

Preliminary

Valence Technology's next generation of Lithium Phosphate products are now available. Packaged in standard BCI lead-acid battery sizes, systems are scalable and offer unparalleled flexibility.



Lithium Phosphate delivers twice the run time, at a 35% weight reduction, compared to lead-acid technology. Intelligent interfaces and control electronics make Valence's Epoch products the system of choice in the modern era. Excellent charging and float characteristics coupled with zero maintenance make Epoch an obvious candidate

for EV, PHEV, HEV, Industrial, Marine, UPS, and Military Applications.

Our unsurpassed cycling capability drives a lower Total Cost Of Ownership.

Key Characteristics Include:

- Fail Soft – Built in robustness and redundancy improves system fault tolerance.
- Programmable CAN Bus Communication minimizes host controller integration time.
- Systems configurable to 48 in series and 16 in parallel, with up to 240 batteries per controller
- Each Battery module has built in automatic protection for over-charge, over-discharge, and over-temperature. This protection ensures maximum battery service life.
- Battery level electronic monitoring of SOC, state-of health, current, voltage, and temperature
- Battery level cell balancing, maximizing deliverable capacity.
- Rugged mechanical design – Dust and Water protection to IP66
- Maintenance-free, Long Cycle Life ~2000, 100% DOD, cycles under normal conditions
- Can be charged using most standard lead-acid chargers (AGM/GEL setting etc.)

Specifications		EU1	E24	E27	EEV
Voltage		12.8V	12.8V	12.8V	19.2V
Capacity (C/5, 23°C)		42 Ah 538 Wh	100 Ah 1280 Wh	122 Ah 1562 Wh	68 Ah 1306 Wh
BCI Group Number		U1R	Group 24	Group 27	NA
Dimensions incl. terminals (L x W x H)		197x132x186mm 7.8x5.2x7.3 in	260x173x232mm 10.3x6.8x9.2 in	306x173x232mm 12.2x6.8x9.2 in	268x148x275mm 10.6x5.8x10.8 in
Terminal bolt		M6 x 1	M8 x 1.25	M8 x 1.25	M8 x 1.25
Weight		7 kg / 15.4 lbs	15.8 kg / 34.8 lbs	18.6 kg / 40.9 lbs	15.6 kg / 34.3 lbs
Standard Discharge @ 23°C	Max Continuous	80A	200A	200A	130A
	Max 30 sec 5% Duty Cycle	120A	300A	300A	200A
	Max 10 sec 5% Duty Cycle	200A	500A	500A	325A
	Cut-off voltage	10 V	10 V	10 V	15 V
Standard Charge @ 23°C	Charge voltage	14.6 V	14.6 V	14.6 V	21.9 V
	Float voltage	13.8 V	13.8 V	13.8 V	20.7 V
	Max continuous	40A	100A	100A	65A
	Max 30 sec 5% Duty Cycle	100A	260A	260A	170A
	Max 10 sec 5% Duty Cycle	140A	350A	350A	225A
Max DCIR @ 23°C, 100% SOC		16m0hm	7m0hm	6m0hm	11m0hm

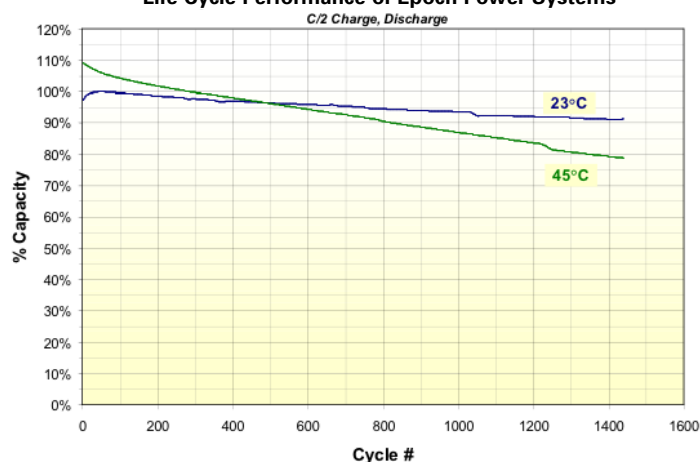
Environmental Specifications

EPOCHTM

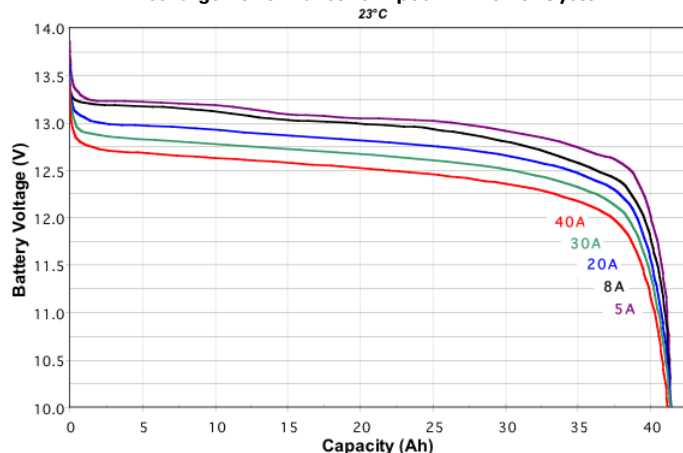
Operational temp range for charge	-10 to +45°C
Operational temp range for discharge	-20 to +60°C
Operating humidity	5% to 95%, non-condensing
Storage temp range	-40°C to +75°C
Shock and vibration	UL 2054
Water and Dust protection	IEC 60529, IP class 66
Certifications	FCC Class B, EN61000-6-2 EN61000-6-4, UL 1642 (cells)
Host interface	CAN 2.0B specifications (ISO 11898-1) Various Analog & Digital configurable outputs
Shipping Classification	UN 3090, Class 9

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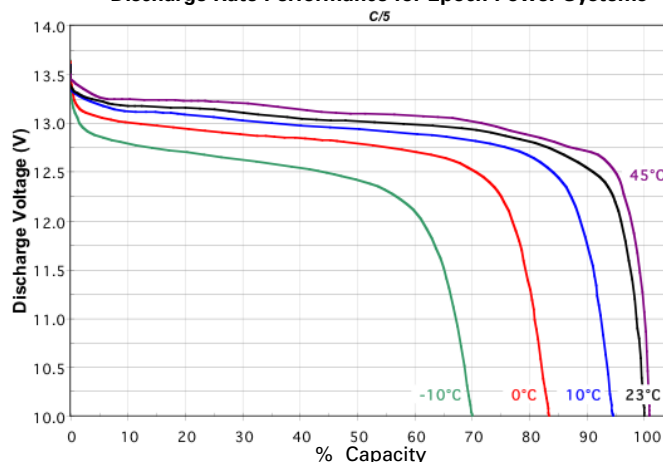
Life Cycle Performance of Epoch Power Systems



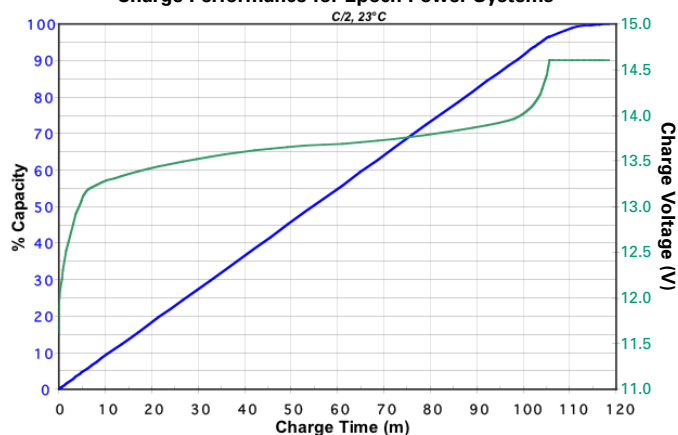
Discharge Performance for Epoch E1 Power System



Discharge Rate Performance for Epoch Power Systems



Charge Performance for Epoch Power Systems



Companion Devices for Epoch Power Systems

EBMU: Battery Management Units that feature battery to battery balance control, direct control capability for up to four contactors, direct data logging, and CAN-Bus communications port to access monitored data.

EBCI: Battery Charge Indicators that feature battery to battery balance control, LED SOC, System Power, Charge/Discharge, and Fault Indications.

* Please refer to separate datasheets on specific Epoch EBMU, EBCI, & Accessories.

Performance may vary depending on, but not limited to battery usage and application. If battery system is used outside specifications, performance will diminish. Epoch® Power System life cycle data based on Valence energy cell performance tests. All specifications are subject to change without notice. All information provided herein is believed, but not guaranteed, to be current and accurate.

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Revision X01, November 2007

