

Instruction manual

VWR® TRACEABLE MEMORY-LOC DATALOGGING THERMOMETER INSTRUCTIONS

EU cat. no 620-2426



CE

UK
CA

Legal address of Manufacturer

Europe

VWR International bv,
Researchpark Haasrode 2020
Geldenaaksebaan 464 B-
3001 Leuven
+3216385011
be.vwr.com

UK Importer:
VWR International Ltd
Hunter Boulevard, Magna Park
Lutterworth, Leicestershire, LE17 4XN
uk.vwr.com

Country of Origin

China

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Safety Information

Avoiding Electrical Shock

Please follow the guidelines below, and read this manual in its entirety to ensure safe operation of the unit.

VWR recommends:



Avoiding Damage to the Instrument



Avoid making any alterations to the Instrument

Use correct batteries. (2x AAA 1.5V)

Package Contents

Description	Quantity
Bottle probe with cable	1
Standard plastic probe with cable	1
universal adapter	1
stand	1
Hook and loop tape	1
Magnetic strips	1
Wall mount	1
Traceable® Certificate	1
Batteries (2xAAA)	1

Unpacking

Remove from box, insert batteries. Save Traceable manual and calibration certificates for reference

Intended use

Easily monitor temperatures overnight or for any time period—stores over 1 million temperature observations

Symbols and conventions

The following chart is an illustrated glossary of the symbols that are used in this manual.
[The following is an example only]

	CAUTION This symbol indicates a potential risk and alerts you to proceed with caution
	CAUTION This symbol indicates the presence of high voltage and warns the user to proceed with caution
	CAUTION This symbol indicates risks associated with hot surfaces

Product Specifications

Range: -50.00 to 70.00 °C

Accuracy: $\pm 0.25^{\circ}\text{C}$

Resolution: 0.01°

Temperature

Sampling Rate: 5 seconds

Memory Capacity: 1,051,200 points

USB Download Rate: 55 readings per second

Battery: 2 AAA (1.5V)

TRACEABLE® CERTIFICATE

Multi-point calibration on an individually-numbered Traceable® Certificate which assures accuracy from an ISO/IEC 17025:2017 (1750.01) calibration laboratory accredited by A2LA. It indicates traceability of measurements to the SI units through NIST or other recognized national measurement institutes (NMI) that are signatories to the CIPM Mutual Recognition Agreement.

Important Guidelines

Not approved for Medical usage

Operation

SETTING THE TIME-OF-DAY/DATE

1. Slide the DISPLAY switch to the DATE/TIME position, the thermometer will display the time-of-day and date. Adjustable parameters are Year->Month->Day->Hour->Minute->12/24 hour time.
2. Press the SELECT button to enter the setting mode.
3. Subsequently press the SELECT button to select which parameter to adjust. The selected parameter will flash once selected.
4. Press the ADVANCE button to increment the selected parameter.
5. Hold the ADVANCE button to continuously "roll" the selected parameter.
6. Press the EVENT DISPLAY button to toggle between Month/Day (M/D) and Day/Month (D/M) display modes.

If no button is pressed for 15 seconds while in the setting mode, the thermometer will exit the setting mode.

Changing the position of the DISPLAY switch while in the setting mode will save the current settings.

VIEWING THE TIME-OF-DAY/DATE

To view the time-of-day/date, slide the DISPLAY switch to the DATE/TIME position.

SELECTING THE UNIT OF MEASURE

To select the desired unit of temperature measure (°C or °F), slide the UNITS switch to the corresponding position.

SELECTING THE TEMPERATURE PROBE CHANNEL

Slide the PROBE switch to either position '1' or position '2' to select the corresponding probe channel P1 or P2.

All temperature readings displayed will correspond with the selected probe channel.

Note: Both probe channels are sampled and monitored continuously regardless of the selected probe channel.

MINIMUM AND MAXIMUM MEMORY

The minimum temperature stored in memory is the minimum temperature measured since the last clear of min/max memory. The maximum temperature stored in memory is the maximum temperature measured since the last clear of min/max memory.

MINIMUM AND MAXIMUM TEMPERATURE VALUES ARE NOT PROGRAMMABLE.

Minimum and maximum temperature values are stored individually for each probe channel P1 and P2. Both channels are monitored continuously regardless of the selected probe channel.

VIEWING MIN/MAX MEMORY

1. Slide the PROBE switch to select temperature probe channel to be displayed.
2. Slide the DISPLAY switch to the MIN/MAX position.
3. The thermometer will display the current, minimum, and maximum temperatures for the selected probe channel.
4. Press the EVENT DISPLAY button to display the minimum temperature with the corresponding date and time of occurrence.
5. Press the EVENT DISPLAY button a second time to display the maximum temperature with the corresponding date and time of occurrence.
6. Press the EVENT DISPLAY button to return to the current temperature display.

No button press for 15 seconds while viewing the minimum or maximum event data will trigger the thermometer to return to the current temperature display.

CLEARING THE MIN/MAX MEMORY

1. Slide the PROBE switch to select the temperature probe channel to be cleared.
2. Slide the DISPLAY switch to the MIN/MAX position.
3. Press the CLEAR SILENCE ALM button to clear the current minimum and maximum temperature readings.

Alarms

Alarm high and low limits can be set individually for each probe channel (P1 and P2).

SETTING ALARM LIMITS

1. Slide the switch to the ALARM position. Then slide the PROBE switch to select the probe channel for which alarms will be set.

Each digit of the alarm value is set individually: Low Alarm Sign (Positive/Negative) -> Low Alarm Hundreds/Tens -> Low Alarm Ones -> Low Alarm Tenths -> High Alarm Sign (Positive/Negative) -> High Alarm Hundreds/Tens -> High Alarm Ones -> High Alarm Tenths.

1. Press the SELECT button to enter the setting mode. The LOW ALM symbol will flash.
2. Press the SELECT button to select the digit to adjust. Each subsequent press of the SELECT button will move to the next digit. The digit will flash while selected.
3. Press ADVANCE button to increment the selected digit.

Note: The negative sign will flash if the sign is negative; no symbol will flash if the sign is positive. Press the ADVANCE button to toggle the sign while it is selected.

If no button is pressed for 15 seconds while in the setting mode, the thermometer will exit the setting mode.

Changing the position of the DISPLAY switch while in the setting mode will save the current settings.

VIEWING THE ALARM LIMITS

1. Slide the PROBE switch to select the probe channel alarm limits to be displayed.
2. Slide the DISPLAY switch to the ALARM position.

ENABLING/DISABLING ALARMS

1. Slide the ALARM switch to the ON or OFF position to enable or disable the alarms.
2. Alarms are enabled for both probe channels P1 and P2 while the switch is set to ON. Alarms are disabled for both probe channels P1 and P2 while the switch is set to OFF.
3. The alarms cannot be configured to enable individual channels P1 or P2 only.

ALARM EVENT HANDLING

An alarm event will trigger if the alarm is enabled and a temperature reading is recorded below the low alarm set point or above the high alarm set point.

When an alarm event triggers, the thermometer buzzer will sound, and the LED for the alarming temperature channel will flash (P1 or P2). If the alarming probe channel is selected, the LCD symbol will flash signaling which set point was breached (HI ALM or LO ALM).

An active alarm may be cleared by either pressing the CLEAR SILENCE ALM button or disabling the alarm functionality by sliding the ALARM switch to the OFF position.

Once an alarm is cleared, it will not re-trigger until after the temperature returns to within the alarm limits.

Note: If an alarm event is triggered and returns to within the alarm limits before being cleared, the alarm event will remain active until it is cleared.

VIEWING ALARM EVENT MEMORY

1. Slide the PROBE switch to select the probe channel alarm data to be displayed.
2. Slide the DISPLAY switch to the ALARM position. The current temperature, low alarm limit, and high alarm limit will display.
3. Press the EVENT DISPLAY button. The thermometer will display the alarm limit, date, and time of the most recent alarm out of range condition. The symbol ALM OUT will display to signal the date and time displayed indicate when the temperature when out of tolerance.
4. Press the EVENT DISPLAY button a second time. The thermometer will display the alarm limit, date, and time of the most recent alarm event returning to within the alarm limits. The symbol ALM IN will display to signal the date and time displayed indicate when the temperature returned to within tolerance.
5. Press the EVENT DISPLAY button to return to the current temperature display.

No button press for 15 seconds while viewing the alarm events will trigger the thermometer to return to the current temperature display.

Note: If no alarm event has occurred for the selected probe channel, the thermometer will display "LLL.LL" on each line.

DATA LOGGING OPERATION

Thermometer will continuously log temperature readings for both probe channels into permanent memory at one-minute intervals. The total memory capacity is 1,051,200 data points. Each data point contains the temperature reading for P1, the temperature reading for P2, and the date and time of occurrence.

Note: All data stored in Celsius (°C) and date format is MM/DD/YYYY.

The thermometer will also store the most recent 10 alarm events. Each alarm event data point contains the probe channel which alarmed, the alarm set point that was triggered, the date and time the channel reading went out of range, and the date and time the channel reading returned to within range.

VIEWING THE MEMORY CAPACITY

Slide the MEM VIEW switch to the ON position.

The first line will display the current percentage of memory full. The second line will display the number of days remaining before memory is full. The third line will display the logging interval (one minute).

Note: The MEM symbol will become active on the display when the memory is 95% full.

SETTING THE LOGGING INTERVAL

1. Slide the MEM VIEW switch to the ON position. The first line will display the current percentage of memory full. The second line will display the number of days remaining before memory is full at the current logging interval. The third line will display the current logging interval.

2. To increment the logging interval, press the ADVANCE button. The minimum logging interval is one minute (0:01). The maximum logging rate is 24 hours (24:00). Once 24 hours is selected, the next subsequent press of the ADVANCE button will return to one minute.

VIEWING UNIQUE DEVICE ID NUMBER

1. Slide the MEM VIEW switch to the ON position.

2. Press the EVENT DISPLAY button. The second and third lines will display the first eight digits of the ID number.

3. Press the EVENT DISPLAY button a second time. The second and third lines will display the last eight digits of the ID number.

4. Press the EVENT DISPLAY button to return to the default display.

DOWNLOADING STORED DATA

Note: USB download will not occur if the battery LCD symbol is active. Plug supplied AC adapter into thermometer to provide sufficient power for USB operation.

1. The data can be downloaded directly to a USB Mass Storage Flash Drive. To begin download, insert USB flash drive into USB port located on left side of thermometer.

2. The download will begin upon insert. Upon inserting an empty flash drive in your device and "MEM" will appear on right side of display, this indicates that the device is downloading. If "MEM"

does not appear on display, gently wiggle the flash drive while inserted until "MEM" appears and data begins downloading. Once "MEM" disappears, device will beep, indicating download is complete.

Note: Do not remove USB drive until download is complete.
Note: DO NOT leave USB Mass Storage Flash Drive inserted into unit. Insert, DOWNLOAD, and then remove. The device cannot continuously write to a USB.

REVIEWING STORED DATA

The downloaded data is stored in a comma-delimited CSV file on the flash drive. The filename naming convention is "D1D2D3D4D5D6D7R1.CSV" where D1 through D7 are the last seven digits of the thermometer's unique ID number and R1 is the revision of the file starting with the letter "A". If more than one file is written from the same thermometer to the USB flash drive, the revision letter will be incremented in order to preserve the previously downloaded files.

The data file can be opened in any software package supporting comma-delimited files including spreadsheet software (Excel) and text editors.

The file will contain the thermometer unique ID number, the most recent ten temperature events, and all stored temperature readings with date and time stamps.

Note: All data stored in Celsius (°C) and date format is MM/DD/YYYY.

DISPLAY MESSAGES

If no buttons are pressed and LL.LL appears on the display, this indicates that the temperature being measured is outside of the temperature range of the unit, or that the probe is disconnected or damaged.

BENCH STAND

The unit is supplied with a bench stand located on the back. To use the bench stand, locate the small opening at the bottom back of the unit. Place your fingernail into the opening and flip the stand out. To close the stand, simply snap it shut.

BATTERY REPLACEMENT

When battery indicator begins to flash, it is time to replace batteries on unit. To replace battery, remove battery cover, located on back of unit by sliding it down. Remove exhausted batteries and replace with two (2) new AAA batteries. Insert new batteries. Replace the battery cover.

Replacing the batteries WILL clear the minimum/maximum memories and high/low alarm settings. However, replacing the batteries WILL NOT clear the time-of- day/date settings or stored temperature data.

Troubleshooting

Review the information in the table below to troubleshoot operating problems.

Problem	Cause	Solution
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An incorrect display, no display or operational difficulties	Low battery power	Replace the batteries with new AAA batteries (see above). Low battery power can occasionally cause any number of "apparent" operational difficulties. Replacing the batteries with new, fresh batteries will solve most of the difficulties.
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Technical service

Web Resources

Visit the VWR website at www.vwr.com for:

- Complete technical service contact information
- Access to the VWR Online Catalogue, and information about accessories and related products
- Additional product information and special offers

Contact us For information or technical assistance contact your local VWR representative or visit. www.vwr.com.

Warranty

VWR warrants that this product will be free from defects in material and workmanship for a period of two (2) years from date of delivery. If a defect is present, VWR will, at its option and cost, repair, replace, or refund the purchase price of this product to the customer, provided it is returned during the warranty period. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication, or from ordinary wear and tear. If the required maintenance and inspection services are not performed according to the manuals and any local regulations, such warranty turns invalid, except to the extent, the defect of the product is not due to such non-performance.

Items being returned must be insured by the customer against possible damage or loss. This warranty shall be limited to the aforementioned remedies. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

Compliance with local laws and regulations

The customer is responsible for applying for and obtaining the necessary regulatory approvals or other authorisations necessary to run or use the Product in its local environment. VWR will not be held liable for any related omission or for not obtaining the required approval or authorisation, unless any refusal is due to a defect of the product.

Equipment disposal



This equipment is marked with the crossed out wheeled bin symbol to indicate that this equipment must not be disposed of with unsorted waste.

Instead it's your responsibility to correctly dispose of your equipment at lifecycle -end by handling it over to an authorized facility for separate collection and recycling. It's also your responsibility to decontaminate the equipment in case of biological, chemical and/or radiological contamination, so as to protect from health hazards the persons involved in the disposal and recycling of the equipment.

For more information about where you can drop off your waste of equipment, please contact your local dealer from whom you originally purchased this equipment.

By doing so, you will help to conserve natural and environmental resources and you will ensure that your equipment is recycled in a manner that protects human health.

Thank you

Local VWR offices in Europe and Asia Pacific

Austria

VWR International GmbH
Graumannsgasse 7
1150 Vienna
Tel.: +43 1 97 002 0
Email: info.at@vwr.com

Belgium

VWR International BV
Researchpark Haasrode 2020
Geldenaaksebaan 464
3001 Leuven
Tel.: +32 016 385 011
Email: vwr.be@vwr.com

China

VWR (Shanghai) Co., Ltd
Bld.No.1, No.3728 Jinke Rd,
Pudong New District
Shanghai, 201203- China
Tel.: +400 821 8006
Email: info_china@vwr.com

Czech Republic

VWR International s. r. o.
Veetee Business Park
Pražská 442
CZ - 281 67 Strábrná Skalice
Tel.: +420 321 570 321
Email: info.cz@vwr.com

Denmark

VWR International A/S
Tobaksvejen 21
2860 Søborg
Tel.: +45 43 86 87 88
Email: info.dk@vwr.com

Finland

VWR International Oy
Valimotie 17-19
00380 Helsinki
Tel.: +358 9 80 45 51
Email: info.fi@vwr.com

France

VWR International S.A.S.
Immeuble Estréo
1-3 rue d'Aurion
93114 Rosny-sous-Bois cedex
Tel.: 0 825 02 30 30* (national)
Tel.: +33 (0) 1 45 14 85 00
(international)
Email: info.fr@vwr.com
* 0,18 € TTC/ min + prix appel

Germany

VWR International GmbH
Hilpertstrasse 20a
D - 64295 Darmstadt
Freecall: 0800 702 00 07
Tel.: +49 (0) 6151 3972 0 (international)
Email: info.de@vwr.com

Hungary

VWR International Kft.
Simon László u. 4.
4034 Debrecen
Tel.: +36 (52) 521-130
Email: info.hu@vwr.com

India

VWR Lab Products Private Limited
No.139. BDA Industrial Suburb,
6th Main, Tumkur Road,
Peenya Post,
Bangalore, India – 560058
Tel.: +91-80-28078400
Email: vwr_india@vwr.com

Ireland

VWR International Ltd
Orion Business Campus
Northwest Business Park
Ballycoolin
Dublin 15
Tel.: +353 01 88 22 222
Email sales.ie@vwr.com

Italy

VWR International S.r.l.
Via San Giusto 85
20153 Milano (MI)
Tel.: +39 02-3320311/02-487791
Email: info.it@vwr.com

Korea

Avantor Performance Materials Korea
Ltd
2F ACE Gwanggyo Tower I
Daehak 4ro 17
Yeongtong-gu Suwon
Korea 16226
Tel.: +82 31 645 7256
saleskorea@avantorsciences.com

Middle East & Africa

VWR International FZ-LLC
Office 203, DSP Lab Complex,
Dubai Science Park
Dubai, United Arab Emirates
Tel.: +971 4 5573271
info.mea@vwr.com

The Netherlands

VWR International B.V.
Postbus 8198
1005 AD Amsterdam
Tel.: +31 020 4808 400
Email: info.nl@vwr.com

Norway

VWR International AS
Brynsalleen 4
0667 Oslo
Tel.: +47 22 90 00 00
Email: info.no@vwr.com

Poland

VWR International Sp. z o.o.
Limbowa 5
80-175 Gdansk
Tel.: +48 058 32 38 210
Email: info.pl@vwr.com

Portugal

VWR International – Mat. de
Laboratório, Soc. Unipessoal, Lda
Edifício Ramazzotti
Avenida do Forte 6, P-1.09 e P-1.10
2790-072 Carnaxide
Tel.: +351 21 3600 770
Email: info.pt@vwr.com

Singapore

VWR Singapore Pte Ltd
The Metropolis
Tower 1, #05-03
9 North Buona Vista Drive
Singapore 138588
Tel: +65 6505 0760
Email: sales.sg@vwr.com

Spain

VWR International Eurolab S.L.
C/ Tecnología 5-17
A-7 Llinars Park
08450 - Llinars del Vallès
Barcelona
Tel.: +34 902 222 897
Email: info.es@vwr.com

Sweden

VWR International AB
Esbogatan 16
164 74 Kista
Tel.: +46 08 621 34 20
Email: info.se@vwr.com

Switzerland

VWR International GmbH
Lerzenstrasse 16/18
8953 Dietikon
Tel.: +41 044 745 13 13
Email: info.ch@vwr.com

UK

VWR International Ltd
Customer Service Centre
Hunter Boulevard
Magna Park
Lutterworth
Leicestershire
LE17 4XN
Tel.: +44 (0) 800 22 33 44
Email: uksales@vwr.com