

Quick Start Guide

vanwalt DataGateway



Important Safety Warnings

- Do not power the vanwaltDataGateway on or off without both the LTE and Radio antennas connected.
- Failure to comply may cause permanent damage to the radio circuitry.
- After disconnecting the battery or solar panel, the unit remains operational for a period.
- Never press and hold both the WAKEUP and PAIR buttons simultaneously. Doing so will reset the device.

Installation Steps

Step 1

Open the Enclosure - Using a Torx T30 screwdriver, loosen the four bolts on the front of the enclosure. Carefully open it, ensuring you do not damage the integrated solar panel.

Step 2

Connect the LTE Antenna - Attach the LTE antenna cable to the port labelled "LTE" on the top-right of the electronics board.

Step 3

Connect the Radio Antenna - Connect it to the port labelled "RADIO" on the bottom-right of the electronics board.

Step 4

Install the Batteries - Insert 3x D-cell 1.2V 4500mAh NiMH rechargeable batteries. Ensure that each battery's polarity matches the markings on the battery holder. Once installed, the device will begin to boot automatically.

- With fully charged batteries, startup should be almost instantaneous.
- When the boot sequence is complete, all LEDs will flash simultaneously five times.

Step 5

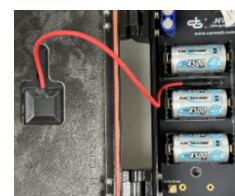
Connect the Solar Panel - Plug the integrated 6V 2W solar panel barrel jack into the port labelled "INTEGRATED SOLAR". This port is located between the first and second battery holders on the electronics board

Step 6

Insert the Silica Pack - Place the silica pack inside the enclosure to protect against moisture.

Step 7

Close the Enclosure - Carefully close the enclosure, ensuring the integrated solar panel remains undamaged. Check that the seal is correctly aligned on both enclosure faces, then tighten the four bolts using the Torx T30 screwdriver.



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equipment for soil and water research

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LED Status Lights

STATUS

Brief flash every 2 seconds indicates the device is awake.

CHARGING

Illuminates when the unit is charging. Charging occurs only when:

- The solar panel is producing enough power.
- The charger is within its operating temperature range.
- The batteries are not already full.

LTE

Illuminates when the cellular module is powered and potentially transmitting. Do not disconnect or touch the LTE antenna during this time.

RADIO RX

Flashes briefly each time a Fleck Radio message is received from a paired device.

RADIO TX

Flashes briefly each time a Fleck Radio message is transmitted from the DataGateway. A short flash indicates that the DataGateway is acknowledging a message received from a paired device.



General Operational Instructions

- Recommended batteries: Ansmann 5035352. D cell 1.2V 4500mAh NiMH rechargeable.
- The DataGateway transmits data to vanwaltConnect via the cellular modem using LTE-M1, NB-IoT, or 2G, depending on configuration.
- Data is sent hourly or every 6 hours based on device settings.
- Press the PAIR button (on the PCB) to immediately transmit any pending data to the vanwaltConnect server.
- Pressing the PAIR button on a connected device (e.g., a DataNode) will:
 - Power the sensor
 - Take a reading
 - Transmit the data to the DataGateway, which will then forward it to vanwaltConnect.
- When installing, orient the front face of the enclosure toward the equator:
 - South-facing in the Northern Hemisphere
 - North-facing in the Southern Hemisphere
 - The unit does not need to be angled vertically toward the sky.