



Digital Data Loggers

It is required of all VFC providers to have a calibrated temperature monitoring device in each storage unit. The VFC program requires all temperature monitoring devices be digital data loggers (DDL).

Digital data loggers (DDL) requirements

To meet VFC requirements, the digital data logger must have the following features:

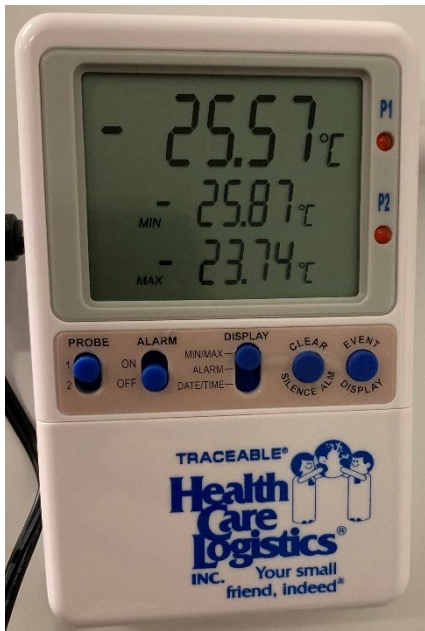
- An active display that can be read from outside the unit and display the minimum, maximum, and current temperature.
- The capacity for continuous monitoring and recording capabilities, where the data can be routinely downloaded and analyzed for review.
- A buffered probe that reflects vaccine temperature (see image on page 3 for examples)
- An alarm for out-of-range temperatures. The alarm can be audible or email, text, or call alerts.

Understanding your DDL

A wide range of digital data loggers are available that have different mechanisms for logging of the temperature data. The two groups available are manual downloads and automatic data downloads.

DDL with manual download

Temperature data usually stored in device's internal memory until downloaded by USB or docking station.



DDL with WiFi/cloud

Models usually send temperature data directly to the cloud or other online application.



Regardless of the DDL you use, understanding how your device works is critical to temperature monitoring. When learning how to use your device focus on the following:

- Understand the digital display.
 - Locate the current, minimum, and maximum readings.
 - Understand what all buttons and icons on the display mean.
- Know how to retrieve and save the temperature data, for example manual download or accessing the cloud.
- Understand how to or when the device resets the minimum and maximum temperatures.
- Understand when your device needs to be recalibrated and how-to recalibrate it.
- Have manufacturer training materials or user guides available.

Certificate of calibration

All DDLs need to have a current and valid certificate of calibration. Calibration testing is required to assure the accuracy of a temperature monitoring device and should be done at least every three years or according to the manufacturer’s suggested timeline. Certificates of Calibration must include the following:

- Model/device number and serial number.
- Date of calibration (report or issue date).
- Confirmation the instrument passed testing (or the instrument in tolerance).

Customer information
 Customer: [Redacted] 50
 Address: [Redacted]
 City, State Zip: [Redacted] 8

Equipment information
 Equipment ID: 50884
 Model No: 311-STP
 Manufacturer: Lascar
 Serial No: 151A0B1B

Calibration Summary
 Calibrated: 05/10/2024
 Cal Due Date: 05/10/2026
 Temp: 70F +/- 10
 Humidity: 50% +/-20
 Technician: Sandra Dagle Bldg 1

Remarks:

Measurement Group 1
 Tolerance (+/-) 0.5 °C

Desc	Nominal	Upper	Lower	As Found Actual	As Found Error	Result	As Left (Cal Sta) Actual	As Left (Cal Sta) Error
	-15.00	-14.50	-15.50	-15.15	-00.15	Pass	-15.15	-00.15
	05.00	05.50	04.50	04.97	-00.03	Pass	04.97	-00.03

Standard Equipment Used

ss, Inc.
 Temperature Sensors
 788-3
 0037
 00037(Q13788-3)
 tible with any

Serial Number: T0037028
 Calibration Date: 11/22/2023
 Test Procedure: 1.7.5-88

Calibration is valid for 2 years after the date of first use recorded in OneVue or for 5 years after the calibration date if the probe is not plugged in, whichever is sooner.

Unit Under Test - Temperature Calibration Data

Actual Resistance	Measurement Delta	Uncertainty	Pass/Fail
921.10 Ohm	-0.13 °C	±0.02 °C	PASS
1156.11 Ohm	+0.18 °C	±0.03 °C	PASS

Calibration date, due date, and first use date
 Different devices may have different recommendations and language referring to when a DDL needs to be calibrated. All certificates will have a calibration date. This is the date the device was last calibrated. Some certificates will provide a due date (see above). This is the date the DDL must be calibrated by. If no date is provided, the DDL must be re-calibrated at a minimum every three years. Some DDLs base the re-calibration date on the date the probe is first installed, referred to the first use date. See the example to the left. The device must be re-calibrated two years after first use.

DDL use and placement

- All vaccine storage units must have a digital data logger.
- All VFC providers must have at least one back-up DDL. The back-up temperature monitoring device should be stored outside of the storage unit until needed and should have a different calibration date than other DDLs to avoid requiring all DDLs to be sent out for recalibration at the same time.
- Providers who transport vaccine must have a DDL that can be used during transport of vaccine.
- Ensure appropriate logging interval is setup. At a minimum the DDL must log temperatures at least every 30 minutes.
- Probe must be placed in the center of the storage unit; the only exception is for units with a built-in port that dictates probe placement.



DDL probe placed in dedicated probe location of a pharmaceutical grade unit.



DDL probe placed in the center of the storage unit.

