

PRO SERIES | GROUP 8D | DUAL PURPOSE

12V 300Ah LiFePO4 BATTERY

Heated dual-purpose LiFePO4 battery in a Group 8D footprint: engine cranking plus 3.84 kWh of deep-cycle house power, with Bluetooth, CAN communications and an IP67 case.

MODEL **DP12300H**



MASTER RATINGS

Single source for nominal voltage, capacity, stored energy and current ratings. Ratings at 25 °C.

12.8v

NOMINAL VOLTAGE

300Ah

NOMINAL CAPACITY

3.84kWh

STORED ENERGY (3,840 WH)

300A

CONTINUOUS DISCHARGE

300A

CONTINUOUS CHARGE (MAX.)

1,000A

CRANKING PEAK, 5 S

4S / 16P

MAX. SERIES / PARALLEL

IP67

DUST-TIGHT, TEMPORARY IMMERSION

CRANKING & LOAD NOTICE

The 1,000 A (5 s) and 800 A (10 s) ratings are for engine cranking and short start-up surges, tested above 60% state of charge at 25 °C. Design continuous loads, cables and fuses around the 300 A limit (150 A recommended). With batteries in series, parallel strings are limited to 4 (4S4P maximum).

CRANKING + DEEP CYCLE

EPOCH PRO APP

SELF-HEATING

IP67 RATED

6,000+ CYCLES

11-YEAR WARRANTY

HEATED DUAL-PURPOSE LiFePO4 POWER

PRO SERIES · MODEL DP12300H

The Epoch DP12300H combines engine-starting power and deep-cycle house energy in one Group 8D LiFePO4 battery. It stores 3.84 kWh, delivers 300 A continuous, 1,000 A for 5 seconds and 800 A for 10 seconds for cranking, heats itself for cold-weather charging, and reports to the Epoch Pro app over Bluetooth and to other equipment over CAN.

LiFePO4 (lithium iron phosphate) chemistry gives a flat voltage curve, long cycle life and maintenance-free service compared with lead-acid batteries. The built-in battery management system (BMS) monitors the cells and disconnects them when operating limits are exceeded.

PRIMARY USE

Marine engine starting plus deep-cycle house power for electronics, pumps, refrigeration and inverters, and RV, solar and off-grid 12V systems, within the 300 A continuous rating.

HOW TO READ THIS SHEET

Ratings are at 25 °C unless noted. Figures marked **Model-specific data** plot this model's published ratings; figures marked **Conceptual diagram** explain principles and are not installation instructions.

KEY FEATURES



Cranking power

1,000 A for 5 s and 800 A for 10 s for engine starting and start-up surges.



Deep-cycle capacity

300 Ah / 3.84 kWh with 300 A continuous charge and discharge.



Self-heating

Warms the battery to 10 °C before charging in cold weather.



Bluetooth + CAN

Epoch Pro app with over-the-air updates; CAN Link ports for networking.



IP67 enclosure

Dust-tight, temporary immersion to 1 m; pressure-relief valve.



Group 8D footprint

19.7 × 10.5 × 9.75 in, 81 lb — replaces 130–160 lb lead-acid 8D batteries.

COMPATIBLE APPLICATIONS



Marine starting

Compatible outboards; Epoch cites Mercury 250 hp when the system is matched.



Dual-purpose boats

One battery for engine starting and house loads.



Marine house power

Electronics, audio, pumps, refrigeration and lighting.



RV and overland

12V house power and inverter systems.



Solar and off-grid

Solar banks, cabins and backup power.



12V to 48V banks

16P at 12 V; up to 4S4P for 24V to 48V systems.

PRODUCT IDENTIFICATION

Model / SKU	DP12300H
Battery type	Dual-purpose cranking and deep-cycle LiFePO4 battery
Chemistry	LiFePO4 (lithium iron phosphate)
Cells	4S3P
Footprint	BCI Group 8D
Bluetooth	Yes — Epoch Pro app, iOS and Android
Self-heating	Yes — internal heating film
Warranty	11-year manufacturer warranty

DUAL-PURPOSE BATTERY NOTICE

Use lithium-compatible charging equipment, including the alternator charging path. Verify the engine maker's battery requirements before replacing a starting battery. Match battery voltages within 0.5 V before connecting a bank, and never mix models or capacities.

ELECTRICAL SPECIFICATIONS

VOLTAGE, CAPACITY AND CURRENT RATINGS

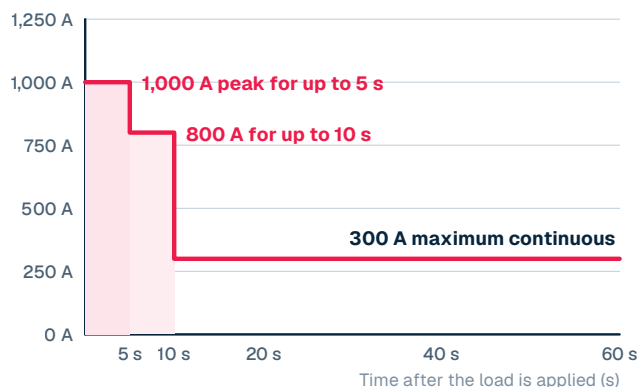
Ratings at 25 °C unless otherwise noted. Verify charger programming, cable ampacity, fuse ratings and environmental limits before final installation.

VOLTAGE AND CAPACITY	
Nominal voltage	12.8 V
Nominal capacity	300 Ah
Stored energy	3.84 kWh (3,840 Wh)
Operating voltage range	10.0–15.4 V
Maximum charge input	15.4 V listed maximum — not a charger target
Cell configuration	4S3P LiFePO4
Cycle life	6,000+ cycles (0.2C, 80% DoD, to 80% of initial capacity, 25 °C)
Internal resistance	< 30 mΩ (1 kHz AC)
End of discharge	11.0–11.6 V
Self-discharge	≤ 3% per month (sleep or off)

CURRENT RATINGS	
Maximum continuous discharge	300 A (150 A recommended for daily use)
Peak discharge	1,000 A for up to 5 seconds; 800 A for up to 10 seconds — cranking and start-up surges
Maximum continuous charge	300 A
Recommended charge current	150 A (up to 50% of capacity)
Series connection	Maximum 4 batteries (up to 48V system class)
Parallel connection	Maximum 16 batteries
Maximum configuration	4S4P, matched batteries and rated equipment

ALLOWABLE DISCHARGE CURRENT

MODEL-SPECIFIC DATA



The 1,000 A rating is for engine cranking and short start-up surges, lasting up to 5 seconds; 800 A for up to 10 seconds. Any load that lasts longer than 10 seconds must stay at or below 300 A. Peak ratings are tested above 60% state of charge at 25 °C; frequent peak discharges shorten battery life.

C-RATE REFERENCE

C-RATE	CURRENT	MEANING FOR THIS BATTERY
0.2C	60 A	Light, steady loads; typical rate for capacity planning
0.5C	150 A	Recommended charge current
1C	300 A	Maximum continuous discharge and charge
3.33C	1,000 A	Peak discharge, up to 5 seconds — engine cranking only

DEFINITION • C-RATE

C-rate expresses current relative to capacity. For a 300 Ah battery, 1C = 300 A and 0.5C = 150 A. Lower rates generally mean less heat and voltage drop.

ENERGY CHECK

12.8 V × 300 Ah

= 3,840 Wh = 3.84 kWh nominal

PLANNING ENERGY (80%)

≈ 3,072 Wh

Used for runtime estimates in this sheet

FULL CONTINUOUS LOAD

300 A ≈ 3,840 W

≈ 0.8 h at planning energy

MECHANICAL & ENVIRONMENTAL

DIMENSIONS, WEIGHT AND TEMPERATURE LIMITS

OUTLINE DIMENSIONS

MODEL-SPECIFIC DATA

Outline envelope only; case features and terminal hardware are not shown.



DEFINITION · IP67

Under IEC 60529, the first digit rates protection against solids and the second against water. **6** = dust-tight; **7** = protected against temporary immersion in up to 1 m of water for 30 minutes. IP67 is not rated for water jets or pressure washing, and the battery must not be left submerged.

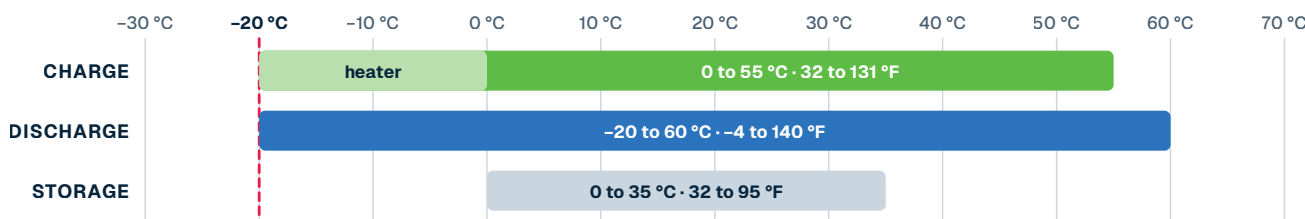
Overall: 19.7 in L x 10.5 in W x 9.75 in H (500 x 267 x 248 mm); BCI Group 8D footprint. Plan clearance for terminal hardware, cable bend radius, terminal covers, ventilation and service access.

MECHANICAL	
Dimensions (L x W x H)	19.7 x 10.5 x 9.75 in (500 x 267 x 248 mm)
Footprint	BCI Group 8D
Weight	81 lb / 36.7 kg
Case	Sealed IP67 case with heat-sink fins, pressure-relief valve and mounting bracket
Terminals	M8
Terminal torque	8–10 Nm (71–89 in-lb)
Mounting orientation	Upright (face up); never on its side or upside down
Enclosure	IP67 — dust-tight, temporary immersion; not submersible

TEMPERATURE AND ENVIRONMENT	
Charge temperature	–20 to 55 °C / –4 to 131 °F
Discharge temperature	–20 to 60 °C / –4 to 140 °F
Storage temperature	0 to 35 °C / 32 to 95 °F, recommended
Self-heating	Yes — internal heating film
Low-temperature charge protection	Heater warms battery to 10 °C before charging
High / low temperature protection	BMS disconnect outside the operating range

TEMPERATURE OPERATING WINDOWS

MODEL-SPECIFIC DATA



Charging from –20 °C uses the internal heater (light green): below 0 °C it warms the cells with a charger connected; charging resumes above 10 °C.

Storage bar shows the recommended storage range (recommended).

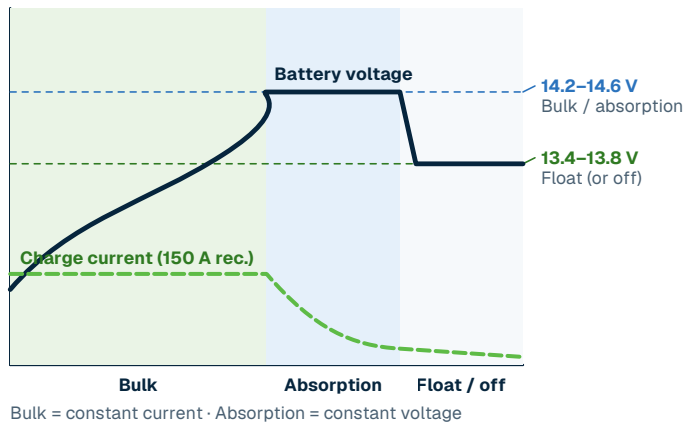
RECOMMENDED CHARGING SETTINGS

PROGRAM EVERY CHARGING SOURCE FOR 12V LiFePO4

Program chargers, inverter chargers, converters, solar charge controllers, DC-to-DC chargers and alternator regulation for LiFePO4 operation. Disable equalization and temperature compensation.

LIFEPO4 CHARGE PROFILE

CONCEPTUAL DIAGRAM



SETTING · RECOMMENDED VALUE

Maximum continuous charge	300 A
Recommended charge current	Up to 150 A (50% of capacity)
Bulk / absorption	14.2 V recommended (14.2–14.6 V range)
Float	13.8 V recommended (13.4–13.8 V range)
Equalization	Disabled
Temperature compensation	0 mV/°C (disabled)
Charge temperature	–20 to 55 °C / –4 to 131 °F

Shape only. Bulk charges at constant current until the absorption voltage is reached; absorption holds that voltage while current tapers.

LOW-TEMPERATURE CHARGE PROTECTION

CONCEPTUAL DIAGRAM



COMPATIBLE CHARGING SOURCES

- ✓ 12V LiFePO4 battery chargers, including the Epoch 12V 50A Lithium Battery Charger.
- ✓ Solar charge controllers (MPPT or PWM) with a programmable or LiFePO4 profile.
- ✓ DC-to-DC chargers for alternator charging, or lithium-ready alternator regulation where the engine maker allows it.
- ✓ Converters and inverter chargers that can be set to the values above.

CHARGING NOTICES

- This model has internal heating. When a charger is connected in cold weather, the heater warms the battery to 10 °C (50 °F) and then switches to charging. With heating, the battery charges down to –20 °C / –4 °F.
- Do not use lead-acid equalization, desulfation or repair modes.
- Combined current from all sources must not exceed 300 A per battery.
- 15.4 V listed maximum — not a charger target: program chargers to the bulk/absorption range above.
- If a charger cannot be fully programmed, confirm its bulk/absorption voltage is within range and equalization and temperature compensation are disabled.

PROTECTION, MONITORING & RUNTIME

WHAT THE BMS DOES AND HOW LONG THE BATTERY WILL RUN

BMS PROTECTION	FUNCTION
Overcharge	Disconnects or limits operation to protect the cells
Over-discharge	Disconnects or limits operation to protect the cells
Over-current	Protects against sustained loads above the ratings
Short circuit	Cutoff at 1,200 A within 500 μ s
High / low temperature	Disconnects when outside the operating range
Low-temperature charge	Heater warms the battery to 10 °C before charging
Cell balancing	Passive balancing near full charge

Operating voltage range: 10.0–15.4 V. A BMS disconnect is a protective event: find and correct the cause before reconnecting. The BMS is not a substitute for correctly sized fuses or breakers.

EPOCH PRO READING	WHAT IT SHOWS
State of charge	Estimated remaining capacity
Voltage	Battery terminal voltage
Current	Charge or discharge current
Temperature	Battery temperature
Status	Battery status and alerts

Bluetooth range, displayed data and app features may vary by device, app version and battery production revision. Use app data as a monitoring aid, not a substitute for safe wiring and correct charger settings. CAN Link in / Link out ports network the bank, and firmware updates are available over the air through the app.

RUNTIME PLANNING

ESTIMATED RUNTIME

MODEL-SPECIFIC DATA

100 W load		≈ 30.7 h
500 W load		≈ 6.1 h
1000 W load		≈ 3.1 h
30 A load (1,280 W)		≈ 2.4 h
2000 W load		≈ 1.5 h

Runtime (h) = 3,072 Wh ÷ load (W). DC loads at 25 °C on a new, fully charged battery; real results vary.

LOAD	ESTIMATED RUNTIME
100 W load	≈ 30.7 h
500 W load	≈ 6.1 h
1000 W load	≈ 3.1 h
100 A load (1,280 W)	≈ 2.4 h
2000 W load	≈ 1.5 h

FORMULA

Runtime (h) = usable Wh ÷ load (W)
80% planning energy = 3,072 Wh per battery. For a parallel bank, multiply by the number of batteries.

PLANNING NOTE

Runtime figures are simplified estimates. Inverter and converter losses, cabling, temperature, battery age, BMS limits, duty cycle and real load behavior change real-world results. For AC loads through an inverter, include the inverter's own consumption and efficiency from its manufacturer. When the battery also starts an engine, keep enough charge in reserve for starting.

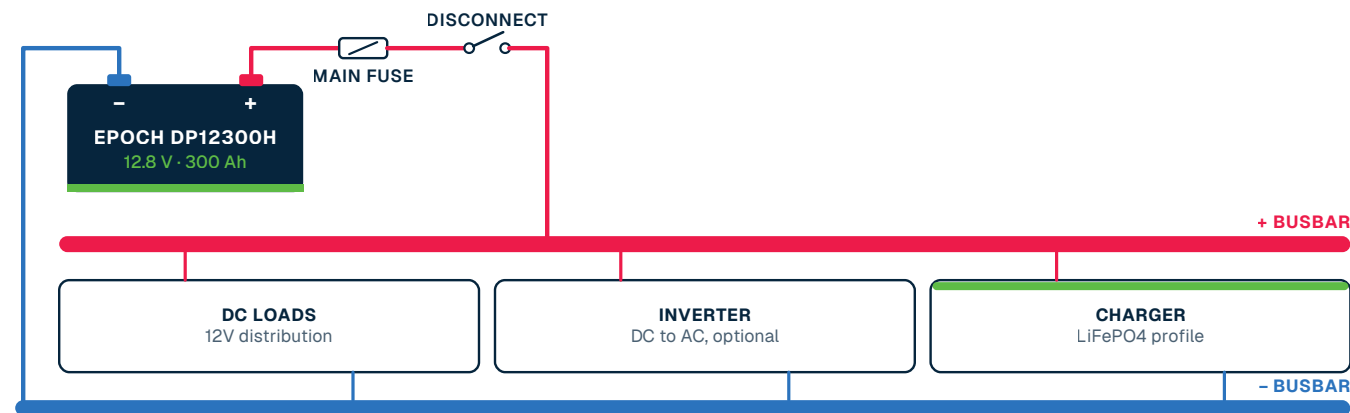
SYSTEM CONFIGURATIONS

SINGLE BATTERY, SERIES AND PARALLEL BANKS

The diagrams in this sheet are vector schematics for system planning. Final designs must be reviewed for cable ampacity, fuse coordination, voltage drop, environmental conditions and the electrical or marine codes that apply.

SINGLE-BATTERY 12V SYSTEM

CONCEPTUAL DIAGRAM



Place the main fuse as close as practical to the battery positive terminal. Fuse each load branch for its conductor.

— Positive (+) — Negative (-)

SERIES	SYSTEM	NOMINAL V	CAPACITY	ENERGY
1S	12V	12.8 V	300 Ah	3.84 kWh
2S	24V	25.6 V	300 Ah	7.68 kWh
3S	36V	38.4 V	300 Ah	11.52 kWh
4S	48V	51.2 V	300 Ah	15.36 kWh

PARALLEL	SYSTEM	NOMINAL V	CAPACITY	ENERGY
1P	12V	12.8 V	300 Ah	3.84 kWh
2P	12V	12.8 V	600 Ah	7.68 kWh
4P	12V	12.8 V	1,200 Ah	15.36 kWh
8P	12V	12.8 V	2,400 Ah	30.72 kWh
16P	12V	12.8 V	4,800 Ah	61.44 kWh

BANKING RULES

- Use only matched DP12300H batteries of the same age, condition and state of charge.
- Fully charge each battery before connecting it into a bank.
- Fuse each battery or string and verify cable ampacity.
- Use equipment rated for the full bank voltage and current.

RECOMMENDED CHARGE CURRENT FOR BANKS

Recommended charge current is up to 50% of the battery or bank capacity:

- Any series string of one battery per position (300 Ah): 150 A
- 2P (600 Ah): 300 A · 4P (1,200 Ah): 600 A · 8P (2,400 Ah): 1,200 A · 16P (4,800 Ah): 2,400 A

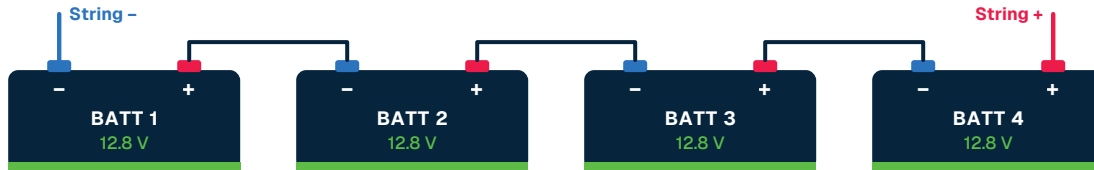
Maximum configuration 4S4P (16 batteries): 51.2 V nominal, 1,200 Ah, 61.44 kWh. With batteries in series, up to 4 strings may be paralleled (4S4P maximum); 16 in parallel applies to 12V banks.

BATTERY BANK WIRING

SERIES, PARALLEL AND SERIES-PARALLEL CONCEPTS

SERIES BANK — UP TO 4S

CONCEPTUAL DIAGRAM



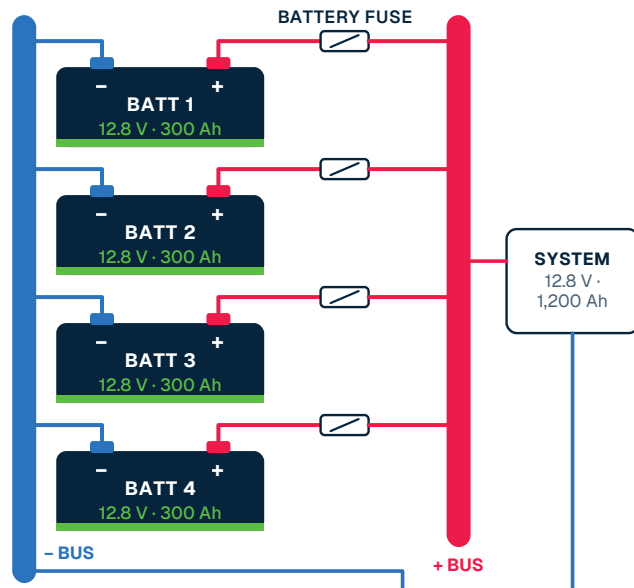
4 × 12.8 V = 51.2 V nominal · capacity stays 300 Ah

Each battery + connects to the next battery -. Fuse the string positive and use equipment rated for the full string voltage.

Series wiring adds voltage; capacity stays 300 Ah per string. Use a charger and inverter rated for the full bank voltage.

PARALLEL BANK — UP TO 16P

CONCEPTUAL DIAGRAM

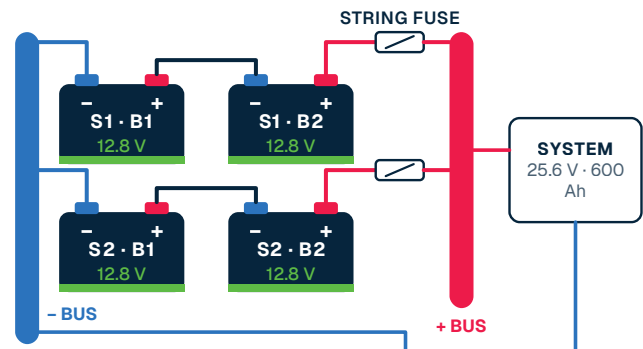


4 of up to 16 batteries shown. Equal cable length and gauge from every battery to the busbars. Fuse each battery as the system design requires.

Parallel wiring adds capacity; voltage stays 12.8 V.

SERIES-PARALLEL — 2S2P EXAMPLE

CONCEPTUAL DIAGRAM



Identical strings, a fuse on each string, equal cable lengths and busbar takeoffs.

Series strings first, then strings in parallel through string fuses and busbars.

⚠ WARNING

Series banks above 12V can exceed touch-safe voltages. Do not exceed 4 batteries in series or 16 in parallel. With batteries in series, up to 4 strings may be paralleled (4S4P maximum); 16 in parallel applies to 12V banks.

BEFORE ENERGIZING

Do not hot-connect batteries. Pre-charge large inverters where required. Confirm charger voltage, inverter low-voltage settings, conductor insulation rating, enclosure clearance and overcurrent protection before energizing.

SAFETY, STORAGE & COMMISSIONING

SUMMARY — READ THE USER MANUAL FOR COMPLETE INSTRUCTIONS

This page summarizes practices for safe handling and system readiness. Refer to the latest Epoch user manual and local codes for complete instructions before installation, operation, transport or service.

📋 INSTALLATION CHECKLIST

- ✓ Use only LiFePO₄-compatible charging, including the alternator path, with equalization disabled.
- ✓ Route cables away from sharp edges, hot surfaces, abrasion points and moving parts.
- ✓ Install appropriate fuses or circuit breakers and verify their voltage ratings.
- ✓ Secure the battery upright in a dry, ventilated, accessible location.
- ✓ Confirm polarity with a multimeter and torque terminals to 8–10 Nm (71–89 in-lb).

📦 STORAGE & HANDLING

- ✓ Store in a cool, dry place at 0 to 35 °C / 32 to 95 °F, protected from sunlight, rain and impact.
- ✓ For long-term storage, keep about 50% state of charge and disconnect loads.
- ✓ Check state of charge at least every 3 months and recharge as needed.
- ✓ Do not submerge, pressure wash, short-circuit, disassemble, crush or incinerate.
- ✓ Keep away from children, pets, conductive tools, flames and incompatible batteries.

COMPLIANCE / LISTING

DETAIL

Battery certification	UL 1973 (certificate of compliance available)
Compliance marks	CE, RoHS
Transport	UN 38.3
Enclosure	IP67 (IEC 60529)
Warranty	11-year manufacturer warranty; register within 90 days of purchase
Protection	Smart BMS: overcharge, over-discharge, over-current, short circuit, high/low temperature

⚠️ CRITICAL WARNINGS

- Never reverse polarity or connect the positive and negative terminals together with a conductor.
- Stop use and disconnect if the battery emits odor, becomes abnormally hot, is damaged, deformed or submerged, or behaves abnormally.
- Never open the case: cells and BMS are not user-serviceable.
- For emergencies, follow lithium battery fire-response procedures and contact qualified personnel.

REVISION HISTORY

REVISION DATE DESCRIPTION

V00 / V06	—	Product specification V00 and DP Series user manual V06 (all DP models).
V01	2026-10-01	New DP12300H-specific document set (user manual, technical data sheet, spec sheet). Reconciled with the product page; storage check at least every 3 months, matching the warranty terms.

Epoch Batteries

3075 Chastain Meadows Pkwy, Marietta, GA 30066, USA · 954 Ponce de Leon Ave, Suite 401, San Juan, PR 00907, USA

1-888-501-1846 · support@epochbatteries.com

EpochBatteries.com · Warranty portal: warranty.epochbatteries.com