TECNED LFP 48/100

Lithium iron phosphate battery pack for telecom backup

48 V / 100 Ah / 4.8 kWh / 19-inch 3U

The TECNED LFP 48/100 provides battery backup for 48 V DC telecom systems in a compact rack format. Each pack combines lithium iron phosphate cells with an integrated battery management system to monitor operation, balance the cells and protect the battery during charging and discharging.

Built for telecom backup

- **Compact rack installation.** 19-inch, 3U housing with front-access connections and handles.
- **Power for critical DC loads.** Up to 100 A continuous discharge and 50 A continuous charging.
- **Integrated battery management.** Monitoring of voltage, current and temperature, with cell balancing.
- **Built-in protection.** Protection against overcharge, overdischarge, overcurrent and high or low temperature.
- **Expandable capacity.** Parallel packs can increase stored energy and extend backup time.
- **System visibility.** RS485, CAN and RS232 interfaces, dry contacts and status indicators.

For telecom cabinets, base stations and network equipment using compatible 48 V DC power systems.

Display and Monitoring Options

LCD display integrated in battery module

View battery status and operating data directly on the module. The built-in LCD and menu buttons provide convenient local access during routine checks.

Central 7 inch graphic display

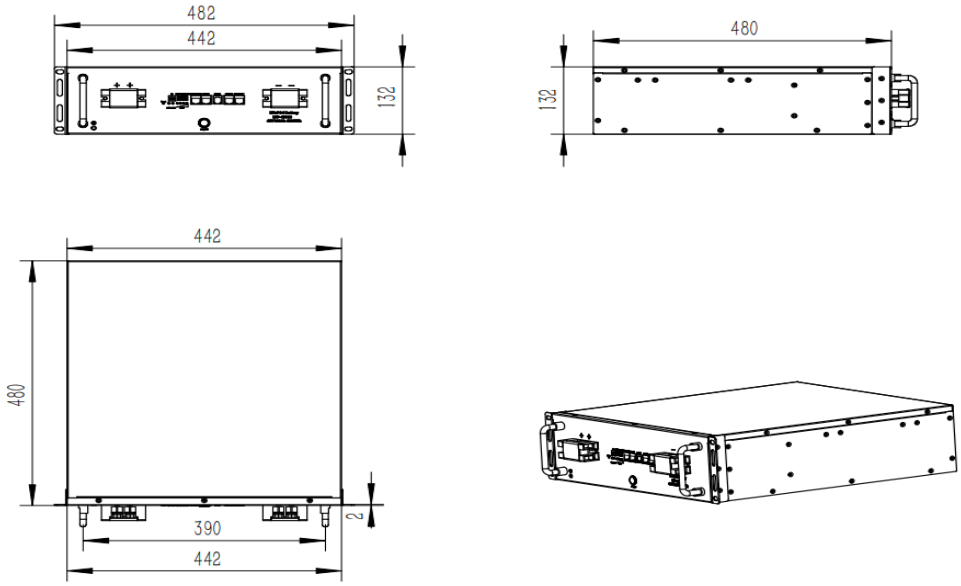
Monitor connected battery modules from one central screen. View state of charge, voltage, current and temperature, with access to cell data and history.

Technical data

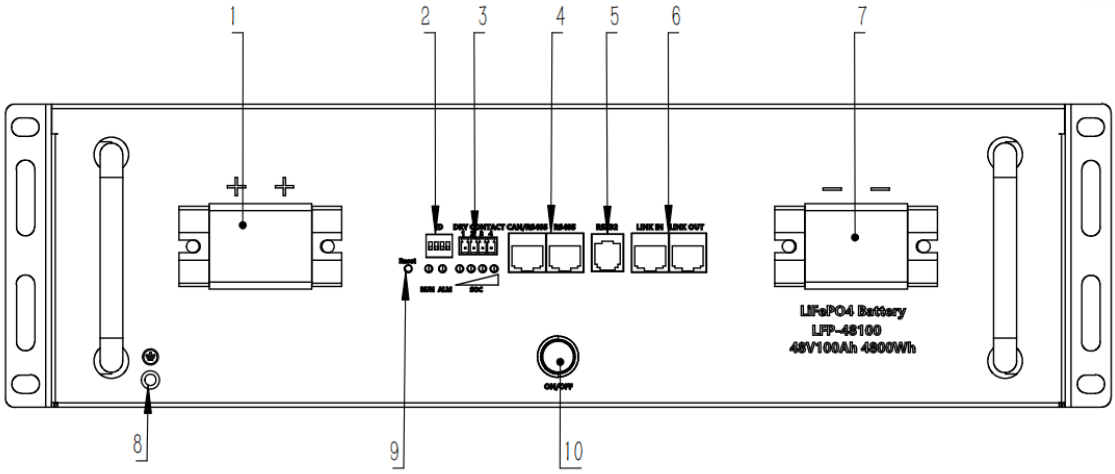
Parameter	TECNED LFP 48/100
Battery chemistry	Lithium iron phosphate ($LiFePO_4$ / LFP)
Nominal voltage / capacity	48 V / 100 Ah
Nominal energy	4.8 kWh[1]
Cell configuration	15S1P
Operating voltage	40.5–54 V DC
Charging voltage	52.5–54 V DC
Standard charging current	20 A (0.2C)
Maximum continuous charging current	50 A (0.5C)
Standard / maximum continuous discharge	100 A (1C) / 100 A (1C)
Charging temperature	0 to +60 °C
Discharging temperature	−20 to +65 °C
Relative humidity / altitude	≤95% / ≤4,000 m
Dimensions W × D × H	482 × 480 × 132 mm; housing width 442 mm
Rack format / weight	19-inch, 3U / approximately 38 kg
Communication interfaces	RS485, CAN and RS232
Pack interconnection	Parallel communication ports and address DIP switch
Local indication	RUN, ALM and four state-of-charge LEDs
Battery management	Voltage, current and temperature monitoring; passive balancing
Protection functions	Overcharge, overdischarge, overcurrent, high / low temperature
Expansion	Parallel connection; no series connection

[1] Nominal energy = 48 V × 100 h. Usable energy and backup time depend on load, temperature, battery condition and system settings.

Mechanical dimensions



Monitoring and system integration



No.	Front panel function	No.	Front panel function
1	Positive terminal	6	Parallel communication
2	Address DIP switch	7	Negative terminal
3	Dry contact outputs	8	Protective earth connection
4	CAN / RS485	9	Reset button
5	RS232	10	On / off switch

Monitoring and diagnostics

PC monitoring software provides battery status, operating data, parameter access and event logs. A central display can show state of charge, voltage, current, temperature and individual cell information.

Integration with TECNED telecom solutions

The TECNED GR(HS)-T series is a modular, rectifier/charger system designed to meet the modern requirements of Telecommunication, Railways, Data centers, Utility infrastructure, and Industrial applications to power critical systems. Based on hot-swappable plug-in rectifier modules, the GR(HS)-T can be configured from 50 A to 300 A.

TECNED B.V.

Tjalke de Boerstrjitte 12/14 • 8561 EL, Balk • The Netherlands

Phone +31-514-820222 • sales@tecned.com • service@tecned.com

www.tecned.com