



12.8 V SERIES · PRODUCT DATASHEET

PB128100

12.8 V 100 Ah LiFePO4 battery

RATED ENERGY

1.28 kWh

A compact 12.8 V pack storing 1.28 kWh — the straightforward way to replace a 12 V lead-acid inverter battery with lithium iron phosphate. More usable energy from a lighter, maintenance-free unit.

NOMINAL VOLTAGE

12.8 V

CAPACITY

100 Ah

MAX DISCHARGE

700 W

MAX CHARGE

50 A

Specifications

Model	PB128100	Max. discharge power	700 W
Chemistry	LiFePO4 (lithium iron phosphate)	BMS	TriShield: BMS + fuse + MCB
Nominal voltage	12.8 V	Monitoring	Visual voltage & state-of-charge display
Rated capacity	100 Ah	Self-discharge	max 3% per month
Rated energy	1.28 kWh	Dimensions (L × W × H)	230 × 210 × 210 mm (±20)
Max. charging voltage	14.4 V	Storage temperature	25 °C
Max. charging current	50 A	Warranty	3–5 years
Discharge cut-off voltage	11.2 V		

Key features

- TriShield — BMS + Fuse + MCB
- SCT — Sync Charge Technology: charge faster, last longer, stay safer
- SOC — visual voltage & state-of-charge monitoring
- High performance · Zero maintenance · Longer life

Ideal for

- Single-battery home inverters
- Small rooftop solar
- Network and CCTV backup
- Backup lighting

TriShield protection: BMS (software: over-current, over-voltage, over-temperature and short-circuit protection), fuse and MCB (hardware: over-current and short-circuit protection). SCT Sync Charge Technology and visual voltage & state-of-charge monitoring. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.



12.8 V SERIES · PRODUCT DATASHEET

PB128200

12.8 V 200 Ah LiFePO4 battery

RATED ENERGY

2.56 kWh

Twice the capacity of the PB128100 at the same voltage: 2.56 kWh for homes, small businesses and off-grid setups that need longer backup without re-wiring to a higher-voltage system.

NOMINAL VOLTAGE

12.8 V

CAPACITY

200 Ah

MAX DISCHARGE

750 W

MAX CHARGE

60 A

Specifications

Model	PB128200	Max. discharge power	750 W
Chemistry	LiFePO4 (lithium iron phosphate)	BMS	TriShield: BMS + fuse + MCB
Nominal voltage	12.8 V	Monitoring	Visual voltage & state-of-charge display
Rated capacity	200 Ah	Self-discharge	max 3% per month
Rated energy	2.56 kWh	Dimensions (L × W × H)	365 × 250 × 240 mm (±20)
Max. charging voltage	14.4 V	Storage temperature	25 °C
Max. charging current	60 A	Warranty	3–5 years
Discharge cut-off voltage	11.2 V		

Key features

- TriShield — BMS + Fuse + MCB
- SCT — Sync Charge Technology: charge faster, last longer, stay safer
- SOC — visual voltage & state-of-charge monitoring
- High performance · Zero maintenance · Longer life

Ideal for

- Large home inverters
- Small shops and clinics
- Off-grid cabins and farms
- Long power cuts

TriShield protection: BMS (software: over-current, over-voltage, over-temperature and short-circuit protection), fuse and MCB (hardware: over-current and short-circuit protection). SCT Sync Charge Technology and visual voltage & state-of-charge monitoring. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.



25.6 V SERIES · PRODUCT DATASHEET

PB256100

25.6 V 100 Ah LiFePO4 battery

RATED ENERGY

2.56 kWh

A 24 V-class pack with 2.56 kWh and up to 1.5 kW discharge — lower current than a 12 V system for the same power, so cables run cooler — without moving to a full 48 V installation.

NOMINAL VOLTAGE

25.6 V

CAPACITY

100 Ah

MAX DISCHARGE

1500 W

MAX CHARGE

50 A

Specifications

Model	PB256100	Max. discharge power	1500 W
Chemistry	LiFePO4 (lithium iron phosphate)	BMS	TriShield: BMS + fuse + MCB
Nominal voltage	25.6 V	Monitoring	Visual voltage & state-of-charge display
Rated capacity	100 Ah	Self-discharge	max 3% per month
Rated energy	2.56 kWh	Dimensions (L × W × H)	365 × 250 × 240 mm (±20)
Max. charging voltage	28.8 V	Storage temperature	25 °C
Max. charging current	50 A	Warranty	3–5 years
Discharge cut-off voltage	22.4 V		

Key features

- TriShield — BMS + Fuse + MCB
- SCT — Sync Charge Technology: charge faster, last longer, stay safer
- SOC — visual voltage & state-of-charge monitoring
- High performance · Zero maintenance · Longer life

Ideal for

- 24 V inverters
- Retail and office backup
- Mid-size solar
- Clinics and labs

TriShield protection: BMS (software: over-current, over-voltage, over-temperature and short-circuit protection), fuse and MCB (hardware: over-current and short-circuit protection). SCT Sync Charge Technology and visual voltage & state-of-charge monitoring. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.



25.6 V SERIES · PRODUCT DATASHEET

PB256200

25.6 V 200 Ah LiFePO4 battery

RATED ENERGY
5.12 kWh

The highest-capacity 24 V pack in the range: 5.12 kWh and up to 2 kW discharge for larger solar arrays, business backup and critical loads on a 24 V system.

NOMINAL VOLTAGE

25.6 V

CAPACITY

200 Ah

MAX DISCHARGE

2000 W

MAX CHARGE

80 A

Specifications

Model	PB256200
Chemistry	LiFePO4 (lithium iron phosphate)
Nominal voltage	25.6 V
Rated capacity	200 Ah
Rated energy	5.12 kWh
Max. charging voltage	29.2 V
Max. charging current	80 A
Discharge cut-off voltage	22.4 V

Max. discharge power	2000 W
BMS	TriShield: BMS + fuse + MCB
Monitoring	Visual voltage & state-of-charge display
Self-discharge	max 3% per month
Dimensions (L × W × H)	455 × 415 × 250 mm (±20)
Storage temperature	25 °C (±5 °C)
Warranty	3–5 years

Key features

- TriShield — BMS + Fuse + MCB
- SCT — Sync Charge Technology: charge faster, last longer, stay safer
- SOC — visual voltage & state-of-charge monitoring
- High performance · Zero maintenance · Longer life

Ideal for

- Large 24 V solar arrays
- Business backup
- Critical-load circuits
- Whole-home essentials

TriShield protection: BMS (software: over-current, over-voltage, over-temperature and short-circuit protection), fuse and MCB (hardware: over-current and short-circuit protection). SCT Sync Charge Technology and visual voltage & state-of-charge monitoring. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.



48 V SERIES · PRODUCT DATASHEET

PB480100

48 V 100 Ah LiFePO4 battery

RATED ENERGY

4.80 kWh

A 48 V pack with 4.8 kWh and up to 2.8 kW discharge for 48 V inverters, UPS systems and telecom sites.

NOMINAL VOLTAGE

48 V

CAPACITY

100 Ah

MAX DISCHARGE

2800 W

MAX CHARGE

50 A

Specifications

Model	PB480100 (label: PB48100)	Max. discharge power	2800 W
Chemistry	LiFePO4 (lithium iron phosphate)	BMS	TriShield: BMS + fuse + MCB
Nominal voltage	48 V	Monitoring	Visual voltage & state-of-charge display
Rated capacity	100 Ah	Self-discharge	max 3% per month
Rated energy	4.80 kWh	Dimensions (L × W × H)	455 × 415 × 250 mm (±20)
Max. charging voltage	54 V	Storage temperature	25 °C
Max. charging current	50 A	Warranty	3–5 years
Discharge cut-off voltage	42 V		

Key features

- TriShield — BMS + Fuse + MCB
- SCT — Sync Charge Technology: charge faster, last longer, stay safer
- SOC — visual voltage & state-of-charge monitoring
- High performance · Zero maintenance · Longer life

Ideal for

- 48 V inverters and UPS
- Telecom and network sites
- Server and data rooms
- 48 V solar

TriShield protection: BMS (software: over-current, over-voltage, over-temperature and short-circuit protection), fuse and MCB (hardware: over-current and short-circuit protection). SCT Sync Charge Technology and visual voltage & state-of-charge monitoring. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.



51.2 V SERIES · PRODUCT DATASHEET

PB512100

51.2 V 100 Ah LiFePO4 battery

RATED ENERGY

5.12 kWh

Sixteen LiFePO4 cells in series give the 51.2 V nominal that modern hybrid solar inverters are designed around: 5.12 kWh and up to 3 kW discharge in one pack.

NOMINAL VOLTAGE

51.2 V

CAPACITY

100 Ah

MAX DISCHARGE

3000 W

MAX CHARGE

50 A

Specifications

Model	PB512100	Max. discharge power	3000 W
Chemistry	LiFePO4 (lithium iron phosphate)	BMS	TriShield: BMS + fuse + MCB
Nominal voltage	51.2 V	Monitoring	Visual voltage & state-of-charge display
Rated capacity	100 Ah	Self-discharge	max 3% per month
Rated energy	5.12 kWh	Dimensions (L × W × H)	455 × 415 × 250 mm (±20)
Max. charging voltage	57.6 V	Storage temperature	25 °C
Max. charging current	50 A	Warranty	3–5 years
Discharge cut-off voltage	44.8 V		

Key features

- TriShield — BMS + Fuse + MCB
- SCT — Sync Charge Technology: charge faster, last longer, stay safer
- SOC — visual voltage & state-of-charge monitoring
- High performance · Zero maintenance · Longer life

Ideal for

- Hybrid solar inverters
- Premium home backup
- Commercial solar
- Shops and offices

TriShield protection: BMS (software: over-current, over-voltage, over-temperature and short-circuit protection), fuse and MCB (hardware: over-current and short-circuit protection). SCT Sync Charge Technology and visual voltage & state-of-charge monitoring. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.



51.2 V SERIES · PRODUCT DATASHEET

PB512200

51.2 V 200 Ah LiFePO4 battery

RATED ENERGY

10.24 kWh

Double the capacity of the PB512100: 10.24 kWh and up to 5 kW discharge on a 51.2 V bus, for larger homes, commercial solar and backup that needs to run through the night.

NOMINAL VOLTAGE

51.2 V

CAPACITY

200 Ah

MAX DISCHARGE

5 kW

MAX CHARGE

100 A

Specifications

Model	PB512200	Discharge cut-off voltage	44.8 V
Chemistry	LiFePO4 (lithium iron phosphate)	Max. discharge power	5 kW
Nominal voltage	51.2 V	BMS	TriShield: BMS + fuse + MCB
Rated capacity	200 Ah	Monitoring	Visual voltage & state-of-charge display
Rated energy	10.24 kWh	Dimensions (L × W × H)	On request
Max. charging voltage	58.4 V	Warranty	3–5 years
Max. charging current	100 A		

Key features

- TriShield — BMS + Fuse + MCB
- SCT — Sync Charge Technology: charge faster, last longer, stay safer
- SOC — visual voltage & state-of-charge monitoring
- High performance · Zero maintenance · Longer life

Ideal for

- Large hybrid solar systems
- Whole-home backup
- Commercial solar
- Telecom shelters

TriShield protection: BMS (software: over-current, over-voltage, over-temperature and short-circuit protection), fuse and MCB (hardware: over-current and short-circuit protection). SCT Sync Charge Technology and visual voltage & state-of-charge monitoring. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.



HIGH-VOLTAGE SERIES · PRODUCT DATASHEET

PBHV1280100

128 V 100 Ah LiFePO4 battery

RATED ENERGY
12.8 kWh

A 128 V high-voltage LiFePO4 pack storing 12.8 kWh, with a smart master–slave CAN BMS (CAN 2.0, 500 kbps) for high-voltage hybrid inverters and commercial energy storage. Installation and service by authorised personnel only.

NOMINAL VOLTAGE

128 V

CAPACITY

100 Ah

MAX DISCHARGE

12.8 kW

COMMUNICATION

CAN 2.0

Specifications

Model	PBHV1280100
Chemistry	LiFePO4 (lithium iron phosphate)
Nominal voltage	128 V
Rated capacity	100 Ah
Rated energy	12.8 kWh
Recommended charging current	max 50 A recommended

Max. discharge power	12.8 kW
Discharging current	100 A max (max 50 A recommended)
BMS	Smart CAN BMS, master–slave
Communication	CAN 2.0, 500 kbps
Dimensions (L × W × H)	On request
Warranty	5 years

Key features

- Smart CAN BMS — master–slave architecture
- CAN 2.0 communication at 500 kbps
- 12.8 kWh and up to 12.8 kW in one pack
- High performance · Zero maintenance · Longer life

Ideal for

- High-voltage hybrid inverters
- Commercial & industrial storage
- Factories and warehouses
- Hospitals and campuses

High-voltage system: installation and service by authorised personnel only. Smart master-slave CAN BMS with CAN 2.0 communication at 500 kbps. Do not connect batteries in series or parallel. Register the battery at powrio.com/warranty/register to receive a digital warranty certificate with QR verification. Specifications are subject to change; confirm with Powrio before ordering.