

200150, 200155 and 200157 Accelerometers

Datasheet

Bently Nevada Machinery Condition Monitoring

164986 Rev. V



Description

The 20015x Accelerometers are general purpose, wide frequency, case-mounted seismic transducers designed for use with Trendmaster ProTIMs.

The 200150 Accelerometer also operates with the Trendmaster 2000 system. The accelerometer interfaces with the 200100 Dual Acceleration to Velocity flexiTIM Module and the 89130-01 Acceleration-to-Velocity TIM (Transducer Interface Module), as well as the 1900/25 and 1900/27 monitors.

The 20015x Accelerometers feature a hermetically sealed, stainless steel case. This design provides an extremely rugged transducer that is well suited for harsh industrial environments. The transducer's top-mounted, 5-pin connector allows you to easily install and remove the interconnecting signal cable. A 3/8-24 threaded hole on the bottom of the sensor's casing accommodates several mounting options.

The 20015x Accelerometers contain a piezoelectric sensing device that generates a charge when it is subjected to vibration. The accelerometers electronically convert this charge to a differential voltage signal that is proportional to the acceleration that is parallel to the sensitive axis of the transducer.



If you use the 200155 and 200157 Accelerometers with 1900 monitors or with TIMs other than those listed in Table 1, or if you operate the transducers outside their specified limits, machine monitoring may fail or the data obtained may not be accurate.

The maximum allowed cable length for use with the 200155 is 15.24 m (50 ft.). You can install 20015x



Ordering Information



For the detailed listing of country and product specific approvals, refer to the *Approvals Quick Reference Guide* (108M1756) available from Bently.com.

200150-AA-BB

General Purpose Trendmaster 2000 or Trendmaster Pro Accelerometer

200155-AA-BB

Low Frequency Trendmaster Pro Accelerometer

200157-AA-BB

Enveloping Trendmaster Pro Accelerometer

Refer to Table 6 for detailed specifications.

A: Mounting Stud Option

00	No mounting stud provided
01	3/8-24 thread, 2 adhesive mount frames with adhesive
02	3/8-24 to 3/8-24 UNF 1-3/8 inch hex plate stud
03	3/8-24 to 1/2-20 UNF 1-3/8 inch hex plate stud
04	3/8-24 to 1/4 NPT 1-3/8 inch hex plate stud
05	3/8-24 to 1/4-28 UNF 1-3/8 inch hex plate stud
06	3/8-24 to 1/4 NPT, 3/4 inch hex stud
07	3/8-24 to 3/8 NPT, 3/4 inch hex stud
08	3/8-24 to 1/2 NPT 1 inch hex stud

09	3/8-24 to 3/4 NPT, 1-1/4 inch hex stud
10	3/8-24 to 1 NPT, 1-3/8 inch hex stud
11	3/8-24 to 1-1/4 NPT, 1-3/4 inch hex stud
12	3/8-24 to 1/4-20 UNC, 3/4 inch hex stud
13	3/8-24 to 5/16-18 UNC, 3/4 inch hex stud
14	3/8-24 to 3/8-24 UNF, 3/4 inch hex stud
15	3/8-24 to 3/8-16 UNC, 3/4 inch hex stud
16	3/8-24 to 1/2-13 UNC, 3/4 inch hex stud
17	3/8-24 to 3/8-16 UNC 1-3/8 inch hex plate stud
18	3/8-24 to M8x1 1-3/8 inch hex plate stud
19	Quick-Set XDCR adapter, 1-inch hex stud
20	3/8-24 thread, 1 magnetic mount base
21	3/8-24 outer diameter to M6x1 inner diameter 1-3/8 inch hex plate stud
22	3/8-24 to M8x1.25 1-3/8 inch hex plate stud
23	3/8-24 to M16x2.0 1-3/8 inch hex plate stud

B: Approvals

05	Multiple Approvals (CSA, ATEX, and IECEx)
-----------	---



Adhesive studs (Options **01** and **20**) are sold in kits containing frames to hold the studs to the substrate while the adhesive cures. The kit also contains provides a scouring pad and alcohol wipe to prepare the mounting surface and a packet of acrylic adhesive and materials to mix the two components.



Using adhesives and magnetic mounts attenuates high frequency signals that may be present.

200151-AA-BB-CC

Accelerometer Interface Standard Cable, Connectors on Both Ends

A: Cable Length

20	2.0 meters
40	4.0 meters
60	6.0 meters

B: Armor Option

02	Blue cable without armor
03	Blue cable with armor

C: Coupling Nut

00	Standard coupling nut (see Figure 9)
02	Nylon coupling nut
10	Enhanced coupling nut. This option provides a better grip for tightening the cable to the accelerometer and is provided on both ends of the cable (see Figure 11).

200152-AA-BB

Accelerometer Interface Standard Cable, Connector on Accelerometer End Only

A: Cable Length

04	4.0 meters
15	15 meters
25	25 meters

B: Coupling Nut

00	Standard coupling nut (see Figure 10)
10	Enhanced coupling nut. This option provides a better grip for tightening the cable to the accelerometer and is provided on the accelerometer end only (see Figure 12).

Accessories

Part Number	Description
164985	200150, 200155, and 200157 Accelerometers User Guide.
162411	Trendmaster System User Guide
149831	Trendmaster Dynamic Scanning Module datasheet.
163662	200200 ProTIM-R Module datasheet.
163663	200250 ProTIM-C Module datasheet.
126709	Trendmaster 2000 for Windows Installation Guide.
141574-01	200100 Acceleration-to-Velocity flexiTIM Module datasheet.
137230	flexiTIM Operation Manual.
190125	1900/25 Vibration Monitor User Guide
141485	1900/25 Vibration Monitor datasheet.
190127	1900/27 Vibration Monitor User Guide
141486	1900/27 Vibration Monitor datasheet.
141556	89130-01 and 89546-01 Accel-to-Velocity Transducer Interface Module datasheet.
142485-01	Housing cable adapter. See Figure 13.
141887-01	Conduit cable adaptor, single. See Figure 14.
141887-02	Conduit cable adapter, double. See Figure 15.