Bently Nevada 3300/48-04-02-01-00

Complete Product Information

Bently Nevada 3300/48-04-02-01-00 measures casing growth using two DC LVDT inputs, with a 0-50 mm display range and differential Alert/Danger alarms.

Operating context

The 0-50 mm scale and 2 in. dc lvdt; 10 mv/mil input setting define the measurement conversion for this order code. Two DC LVDTs track casing motion at the machine supports relative to the fixed foundation. Direct mode allows the individual channels to be inspected, while Differential mode evaluates unequal movement between the two locations.

Alert and Danger levels are adjustable over 0-100% of full-scale in Differential mode. Display and setting resolution is within ±1.6% of full-scale; alarm repeatability after adjustment is within ±0.4% of full-scale. Epoxy sealed is the ordered relay configuration. Delay, reset and energized-state settings remain separate commissioning choices that must match the rack alarm arrangement.

Recorder outputs can be configured for 4-20 mA, 1-5 Vdc or 0 to -10 Vdc, with two direct channels or one differential measurement. A current output supports 0-600 ohms; a voltage output requires at least 10 kilohms. Buffered transducer connections support signal inspection, while the LCD and OK indicators provide adjustment and diagnostic information.

Configuration snapshot

Monitor function	Two-channel casing expansion
Full-scale range	0-50 mm
Transducer input	2 in. DC LVDT; 10 mV/mil
Alarm relay option	Epoxy sealed
Agency approval option	00 - Not required
Signal input impedance	1.0 megohm
Nominal power consumption	1.5 W

02 Signal path, configuration and acceptance

Signal-conditioning accuracy	±0.33% FS typical; ±1% FS maximum at +25°C
Recorder formats	4-20 mA; 1-5 Vdc; 0 to -10 Vdc
Alarm measurement	Differential mode only
Operating temperature	0 to +65°C
Relative humidity	Up to 95%, noncondensing

Exact configuration

Order-code configuration: 0-50 mm, 2 in. DC LVDT; 10 mV/mil, epoxy sealed, agency option 00. Field-programmable settings must match the installed rack and LVDTs.

Set the intended measurement mode

Direct mode allows the two individual casing-expansion values to be viewed. Alert and Danger comparisons are available only in Differential mode. Verify the displayed measurement before adjusting or testing alarm levels.

Adjust levels with their resolution in mind

Both alarm levels are digitally adjustable over 0-100% of full-scale. Setting resolution is within ±1.6% of full-scale; repeatability after setting is within ±0.4% of full-scale. Apply the machine monitoring plan and retain the final setpoints in the service record.

Prove delay and reset behavior

The selectable alarm delays are 0.1, 1, 3 or 6 seconds. Alert and Danger can each be configured for latching or nonlatching reset. Verify the chosen delay and the required reset action rather than relying on an assumed factory configuration.

Input	Processing	Acceptance
Two-channel casing expansion	Case Expansion Monitor	Prove the configured signal, alarm and recorder path

03 Applications and commissioning precautions

Casing growth

Track movement of the casing relative to the machine foundation using two DC LVDTs.

Unequal movement

Use the differential measurement to compare displacement at the two monitored locations.

Rack alarm circuits

Integrate the epoxy sealed relay option with the intended Alert and Danger circuits.

Trend recording

Scale the selected current or voltage recorder signal to the 0-50 mm monitor range.

Match both LVDTs

Use 2 in. dc lvdt; 10 mv/mil inputs with the 0-50 mm scale.

Select the alarm mode

Alert and Danger comparisons are available only in Differential mode.

Review relay hardware

The order specifies epoxy sealed; verify the actual rear module and downstream contact circuit.

Prove recorder loading

Use 0-600 ohms for 4-20 mA or at least 10 kilohms for a voltage output.

Preserve field settings

Record delay, reset, energized state, recorder mode and upscale direction before replacement.

Check diagnostics

Resolve active error indications and verify both channels before returning the measurement to service.

04 Engineering questions and decisions

Which metric range is configured in 3300/48-04-02-01-00?

Range option 04 selects 0-50 mm. Input option 02 matches a 2 in. DC LVDT with a 10 mV/mil sensitivity; the metric display range and transducer option are separately encoded.

How does 3300/48-04-02-01-00 use its two LVDT channels?

The monitor can display two independent casing-expansion measurements or their difference. Differential mode supplies Alert and Danger alarm comparisons; Direct mode does not provide those alarms.

What relay construction is specified for 3300/48-04-02-01-00?

Relay option 01 specifies epoxy-sealed alarm relays. The rear relay assembly and installed wiring must match the complete order code and intended Alert and Danger contact circuits.

How should a voltage recorder connected to 3300/48-04-02-01-00 be loaded?

For 1-5 Vdc or 0 to -10 Vdc operation, the output impedance is 100 ohms and the load resistance must be at least 10 kilohms. Configure the receiving input and scaling to match the selected format.

What happens if a recorder output on 3300/48-04-02-01-00 is shorted?

The monitor operation is unaffected by a short circuit on a recorder output. This does not make the recorder reading valid; correct the output wiring fault and prove the receiving signal before returning the measurement to service.

How can the upscale direction of 3300/48-04-02-01-00 be configured?

A field-programmable option selects movement toward or away from the transducer as upscale. Confirm the LVDT mounting direction and both channel settings against the machine movement convention.

How is the LVDT supply protected in 3300/48-04-02-01-00?

The transducer supply is -24 Vdc and is current-limited separately for each channel on the monitor circuit board. Preserve the specified DC LVDT wiring and do not interchange signal and power terminals.

What diagnostics does 3300/48-04-02-01-00 perform during operation?

The monitor provides power-up, cyclic and user-invoked self-tests. A continuing error stops monitoring until the error is removed and produces an LCD error indication; retain the error record before following the applicable troubleshooting procedure.

05 Lifecycle and offered-unit information

Lifecycle status

3300/48-04-02-01-00: 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.

Bently Nevada 3300/05-24-00-00	View product
Bently Nevada 3300/05-23-00-00	View product
Bently Nevada 3300/05-22-01-00	View product

Available unit details

Bently Nevada 3300/48-04-02-01-00. Condition: New, original product. Confirm the rear signal-input module, epoxy sealed relay module, terminal accessories and any transducers separately in the quotation.

Installed-system record

Retain 3300/48-04-02-01-00 with the rear assembly marking, rack position, LVDT references, movement direction, recorder scaling and final alarm configuration. Include the measured test results and the approved normal/bypass states so later maintenance can reproduce the acceptance checks.

Technical reference

Bently Nevada 3300/48 Specifications and Ordering Information, 141510-01 Rev. F; Case Expansion Monitor Operation, 84417-01 Rev. NC

Apter Power summary, not a manufacturer-issued manual.

Discuss the complete offered reference

Bently Nevada 3300/48-04-02-01-00

New, original product

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