

MANUFACTURER-SOURCE TECHNICAL REFERENCE

Bently Nevada 2300/20-00

Product Reference

Bently Nevada Two-Channel Vibration Monitor with 4-20 mA Outputs

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 2300/20-00
Reference number	2300/20-00
Document basis	Published Bently Nevada product records, PDFs, and manuals listed on page 3



Product page

<https://www.apterpower.com/Bently-Nevada/2300-20-00>
Apter Power contact

sales13@apterpower.com | +86 180 3023 5313

Product role and published parameters

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

Bently Nevada 2300/20-00 is the no-agency-approval version of the 2300/20 compact vibration monitor, a two-channel device for continuous condition monitoring and machinery protection on essential medium- to low-criticality and spared equipment. The monitor accepts two synchronously sampled acceleration, velocity or proximity-transducer inputs plus a dedicated speed channel that can use a proximity probe, magnetic pickup or proximity switch. System context: Bently Nevada Two-Channel Vibration Monitor with 4-20 mA Outputs.

Published field	Manufacturer-published value or verified identity note
Power input	18 to 36 VDC, 7.5 W maximum
Primary vibration inputs	Two synchronized acceleration, velocity or proximity inputs
Input conversion	Independent 24-bit ADCs; channel hardware accuracy $\pm 1\%$ of full scale
Acceleration input	Configurable 0.2 Hz to 20 kHz bandpass; 5 to 1000 mV/g scale factor; 2 to 80 g peak full scale
Velocity input	Configurable 0.2 Hz to 20 kHz bandpass; 5 to 1000 mV/in/s scale factor; 0 to 50 in/s peak full scale
Radial-vibration input	Configurable 0.2 Hz to 20 kHz bandpass; 5 to 1000 mV/mil scale factor; 0 to 160 mil peak-to-peak full scale
Speed input ranges	Proximity transducer 1 to 120,000 rpm; proximity switch 1 to 60,000 rpm; magnetic pickup 200 to 120,000 rpm

System function and signal path

01	The monitor accepts two synchronously sampled acceleration, velocity or proximity-transducer inputs plus a dedicated speed channel that can use a proximity probe, magnetic pickup or proximity switch. All three input channels can instead support process variables, and configured measurements include acceleration peak/RMS, velocity peak/RMS, displacement peak-to-peak/RMS and speed with alert and danger alarming.
02	For plant integration, 2300/20-00 provides two internally powered 4-20 mA outputs, two programmable dry-contact relay outputs, three protected BNC buffered outputs for the two vibration signals and speed/Keyphasor signal, and 10/100Base-T Ethernet with Modbus over Ethernet. Companion hardware can include Bently Nevada accelerometers, Velomitor or Proximitors systems, a compatible speed sensor, a 24 VDC DIN-rail supply, an enclosure and optional System 1 device connectivity, all selected separately for the installation.
03	The 2300 platform is applied where a broad machine train or individual casing can be covered by its channel count: proximity sensing on fluid-film-bearing machines, velocity sensing on slow-speed assets, acceleration and enveloped-acceleration measurements on rolling-element bearings or geared equipment, and compact protection on examples such as cryogenic pumps and small hydro units. Baker Hughes lists oil and gas, power generation, water treatment, pulp and paper, manufacturing, mining and cement among the applicable industries; the -00 approval code confines this exact order to locations that do not require the omitted agency approvals.

Applications, answers, and official sources

1

Compact balance-of-plant machinery protection: Continuously measures two vibration points and a speed or process input, alarms on configured levels and can operate relay outputs for an essential or spared machine whose point count fits the monitor.

2

Fluid-film-bearing shaft monitoring: Uses compatible Proximitors inputs for radial-vibration or thrust-position measurements, with a phase/speed input for time-synchronous diagnostics.

3

Slow-speed and rolling-element-bearing monitoring: Uses Velomitor or accelerometer inputs for casing velocity, acceleration and configured enveloped-acceleration measurements on slow-speed, bearing or geared assets.

4

Small hydro or cryogenic-pump monitoring: Provides a compact continuous monitor for officially documented small-hydro use and for engineered cryogenic-pump acceleration/velocity measurement strategies, subject to sensor and area-approval selection.

Frequently asked questions

What is Bently Nevada 2300/20-00?	It is a compact two-channel continuous vibration monitor and machinery-protection device with a dedicated speed/process channel, two configurable 4-20 mA outputs, two relays and Ethernet communications.
What does the -00 suffix mean?	In the official 2300/20-AA order code, 00 means the approvals option is None. It is not the multi-explosive-atmosphere-certified -02 variant.
How is 2300/20 different from 2300/25?	2300/20 has two 4-20 mA outputs for plant/DCS integration. 2300/25 uses a Trendmaster SPA output instead.
Which vibration sensors can it accept?	The two main channels support compatible accelerometer, Velomitor and Proximitors inputs, including documented Bently Nevada sensor families. Exact excitation, scale, cable and approval compatibility must be configured.
What can the speed channel use?	The dedicated channel supports a compatible proximity probe, proximity switch or magnetic pickup. The maximum and minimum rpm depend on the selected interface.
Can the inputs monitor process variables?	Yes. The official datasheet states that all three input channels support process-variable operation in addition to their vibration/speed roles.

Official Bently Nevada sources

2300/20 and 2300/25 2300 Vibration Monitors Datasheet	https://dam.bakerhughes.com/m/2d9d8ca049d0e898/original/2300-Series-Vibration-Monitors-Datasheet-105M0340-pdf.pdf
Distributed Sensor and Protection Systems	https://www.bakerhughes.com/bently-nevada/monitoring-systems/distributed-protection-systems
2300 Vibration Monitor Fact Sheet	https://dam.bakerhughes.com/m/73b2b3d8ebc3ae2f/original/2300-Vibration-Monitor-Fact-Sheet-GEA31447-pdf.pdf
New Capabilities in 2300 Vibration Monitors	https://www.bakerhughes.com/bently-nevada/orbit-home/orbit-article/new-capabilities-2300-vibration-monitors
Application Guide for the Condition Monitoring of Cryogenic Pumps	https://www.bakerhughes.com/sites/bakerhughes/files/2022-01/GEA32338B%20Cryogenic%20Pumps%20Ap%20Guide_R1.pdf
Roadmap to Digital Transformation of Hydro Condition Monitoring	https://www.bakerhughes.com/bently-nevada/orbit-home/orbit-article/roadmap-digital-transformation-hydro-condition-monitoring