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TECHNICAL BROCHURE

LYTVOLT S5000

5 kWh | 48 V | $LiFePO_4$ Battery
Energy Storage Module

"Power. Anywhere. Always."

5 kWh	48 V DC	16 Modules	76 kWh
Nominal Capacity	Nominal Voltage	Max Parallel	Max Total Capacity

5-Year Warranty	CE / UN38.3 Certified	6,000 Cycles @ 80% DoD
Full manufacturer warranty on all modules	Meets international safety & transport standards	Industry-leading lifespan for long-term projects

PRODUCT OVERVIEW

System Overview

The Lytvolt S5000 is part of Lytup Power Systems' flagship modular LiFePO₄ Battery Energy Storage System (BESS) series, engineered for commercial, industrial, and EPC project applications. Built on prismatic Lithium Iron Phosphate cell chemistry, the S5000 delivers superior cycle life, thermal stability, and deep-discharge resilience making it the ideal choice for solar-coupled storage, off-grid power systems, and grid-backup installations.

- ✓ Prismatic LiFePO4 cells - industry-leading safety & cycle life
- ✓ 48V nominal - broadest inverter compatibility on the market
- ✓ CAN Bus & RS485 multi-protocol BMS communication
- ✓ Up to 16 modules in parallel (76 kWh usable)
- ✓ Ideal for schools, clinics, telecom towers, small factories
- ✓ Integrated BMS with real-time cell balancing & protection
- ✓ 5-year manufacturer warranty
- ✓ CE / UN38.3 certified
- ✓ Wide operating range: 0°C to 50°C
- ✓ Seamless upgrade path to S15000 for larger project requirements

Technical Specifications

PARAMETER	SPECIFICATION
Nominal Capacity	5 kWh (Usable: ~4.75 kWh at 95% DoD)
Nominal Voltage	48 VDC
Cell Chemistry	LiFePO4 Prismatic
Max Discharge Current	100 A (nominal)
Max Charge Current	60 A (nominal)
Charge Cut-off Voltage	58.4 V
Discharge Cut-off Voltage	44.8 V
Communication Protocols	CAN Bus | RS485
Max Parallel Configuration	16 modules (Total: 76 kWh usable)
Warranty	5 Years
Certifications	CE | UN38.3

Certifications: CE | UN38.3. For installations exceeding 76 kWh, consider upgrading to Lytvolt S15000 (up to 915.2 kWh). Operating Temperature: 0°C - 50°C.

Capacity Configuration & Autonomy Matrix

The table below shows scaled capacity and estimated backup autonomy across C&I load scenarios. All figures assume 95% DoD with ±10% real-world variance.

Units	Usable Capacity	Basic 0.2 kW	Essential 0.5 kW	Standard 1 kW	Full / SoHo 2.5 kW	Small Office 5 kW	Medium C&I 10 kW
1x	**4.8 kWh**	21–27 hrs	8–11 hrs	4–6 hrs	1–3 hrs	< 2 hrs	< 1 hr
2x	**9.5 kWh**	42–53 hrs	17–21 hrs	8–11 hrs	3–5 hrs	1–3 hrs	< 2 hrs
4x	**19.0 kWh**	85–105 hrs	34–42 hrs	17–21 hrs	6–9 hrs	3–5 hrs	1–3 hrs
8x	**38.0 kWh**	> 120 hrs	68–84 hrs	34–42 hrs	13–17 hrs	6–9 hrs	3–5 hrs
16x	**76.0 kWh**	> 200 hrs	> 120 hrs	68–84 hrs	27–34 hrs	13–17 hrs	6–9 hrs

NOTE: Autonomy figures are indicative. Actual runtime depends on inverter efficiency (92–97%), ambient temperature, battery State of Health, and load power factor. Consult a Lytup-certified engineer for site-specific sizing.

C&I Application Segments

C&I Segment	Recommended Configuration	Typical Use Cases
Small C&I	1–4x S5000 (4.75–19 kWh)	*Telecom towers, petrol stations, small clinics*
Medium C&I	4–16x S5000 (19–76 kWh)	*Schools, offices, cold storage, water pumping*
EPC Solar Projects	2–16x S5000	*Solar-coupled storage for commercial rooftop & ground-mount*
Upgrade Projects	As replacement or expansion	*Replacing aged lead-acid or gel battery banks*

Inverter Compatibility - PACE BMS Interface

All Lytvolt modules support native BMS-to-inverter communication via CAN Bus and RS485 protocols, ensuring accurate SoC display, remote charge/discharge control, and protection relay coordination.

CAN Bus Port Compatible Inverters	RS485 Port Compatible Inverters
AFORE	AFORE
Deye (Pylontech / SunSynk / SolarEdge / CHNT Power / EG4 / LiVolTek / Megarevo / SunGrow / Sol-Ark)	Deye (Bentterson)
FUJI	ELTEK
GoodWE	Growatt
Growatt (Sacolar)	LEOCH
INVT	Luxpower
Luxpower (EG4)	MSL
MUST	OREX SUNPOLO
Schneider (SE)	Pace
Senergy	Phocos
SMA	Pylontech (Anern)
Sofar	Schneider
Solis	SRNE
Sorotec	SE
Studer	Voltron / Voltronic (EA Sun Power / MPP Solar)
TBB	EPEVER (With EPEVER BMS-Link)
Victron	—

Ready to switch to clean, reliable energy?

Contact the Lytup team

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