

VDL200 Data Logger

For continuous monitoring systems



Features

- Optimized for fast transfer of measurement and alarm data
- 2 probe ports
- Records and displays up to 4 parameters
- PoE (Power over Ethernet) and battery backup
- Local memory buffer for a minimum of 30 days of data
- Ethernet connection to Vaisala viewLinc Enterprise Server software
- Easy configuration with Insight PC software using USB-C connection

VDL200 is an Ethernet-connected data logger for continuous monitoring systems. It provides high-accuracy measurements from up to 2 detachable humidity, temperature, and carbon dioxide probes. VDL200 also supports the ANP115 Analog Input Probe for recording and display of measurements from analog signals. Suitable applications include real-time measurements in environments where wired connections are preferred. VDL200 is compatible with the Vaisala viewLinc Enterprise Server software.

Ease of deployment

VDL200 has a versatile mounting bracket that supports installation using screws, cable ties, or the included magnet. Connected probes are detected at startup, and measurement parameters are automatically selected for display and data logging.

VDL200 is powered by PoE (Power over Ethernet), and secured with a battery backup. VDL200 uses commonly available AA size 1.5 V alkaline (LR6) and lithium (FR6) batteries.

Only minimal configuration is needed to connect the VDL200 to its host system. Typically only the address of the host system must be set, and possibly the network settings must be configured according to the local network requirements. When the data logger is accepted to the host system, it automatically identifies the connected devices and the available parameters – manual configuration is not needed.

VDL200 has a USB-C service port for on-site access to configuration settings. To connect, you need a USB-C cable and the Insight PC software for Windows®. For more information, see vaisala.com/insight.

Ease of use

The display and status LED on the data logger show the measurement and connectivity status of the data logger at a glance. All 4 measurement parameters and their units fit on the display at the same time.

Connected VDL200 data loggers can be remotely managed from the host system.

Gap-free data

If the VDL200 loses connection with its host system, it continues to measure and display data, and store the data in its local memory. When the connection is restored, the locally stored data is quickly uploaded to the host system.

In case of a power outage, the data logger continues to record data to its local memory using the battery backup. The battery type and measurement probe combination determine how long the battery backup lasts.

Interchangeable probes

VDL200 utilizes external, interchangeable Vaisala measurement probes. Probes can be replaced with factory calibrated ones as part of an applicable service, or they can be calibrated on the spot. Probe calibration information is automatically updated to the host system, and can be used to remind the system administrator to take action when calibration is due.

Probe options

Probe	Description ¹⁾	Installation notes
HMP110 and HMP110T 	<p>Humidity and temperature probe for measurement in demanding conditions. Robust stainless steel construction. Temperature-only version HMP110T available.</p> <p>Plastic grid filter provides the fastest response time. For added protection, select the membrane filter, the PTFE filter, or the stainless steel sintered filter.</p> <p>Measurement temperature range $-40 \dots +80 \text{ }^{\circ}\text{C}$ ($-40 \dots +176 \text{ }^{\circ}\text{F}$).</p>	<p>Suitable for measurement inside chambers, incubators, fridges, and freezers.</p> <p>Versatile mounting options using accessories.</p> <p>Must be connected to VDL200 using an M8/M8 probe cable (for example, CBL211293-3MSP).</p>
HMP115 and HMP115T 	<p>Humidity and temperature probe for general purpose measurement. Temperature-only version HMP115T available.</p> <p>Plastic grid filter provides the fastest response time. For added protection, select the membrane filter or the PTFE filter.</p> <p>Operating temperature range $-40 \dots +60 \text{ }^{\circ}\text{C}$ ($-40 \dots +140 \text{ }^{\circ}\text{F}$).</p>	<p>Ideal choice for ambient measurement.</p> <p>Can be connected to VDL200 directly or using an M8/M8 probe cable (for example, CBL211293-3MSP).</p>
TMP115 	<p>Temperature probe for measurement in a wide range of conditions.</p> <p>Available as 50 cm (1 ft 7.7 in) and 3 m (9.8 ft) long versions. Length includes the probe body and sensor tip.</p> <p>Measurement temperature range $-196 \dots +150 \text{ }^{\circ}\text{C}$ ($-320 \dots +302 \text{ }^{\circ}\text{F}$).</p> <p>Operating temperature range of the probe body is $-40 \dots +60 \text{ }^{\circ}\text{C}$ ($-40 \dots +140 \text{ }^{\circ}\text{F}$).</p>	<p>Suitable for measurement inside chambers, fridges, and freezers. Sensor tip withstands immersion in glycol and liquid nitrogen.</p> <p>Can be connected to VDL200 directly or using an M8/M8 probe cable (for example, CBL211293-3MSP).</p> <p>Use the thermal dampener block accessory (item code 236310SP) to add thermal mass to the sensor tip.</p>
GMP251 and GMP252 	<p>Carbon dioxide probes for %-level measurements (GMP251) and ppm-level measurements (GMP252). Designed for use in demanding applications such as life science incubators.</p> <p>Operating temperature range $-40 \dots +60 \text{ }^{\circ}\text{C}$ ($-40 \dots +140 \text{ }^{\circ}\text{F}$).</p> <p>When ordered with the VDL200 data logger, the probe is delivered with an M8-M12 adapter cable (item code CBL211291SP) and the CO₂ probe mounting kit (item code ASM214253SP). The kit includes a probe holder that has attachments for the CO₂ probe, a \varnothing 12 mm probe (for example, HMP110) and the sensor tip of the TMP115 probe.</p>	<p>Must be connected to VDL200 using the M8/M12 flat cable (item code CBL211291SP).</p>
ANP115 	<p>A single channel analog input probe for converting the voltage or current output of an analog sensor into a digital output. The channel can be configured as generic boolean input for use as an alarm switch, for example.</p> <p>Model with a door contact switch is also available.</p>	<p>ANP115 must be configured before installation using Insight PC software and Vaisala USB cable (item code 219690). The model with door contact switch is pre-configured and does not require additional configuration.</p> <p>Can be connected to VDL200 directly or using an M8/M8 probe cable (for example, CBL211293-3MSP).</p>

¹⁾ See *probe datasheets in docs.vaisala.com* for detailed probe specifications.

Accessories

VDL200 accessories

Description	Item code
Mounting kit with screws (4 pcs), wall plugs (4 pcs), and cable ties (2 pcs)	245679SP
USB-A – USB-C cable for service port connection, 2 m	273956
Probe cable for VDL200, M8-4M – M8-4F, 3 m	CBL211293-3MSP
Probe cable for VDL200, M8-4M – M8-4F, 10 m	CBL211293-10MSP
Flat probe cable for VDL200, M8-4M – M8-4F, 3 m	CBL211292SP
Flat probe cable for VDL200, M8-4M – M12-5F, 3 m	CBL211291SP
High-temperature cable, M12-5M – M12-5F, 1 m ^{1) 2)}	271038SP
High-temperature cable, M8-4M – M8-4F, 1 m ²⁾	271039SP

1) For CO₂ probe. Connect to VDL200 using M8-M12 adapter cable CBL211291SP.

2) High-temperature cables tolerate –20 ... +180 °C (–4 ... +356 °F) temperatures and can remain inside an incubator during a typical heat sterilization cycle. To minimize heat conduction, leave half of the cable in ambient temperature when installed.

Selected probe-specific accessories

Description ¹⁾	Compatible probes	Item code
Thermal dampener block for 3/16" probes (4.8 mm)	TMP115	236310SP
Probe holder (5 pcs) for Ø 12 mm probes	ANP115, HMP110/T, HMP115/T, TMP115	ASM213382SP
CO ₂ probe mounting kit	GMP251, GMP252	ASM214253SP
Sintered PTFE filter	HMP115/T	219452SP

1) See [probe datasheets](#) in [docs.vaisala.com](#) for more accessories.

Technical data

Compatible probes

Measurement or function	Probe models
Humidity and temperature (RH+T)	HMP110, HMP115
Temperature (T)	HMP110T, HMP115T, TMP115
Carbon dioxide (CO ₂)	GMP251, GMP252
Analog signal input and door contact	ANP115

Compatible systems and software

System or software	Version	Connection
viewLinc Enterprise Server	Version 5.2.1 or above	TCP port 8883 (default)
Insight PC software	Version 1.3.0 or above	USB-C
Time server ¹⁾	Any	UDP port 123

¹⁾ Connection to Network Time Protocol (NTP) server is required for operation.

Inputs and outputs

Ethernet connector	8P8C (RJ-45)
Probe connector (2 pcs)	4-pin female M8 connector
Service port	USB-C
Ethernet interface	
Supported standards	10BASE-T, 100BASE-TX
IPv4 address assignment	DHCP (automatic), static IP

Operating environment

Operating environment	Indoor use
Use in wet location	No
Storage temperature	-30 ... +60 °C (-22 ... +140 °F)
Operating temperature	-20 ... +60 °C (-4 ... +140 °F)
Operating humidity	0-100 %RH, non-condensing
IP rating	IP30
Do not place the VDL200 unit in an environment that can exceed this specification, for example inside a climate chamber. Insert only the measurement probe(s) in the chamber and leave the VDL200 unit outside it.	

Powering

Powering options	Power over Ethernet (PoE) Battery backup ¹⁾ USB-C for temporary service use
PoE supply voltage	48 V DC
USB-C supply voltage	5 V DC
Power consumption	Max. 2 W
Battery type	AA size, 1.5 V, LR6 (alkaline) or FR6 (lithium)
Number of batteries	4
Typical operating time on battery power at +20 °C (+68 °F)	
RH and T measurement combinations	2 weeks with alkaline batteries
CO ₂ measurement or analog signal input	24 hours with lithium batteries

¹⁾ Network connection is not available when VDL200 is operating on battery power.

Data logging and user interface specifications

Number of samples ¹⁾	50 000
Sampling rate	1 min
Minimum recording span	30 days
Memory type	Flash
Memory mode	Ring buffer (FIFO)
Display	3.16" reflective matrix display
Display languages	English
Interaction	2 capacitive buttons

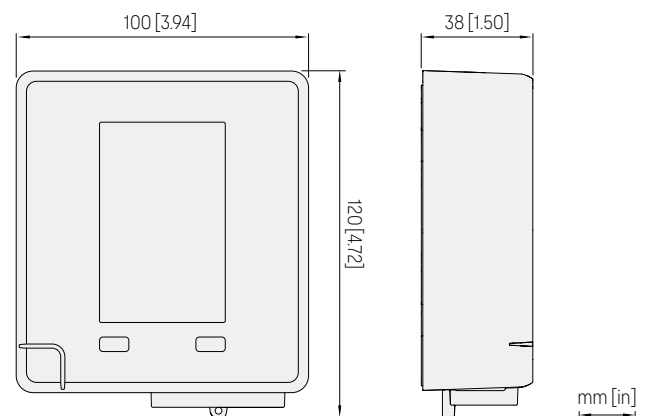
¹⁾ 1 sample can include up to 4 measurement values.

Compliance

EU directives and regulations	EMC Directive (2014/30/EU) RoHS Directive (2011/65/EU) as amended by 2015/863
Electromagnetic compatibility (EMC)	IEC/EN 61326-1, industrial environment EN 61000-6-2 EN 61000-6-4 FCC part 15 B, Class B ICES-3 / NMB-3 (Class B)
Compliance marks	CE, China RoHS, KC, RCM

Mechanical specifications

Housing color	RAL 9003 (white)
Mounting methods	Screws, cable ties, or magnet
Dimensions without probes (H × W × D)	120 × 100 × 38 mm (4.72 × 3.94 × 1.50 in)
Display size (H × W)	68 × 42 mm (2.68 × 1.65 in)
Weight without batteries and probes	260 g (9.17 oz)
Materials	
Housing	PBT plastic
Display window	PMMA (acrylic)
Mounting bracket	PC/ABS plastic blend



VDL200 dimensions