 rpm; external transducers only |
| Speed accuracy | ±(0.02% of reading + 1 rpm) at +25°C |
| Nominal power consumption | 2 W |
| Manual trigger threshold | 0 to -24 Vdc |
| Recorder outputs | Separate forward and reverse speed outputs |
| Operating temperature | 0 to +65°C |
| Application limitation | Not for speed control or overspeed protection |

## Exact configuration

Order options 01/00/00 specify epoxy-sealed relays, no requested agency approval and no barriers. Verify transducer sequence, event count and the external reverse-alarm enable circuit.

## Match events per revolution

One event per revolution supports 0.05-20,000 rpm, while two events supports 0.05-10,000 rpm. Two events per revolution is valid only with external transducer inputs. Keep the event setting consistent with the actual shaft target.

## Check the enable circuit

An external contact closure at the input module enables the reverse-rotation and reverse-speed alarms. Record the intended contact state and its relationship to the machine operating sequence. The enable input must be included in functional testing.

## Retain direction-specific scaling

Separate recorder outputs represent forward and reverse speed, each proportional to its selected full-scale range. Select 4-20 mA, 1-5 Vdc or 0 to -10 Vdc and verify both receiving inputs. Do not exchange the direction labels at the recorder.

| Input | Processing | Acceptance |
|---|---|---|
| Reverse rotation and forward/reverse speed | Reverse Rotation Monitor | Prove the configured signal, alarm and recorder path |

# 03 Applications and commissioning precautions

### Pump reversal

Detect unintended reverse shaft rotation associated with process changes.

### Hydraulic turbines

Monitor direction where the machine operating sequence can include reversal.

### Compressor trains

Indicate a reverse-rotation event using the correct target and paired probes.

### Direction-specific recording

Record forward and reverse speed through their separate analog outputs.

### Confirm the forward sequence

The target reaches transducer A before B for the intended forward direction.

### Preserve probe geometry

Check the required signal overlap and mounting arrangement against the original drawing.

### Check event count

Two events per revolution is valid only with external transducer inputs.

### Prove the enable contact

Contact closure enables reverse-rotation and reverse-speed alarms.

### Allow direction alarm timing

The reverse-rotation delay is three revolutions or one second, whichever is longer.

### Provide separate protection

Do not use this monitor as a speed controller or overspeed-protection device.

# 04 Engineering questions and decisions

### How does 3300/52-01-00-00 identify the forward direction?

The target notch reaches transducer A before transducer B for forward rotation. Correct spacing and overlap of the two proximity signals are essential; retain the machine-specific probe drawing when replacing components.

### What is the function of the external enable contact on 3300/52-01-00-00?

Closing the contact at the signal-input module enables both the reverse-rotation alarm and the reverse-speed alarm. Include this contact and its intended operating state in the commissioning checks.

### Which relay and barrier options belong to 3300/52-01-00-00?

The 01 relay option specifies epoxy-sealed relays. The next 00 requests no agency approval, and the final 00 selects no barriers. These options do not establish a hazardous-area installation approval.

### How does event count affect the speed range of 3300/52-01-00-00?

One event per revolution supports 0.05-20,000 rpm; two events per revolution supports 0.05-10,000 rpm. The two-event option is valid only with external transducer inputs.

### What delay applies to the reverse-rotation alarm on 3300/52-01-00-00?

The reverse-rotation delay is three shaft revolutions or one second, whichever is longer. Verify the machine-direction test at a known speed so both the event count and time condition are considered.

### Does 3300/52-01-00-00 provide separate forward and reverse recorder signals?

Yes. It provides one recorder for forward speed and one for reverse speed, each proportional to its configured full-scale range. Select 4-20 mA, 1-5 Vdc or 0 to -10 Vdc to match the receiving inputs.

### Which measurements can be called up on the display of 3300/52-01-00-00?

The normal display indicates rpm. Front-panel controls allow transducer gap, speed setpoints, maximum reverse speed and the number of reverse rotations to be displayed, with direction and enabled-state indications.

### Can 3300/52-01-00-00 replace a speed-control or overspeed-protection system?

No. The monitor does not provide the protective redundancy and response required for those functions. Use the speed alerts for annunciation and the recorder signals for logging, with a separate suitable protection system where required.

# 05 Lifecycle and offered-unit information

## Lifecycle status

**3300/52-01-00-00:** This model belongs to the legacy 3300 monitoring platform. The platform entered obsolete Phase 5 in March 2014; manufacturer repair and replacement support ended in 2017.

**Migration planning:** Review the installed rack, transducers, alarm logic and machine requirements with Bently Nevada before selecting a replacement system. A newer monitoring platform is not a drop-in module replacement.

**Availability:** Apter Power availability is confirmed separately from the manufacturer lifecycle and support status.

## Explore other Bently Nevada references

Portfolio navigation only; no compatibility or substitution is implied.

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|---|---|
| **Bently Nevada 3300/55-01-04-18-18-00-00-05-00** | View product |
| **Bently Nevada 3300/26-XX-XX-XX-00-00-01-00** | View product |
| **Bently Nevada 3300/65-13-01-00-00-01-00** | View product |

## Available unit details

Bently Nevada 3300/52-01-00-00. Condition: New, original product. Confirm the rear relay/input module, terminal accessories, external enable contact and transducer systems separately in the quotation.

## Installed-system record

Retain 3300/52-01-00-00 with the rear module, probe references, target drawing, A/B order, event count, trigger settings, enable logic, relay reset settings and both recorder ranges. Include the direction and alarm test results.

## Technical reference

Bently Nevada 3300/52 Reverse Rotation Monitor, archived Specifications and Ordering Information reference associated with document 141513

Apter Power summary, not a manufacturer-issued manual.

### Discuss the complete offered reference

Bently Nevada 3300/52-01-00-00

New, original product

sales13@apterpower.com | +86 18030235313