

MANUFACTURER-SOURCE TECHNICAL REFERENCE

Bently Nevada 330400-02-00

Product Reference

Bently Nevada Three-Wire Accelerometer, M8 x 1 Stud, No Agency Approval

DOCUMENT SCOPE

Independent Apter Power manual compiled only from the cited Bently Nevada manufacturer sources. No product photograph is included.

Product / lookup identity	Bently Nevada 330400-02-00
Reference number	330400-02-00
Document basis	Published Bently Nevada product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/Bently-Nevada/330400-02-00>
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Product role and published parameters

WHAT IT IS, WHAT IT DOES, AND WHERE IT FITS

Bently Nevada 330400-02-00 is a three-wire piezoelectric accelerometer for casing-acceleration measurement on critical machinery. Machine vibration acts on the piezoelectric sensing element, and the sensor's internal charge amplifier produces a dynamic voltage proportional to acceleration on separate power, signal and common conductors. System context: Bently Nevada Three-Wire Accelerometer, M8 x 1 Stud, No Agency Approval.

Published field	Manufacturer-published value or verified identity note
Sensor type	Three-wire piezoelectric accelerometer with internal charge amplifier
Sensitivity	10.2 mV/(m/s ²), equivalent to 100 mV/g, ±5%
Acceleration range	490 m/s ² (50 g) peak overall acceleration within 10 Hz to 15 kHz
Amplitude linearity	±1% to 490 m/s ² (50 g) peak
Broadband noise floor	0.039 m/s ² (0.004 g) RMS from 10 Hz to 15 kHz
Frequency response	10 Hz to 15 kHz ±3 dB; 30 Hz to 10 kHz ±10%
Transverse sensitivity	Less than 5% of axial

System function and signal path

- 01 Machine vibration acts on the piezoelectric sensing element, and the sensor's internal charge amplifier produces a dynamic voltage proportional to acceleration on separate power, signal and common conductors. It requires -24 ±0.5 VDC with 2 mA nominal bias current, has an -8.5 ±0.5 VDC output-bias voltage, and covers 10 Hz to 15 kHz within ±3 dB for casing and high-frequency vibration measurements.
- 02 The case-isolated 316L stainless-steel sensor uses a three-pin MIL-C-5015 receptacle and can be paired with Bently Nevada 130539, 16925 or 16710 interconnect cables, mating connector 00531080 and suitable 43217/37442 protective mounting hardware. Official Bently documentation also identifies the 330400 with the 2300 family, 3500/70M reciprocating-machinery monitor and 3701/46 PAS/PAV inputs; wiring, excitation and measurement configuration must be verified for the chosen monitor.
- 03 The transducer is mounted on a prepared bearing housing or machine casing where rotor vibration is transmitted to the measurement point. Official scenarios include gear-mesh monitoring, high-frequency impact and gas-leak signatures on reciprocating compressors, hydro-unit acceleration inputs and backward-compatible upgrades of older three-wire 23732-type acceleration systems; the requested -00 agency option must remain in a nonhazardous or otherwise approval-free installation unless the exact certified sensor variant is selected.

Applications, answers, and official sources

1 Gear-mesh acceleration monitoring: Measures high-frequency casing acceleration on a gearbox or geared critical machine where gear-mesh vibration is transmitted to the selected bearing housing or casing point.

2 Reciprocating-compressor impact monitoring: Feeds a compatible monitor such as 3500/70M with acceleration data used for high-frequency impact and gas-leak-related signatures on reciprocating machinery.

3 Hydro-unit casing acceleration: Connects to a compatible 3701/46 PAS or PAV acceleration input for continuous casing or bearing-housing measurements on a hydro unit.

4 Legacy three-wire accelerometer upgrade: Provides a backward-compatible three-wire sensor architecture for replacing older 23732-type acceleration systems without an external interface module, after monitor and wiring verification.

Frequently asked questions

What is Bently Nevada 330400-02-00?	It is a three-wire piezoelectric casing-acceleration transducer with 100 mV/g sensitivity, a 50 g peak range, an M8 x 1 integral stud and no selected agency approvals.
What do 02 and 00 mean in the order code?	02 selects the M8 x 1 integral mounting stud. 00 selects no agency approvals.
Does the 330400-02-00 meet API 670?	The manufacturer states that the 330400 is designed to address the API 670 requirements for accelerometers. That statement does not add hazardous-area approval to the -00 order option.
What signal does it produce?	Its internal charge amplifier produces a dynamic voltage proportional to acceleration at 100 mV/g nominal sensitivity, using separate PWR, SIG and COM conductors.
What power does it require?	It requires -24 ±0.5 VDC, with 2 mA nominal bias current and an -8.5 ±0.5 VDC output-bias voltage.
What are its frequency and acceleration ranges?	The 330400 covers 10 Hz to 15 kHz within ±3 dB and 30 Hz to 10 kHz within ±10%, with 50 g peak overall range in the 10 Hz to 15 kHz span.

Official Bently Nevada sources

330400/330425 Accelerometers	https://www.bakerhughes.com/bently-nevada/sensors/acceleration-velocity-sensors/330400330425-accelerometers
330400 and 330425 Accelerometer Acceleration Transducers Datasheet	https://dam.bakerhughes.com/m/19b6525be7684676/original/330400-and-330425-Accelerometer-Acceleration-Transducers-Datasheet-141638-pdf.pdf
43217 and 37442 Accelerometer Mounting Kit Datasheet	https://dam.bakerhughes.com/m/26503b723cddade7/original/43217-and-37442-Accelerometer-Mounting-Kit-Datasheet-141630-pdf.pdf
Accelerometers: How do they Work?	https://www.bakerhughes.com/bently-nevada/orbit-home/orbit-article/accelerometers-how-do-they-work
Condition Monitoring of Reciprocating Compressors in Oil & Gas	https://www.bakerhughes.com/bently-nevada/orbit-home/orbit-article/condition-monitoring-reciprocating-compressors-oil-and-gas
3701/46 ADAPT Hydro Monitor Datasheet	https://dam.bakerhughes.com/m/2bc3a7ac4020b4bf/original/3701-46-ADAPT-Hydro-Monitor-Datasheet-103M9138-pdf.pdf
3500 Machinery Protection Systems	https://www.bakerhughes.com/bently-nevada/monitoring-systems/machinery-protection/3500-machinery-protection-systems