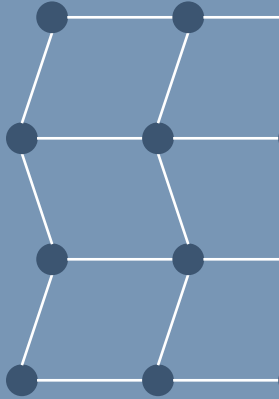


MANUFACTURER-SOURCE TECHNICAL REFERENCE

Bently Nevada 330425-01-05

330425-01-05 Casing-Acceleration Installation and Approval Guide

Bently Nevada 330425-01-05 Casing Acceleration Transducer



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 330425-01-05
Reference number	330425-01-05
Document basis	Published Bently Nevada product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/Bently-Nevada/330425-01-05>

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Machine casing motion, piezoelectric conversion, three-wire signal, and monitor channel path

Bently Nevada 330425-01-05 is a three-wire piezoelectric acceleration transducer for casing-vibration measurement on highly critical machinery; suffix 01 specifies a 1/4-28 UNF integral mounting stud and suffix 05 specifies multiple CSA, ATEX and IECEx approvals. Mounted directly on a prepared bearing housing or machine casing, it converts axial casing acceleration into an analogue voltage signal through its internal charge amplifier so a compatible machinery-protection or condition-monitoring channel can trend the vibration and apply configured alarm or protection logic.

01	Measured Signal: Axial acceleration of the mounting surface/bearing housing/machine casing.
02	Transduction: Piezoelectric sensing element and internal charge amplifier convert mechanical acceleration into an analogue voltage signal with 25 mV/g nominal sensitivity.
03	Dynamic Range: 75 g peak overall acceleration within the 10 Hz to 15 kHz span, with $\pm 1\%$ amplitude linearity to 75 g peak under the specified conditions.
04	Electrical Interface: Three-wire powered transducer using -24 ± 0.5 Vdc, 2 mA nominal bias and -8.5 ± 0.5 Vdc output bias; case is isolated.
05	Monitor Processing: The connected 1900/65A, 3500/70M or other explicitly compatible monitor powers/conditions the transducer signal, converts it to configured acceleration/reciprocating-acceleration measurements and performs alarm/protection processing.

330425 versus 330400 boundary, critical machinery, and hazardous-area conditions

01	Official document weight note: The current official datasheet contains both 99 g and 100 g typical entries. Keep the backend weight empty, suppress any 0 sentinel, and verify the current unit before logistics use.
02	Verification Status: VERIFIED EXACT MODEL AND COMPLETE ORDERING SUFFIX FROM BENTLY NEVADA OFFICIAL DATASHEET 141638 REV. AB
03	Exact Mapping: The Bently Nevada ordering table defines 330425-AA-BB. Option 01 is a 1/4-28 UNF integral mounting stud, and option 05 is the multiple-approvals selection covering CSA, ATEX and IECEx. Therefore 330425-01-05 is the 25 mV/g, 75 g peak 330425 accelerometer with the 1/4-28 stud and multiple approvals.

Suffixes, location, surface, torque, bias, cable, 25 mV/g scaling, approvals, and trip tests

01	Confirm the exact 330425-01-05 label, 1/4-28 stud and 05 approval markings; do not substitute a 330400 or an M8-thread 330425-02 variant.
02	Select the measurement location from machinery dynamics: the bearing housing or casing must transmit representative vibration. An unsuitable point can attenuate the signal or generate misleading readings.
03	Prepare a flat 32 microinch rms mounting surface, clean the threads, seat the sensor correctly and apply 4.1 N-m mounting torque; improper installation can reduce amplitude/frequency response or create false signals.
04	Supply only -24 ± 0.5 Vdc through a compatible Bently Nevada monitoring channel and verify the expected 2 mA bias and -8.5 ± 0.5 Vdc output bias before enabling alarms/trips.
05	Configure the receiving channel for 25 mV/g and 75 g peak, not the 330400 values of 100 mV/g and 50 g peak.
06	Do not expose the measurement to damaging energy above the specified range; vibration above 15 kHz, especially near resonance, significantly reduces the usable acceleration range.

Identity and release controls

Verification Status	VERIFIED EXACT MODEL AND COMPLETE ORDERING SUFFIX FROM BENTLY NEVADA OFFICIAL DATASHEET 141638 REV. AB
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Official Bently Nevada sources

330400 and 330425 Accelerometer Acceleration Transducers Datasheet	https://dam.bakerhughes.com/m/19b6525be7684676/original/330400-and-330425-Accelerometer-Acceleration-Transducers-Datasheet-141638-pdf.pdf
330400/330425 Accelerometers product page	https://www.bakerhughes.com/bently-nevada/sensors/acceleration-velocity-sensors/330400330425-accelerometers
1900/65A General Purpose Equipment Monitor Datasheet	https://dam.bakerhughes.com/m/431ea7aa66550d9f/original/1900-65A-General-Purpose-Equipment-Monitor-Datasheet-173401-pdf.pdf
3500 Machinery Protection System product page	https://www.bakerhughes.com/bently-nevada/monitoring-systems/machinery-protection/3500-machinery-protection-systems