PYLONTECH FIDUS

The Pylontech Fidus is a 5.12 kWh low-voltage lithium battery designed for modular and scalable residential and professional energy storage systems. With 95% depth of discharge, IP65 protection, CAN/RS485 communications and expansion up to approximately 583 kWh, it offers a flexible and robust solution for indoor and outdoor installations.









The **Pylontech Fidus** is a low-voltage lithium battery designed for residential and professional energy storage systems that require a flexible, scalable solution capable of operating reliably in demanding environmental conditions.

Each module provides a nominal capacity of **5.12 kWh** and a usable capacity of **4.86 kWh**, thanks to a depth of discharge of up to **95%**. This high level of usable energy helps maximise the energy available for self-consumption, backup and intelligent energy management.

One of the main strengths of the Fidus range is its high scalability. The system supports up to **20 modules per battery group** and up to **6 strings**, allowing installations to grow from just a few kilowatt-hours to approximately **583 kWh** through parallel expansion. This makes it suitable for both residential installations and larger-scale projects.

The battery operates at a nominal voltage of **51.2 VDC** and supports charging and discharging currents of up to **100 A**. It can also handle higher currents for short periods, reaching **103 to 120 A for 2 minutes** and **121 to 200 A for 15 seconds**, providing strong response capability for temporary power demands.

To improve performance in demanding climates, the **FB-L-5.12-EU-Pro** version includes a **self-heating function**, enabling reliable operation in cold conditions and extending the battery's usable temperature range. Combined with its **IP65** protection rating and **C5-M** anti-corrosion level, the Fidus Battery EU is particularly well suited to outdoor installations and harsh environments.

Integration with the rest of the system is provided through **CAN and RS485** communications, enabling connection to compatible inverters and energy management systems. Pylontech also states compatibility with more than **50 popular inverter brands**, making the battery easy to integrate into a wide range of photovoltaic and storage solutions.

The battery offers flexible installation options and can be mounted **on a wall, on the floor or in a rack**, giving installers greater freedom to adapt the system to the available space and project requirements.

For local monitoring, the system includes **LED indicators** and can optionally support **Bluetooth and Wi-Fi** connectivity, making it easier to interact with the system and check its operating status.

The Fidus Battery EU is designed for long service life, with a **10-year design life** and more than **8,000 cycles at 25°C** under the test conditions specified by the manufacturer. It is also certified to standards including **IEC 62619, IEC 63056, VDE 2510-50, IEC 62477-1, EMC and CE**, supporting its use in modern energy storage systems.

Overall, the **Pylontech Fidus** is a low-voltage storage solution aimed at installations that require high usable capacity, modularity, broad inverter compatibility, environmental resistance and easy system expansion.

SPECIFICATIONS

Pylontech Fidus Battery EU technical data

Specification	FB-L-5.12-EU	FB-L-5.12-EU-Pro
Electrical specifications		
Nominal voltage	51.2 VDC	51.2 VDC
Nominal capacity	5.12 kWh	5.12 kWh
Usable capacity	4.86 kWh	4.86 kWh
Depth of discharge (DoD)	95 %	95 %
Discharge voltage	44 – 56.8 VDC	44 – 56.8 VDC
Charge voltage / Maximum charge voltage	42.5 – 56.8 VDC	42.5 – 56.8 VDC
Charge / discharge current (max.)	100 A	100 A
Charge / discharge current (peak)	103 – 120 A @ 2 min / 121 – 200 A @ 15 s	103 – 120 A @ 2 min / 121 – 200 A @ 15 s
Short-circuit current / duration	< 1,000 A / 1 ms	< 1,000 A / 1 ms
Configuration and scalability		
Maximum configuration in one battery group	20 units	20 units
Maximum number of strings	6	6
Communication and interaction		
Communication port	CAN / RS485	CAN / RS485
Interaction	LED / Bluetooth and Wi-Fi (optional)	LED / Bluetooth and Wi-Fi (optional)
Environmental conditions		
Operating temperature – Charge	–10 – 55 °C	–20 – 55 °C (Self-heating)
Operating temperature – Discharge	–10 – 55 °C	–20 – 55 °C (Self-heating)
Storage temperature	–20 – 60 °C	–20 – 60 °C
Protection class	I	I
IP rating	IP65	IP65
Anti-corrosion rating	C5-M	C5-M
Relative humidity, non-condensing	5 – 95 %	5 – 95 %
Maximum altitude	≤ 4,000 m	≤ 4,000 m
Mechanical data		
Dimensions (width × depth × height)	600 × 361 × 168 mm	600 × 361 × 168 mm
Weight	43 kg	44 kg
Service life and certifications		
Design life at 25 °C	10 years	10 years
Cycle life at 25 °C [3]	8,000+	8,000+
Certifications	IEC 62619 / IEC 63056 / VDE 2510-50 / IEC 62477-1 / EMC / CE	IEC 62619 / IEC 63056 / VDE 2510-50 / IEC 62477-1 / EMC / CE

1) Supports a charge/discharge current of up to 100 A. The recommended current is dynamically adjusted according to the real-time status of the battery.
2) At low or high temperature ranges, the BMS reduces the recommended current and the system must be operated at reduced power.
3) Cycle life test conditions: 25 °C / 0.5 C. For further information, please contact Pylontech technical support.

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