Bently Nevada 330425-01-CN

330425 Accelerometer Acceleration Transducer

Bently Nevada 330425-01-CN is a 330425 casing-acceleration transducer with a 1/4-28 UNF integral stud and a CN country-specific order option. It is used where machinery housing vibration is monitored.

What this complete order code selects

330425 design

Higher-range casing acceleration transducer used on critical machinery.

01 mounting option

1/4-28 UNF integral stud; prepare the approved machine mounting point.

CN option

Country-specific ordering option; verify the exact supplied approval marking.

Signal path and installed boundary

Machine	Rotor forces transfer through the housing to the selected sensing point.
Sensor	Axial acceleration becomes a proportional signal with specified excitation.
Cable and monitor	The selected interconnect and monitor provide the installed measurement chain.

The 330425 signal is meaningful only with a correctly mounted sensor, compatible cable and approved monitor input. A replacement must preserve the measurement location and channel setup.

330425	25 mV/g; 75 g peak in the specified band.
330400 comparison	100 mV/g; 50 g peak. These family members require different monitor scaling.

Sensor data by engineering domain

Sensitivity	25 mV/g ±5% at reference conditions
Peak acceleration span	75 g within 10 Hz to 15 kHz
Amplitude linearity	±1% to 75 g peak
Broadband noise floor	0.01 g rms, 10 Hz to 15 kHz
Frequency response, ±3 dB	10 Hz to 15 kHz
Frequency response, ±10%	30 Hz to 10 kHz
Transverse sensitivity	Less than 5% of axial
Mounted resonant frequency	Greater than 30 kHz

Input supply	−24 ±0.5 V DC
Nominal bias current	2 mA
Output bias voltage	−8.5 ±0.5 V DC
Case grounding	Isolated
Connector	3-pin MIL-C-5015 receptacle
Mounting torque	4.1 N·m
Operating temperature	−55 to +121 °C
Sensor ingress protection	Equivalent to IP68; cable excluded
Maximum cable length	305 m without signal degradation

Response interpretation

The 75 g peak acceleration span is specified over 10 Hz to 15 kHz. For tighter amplitude comparison, use the 30 Hz to 10 kHz ±10% response band.

Environmental separation

The sensor body is hermetically sealed and has an equivalent IP68 rating. Cable and connector protection must be established separately in the installation.

Application and compatibility

Bearing-housing acceleration

Observe casing vibration at a location that receives the machine fault energy being assessed.

Gear-mesh observation

Use the high-frequency acceleration channel where the approved machine monitoring strategy requires it.

Condition trending

Trend the same sensor location and bandwidth over time; compare changing values with operating conditions.

Replacement service

Retain the mounting location, cable route and monitoring channel setup when exchanging the transducer.

Six installation decisions

01 Mounting location

Choose a bearing housing or casing point with representative vibration transfer; document the location.

02 Surface preparation

Prepare the contact face to the manufacturer surface specification before seating the integral stud.

03 Stud fastening

Apply the specified mounting torque with a suitable tool; avoid overtightening or a loose sensor.

04 Cable interface

Match the three-pin connector and protect the cable; the sensor ingress rating does not certify the cable.

05 Supply and polarity

Verify the negative DC excitation and monitor input against the installed wiring drawing before energizing.

06 Acceptance trend

After installation, compare bias, noise and operating trend with the approved channel baseline.

Technical questions that affect installation and diagnosis

Why could 330425-01-CN show lower high-frequency vibration after replacement?

Inspect seating, mounting surface and stud torque, then compare the new location and cable with the original installation. Poor coupling can reduce frequency response even when the sensor is electrically healthy.

How can an abnormal bias reading on 330425-01-CN be isolated?

Check the sensor supply and output bias at the approved monitor connection, then inspect cable continuity and connector condition. Compare the reading with the installed channel baseline before replacing the sensor.

What should be checked if 330425-01-CN reports vibration when the machine is stopped?

Review mounting tightness, cable motion, grounding and monitor noise. Isolate the channel according to the site procedure and distinguish electrical pickup from an actual machine response.

How should a cable change be assessed for 330425-01-CN?

Verify the selected three-socket interconnect, routing and total length against the installed design. Check the channel bias and a known operating trend after reconnecting; the sensor-only ingress rating does not cover the cable.

When is the wider response band of 330425-01-CN relevant to a trend?

Use the manufacturer’s ±3 dB or ±10% band according to the diagnostic frequency range and monitor configuration. Confirm the same filter and measurement bandwidth before comparing historical values.

How can cross-axis motion affect a 330425-01-CN reading?

Align the sensitive axis to the intended casing-motion direction and document orientation. If machine motion changes direction, compare orthogonal locations; the published transverse response is limited but not zero.

Offered item and lifecycle

Offered identity	Bently Nevada 330425-01-CN; New, original product.
Supply scope	The offered item is the 330425-01-CN accelerometer; interconnect cable, monitor and mounting accessories are separate unless itemized in the quotation.
Lifecycle status	A current manufacturer lifecycle phase for the complete 330425-01-CN identity is not established by the reviewed product datasheet. Confirm replacement support for the installed monitoring arrangement.

Further technical questions

What must be verified before using 330425-01-CN in a hazardous area?

Read the exact supplied approval marking and installation drawing, then check the associated circuit entity parameters and cable conditions. The CN order suffix alone does not establish a particular area classification.

How should 330425-01-CN be accepted after a sensor exchange?

Record the supplied marking and mounting point, verify excitation and output bias, then compare noise floor and operating vibration against an approved baseline under comparable machine conditions.

Related Bently Nevada references

Related catalogue entries are navigation references; match each complete order code to its own installation.

- **Bently Nevada 16710-26**
- **Bently Nevada 16710-32**
- **Bently Nevada 330425-01-05**

Discuss the complete marking with Apter Power

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Provide the installed channel, sensor label and cable information for an exact offer.

Technical basis: Bently Nevada 141638 Rev. AB; Approvals Quick Reference Guide 108M1756 Rev. AL.