ENS-220100C Battery Charger

Product overview

Provides automatic charging, process monitoring and data analysis for battery and UPS maintenance. Supports constant-current, constant-voltage/taper and trickle/float charging, recording voltage, current, time and capacity. For lead-acid and lithium battery maintenance; set operating parameters to suit the battery.

Three-stage charging • Touchscreen • Analysis and reports



Operating ratings

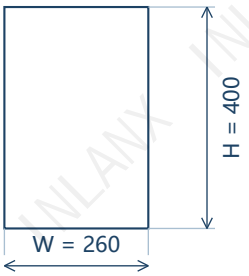
Item	Specification
Charge voltage	90-270 VDC
Charge current	0-100 A
Dimensions (L × W × H)	605 × 260 × 400 mm
Main-unit mass	≤29.6 kg

Overall dimensions • mm

Side envelope



Front envelope



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

Select operating points within the stated voltage, current and specified power limits. Optional functions require the corresponding accessories.

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Technical specifications

Item	Specification
AC supply	AC 380 V (ABCN+PE), 40-60 Hz
Charge voltage	90-270 VDC
Charge current	0-100 A
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; the 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

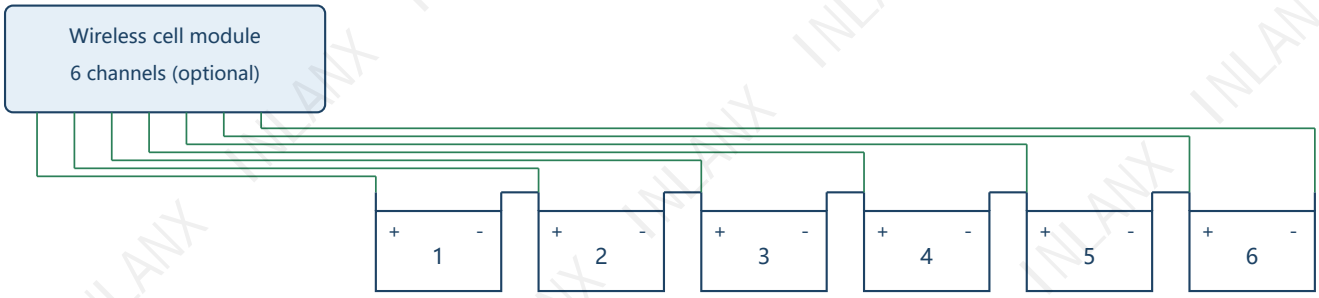
No.	Description
1	Three-stage charging: constant current → constant voltage with tapering current (equalization) → trickle/float, with automatic control for lead-acid batteries, lithium batteries and UPS power-system maintenance.
2	Automatic termination: stops when battery-group or cell voltage reaches 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.