# Bently Nevada 200350-00-00-00

## 01 Plan the measurement point

### 1 Define the acceleration channel

Record the exact 200350-00-00-00 marking and identify the machine point, axis of measurement and receiving input card. This sensor measures casing acceleration, not shaft-relative displacement. A rotor fault can be detected through a housing measurement only when enough vibration reaches that location. Preserve the original location and direction when replacing an established sensor unless the measurement design is being reviewed.

### 2 Check the supplied configuration

The ordered mounting option is a 1/4-28 stainless-steel stud with a brass tip. Nominal sensitivity is 100 mV/g with ±20% tolerance, and the final 00 specifies no approvals. Compare the actual label and mounting hardware with this configuration. Do not treat a similar 200355 or an approved variant as the same ordered sensor just because its connector appears identical.

### 3 Resolve the input-power arrangement

Use the compatible Trendmaster Pro Constant Current Direct Input Card 149811-02 or Seismic Direct Input Card 164746-01 with appropriate channel settings. Check the actual circuit for positive constant-current excitation. The operating envelope is 18-28 V DC and 2-20 mA. Do not connect this 200350 sensor to a negative-excitation supply. Confirm the card configuration before attaching the cable.

### 4 Prepare the service boundary

Place the affected machine-monitoring channel in the plant-approved maintenance condition before disconnection. Identify any alarm or shutdown functions that depend on the reading and arrange the required authorization. Record the current scale, input mode, cable termination and measurement point. Keep temporary bypasses and test connections traceable so the original monitoring function can be deliberately restored.

Before proceeding: exact sensor, mounting location, positive input power and channel responsibility are established.

# 200350-00-00-00 / Mount the sensing element

## 02 Mount the sensing element

### 1 Choose a mechanically meaningful location

Use a bearing housing or machine casing that transmits the vibration of interest. A thin cover, poorly supported bracket or flexible surface can reduce the measured amplitude or modify frequency response. Check access for tightening and cable connection. The installation should preserve a clear mechanical path from the monitored structure to the sensor, rather than relying on electrical continuity alone.

### 2 Prepare the contact surface and stud

Clean and prepare the mounting surface according to the applicable sensor instructions. Inspect the female mounting thread and the selected stud for damage or contamination. This order includes the standard 1/4-28 stud; magnetic and adhesive arrangements are different mounting choices. If the field installation changes the mounting method, review the measurement response rather than assuming that the original calibration remains sufficient.

### 3 Apply controlled mounting torque

Use 2.7-6.8 N·m mounting torque and suitable access to the sensor body. This is the mounting requirement, not a cable connector torque specification. Avoid loading the connector or using the cable as a handle while tightening. Confirm that the sensor seats firmly and the orientation is suitable for the intended sensitive axis. Resolve damaged threads before completing the mounting.

### 4 Check the installation environment

Keep operation within -54 to +121 °C. The welded stainless-steel enclosure is rated IP68, with humidity specified as 100% relative, condensing and non-submerged. These descriptions do not establish an unlimited immersion duty or hazardous-area approval. The final 00 code has no approvals. Evaluate the actual area classification and exposure conditions separately before returning the installation to service.

Hold point: firm seating, correct mounting method, suitable orientation and permitted environment.

# 200350-00-00-00 / Connect the signal circuit

## 03 Connect the signal circuit

### 1 Identify the two-pin interface

The connector is a top-mounted two-pin MIL-C-5015 type. Use the sensor drawing and cable documentation to identify signal/power and ground functions before connection. Inspect mating contacts and connector condition, keeping them clean and correctly aligned. The detachable cable arrangement allows servicing without removing the sensor, but an electrically connected plug does not prove that mounting and input setup are correct.

### 2 Choose the appropriate cable family

Standard cable uses a two-conductor twisted shielded pair, a two-socket connector and terminal lugs at the opposite end. The 9571 family is unarmored; the 84661 family is armored. Choose protection and length for the route. The splash-proof cable is not recommended for model 200350. A connector that physically fits is not sufficient evidence that a cable arrangement meets the measurement requirement.

### 3 Review capacitance and high-frequency loading

The 31 m cable recommendation assumes maximum vibration of 50 g, frequency of 10 kHz and cable capacitance of 200 pF/m. Preserve these conditions when judging the limit. Longer runs or different cable capacitance require a review of the input and excitation arrangement. Do not select an arbitrary long cable and then infer the full 10 kHz response from the sensor rating alone.

### 4 Inspect the full run before power is applied

Follow the approved termination and shield arrangement for the receiving card. Check conductor identification, mechanical support, cable condition and connector engagement. Keep the route free of unintended tension at the sensor. Compare the installed card and wiring with the planned positive-excitation circuit, then confirm that any temporary installation or test leads have been removed or clearly identified.

Before energization: pin assignment, shield treatment, cable selection and positive excitation are checked.

# 200350-00-00-00 / Commission and verify response

## 04 Commission and verify response

### 1 Measure the energized circuit

Apply the approved positive constant-current excitation. Check the supply arrangement against 18-28 V DC and 2-20 mA, then measure the output bias using the specified test method. The expected bias is 8-12 V DC. The settling time is no more than 2.0 seconds to within 1% of bias under reference conditions. Resolve incorrect bias before treating the channel as a useful vibration measurement.

### 2 Apply the correct acceleration scaling

Use 100 mV/g nominal sensitivity with the 200350 tolerance of ±20%. If a unit-specific calibration value is available, apply it according to the receiving-system setup procedure. Keep engineering units and measurement mode consistent throughout the channel. Do not use the tighter 200355 sensitivity tolerance or a displacement-probe scale factor for this accelerometer.

### 3 Verify the useful response band

The calibrated frequency band is 0.5 Hz to 10 kHz at ±3 dB. The mounted resonance is 25 kHz and is not an extension of that band. Reference data uses +20 to +30 °C and 100 Hz unless otherwise stated. Use a controlled vibration comparison appropriate to the installation and record relevant conditions, especially when checking a long cable or a changed mounting method.

### 4 Demonstrate the monitoring function

Compare the applied or observed acceleration with the receiving-channel indication. Confirm axis, scaling and a plausible noise level. A normal DC bias alone does not demonstrate dynamic response or verify alarm logic. Restore and test the applicable monitoring and fault paths using the plant-approved procedure; do not release a protective function solely because the sensor powers up without an error.

Acceptance is a verified acceleration response through the channel, not only an acceptable DC bias.

# 200350-00-00-00 / Troubleshoot and hand over

## 05 Troubleshoot and hand over

### 1 Separate electrical and mechanical causes

If the bias is incorrect, inspect excitation polarity, the constant-current input, conductor identification and connector integrity before changing scaling. If the bias is valid but vibration response is weak or distorted, inspect the mounting point, seating, orientation and structural transmission path. Treat these as investigative checks rather than proof that any one component has failed.

### 2 Investigate noise or high-frequency loss

Review shield termination, connector condition and cable capacitance against the installed input arrangement. Recheck the 31 m recommendation assumptions before attributing attenuation to the sensor. The 350 µg broadband noise value applies over 1-10 kHz under the specified conditions; installed mechanical vibration and electrical interference can add to the measured signal.

### 3 Complete the technical record

Retain sensor identity, mounting method, input card, cable route, excitation checks, settled bias, sensitivity setting and functional-test results. Restore authorized bypasses and confirm the intended channel state. Technical basis: Bently Nevada 200350 and 200355 Accelerometers, 164804 Rev. T; use the applicable User Guide 168303 and approved plant procedures for the installation method.

Related cable references below are navigation aids; verify the actual connection and length before selection.

- Bently Nevada 9571-12
- Bently Nevada 9571-99
- Bently Nevada 9571-20