

ACE DLG88L

Rugged outdoor data logger
for agricultural and
meteorological applications



The DLG88L is a specialized data logger meticulously crafted for agricultural and meteorological applications. Featuring a user-friendly LCD screen for easy data viewing, an onboard SD card memory to log measured parameters, and a 4G LTE modem for seamless data transmission to the cloud, the DLG88L stands as the optimal choice for Agri/Met applications.

DESCRIPTION

ACE DLG88L is a rugged outdoor data logger from the Aeron family of loggers, designed for agricultural and meteorological applications. DLG88L connects with a variety of sensors for Agri/Met, takes periodic measurements, processes the acquired data, and stores in its onboard SD card memory. The acquired data is simultaneously communicated to the secured cloud server using an integrated LTE modem for real-time monitoring.

DLG88L consumes very low power allowing it to operate for weeks without charging the onboard 3.7 V Li-ion

battery. The battery can be charged with a 20 W solar panel, eliminating the need for an AC power supply.

The DLG88L offers a data storage memory of 8 GB, sufficient to store data for years. It also features USB connectivity which can be used for retrieval of SD card data by connecting the device to a Computer/laptop. The LCD screen and keypad makes the configuration and device health assessment very easy on the site. Users can subscribe to Aeron's cloud portal for remotely accessing data.

PRODUCT FEATURES



Compatibility

The DLG88L integrates seamlessly with Aeron® and Davis® sensors, tailored for precise weather and soil measurements.



ADC Resolution

DLG88L features a 12-bit ADC with $\pm 0.1\%$ accuracy of full scale, ensuring precise data acquisition across a wide range of applications.



On Board Display

The device has an on board graphic LCD to display the real time data of the sensors and device functionalities.



Multiple Interfaces

The device offers various interfaces including SDI12, RS232 and RS485 Modbus RTU for easy integration with any external devices.



Communication

DLG88L incorporates a 4G LTE modem, facilitating seamless integration and communication with web servers.



Time Synchronization

DLG88L synchronizes time upon network connection, ensuring accurate timestamps for data transmission and logging.



Memory

The device stores data for over 5 years on 8GB internal memory in .csv format. It supports up to 32GB microSD card for extra storage.



Environment Protection

The data logger is housed in an IP65 enclosure making it suitable to be used in harsh environmental conditions.



Power Consumption

The device operates from 9 to 28VDC and consumes less than 180mA current during operations.

APPLICATIONS

- Agricultural Weather Station
- Meteorological Weather Monitoring

TECHNICAL SPECIFICATIONS

ACE DLG88L

ANALOG INPUT

| | |
|----------|--|
| Channels | Davis® Anemometer |
| | Aeron® / Davis® Air Temperature Humidity |
| | Davis® Rain Bucket |
| | Davis® Solar Radiation |
| | Aeron® / Davis® Leaf Wetness |
| | Vegetronix Soil Moisture |
| | Soil Temperature (PT100) |

| | |
|-------------------------------|---------------------|
| On-board Sensors [#] | Barometric Pressure |
|-------------------------------|---------------------|

ANALOG TO DIGITAL CONVERTER (ADC)

| | |
|---------------|---------------|
| Resolution | 12 bit |
| Accuracy | ±0.1% of FS |
| Type | Sigma - Delta |
| Sampling Rate | Upto 10 Hz |

PARAMETERS

| | |
|-------------------------|---|
| Simultaneous Parameters | up to 176 parameters (including sensor and calculated parameters) |
| Data Rate | 1 minute (min.) to 24 hours (max.) |

COMMUNICATION

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|---------------|---------------------------|
| Network Type | LTE |
| Data Security | AES (128 bit) |
| Interfaces | RS485 MODBUS RTU & SDI-12 |

| | |
|----------------------|---|
| Micro-processor | 32 bit |
| Display | Graphic LCD Display (128 x 64 resolution) |
| Indicators | LED - Power, LED - Network |
| Keypad | 3 button Keypad |
| Date & Time | RTC with backup battery (replaceable) |
| | Accuracy: 10 ppm/° C |
| Time Synchronization | Server |

ELECTRICAL

| | |
|----------------|---|
| Voltage Input | +9 V to +28 V DC |
| Charge Current | <180 mA (in operation) |
| | <50 mA (in power down mode) |
| Batteries | 3.7 V Li-ion batteries with 5200 mAh capacity |

STORAGE

| | |
|----------------|---------------|
| SD Card Memory | 8 GB Micro SD |
|----------------|---------------|

ENVIRONMENT

| | |
|-----------------------|---------------------------------------|
| Operating Temperature | -20 °C to +70 °C |
| Storage Temperature | -40 °C to +80 °C |
| Protection | IP65 |
| Housing | ABS UV Protected |
| Dimensions | 125 mm (W) x 170 mm (L) x 66.5 mm (B) |
| Weight | <700 gms |

- refer ordering information

ORDERING INFORMATION

ACE - DLG88L - **YY**

10 - Without Onboard Barometer Sensor (Product Code: 23005)

11 - With Onboard Barometer Sensor (Product Code: 23006)

20 - Without Onboard Barometer Sensor, with RS485 & SDI-12 (Product Code: 23007)

21 - With Onboard Barometer Sensor, with RS485 & SDI-12 (Product Code: 23008)