ENS-3805C Battery Charger

Product overview

Charging maintenance for lead-acid batteries, lithium batteries and UPS power systems. Uses constant-current, constant-voltage/taper and trickle/float charging; records voltage, current, time and capacity, with data export and PC analysis.

Automatic testing • Data recording • Report analysis



Operating ratings

Item	Specification
Charge voltage	90-450 VDC
Charge current / limits	90-400 V: 0-50 A; 400-450 V: 0-40 A
Dimensions (L × W × H)	500 × 260 × 275 mm
Main-unit mass	≤15 kg

Overall dimensions • mm



Overall envelope only; not an installation/manufacturing drawing. Dimensions from the model manual.

Dimensions and mass from the model manual. Diagram shows the overall envelope, not an installation drawing. Observe the voltage, current and stated power limits.

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Technical specifications

Item	Specification
AC supply	AC 380 V (ABCN+PE), 40-60 Hz
Operation	Touchscreen
Display	7-inch TFT LCD, resistive touchscreen, 1024×600
Data communication	1×RS485 (disabled by default)
Internal storage	8 Gbit FLASH
Voltage measurement accuracy	±0.5%FS + 0.1 V
Current measurement accuracy	±1%FS + 0.1 A
Group voltage display accuracy	0.1 V
Group current display accuracy	0.01 A

Protection and safety tests

Item	Specification
Main-unit protection	Shutdown on overtemperature, overcurrent or loss of current control
Shutdown device	High-voltage DC switch
Reverse-polarity protection	Supported
Abnormal-condition protection	Mains-cable power loss and main-cable disconnection/power loss
Overtemperature thresholds	Resistor enclosure 85°C; heatsink 100°C
Alarm	LCD indication and buzzer
Dielectric withstand test	2200 VDC, 1 min. AC input-to-chassis; source lists both DC input-to-output and DC input-to-chassis, pending confirmation.

Operating and storage environment

Item	Specification
Cooling	Forced-air cooling
Operating temperature	-5 to +50°C
Storage temperature	-40 to +70°C
Relative humidity	0-90% RH (40±2°C)
Rated altitude	2000 m

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Core functions

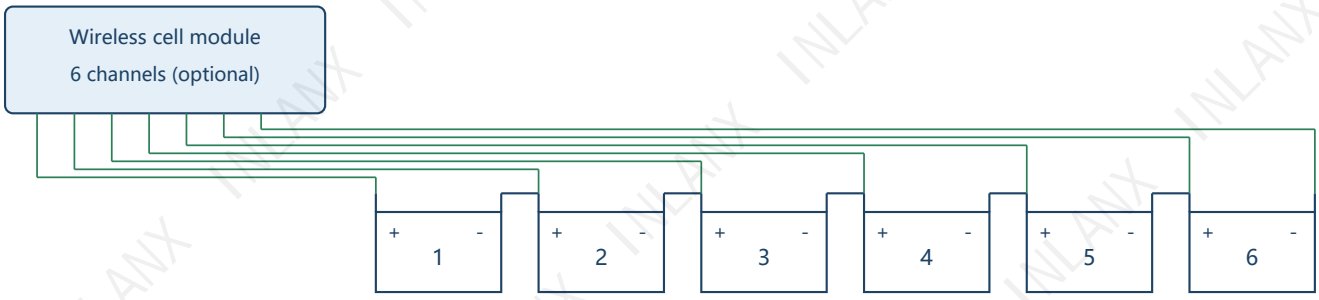
No.	Description
1	Three-stage charging: constant current → constant voltage with tapering current (equalization) → trickle/float, with automatic control for lead-acid batteries, lithium batteries and UPS power-system maintenance.
2	Automatic termination: stops when battery-group or cell voltage reaches its upper limit, or when the configured charge-time or charge-capacity limit is reached. Records continuous process data.
3	Touch operation: 7-inch high-brightness TFT LCD with resistive touch input and 1024×600 resolution for direct on-screen operation.
4	Wireless cell monitoring (optional): LoRa modules support 2 V, 4 V, 6 V and 12 V cells, monitoring six cells per module. The source example uses four modules for a 48 V battery group.
5	Wireless bands: receives and changes cell-monitoring module band settings, supporting settings 1-10 for multiple instruments in the same equipment room.
6	Cell analysis: with cell-acquisition modules, displays charging cell voltages as bar charts and data tables, and identifies the highest- and lowest-voltage cells.
7	Historical curves: reviews recorded battery-group voltage and current curves.
8	Charging templates: six built-in test templates can be edited and recalled.
9	Data management: USB-drive export, PC analysis and report generation; test-data names can be edited on the instrument.
10	Power-loss recovery: enabled by default. Automatically resumes the preceding test state when mains power returns, maintaining record continuity.
11	Online monitoring (optional): requires cell-monitoring modules and a current clamp. Monitors and records battery-group voltage, current, capacity and time, and generates reports.
12	Reserved interfaces: RS485 master for cell-voltage acquisition, RS485 slave for remote control and CAN for signal input/readout. Actual enablement is specified in the technical table.

Automatic charging sequence



Charging sequence redrawn from the source description; not a measured curve.

Wireless cell sensing (optional)



Cell-voltage sensing redrawn from the manual; follow module labels and manual for wiring.