

APTER POWER PRODUCT MANUAL

177230-00-01-05

177230 Self-Contained Seismic Transmitter

The 177230-00-01-05 is a Bently Nevada self-contained piezoelectric seismic transmitter with a 0 to 12.7 mm/s (0 to 0.5 in/s) velocity range, 10 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 10 Hz to 1 kHz option reports RMS vibration level.

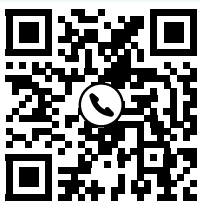
Manufacturer	Bently Nevada / verify where stated
Prepared by	Apter Power
Document ID	AP-MAN-177230-00-01-05-R1
Revision	R1
Issue date	2026-08-13

APTER POWER SALES TEAM

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Turn Machine Motion into Actionable 4-20 mA Insight.

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SCAN FOR PRODUCT & QUOTE

177230-00-01-05

1. Product Identity and Model Configuration

The 177230-00-01-05 is a Bently Nevada self-contained piezoelectric seismic transmitter with a 0 to 12.7 mm/s (0 to 0.5 in/s) velocity range, 10 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.
00	0 to 12.7 mm/s (0 to 0.5 in/s) measurement range.
01	10 Hz to 1 kHz; RMS 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 Unpublished values are not inferred.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 12.7 mm/s (0 to 0.5 in/s)
Velocity Frequency Response	10 Hz to 1 kHz
Velocity Output Basis	RMS
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 177230-00-01-05 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/177230-00-01-05>

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.

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