# Bently Nevada 3300/16-02-05-02-00-00-02

## 01 Plan the controlled replacement

### Place protection in an approved maintenance state

Identify the affected machine channel, alarm outputs and trip circuits before disconnecting the installed unit. Record the present readings and settings so that the replacement can be compared under the same stable condition.

### Preparation sequence

| | |
|---|---|
| **01** | Verify the complete 3300/16-02-05-02-00-00-02 marking. |
| **02** | Record the selected 0–5 mils pp scale and both channel readings. |
| **03** | Trace the 3300 XL NSv or RAM, 200 mV/mil signal wiring and channel assignments. |
| **04** | Identify relay, barrier, recorder and bypass connections. |
| **05** | Establish the approved test and return-to-service conditions. |

### Configuration to retain

| Item | Installed selection |
|---|---|
| Measurement range | 0–5 mils pp |
| Input / processing | 3300 XL NSv or RAM, 200 mV/mil |
| Alarm relay option | Hermetically sealed |
| Safety-barrier option | None |
| Approval selection | None |
| Range multiplier | 3X |

### Do not copy settings from a nearby monitor

Two monitors in the same rack can have different input systems, ranges and output options. Use the identified channel record and the complete order code for every transfer decision.

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## 02 Inspect, install and reconnect

## Pre-installation checks

| Check | Requirement |
| --- | --- |
| 3300/16-02-05-02-00-00-02 | Complete identity and undamaged connector interface |
| 3300 XL NSv or RAM, 200 mV/mil | Correct transducer source, sensitivity and polarity |
| Hermetically sealed | Correct relay hardware and downstream contact wiring |
| None | Matching rear interface and field-circuit arrangement |
| 0–5 mils pp | Correct scale for the machine protection requirement |
| 3X | Correct multiplier state before setpoint comparison |

## Connection controls

**Channel identity**
Label each conductor and prove one path at a time.

**Rack interface**
Inspect seating and connector condition before energizing.

**Shield and common**
Restore the established signal-reference arrangement.

**Alarm contacts**
Confirm normal state and required energization logic.

## Preserve field-circuit boundaries

A barrier option changes the permissible interface and cannot be treated as a cosmetic code suffix. An unbarriered configuration likewise cannot inherit barrier assumptions from another unit.

## Mechanical and electrical inspection

Check for bent contacts, contamination, loose terminations or damaged wiring. Correct these conditions before interpreting a signal discrepancy as a monitor calibration fault.

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## 03 Configure and verify the measurement

## Response-test sequence

| | |
|---|---|
| **01** | Energize under controlled conditions. |
| **02** | Confirm normal monitor status before applying a signal. |
| **03** | Apply a known change to one identified input. |
| **04** | Compare the local indication with the 0–5 mils pp scale. |
| **05** | Observe the assigned recorder and alarm outputs. |
| **06** | Repeat independently for the second channel or remaining inputs. |

## What to compare

| Observation | Expected configuration |
|---|---|
| Source condition | 3300 XL NSv or RAM, 200 mV/mil |
| Selected span | 0–5 mils pp |
| Multiplier | 3X |
| Alarm hardware | Hermetically sealed |
| Barrier interface | None |
| Approval marking | None |

## Separate indication from alarm operation

A correct measurement display does not prove the relay path, and a relay transition does not prove that scaling is correct. Test each stage against the applied condition and recorded setpoints.

## Avoid unsupported adjustments

If the response is inconsistent, first check input identity, polarity, sensitivity, range and multiplier. Do not compensate for a wrong transducer or configuration by changing alarm setpoints.

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## 04 Test alarms and abnormal states

## Functional checks

| | |
|---|---|
| **Normal state**<br>Confirm expected OK, bypass and alarm indications. | **Controlled crossing**<br>Cross each required setpoint using the approved input method. |
| **Delay and reset**<br>Observe the configured delay, latch and reset behavior. | **Contact path**<br>Verify the intended downstream circuit receives the transition. |

## Fault-response test

| | |
|---|---|
| **01** | Remove or interrupt only the approved test signal. |
| **02** | Observe the monitor status and the assigned alarm behavior. |
| **03** | Restore the signal and confirm recovery or required reset. |
| **04** | Repeat without disturbing the other channel. |
| **05** | Clear temporary bypasses only after the complete path is accepted. |

## Relay selection matters

This model uses hermetically sealed alarm relays. Test their actual contact logic and downstream use.

## Approval and barrier are separate selections

An agency marking does not replace the wiring and functional checks. A barrier choice does not by itself establish approval for the complete installation.

## Restore the normal state deliberately

Remove temporary test signals and bypasses in the approved order, then confirm the expected status before reconnecting the downstream protection function.

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## 05 Troubleshoot and return to service

## Symptom-led checks

| Observed condition | Investigation |
| --- | --- |
| No response | Check input source, polarity, continuity, channel identity and monitor status. |
| Wrong scale | Check 0–5 mils pp, input sensitivity and 3X multiplier selection. |
| Unexpected alarm | Compare the applied value, setpoint, delay, latch and bypass state. |
| Output mismatch | Separate local indication, recorder output and relay-contact testing. |
| Intermittent behavior | Inspect rack seating, terminals, shield/common and field-cable condition. |
| One channel differs | Apply the same controlled method to each channel and trace assignments. |

## Release evidence

| | |
| --- | --- |
| **Measurement**<br>Stable response across the intended part of the selected span. | **Outputs**<br>Recorder and relay paths correspond to the identified channel. |
| **Configuration**<br>Range, input, barrier, multiplier and alarm settings restored. | **Protection state**<br>Required bypasses removed and downstream functions accepted. |

## Record the completed work

Use a controlled input condition to verify the 0–5 mils pp scale, 3300 XL NSv or RAM, 200 mV/mil conversion, channel identity and selected output behavior. Restore the recorded alarm, delay, reset, multiplier and bypass states only after the complete path responds correctly.

## Related product references

**Bently Nevada 330105-02-12-10-12-05**

**Bently Nevada 330703-000-040-10-11-00**