

# Weighing Environment Logger

# AD-1687

MODEL	AD-1687	S/N	T1200112	ID	0	VR	1.3						
277	2012/1/25	17:20:47	25	C	44.8	%	1001	hPa	1	Gal	ST	0.154	g
278	2012/1/25	17:21:33	25	C	44.8	%	1001.1	hPa	2	Gal	ST	0.156	g
279	2012/1/25	17:28:24	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
280	2012/1/25	17:28:27	25	C	44.8	%	1001.3	hPa	1	Gal	ST	0.151	g
281	2012/1/25	17:28:30	25	C	44.8	%	1001.3	hPa	1	Gal	ST	0.151	g
282	2012/1/25	17:28:34	25	C	44.8	%	1001.4	hPa	2	Gal	ST	0.152	g
283	2012/1/25	17:28:37	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.15	g
284	2012/1/25	17:28:37	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.15	g
285	2012/1/25	17:28:38	25	C	44.8	%	1001.3	hPa	1	Gal	ST	0.151	g
286	2012/1/25	17:28:40	25	C	44.8	%	1001.4	hPa	0	Gal	ST	0.151	g
287	2012/1/25	17:28:42	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
288	2012/1/25	17:28:43	25	C	44.8	%	1001.3	hPa	0	Gal	ST	0.151	g
289	2012/1/25	17:28:44	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
290	2012/1/25	17:28:45	25	C	44.8	%	1001.3	hPa	1	Gal	ST	0.151	g
291	2012/1/25	17:28:46	25	C	44.8	%	1001.4	hPa	2	Gal	ST	0.151	g
292	2012/1/25	17:28:47	25	C	44.8	%	1001.4	hPa	0	Gal	ST	0.151	g
293	2012/1/25	17:28:48	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
294	2012/1/25	17:28:49	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
295	2012/1/25	17:28:50	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
296	2012/1/25	17:28:51	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
297	2012/1/25	17:28:52	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
298	2012/1/25	17:28:53	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
299	2012/1/25	17:28:54	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
300	2012/1/25	17:28:55	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
301	2012/1/25	17:28:56	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
302	2012/1/25	17:28:57	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
303	2012/1/25	17:28:58	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
304	2012/1/25	17:28:59	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
305	2012/1/25	17:29:00	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
306	2012/1/25	17:29:01	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
307	2012/1/25	17:29:02	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g
308	2012/1/25	17:29:03	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
309	2012/1/25	17:29:04	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.152	g
310	2012/1/25	17:29:05	25	C	44.8	%	1001.4	hPa	1	Gal	ST	0.151	g

**Temperature**

**Barometric Pressure**

**Humidity**

**Vibration**



**Weighing Data**

**All in One Device!**



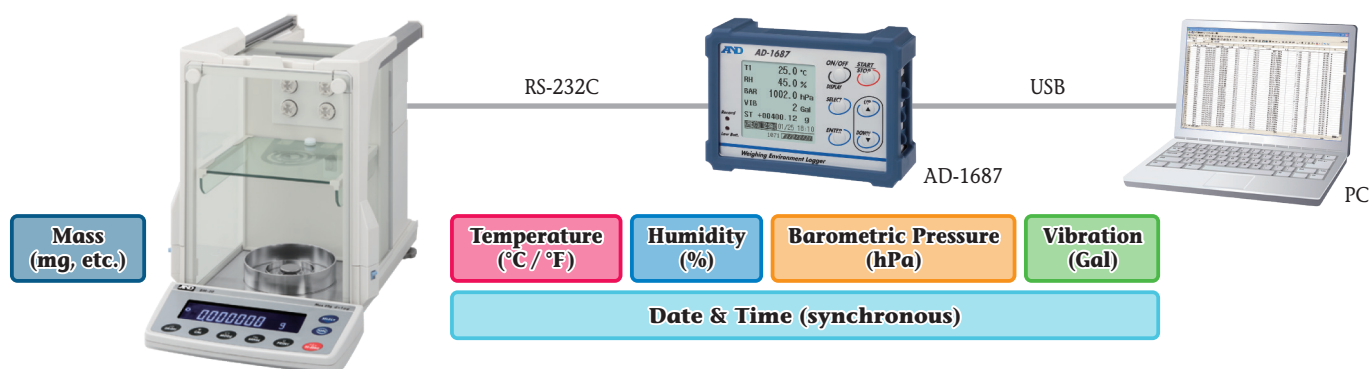
**AND** ...Clearly a Better Value  
 A&D Company, Limited  
<http://www.aandd.jp>

# Who Else Wants to Manage Environmental and Weighing Data With Just One Device?

Temperature, humidity, barometric pressure, and mass values – Isn't it troublesome to unify and process these data from different recording devices? The AD-1687 Weighing Environment Logger, which also detects vibration, is ideal for monitoring environmental conditions that influence the performance of precision analytical balances. A unique product that A&D ourselves long wished to have as a balance manufacturer!

## Simultaneous and chronological recording of environmental and weighing data

When connected to an A&D balance, the AD-1687 saves mass values sent from the balance while simultaneously collecting temperature, humidity, barometric pressure, and vibration data from the setup environment, all with date and time of recording. You will no longer be bothered by complicated, error-prone data integration tasks.



## Instant data saving to a PC requiring no special software

The PC recognizes the AD-1687 as USB storage. The data is stored in CSV format and can be opened using software such as Microsoft Excel, allowing easy processing and graphing of results for analysis and documentation.

### Real-time transmission mode

By linking a balance and a PC, the AD-1687 can transfer weighing data along with environmental data to the PC in real time without saving the data on the device itself.

## Large memory capacity of 10,000 data sets

The AD-1687 stores up to 10,000 sets<sup>i</sup> of environmental and weighing data with date and time. You can select either endless recording (overwrites the oldest data when memory is full) or one-time recording (stops recording when memory becomes full).

\* i Roughly 100 days' worth of continuous recording at a 15-minute interval

## No battery required when connected to either a balance or a PC

The AD-1687 can receive power directly from a balance via RS-232C or from a PC via USB. Three types of RS-232C cables (9-pin D-Sub, 25-pin D-Sub, and 7-pin DIN) and a USB cable are provided as standard.

### Power-saving function when operated on batteries

The AD-1687 is automatically turned off after a set period<sup>ii</sup> of inactivity. (Only the display is turned off while recording in interval mode.) The remaining battery level is displayed to avoid unexpected recording failure.

\* ii Settings are 30 sec, 1 min, 2 min, 5 min, 10 min, and OFF

## Various display modes

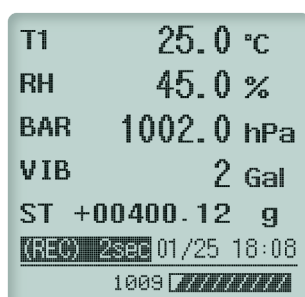
Depending on your purpose or preference, you can set the AD-1687 to display either all data items or only two important ones (primary data mode), and display data either numerically or by trend graphs (trend graph mode).

### Primary data mode

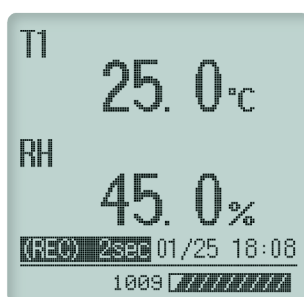
Only two data items (e.g. temperature and humidity) of your choosing are displayed for easier reading.

### Trend graph mode

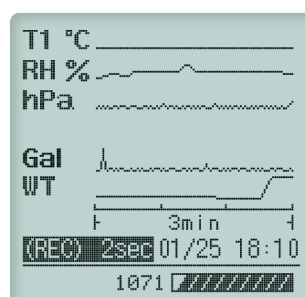
Results are graphed using automatic scaling so you can grasp chronological changes quickly and intuitively.



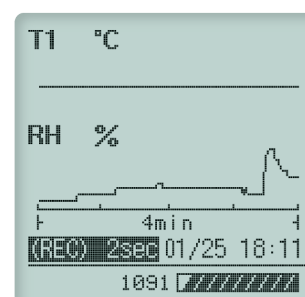
All items  
(numeric)



Two items  
(numeric)



All items  
(trend graph)



Two items  
(trend graph)

## Interval time setting for environmental data recording

It is possible to set an interval time between 1 second to 60 minutes at which the AD-1687 measures and records the environmental data.<sup>iii</sup>

\* iii For weighing data, use the interval output mode of the weighing instrument.

## High portability and IP65 dust and waterproof construction

The AD-1687 is compact enough (127 × 90 × 36 mm with the protective cover) to be carried around. With the protective cover, it is IP65 dust and waterproof and suitable for use at various sites where the conditions are not as favorable as laboratories.

## Industry's first environment logger that detects vibration

Because the AD-1687 measures vibration, it is useful for managing not just weighing environments but also areas like production facilities where the amount of vibration becomes an issue.

## Specifications

	Resolution	Measurement range	Accuracy
Temperature	0.1 °C	0 to 60 °C	±0.5 °C (20 to 30 °C)
	0.1 °F	32 to 140 °F	±0.9 °F (68 to 86 °F)
Relative humidity	0.1% RH	0 to 100%	±3% (20 to 80%)
Barometric pressure	0.1 hPa	500 to 1100 hPa	±4 hPa (0 to 50 °C)
Vibration	1 Gal	0 to 2000 Gal	±20 %, static acceleration
Data capacity	Maximum 10,000 sets (including date and time)		
Interval time	1, 2, 5, 10, 15, 20, 30 seconds, 1, 2, 5, 10, 15, 20, 30, 60 minutes		
Power supply	Two LR6 (AA) batteries, RS-232C, or USB		
Battery life	Approx. 6 months (with measurement interval at 1 minute, alkaline batteries)		
Clock accuracy	Maximum ±1 minute/month		
Compatible operating systems	Windows 2000 / XP / Vista / 7 / 8 / 10 (32 / 64 bit)		
Operating environment	0 to 60 °C / 32 to 140 °F, 85% RH or less (no condensation)		
Dimensions	127 (W) × 90 (H) × 36 (D) mm (including the protective cover)		
Weight	Approx. 280 g (including batteries and the protective cover)		

## Standard accessories

- Three RS-232C cables for weighing instruments (9-pin D-Sub, 25-pin D-Sub, and 7-pin DIN, 1 m)
- USB cable (1 m)
- Two LR6 (AA) batteries (for operation check)
- Protective cover
- Instruction manual

### *You only need to record weighing data? Then please consider the AD-1688 Weighing Data Logger.*



The AD-1688 is a handheld device (55 × 103 × 16.5 mm) that stores up to 5,000 weighing results with date and time. You can retrieve the saved data later by connecting the AD-1688 to a USB port of your computer. (No driver software is necessary.)



Save



Carry



and Retrieve the Data!

As with the AD-1687 weighing environment logger, the AD-1688 becomes especially handy where a PC or printer cannot be placed near the weighing instrument, such as clean rooms.



#### A&D Company, Limited

3-23-14 Higashi-Ikebukuro, Toshima-ku, Tokyo 170-0013 JAPAN  
Telephone:[81](3) 5391-6132 Fax:[81](3) 5391-6148  
<http://www.aandd.jp>

#### A&D ENGINEERING, INC.

1756 Automation Parkway, San Jose, CA 95131 U.S.A.  
Telephone:[1](408) 263-5333 Fax:[1](408) 263-0119

#### A&D Australasia Pty Ltd.

32 Dew Street, Thebarton, South Australia 5031 AUSTRALIA  
Telephone:[61](8) 8301-8100 Fax:[61](8) 8352-7409

#### A&D INSTRUMENTS LTD.

Unit 24/26 Blacklands Way Abingdon Business Park,  
Abingdon, Oxon OX14 1DY UNITED KINGDOM  
Telephone:[44](1235) 550420 Fax:[44](1235) 550485

#### <German Sales Office>

Hamburger Straße 30 D-22926 Ahrensburg GERMANY  
Telephone:[49](0) 4102 459230 Fax:[49](0) 4102 459231

#### A&D KOREA Limited

Manhattan Bldg. 8F, 36-2 Yoido-dong, Youngdeungpo-gu, Seoul, KOREA  
Telephone:[82](2) 780-4101 Fax:[82](2) 782-4280

#### A&D RUS CO., LTD.

Vereyskaya str.17, Moscow, 121357 RUSSIA  
Telephone: [7] (495) 937-33-44 Fax: [7] (495) 937-55-66

#### A&D Instruments India Private Limited

509 Udyog Vihar Phase V  
Gurgaon-122 016, Haryana, INDIA  
Telephone: [91](124) 471-5555 Fax: [91](124) 471-5599