

APTER POWER PRODUCT MANUAL

177230-01-02-05

177230 Self-Contained Seismic Transmitter

The 177230-01-02-05 is a Bently Nevada self-contained piezoelectric seismic transmitter with a 0 to 25.4 mm/s (0 to 1.0 in/s) velocity range, 3 Hz to 1 kHz frequency option, 4 to 20 mA primary velocity output, secondary unbuffered acceleration output, and multiple approvals.

It senses casing or bearing-housing vibration on general-purpose machinery, converts the measured velocity level to a proportional two-wire 4 to 20 mA signal for PLC, DCS, or SCADA input, and provides a secondary dynamic acceleration signal for diagnostic verification. The 3 Hz to 1 kHz option reports peak vibration level.

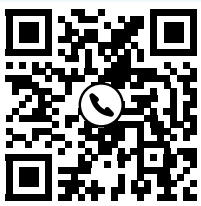
Manufacturer	Bently Nevada / verify where stated
Prepared by	Apter Power
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APTER POWER SALES TEAM

INDUSTRIAL AUTOMATION PRODUCT SUPPORT

Capture Low-Frequency Motion. Communicate Condition Clearly.

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SCAN FOR PRODUCT & QUOTE

177230-01-02-05

1. Product Identity and Model Configuration

The 177230-01-02-05 is a Bently Nevada self-contained piezoelectric seismic transmitter with a 0 to 25.4 mm/s (0 to 1.0 in/s) velocity range, 3 Hz to 1 kHz frequency option, 4 to 20 mA primary velocity output, secondary unbuffered acceleration output, and multiple approvals.

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Model Configuration

Code	Confirmed definition
177230	Self-contained seismic vibration transmitter.
01	0 to 25.4 mm/s (0 to 1.0 in/s) measurement range.
02	3 Hz to 1 kHz; peak output basis.
05	Multiple approvals: CSA/NRTL/C and ATEX/IECEEx.

Key Features

- Self-contained sensing and signal conditioning require no field configuration or adjustment.
- Two-wire 4 to 20 mA output interfaces with PLC, DCS, and SCADA systems.
- Secondary acceleration signal supports diagnostic verification and analysis.
- Hermetically sealed 316L stainless-steel housing supports industrial machinery environments.

2. Technical Specifications

Published values and exact-code limitations are reproduced or summarized from the source named below. Unpublished values are not inferred.

Parameter	Confirmed value
Product Type	Self-contained piezoelectric seismic transmitter
Primary Output	4 to 20 mA current loop
Measurement Range	0 to 25.4 mm/s (0 to 1.0 in/s)
Velocity Frequency Response	3 Hz to 1 kHz
Velocity Output Basis	peak
Secondary Output	Unbuffered acceleration voltage, pin C to pin B
Acceleration Sensitivity	10.2 mV/m/s ² (100 mV/g) +/-20%
Acceleration Full Scale	147 m/s ² (15 g) peak
Acceleration Frequency Response	2.5 Hz to 10 kHz +/-10%
Operating Temperature	-40 C to +85 C (-40 F to +185 F)
Case Material	316L stainless steel
Connector	3-pin MIL-C-5015
Mounting Hole	1/4-28 UNF
Physical Size	25.4 mm diameter x 66.0 mm height
Typical Weight	131 g (4.62 oz)
Mounting Torque	4 to 7 N-m (35.4 to 62.0 in-lbf)
Approval Option	05 - CSA/NRTL/C, ATEX/IECEX

Technical Note

Confirm the analog input scaling, output basis, wiring, mounting torque, and approval entity parameters before commissioning.

3. Functions, Applications and Components

Core Functions

- Measures casing or bearing-housing vibration velocity.
- Converts vibration to a proportional 4 to 20 mA machinery-control signal.
- Provides a secondary raw acceleration signal for diagnostics.
- Supports repeatable monitoring of rolling-element-bearing machinery.

Application Areas

Application	System role
Electric Motors	Monitors bearing-housing vibration on general-purpose motors.
Pumps	Provides a 4 to 20 mA vibration input for pump condition monitoring.
Small Reciprocating Compressors	Measures casing vibration where accelerometer-based monitoring is appropriate.
PLC and DCS Inputs	Feeds a proportional vibration signal to machinery control systems.
SCADA Monitoring	Supports remote trending of general-purpose machine vibration.
Diagnostic Verification	Uses the secondary acceleration output for waveform or spectrum analysis.

Compatible Components

- Three-conductor shielded 18 to 22 AWG interconnect wiring with the published insulation and shielding requirements.
- A compatible 3-pin MIL-C-5015 mating connector and environmental shell.
- PLC, DCS, or SCADA analog inputs configured for the published 4 to 20 mA loop.
- The supplied M6 x 1, M8 x 1.25, and 1/4-28 UNF stud adapters as appropriate to the machine.

Lifecycle Status

Baker Hughes currently publishes Bently Nevada 177230 Seismic Transmitter Datasheet 177232 Rev. T and lists 177230-01-02-05 as a standard ordering configuration. No separate lifecycle status is published for the complete suffix.

4. Installation Precautions

- Mount directly by stud where practical and tighten to the published 4 to 7 N-m torque.
- If using a magnetic base, roll it onto the machine; do not snap it into place because the resulting shock can damage the electronics.
- Use shielded three-conductor wiring and follow the published pin assignments and loop-power limits.
- Confirm the analog input scaling matches the ordered range and output basis.
- Verify the 05 approval marking, entity parameters, cable parameters, and installation drawing before hazardous-area use.

STOP - Verify before installation

Confirm the analog input scaling, output basis, wiring, mounting torque, and approval entity parameters before commissioning.

Use the physical nameplate and current original-manufacturer documents as the controlling records.

5. Source and Use Notice

Technical source

Bently Nevada 177230 Seismic Transmitter Datasheet 177232 Rev. T

Apter Power product page

<https://www.apterpower.com/Bently-Nevada/177230-01-02-05>

Use Notice

This is an original Apter Power product-specific reference prepared from the source named above. It is not a Bently Nevada publication and does not replace the original datasheet, nameplate, certification, installation drawing, or safety instructions. Confirm current manufacturer documentation before purchase, installation, or replacement.

ASK FOR QUOTE

For availability and quotation details, visit www.apterpower.com.