Bently Nevada 200355-00-00-00

01 Define the acceleration measurement

1 Choose the actual measurement direction

Identify the casing or bearing-housing motion to be monitored and align the sensor’s sensitive axis with it. The 200355 measures acceleration along that axis. A mounting point should transmit the machine vibration of interest; a mechanically convenient cover may not provide a representative signal.

2 Preserve the low-frequency path

The sensor response extends to 0.2 Hz within ±3 dB. Verify that the receiving channel’s coupling, integration and filter settings retain the required bandwidth. A low-frequency-capable sensor cannot recover information removed by a downstream high-pass filter.

3 Confirm the powered input arrangement

Use a compatible constant-current input, such as the specified Trendmaster Pro direct-input arrangements. Confirm the 18 to 28 V excitation and 2 to 20 mA current range before connection. The output bias and dynamic acceleration signal must be handled correctly by the input circuit.

Quantity	Acceleration along the sensitive axis
Scale	100 mV/g ±5%
Input boundary	Constant-current conditioning and suitable bandwidth

200355-00-00-00 / Prepare the mounting and cable

02 Prepare the mounting and cable

1 Verify the supplied stud

The selected mounting option provides a 1/4-28 stainless-steel stud with a brass tip. Check the machine-side fit and the sensor’s female mounting thread before assembly. Do not treat an alternative metric stud as interchangeable simply because the sensor body appears identical.

2 Establish rigid contact

Prepare the mounting location to provide a stable mechanical path and tighten within the 2.7 to 6.8 N·m specified range. Loose contact can create resonances or attenuate the intended signal. Record the location and orientation so future comparisons use the same measurement geometry.

3 Evaluate cable loading

Inspect the top-mounted two-pin connector and route the cable with suitable support. The recommended 31 m length assumes 50 g, 10 kHz and 200 pF/m cable capacitance. Longer or different cables require evaluation of current, capacitance and signal demand rather than a blanket length extension.

Thread	1/4-28 sensor and selected stud arrangement
Torque	2.7 to 6.8 N·m
Cable basis	31 m at stated amplitude, frequency and capacitance

200355-00-00-00 / Connect and establish bias

03 Connect and establish bias

1 Check the circuit before energization

Confirm the correct input channel, connector assignment and constant-current supply setting. Separate the sensor circuit from unrelated plant wiring and inspect for damage or moisture at the connector. Preserve the case-isolation arrangement rather than assuming the housing is the signal return.

2 Allow the electrical state to settle

After applying excitation, allow the specified settling interval of up to 5 seconds to reach within 1% of bias. The expected output bias is 8 to 12 V DC. Evaluate a stable reading before deciding that an initial transient indicates a fault.

3 Check dynamic headroom

The measurement range is ±50 g, separate from the bias level. Review the anticipated acceleration and receiving input capacity so the complete signal can be acquired without overload. A correct static bias alone does not prove that a high-amplitude dynamic waveform is within range.

Bias	8 to 12 V DC
Settling	Up to 5 seconds within 1% of bias
Dynamic limit	±50 g acceleration measurement

200355-00-00-00 / Verify the acceleration channel

04 Verify the acceleration channel

1 Prove the sensitivity setting

Apply an appropriate known mechanical reference under controlled conditions and compare the measured acceleration with the 100 mV/g channel scale. Record the excitation setting, reference frequency and test amplitude. Electrical signal injection alone cannot prove the mechanical mounting path.

2 Review noise in the useful bandwidth

The 50 µg broadband electrical noise figure covers 1 to 10 kHz. Compare actual noise using a defined measurement bandwidth and consistent analysis settings. Cable interference, mounting motion and receiving-channel noise can make the installed result different from the sensor-only figure.

3 Separate off-axis and overload effects

Transverse sensitivity can reach 5%, so strong motion perpendicular to the intended axis can influence the reading. The 5,000 g shock survivability rating does not extend the calibrated ±50 g range. Inspect suspicious waveforms for overload or mounting effects before interpreting them as machine condition.

Reference test	Known acceleration and matching channel scale
Noise assessment	Bandwidth and operating conditions stated
Data review	No unassessed clipping, off-axis or mounting artifact

200355-00-00-00 / Diagnose and hand over

05 Diagnose and hand over

1 Investigate abnormal bias systematically

For an abnormal stable bias, compare the supply and current setting, cable continuity, connector condition and input assignment. Preserve the original circuit arrangement while isolating the fault. Replacing a sensor before checking the input can leave the underlying cause unchanged.

2 Retain a repeatable measurement baseline

Record mounting point, direction, stud, torque practice, cable route, excitation and analysis filters. Keep a representative accepted waveform or spectrum with the channel record. These details make a later change in vibration easier to distinguish from a change in installation.

3 Apply the correct environmental boundary

Keep the sensor within -54 to +121 °C and assess the cable and connection separately. The sealed housing does not excuse damaged connectors or unsupported cable conditions. Return the channel only after the final mechanical and electrical checks are complete.

Technical basis: Bently Nevada 200350 and 200355 Accelerometers, 164804 Rev. T.

Related product navigation

- Bently Nevada 330400-01-00
- Bently Nevada 330425-01-00
- Bently Nevada 330450-80-00

These are related references, not confirmed substitutes or an automatically approved assembly.