Precision
BATTERIES

ADVANCED LITHIUM

precisionbatteries.com

V.06-102122

WHY PRECISION ADVANCED LITHIUM?

The Precision Lithium Difference

The Precision Lithium line is unmatched in terms of reliability, safety, performance, and durability. We designed our units to perform as well on the first day as in their tenth year, and our state-of-the-art BMS, cells, and safety functions take recreational lithium batteries to a new level. So whether the batteries are used in southern Florida, Texas, or Arctic Alaska, our batteries will perform time after time.

Warranty

All Precision batteries include a **headache-free, no-hassles**, streamlined warranty process, unlike most lithium brands on the market which require the user to pay for shipping to and from the manufacturer or require payment for service fees. It's clear in our fine print:

> If there is a valid Precision Lithium warranty, the battery will be replaced and delivered to the place of sale at no cost to the customer. Period.
>
> What's classified as a warranty: Any Precision Lithium battery without signs of obvious damage that will not perform to specifications with an approved charger within the warranty period. Period.
>
> That's it! We know our customers spend hard-earned money on these lithium batteries, and we will not deceive our customers with falsely advertised 10, 15, or 20-year warranties.

PART #	BCI	VOLTAGE	AH	LCA	ENERGY	WIDTH	LENGTH	HEIGHT	WEIGHT (LBS)	TYPE
PR24V52-DC+HT	31	25.6	52	N/A	1,331	12.99"	6.77"	8.58"	33.7	DEEP CYCLE
PR52-DC	U1	12.8	52	200	665	5.24"	7.68"	6.73"	17.2	DEEP CYCLE
PR70-DC	24	12.8	70	200	896	6.61"	10.24"	8.23"	24.5	DEEP CYCLE
PR70-DP	24	12.8	70	800	896	6.61"	10.24"	8.23"	26.9	DUAL-PURPOSE
PR110-DC+HT	24	12.8	110	200	1,408	6.61"	10.24"	8.23"	33.73	DEEP CYCLE
PR110-DP+HT	31	12.8	110	800	1,408	6.77"	12.99"	8.58"	34.17	DUAL-PURPOSE
PR300-DC+HT	4D	12.8	300	300	3,840	7.87"	20.6"	7.15"	93.7	DEEP CYCLE

FEATURES AND BENEFITS

Vibration Resistance

With extreme impact and vibration resistance, Precision Lithium is protected with a special coating to ensure the internal components stay intact and secure while in off-road, marine, RV, or any bumpy scenario for the life of the battery.

Water Protection

Precision lithium cells and Battery Maintenance Systems (BMS) are protected to complete water submersion.

Fire Supression

Our Lithium cells and Advanced BMS is already one of the safest options available, but Precision takes safety to the next level with built-in fire suppression if something should go wrong.

Heating Function

Select Precision Lithium Batteries have an automatic built-in cold weather internal heating element. This function protects and prevents damage to Lithium-Ion cells when charging under 32° F.

PRECISION LITHIUM BATTERIES

PR24V52-DC+HT

Group 31

ELECTRICAL SPECIFICATIONS

Nominal Voltage	**25.6V**
Nominal Capacity	**52Ah**
Capacity @ 25A	**156 min**
Resistance	**≤30 mΩ @ 50% SOC**
Efficiency	**99%**
Self Discharge	**<3% per Month**
Maximum Modules in Series	**2**

DISCHARGE SPECIFICATIONS

Maximum Continous Discharge Current	**52A**
Peak Discharge Current	**52A (7.5s ± 2.5s)**
BMS Discharge Current Cut-Off	**215A ± 15A (10 ± 5 ms)**
Recommended Low Voltage Disconnect	**22V**
BMS Discharge Voltage Cut-Off	**16.0V (2.0 ± 0.08 vpc) (20 ± 6ms)**
Reconnect Voltage	**20V (2.5 ± 0.5 vpc)**
Short Circuit Protection	**200-600 µs**

TEMPERATURE SPECIFICATIONS

Discharge Temperature	**-4 to 140 °F (-20 to 60 °C)**
Charge Temperature	**-4 to 113 °F (-20 to 45 °C)**
Storage Temperature	**23 to 95 °F (-5 to 35 °C)**
BMS High Temperature Cut-Off	**167 °F (75 °C)**
Reconnect Temperature	**122 °F (50 °C)**

MECHANICAL SPECIFICATIONS

Dimensions (L x W x H)	**12.99 X 6.77 X 8.58" 330 X 172 X 218 MM**
Weight	**33.7 lbs (15.3 kg)**
Terminal Type	**M8 x 1.25 x 2mm**
Terminal Torque	**80 - 100 in-lbs (9 - 11 N-m)**
Case Material	**ABS**
Enclosure Protection	**IP66**
Cell Type - Chemistry	**Cylindrical - LiFePO4**

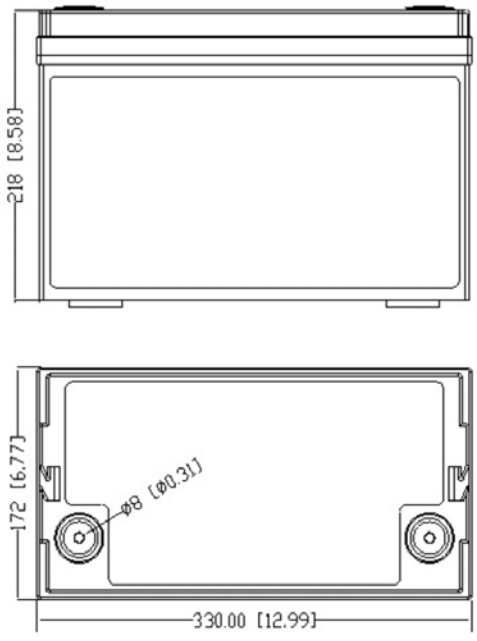
CHARGE SPECIFICATIONS

Recommended Charge Current	**2.5A - 25A**
Maximum Charge Current	**52A**
Charge Current 14 to 32 °F (-10 to 0 °C)	**≤0.3 C**
Charge Current -4 to 14 °F (-20 to -10 °C)	**≤0.03 C**
Recommended Charge Voltage	**28.4V - 29.2V**
BMS Charge Voltage Cut-Off	**31.2V (2.5 ±0.025 vpc)**
Reconnect Voltage	**30.4V (3.8 ± 0.05 vpc)**
Balancing Voltage	**27.6V (3.5 ± 0.05 vpc)**

COMPLIANCE SPECIFICATIONS

Certifications	**UN 38.3 & CE (BATTERY) UL1642 (CELLS) (FILE# MH64443) IEC62133 (CELLS)**
Shipping Classification	**UN 3480, CLASS 9**

DIMENSIONAL SPECIFICATIONS (MM)



PRECISION LITHIUM BATTERIES

PR52-DC
Group U1

ELECTRICAL SPECIFICATIONS

Nominal Voltage	**12.8V**
Nominal Capacity	**52Ah**
Capacity @ 25A	**156 min**
Resistance	**≤30 mΩ @ 50% SOC**
Efficiency	**99%**
Self Discharge	**<3% per Month**
Maximum Modules in Series	**4**

DISCHARGE SPECIFICATIONS

Maximum Continous Discharge Current	**50A**
Peak Discharge Current	**120A (2s)**
BMS Discharge Current Cut-Off	**200A ± 50A (2 ±1 ms)**
Recommended Low Voltage Disconnect	**10V**
BMS Discharge Voltage Cut-Off	**9.2V (2.3 ±0.1 vpc) (2 ± 0.5s)**
Reconnect Voltage	**10V (2.5 ± 0.1 vpc) (2 ± 0.5s)**
Short Circuit Protection	**200-800 µA**

TEMPERATURE SPECIFICATIONS

Discharge Temperature	**-4 to 140 °F (-20 to 60 °C)**
Charge Temperature	**-4 to 113 °F (-20 to 45 °C)**
Storage Temperature	**23 to 95 °F (-5 to 35 °C)**
BMS High Temperature Cut-Off	**167 °F (75 °C)**
Reconnect Temperature	**122 °F (50 °C)**

MECHANICAL SPECIFICATIONS

Dimensions (L x W x H)	**7.68 X 5.24 X 6.73" 195 X 133 X 171 MM**
Weight	**17.2 lbs (7.8 kg)**
Terminal Type	**M8 x 1.25 x 2mm**
Terminal Torque	**80 - 100 in-lbs (9 - 11 N-m)**
Case Material	**ABS**
Enclosure Protection	**IP66**
Cell Type - Chemistry	**Cylindrical - LiFePO4**

CHARGE SPECIFICATIONS

Recommended Charge Current	**10A**
Maximum Charge Current	**50A**
Charge Current 14 to 32 °F (-10 to 0 °C)	**≤0.03 C**
Charge Current -4 to 14 °F (-20 to -10 °C)	**≤0.03 C**
Recommended Charge Voltage	**14.2V - 14.6V**
BMS Charge Voltage Cut-Off	**15V (3.75 ±0.05 vpc) (1.5 ± 1.0 s)**
Reconnect Voltage	**14.6V (3.65 ±0.05 vpc)**
Balancing Voltage	**13.8V (3.525 ±0.05 vpc)**

COMPLIANCE SPECIFICATIONS

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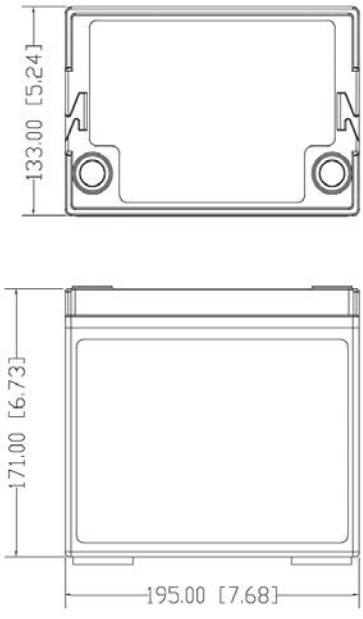

PRECISION LITHIUM BATTERIES

PR70-DC
Group 24

ELECTRICAL SPECIFICATIONS

Nominal Voltage	**12.8V**
Nominal Capacity	**70Ah**
Capacity @ 25A	**210 min**
Resistance	**≤30 mΩ @ 50% SOC**
Efficiency	**99%**
Self Discharge	**<3% per Month**
Maximum Modules in Series	**4**

DISCHARGE SPECIFICATIONS

Maximum Continous Discharge Current	**100A**
Peak Discharge Current	**200A (2s)**
BMS Discharge Current Cut-Off	**300A ± 50A (2 ±1 ms)**
Recommended Low Voltage Disconnect	**10V**
BMS Discharge Voltage Cut-Off	**9.2V (2.3 ±0.1 vpc) (2 ± 0.5s)**
Reconnect Voltage	**10V (2.5 ± 0.1 vpc) (2 ± 0.5s)**
Short Circuit Protection	**200-800 µA**

TEMPERATURE SPECIFICATIONS

Discharge Temperature	**-4 to 140 °F (-20 to 60 °C)**
Charge Temperature	**-4 to 113 °F (-20 to 45 °C)**
Storage Temperature	**23 to 95 °F (-5 to 35 °C)**
BMS High Temperature Cut-Off	**167 °F (75 °C)**
Reconnect Temperature	**122 °F (50 °C)**

MECHANICAL SPECIFICATIONS

Dimensions (L x W x H)	**10.24 X 6.61 X 8.23" 260 X 168 X 209 MM**
Weight	**24.5 lbs (11.1 kg)**
Terminal Type	**M8 x 1.25 x 2mm**
Terminal Torque	**80 - 100 in-lbs (9 - 11 N-m)**
Case Material	**ABS**
Enclosure Protection	**IP66**
Cell Type - Chemistry	**Cylindrical - LiFePO4**

CHARGE SPECIFICATIONS

Recommended Charge Current	**14A**
Maximum Charge Current	**70A**
Charge Current 14 to 32 °F (-10 to 0 °C)	**≤0.03 C**
Charge Current -4 to 14 °F (-20 to -10 °C)	**≤0.03 C**
Recommended Charge Voltage	**14.2V - 14.6V**
BMS Charge Voltage Cut-Off	**15V (3.75 ±0.05 vpc) (1.5 ± 1.0 s)**
Reconnect Voltage	**14.6V (3.65 ±0.05 vpc)**
Balancing Voltage	**13.8V (3.625 ±0.05 vpc)**

COMPLIANCE SPECIFICATIONS

Certifications	**UN 38.3 & CE (BATTERY) UL1642 (CELLS) (FILE# MH64443) IEC62133 (CELLS)**
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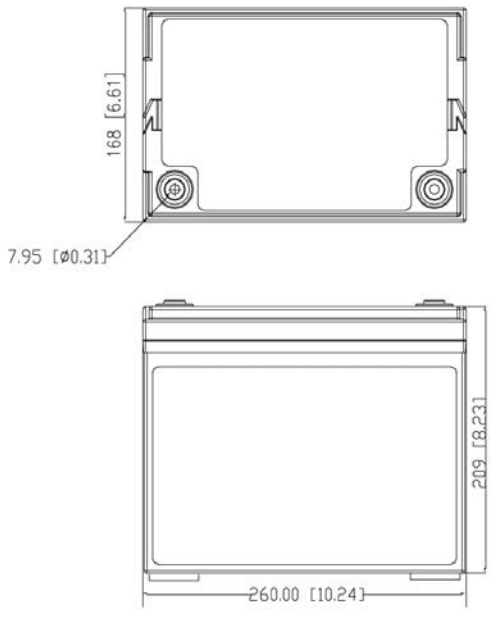
DIMENSIONAL SPECIFICATIONS (MM)



PRECISION LITHIUM BATTERIES

PR70-DP
Group 24

ELECTRICAL SPECIFICATIONS	
Nominal Voltage	**12.8V**
Nominal Capacity	**70Ah**
Capacity @ 25A	**210 min**
Resistance	**≤30 mΩ @ 50% SOC**
Efficiency	**99%**
Self Discharge	**<3% per Month**
Maximum Modules in Series	**1 (Single Use)**

DISCHARGE SPECIFICATIONS	
Maximum Continous Discharge Current	**100A**
Peak Discharge Current	**800A (2s)**
BMS Discharge Current Cut-Off	**1000A ± 100A (2 ±1 ms)**
Recommended Low Voltage Disconnect	**10 V**
BMS Discharge Voltage Cut-Off	**9.2V (2.3 ±0.1 vpc) (2 ± 0.5s)**
Reconnect Voltage	**10V (2.5 ± 0.1 vpc) (2 ± 0.5s)**
Short Circuit Protection	**200-800 µA**

TEMPERATURE SPECIFICATIONS	
Discharge Temperature	**-4 to 140 °F (-20 to 60 °C)**
Charge Temperature	**-4 to 113 °F (-20 to 45 °C)**
Storage Temperature	**23 to 95 °F (-5 to 35 °C)**
BMS High Temperature Cut-Off	**167 °F (75 °C)**
Reconnect Temperature	**122 °F (50 °C)**

MECHANICAL SPECIFICATIONS	
Dimensions (L x W x H)	**10.24 X 6.61 X 8.23" 260 X 168 X 209 MM**
Weight	**26.9 lbs (12.2 kg)**
Terminal Type	**M8 x 1.25 x 2mm**
Terminal Torque	**80 - 100 in-lbs (9 - 11 N-m)**
Case Material	**ABS**
Enclosure Protection	**IP66**
Cell Type - Chemistry	**Cylindrical - LiFePO4**

CHARGE SPECIFICATIONS	
Recommended Charge Current	**14A**
Maximum Charge Current	**70A**
Charge Current 14 to 32 °F (-10 to 0 °C)	**≤0.3 C**
Charge Current -4 to 14 °F (-20 to -10 °C)	**≤0.03 C**
Recommended Charge Voltage	**14.2V - 14.6V**
BMS Charge Voltage Cut-Off	**15V (3.85 ±0.05 vpc) (1.5 ± 1.0 s)**
Reconnect Voltage	**14.4V (3.6 ±0.05 vpc)**
Balancing Voltage	**13.8V (3.625 ±0.05 vpc)**

COMPLIANCE SPECIFICATIONS	
Certifications	**UN 38.3 & CE (BATTERY) UL1642 (CELLS) (FILE# MH64443) IEC62133 (CELLS)**
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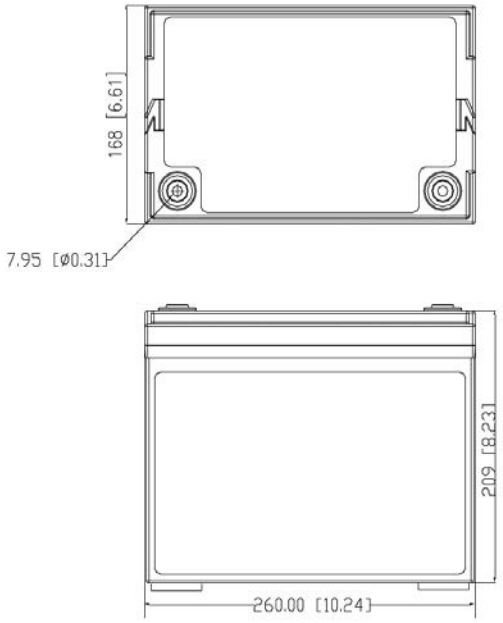
DIMENSIONAL SPECIFICATIONS (MM)



PRECISION LITHIUM BATTERIES

PR110-DC+HT

Group 24

ELECTRICAL SPECIFICATIONS	
Nominal Voltage	**12.8V**
Nominal Capacity	**110Ah**
Capacity @ 25A	**264 min**
Resistance	**≤30 mΩ @ 50% SOC**
Efficiency	**99%**
Self Discharge	**<3% per Month**
Maximum Modules in Series	**4**

DISCHARGE SPECIFICATIONS	
Maximum Continous Discharge Current	**100A**
Peak Discharge Current	**200A (2s)**
BMS Discharge Current Cut-Off	**300A ± 50A (2 ±1 ms)**
Recommended Low Voltage Disconnect	**10 V**
BMS Discharge Voltage Cut-Off	**9.2V (2.3 ±0.01 vpc) (2 ± 0.5s)**
Reconnect Voltage	**10V (2.5 ± 0.1 vpc) (2 ± 0.5s)**
Short Circuit Protection	**200-800 µA**

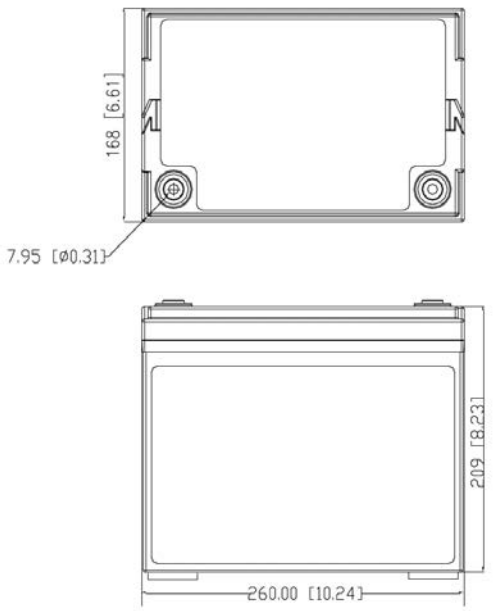
TEMPERATURE SPECIFICATIONS	
Discharge Temperature	**-4 to 140 °F (-20 to 60 °C)**
Charge Temperature	**-4 to 113 °F (-20 to 45 °C)**
Storage Temperature	**23 to 95 °F (-5 to 35 °C)**
BMS High Temperature Cut-Off	**167 °F (75 °C)**
Reconnect Temperature	**122 °F (50 °C)**

MECHANICAL SPECIFICATIONS	
Dimensions (L x W x H)	**10.24 X 6.61 X 8.23" 260 X 168 X 209 MM**
Weight	**33.73 lbs (15.3 kg)**
Terminal Type	**M8 x 1.25 x 2mm**
Terminal Torque	**80 - 100 in-lbs (9 - 11 N-m)**
Case Material	**ABS**
Enclosure Protection	**IP66**
Cell Type - Chemistry	**Cylindrical - LiFePO4**

CHARGE SPECIFICATIONS	
Recommended Charge Current	**20A**
Maximum Charge Current	**100A**
Charge Current 14 to 32 °F (-10 to 0 °C)	**≤0.3 C**
Charge Current -4 to 14 °F (-20 to -10 °C)	**≤0.03 C**
Recommended Charge Voltage	**14.2V - 14.6V**
BMS Charge Voltage Cut-Off	**15V (3.75 ±0.05 vpc) (1.5 ± 1.0 s)**
Reconnect Voltage	**14.4V (3.6 ±0.05 vpc)**
Balancing Voltage	**13.8V (3.5 ±0.05 vpc)**

COMPLIANCE SPECIFICATIONS	
Certifications	**UN 38.3 & CE (BATTERY) UL1642 (CELLS) (FILE# MH64443) IEC62133 (CELLS)**
Shipping Classification	**UN 3480, CLASS 9**

DIMENSIONAL SPECIFICATIONS (MM)



PRECISION LITHIUM BATTERIES

PR110-DP+HT

Group 31

ELECTRICAL SPECIFICATIONS	
Nominal Voltage	**12.8V**
Nominal Capacity	**110Ah**
Capacity @ 25A	**264 min**
Resistance	**≤30 mΩ @ 50% SOC**
Efficiency	**99%**
Self Discharge	**<3% per Month**
Maximum Modules in Series	**1 (Single Use)**

DISCHARGE SPECIFICATIONS	
Maximum Continous Discharge Current	**100A**
Peak Discharge Current	**800A (2s)**
BMS Discharge Current Cut-Off	**1000A ± 100A (2 ±1 ms)**
Recommended Low Voltage Disconnect	**10 V**
BMS Discharge Voltage Cut-Off	**9.2V (2.3 ±0.01 vpc) (2 ± 0.5s)**
Reconnect Voltage	**10V (2.5 ± 0.1 vpc) (2 ± 0.5s)**
Short Circuit Protection	**200-800 µA**

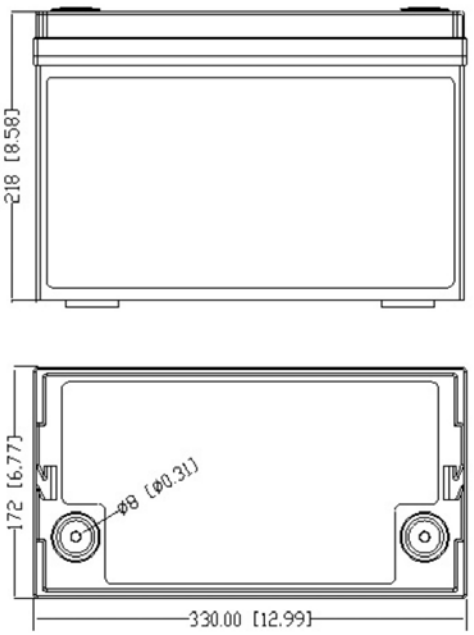
TEMPERATURE SPECIFICATIONS	
Discharge Temperature	**-4 to 140 °F (-20 to 60 °C)**
Charge Temperature	**-4 to 113 °F (-20 to 45 °C)**
Storage Temperature	**23 to 95 °F (-5 to 35 °C)**
BMS High Temperature Cut-Off	**167 °F (75 °C)**
Reconnect Temperature	**122 °F (50 °C)**

MECHANICAL SPECIFICATIONS	
Dimensions (L x W x H)	**12.99 X 6.77 X 8.58" 330 X 172 X 218 MM**
Weight	**34.17 lbs (15.5 kg)**
Terminal Type	**M8 x 1.25 x 2mm**
Terminal Torque	**80 - 100 in-lbs (9 - 11 N-m)**
Case Material	**ABS**
Enclosure Protection	**IP66**
Cell Type - Chemistry	**Cylindrical - LiFePO4**

CHARGE SPECIFICATIONS	
Recommended Charge Current	**20A**
Maximum Charge Current	**100A**
Charge Current 14 to 32 °F (-10 to 0 °C)	**≤0.3 C**
Charge Current -4 to 14 °F (-20 to -10 °C)	**≤0.03 C**
Recommended Charge Voltage	**14.2 V - 14.6 V**
BMS Charge Voltage Cut-Off	**15V (3.75 ±0.05 vpc) (1 ± 0.5 s)**
Reconnect Voltage	**14.4V (3.6 ±0.1 vpc)**
Balancing Voltage	**13.8V (3.5 ±0.05 vpc)**

COMPLIANCE SPECIFICATIONS	
Certifications	**UN 38.3 & CE (BATTERY) UL1642 (CELLS) (FILE# MH64443) IEC62133 (CELLS)**
Shipping Classification	**UN 3480, CLASS 9**

DIMENSIONAL SPECIFICATIONS (MM)



PRECISION LITHIUM BATTERIES

PR300-DC+HT

Group 4D

ELECTRICAL SPECIFICATIONS	
Nominal Voltage	**12.8V**
Nominal Capacity	**300Ah**
Capacity @ 25A	**720 min**
Resistance	**≤30 mΩ @ 50% SOC**
Efficiency	**99%**
Self Discharge	**<3% per Month**
Maximum Modules in Series	**4**

DISCHARGE SPECIFICATIONS	
Maximum Continous Discharge Current	**200A**
Peak Discharge Current	**300A (2s)**
BMS Discharge Current Cut-Off	**320A ±50 A (2 ±1 ms)**
Recommended Low Voltage Disconnect	**10 V**
BMS Discharge Voltage Cut-Off	**9.2V (2.3 ±0.01 vpc) (2 ± 0.5s)**
Reconnect Voltage	**10V (2.5 ± 0.1 vpc) (2 ± 0.5s)**
Short Circuit Protection	**200-800 µA**

TEMPERATURE SPECIFICATIONS	
Discharge Temperature	**-4 to 140 °F (-20 to 60 °C)**
Charge Temperature	**-4 to 113 °F (-20 to 45 °C)**
Storage Temperature	**23 to 95 °F (-5 to 35 °C)**
BMS High Temperature Cut-Off	**167 °F (75 °C)**
Reconnect Temperature	**122 °F (50 °C)**

MECHANICAL SPECIFICATIONS	
Dimensions (L x W x H)	**20.55 X 9.44 X 8.58" 522 X 240 X 218 MM**
Weight	**93.7 lbs (42.5 kg)**
Terminal Type	**M8 x 1.25 x 2mm**
Terminal Torque	**80 - 100 in-lbs (9 - 11 N-m)**
Case Material	**ABS**
Enclosure Protection	**IP66**
Cell Type - Chemistry	**Cylindrical - LiFePO4**

CHARGE SPECIFICATIONS	
Recommended Charge Current	**60A**
Maximum Charge Current	**200A**
Charge Current 14 to 32 °F (-10 to 0 °C)	**≤0.3 C**
Charge Current -4 to 14 °F (-20 to -10 °C)	**≤0.03 C**
Recommended Charge Voltage	**14.2 V - 14.6 V**
BMS Charge Voltage Cut-Off	**15V (3.75 ±0.05 vpc) (1.5 ± 1.0 s)**
Reconnect Voltage	**14.4V (3.6 ±0.05 vpc)**
Balancing Voltage	**13.8V (3.5 ±0.05 vpc)**

COMPLIANCE SPECIFICATIONS	
Certifications	**UN 38.3 & CE (BATTERY) UL1642 (CELLS) (FILE# MH64443) IEC62133 (CELLS)**
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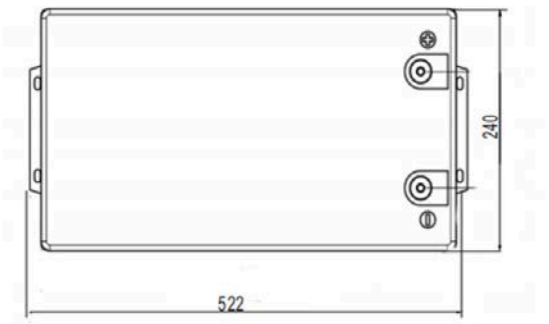
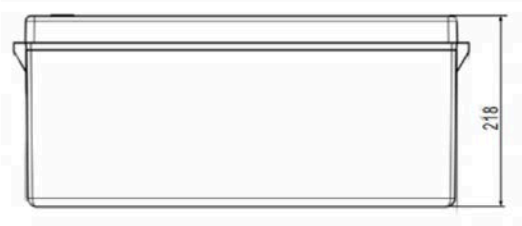
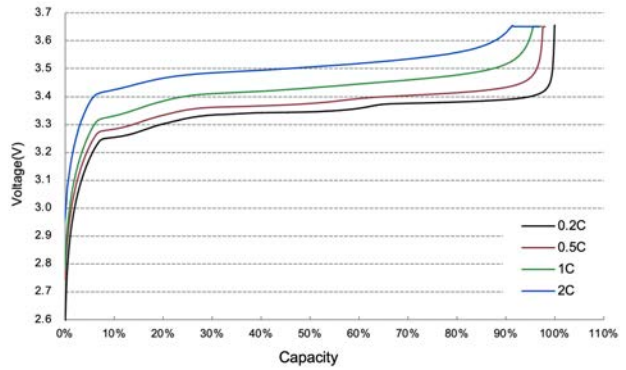


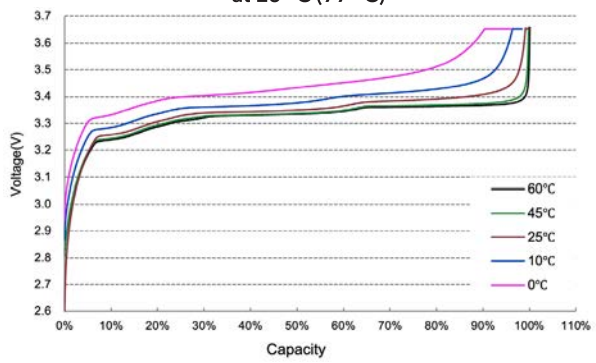


PERFORMANCE CHARACTERISTICS

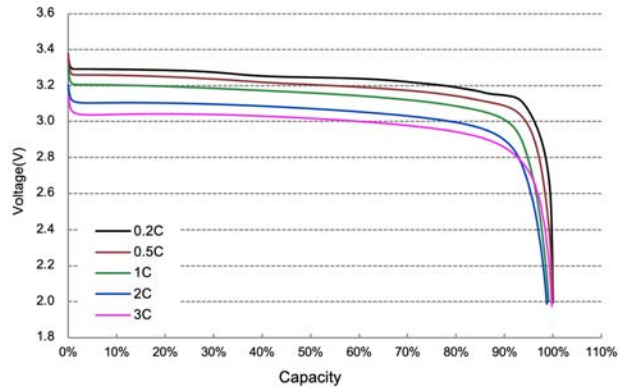
Charging Characteristics at different rates at 25 °C (77 °C)



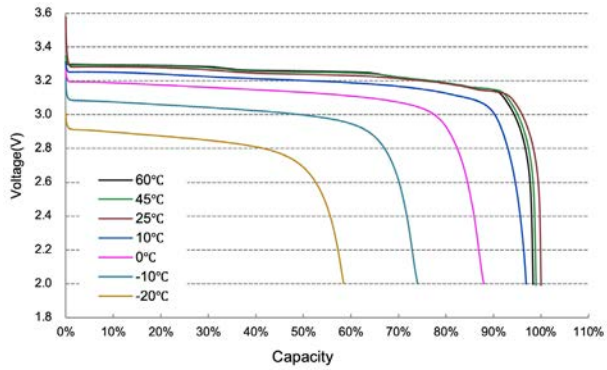
Charging Characteristics at different temperatures at 25 °C (77 °C)



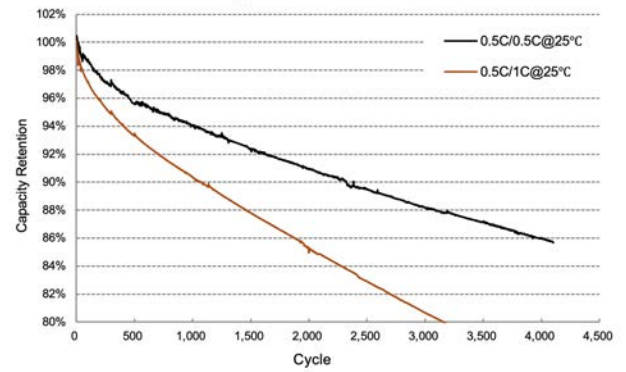
Discharging Characteristics at different rates at 25 °C (77 °C)



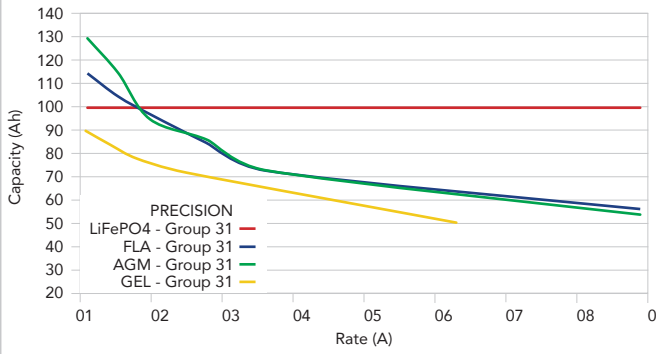
Discharging Characteristics at different temperatures at 25 °C (77 °C)



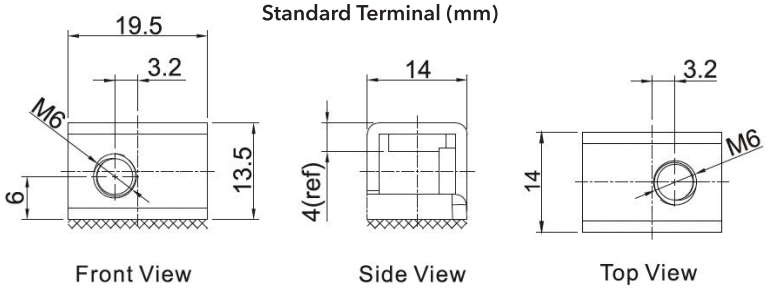
Cyclic Characteristics



Capacity of Precision LiFePO4 vs. Lead Acid at Various Rates of Discharge



Standard Terminal (mm)



PRO Charging Systems

REAL PRO SERIES

Product Features
RealPro Series battery chargers are an affordable, reliable and safe battery charging system designed for everyday use. The system is engineered for users who need a charging system on an occasional basis and may not want or need the capabilities of a heavier duty and higher amperage product. It is designed for use in many types of applications including bass boats, runabouts, pontoon boats, other watercraft, automobiles, ATVs, golf carts and other similar uses. The system delivers sophisticated capabilities and superior value to customers.

Charges Wet Cell, AGM and Precision Lithium 12-volt Batteries
Designed for use in fresh and salt water
Dependable, rugged construction and waterproof
Independent outputs and fully automatic
Battery maintenance mode
Two year warranty
DC charge cables = 5ft and AC power cord = 3ft
Approved and meets ISO 8846 Marine standards
6 AMP Banks
Models available to charge 12-24V systems
LED lights indicate "Each Battery's" state of charge
Reverse polarity protected and no installation restrictions
Ignition protected (US Coast Guard 33 CFR 183.410)
FCC 15 Parts A and B Interference Compliant

SPORTSMAN SERIES

Product Features
The Sportsman Series of chargers have set the standard for advanced capability and reliability in the marine/watercraft market segment. Today, they continue to be the safest, most reliable, and best performing battery chargers available on the market. Across a broad range of fishing and recreational boats, Pro Charging Systems keeps boaters on the water longer while extending the life of their batteries. Dual Pro charging technology has been and continues to be the choice of over 50 boat manufacturers and professional fishermen on the B.A.S.S. and FLW tournament circuit.
Applications: Inland Watercraft, Saltwater Watercraft, Golf Carts, Utility Carts and more.

AUTOPROFILE Models for Lithium* and AGM batteries (More product features below)
10 AMP Banks
Designed for use in fresh and saltwater
PROVolt® Intuitive Charging Technology
Waterproof, dependable, rugged construction
Independent outputs
Fully automatic / multi stage charging
Zero spark technology
Battery maintenance mode
On-board diagnostic codes
Temperature compensated
Advanced microprocessor controlled
Battery systems available: 12V – 48V
LED lights indicate the state of charge
Reverse polarity protected
No installation restrictions
FCC Parts A & B interference compliant
DC charge cables = 5ft. AC power cord = 3ft.
Approved and meets ISO 8846 Marine standards
Ignition protected (US Coast Guard 33 CFR 183.410

PRO CHARGING SYSTEMS

PROFESSIONAL SERIES

Product Features
For more than twenty years, the Professional Series of chargers have set the standard for advanced capability and reliability in the marine/watercraft market segment. Today, they continue to be the safest, most reliable, and best performing battery chargers available on the market. Across a broad range of fishing and recreational boats, Pro Charging Systems keeps boaters on the water longer while extending the life of their batteries. Dual Pro charging technology has been and continues to be the choice of over 50 boat manufacturers and professional fishermen on the B.A.S.S. and FLW tournament circuit. **Applications: Inland Watercraft, Saltwater Watercraft, Golf Carts, Utility Carts and more.**

PROVolt® Models for Wet Cell and AGM batteries
AUTOPROFILE Models for Lithium* and AGM batteries (More product features below)
15 AMP Banks
Designed for use in fresh and saltwater
PROVolt® Intuitive Charging Technology
Waterproof, dependable, rugged construction
Independent outputs
Fully automatic / multi stage charging
Zero spark technology
Battery maintenance mode
On-board diagnostic codes
Temperature compensated
Advanced microprocessor controlled
Battery systems available: 12V – 48V
LED lights indicate the state of charge
Reverse polarity protected
No installation restrictions
FCC Parts A & B interference compliant
DC charge cables = 5ft. AC power cord = 3ft.
Approved and meets ISO 8846 Marine standards
Ignition protected (US Coast Guard 33 CFR 183.410

DUAL POWER SERIES

Product Features
Dual Power Series of chargers simultaneously charges your main battery independently and the rest of your batteries in series. The result is fast, dependable and efficient charging. The product also leverages powerful exclusive technologies to further enhance the energy management status of fresh and saltwater boats. Available in 36V/12V configuration.

Dynamic Intelligent High Frequency Charging
Charges Wet Cell, AGM, Gelled Electrolyte and most Lithium Batteries*
Charges Main Battery Independently and Additional Batteries in Series
Quickly and Efficiently Charges and Conditions Batteries
Smaller Form Factor and only 12 lbs
IP67 & IP68 Pending
89% Overall Efficiency
.98 Power Factor
Communicates with Smartphones via DeltaView® Link App

FREQUENTLY ASKED QUESTIONS

SIZING/SELECTION

Q: Will Precision batteries work in my Trolling motor?
Precision deep-cycle batteries 52A and greater are designed to work with all production Trolling Motors. Please consult your specification sheet for larger current drains.

Q: Will Precision batteries work in my RV?
Yes, most consumers select the PR110-DC+HT or the PR70-DC

Q: What is the minimum quantity of batteries needed for my trolling motor or boat motor?

12V trolling motor	1
24V trolling motor	2
36V trolling motor	3
12 v Starting Battery	1

Q: Do I need to use the Lithium Starting battery if I purchase Precision Lithium deep-cycle batteries?
We recommend the Precision starting batteries for extended accessory runtime and faster charging than lead batteries.

Q: Can I use different types (Flooded, AGM, Lithium) batteries in my boat, RV, or Solar System for Deep-Cycle applications?
Yes, if there is a defective lithium unit, then adding a Flooded or AGM battery short-term in the battery bank will not cause any damage to either setup, but you cannot mix Lithium and Lead in series connections for long-term use. Also, ensure you use the same SKU battery per bank.

Q: Can I use different types (Flooded, AGM, Lithium) batteries in starting applications.
Yes, adding a flooded or AGM (Lead) battery in parallel can protect the lithium battery from momentary peak alternator current & voltage.
Please note: The lead battery should connect to the lithium battery in parallel as a stand-alone battery. Then, install the lithium battery as the main battery with all wires, charger, alternator, starter, etc.… connected to the lithium battery terminals.

Q: Are my Precision Lithium batteries drop-in replacements?
Yes, Precision Lithium batteries have physically similar dimensions as Lead and AGM. Group 24, 27, and 31.

INSTALLATION

Q: How should I install my Precision Lithium batteries?
The battery is a direct replacement and should be installed the same as the existing batteries.

Q: What size cables/wiring do I need to connect my Precision Lithium batteries?
Refer to the Original Equipment Manufacturer's specifications for wire size required to operate your electrical components and motors.

CHARGING

Q: What charger do you recommend for marine applications?
We recommend using a multi-bank charger to ensure each battery is balanced correctly and receives a full charge. Chargers with a lithium charge profile are required; Lead battery chargers may charge the lithium battery, but doing so will harm the lithium cells. Please consult your Precision Lithium dealer for approved lithium charger models.

Q: I do not have a multi-bank charger for my RV. How should I charge my lithium batteries?
If the stock converter in your RV was designed for Lead/ AGM and not Lithium, then please speak with your local dealer about upgrading to a lithium option. Most lead battery converters can charge a lithium battery, but the algorithm can decrease the battery's lifespan and fail to charge a fully depleted lithium battery.

Q: What charger/charge controller do I need for solar applications?
Please ensure the Charge Controller/ Converter/ Inverter has a lithium charge profile. The recommended charge voltage is 14.2V, and the recommended charge current is .3-.5C.

Q: Can I use any charge profile to charge my batteries?
No. AGM or Lead charging profile can charge a lithium battery that is not fully depleted, but it will harm lithium cells and reduce the battery's overall lifespan. Lithium chargers use algorithms that properly balance and charge the lithium cells.

Q: Can I charge multiple batteries in series or parallel with a single set of charge leads (single-bank charger)?
It's recommended to use a multi-bank charger to ensure each battery receives the proper charge. If a multi-bank charger is not available, connect the charger to the positive terminal of one battery and the negative terminal of the furthest distance battery in the bank. (See diagram at the end of this section on page 2)

Q: How long will it take my batteries to charge?
The time it takes to charge your batteries depends on the percent discharged and the charger's output current (Amps), and the total capacity of your battery. Typically, a 10A charger will fully charge a depleted 100A battery in 10 hours.

Q: Do I need to charge my Precision Lithium batteries after each use?
It is recommended to fully charge your batteries after each use to ensure full capacity for subsequent uses. Storing lithium batteries under 20% charged can damage the cells or BMS and reduce their overall lifespan.

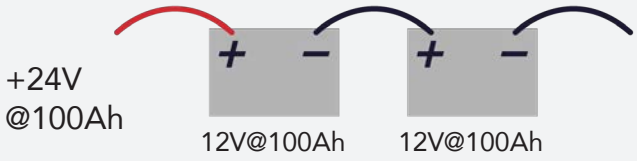
Q: How long can I leave my charger connected to my batteries?
Please refer to the charger's instruction manual.

Q: What is the recommended charging temperature range of Precision Lithium Batteries?
-25°F to 104°F if the battery has a built-in heating function.
32°F to 113°F If the battery does not have a built-in heater.
Charging temps of 10°F to 113°F are acceptable if using a charger with less than 10% of the battery's capacity. Example: 10% of a 100-amp battery is ten amps.

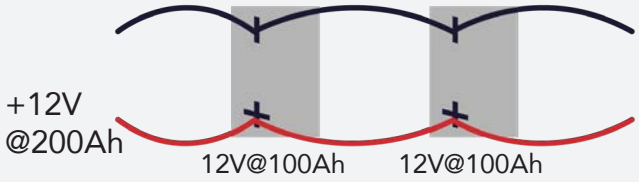
Q: Why is my battery not charging after the battery was completely discharged?
The battery management system will enter " low-voltage protection mode" (sleep mode) to safeguard itself from possible damage. If the battery is completely drained of capacity (power/amperage), a battery charger with a Lithium charge profile and wake-up feature must be used to recharge the battery fully. Standard flooded lead acid or AGM chargers do not have the "smarts" to charge lithium batteries properly. - Please consult your local Precision dealer for charger selections.

FREQUENTLY ASKED QUESTIONS

SERIES: Double Voltage & Same Amperage



PARALLEL: Same Voltage & Double Amperage



OPERATION

Q: What is the expected runtime of my Precision Lithium battery?
The runtime will vary depending on the amp draw and other conditions, such as the general operation of electronic equipment. Example: One Precision Lithium group 24 110-Amp battery will run approximately 40-50% longer than a group 31 110-amp flooded lead-acid or AGM battery.

Q: How far can I discharge my Precision Lithium starting/dual-purpose battery before it can't start my engine?
If your battery is more than 80% discharged, you may experience issues starting your motor. If users feel their battery is getting low on power, they should start their motor and recharge the battery with the alternator.

Q. What purpose does the heating function serve
Charging a lithium battery under 32°F can damage the lithium cells. Therefore, the heating function automatically diverts the current (power from the charger) from the lithium cells to an internal heating element to warm the cells to a proper temperature before charging initiates.

Q: Can I mix batteries in my boat?
It is not recommended to mix varying amp-hour or chemistry of batteries for the same application. Deep-cycle batteries should be the same SKU for each bank. And Starting batteries should be the same SKU when connected in parallel. -Other than noted in the Sizing/Selection portion of this sheet.

Q: How long will my batteries last?
With proper care, expect 5,000 discharge/charge cycles at 80% depth of discharge at 77°F. The average Flooded or AGM marine battery life expectancy is 100-300 discharge/charge cycles at 80% depth of discharge at 77°F.

Q: Will my existing battery gauge work on my Precision Lithium battery?
Not if it's a lead-acid battery gauge. Lithium and Flooded/AGM batteries have slightly different voltages (12V for Lead and 12.8V for Lithium), so the reading of the Lead battery gauge is inaccurate on Lithium batteries.

Q: Are my Precision Lithium batteries water-resistant?
Yes, the case of the battery is IP66, while the internal components are fully coated to protect against water submersion.

Q: Are my Precision Lithium batteries fire resistant?
Yes, Our batteries utilize a BMS to protect the battery and user from certain abuse. In addition, Precision Lithium cells are designed to be one of the safest lithium options available, the plastic box is V0 fire-rated, and the internal components are covered with a V0 rated heat-dissipating/ fire suppressing sealant/ waterproofing.

Q: Do my batteries have peak limitations?
Yes, please refer to the datasheet for your battery model.

Q: How do I connect my lithium batteries in parallel?
Fully charge each battery independently before connecting the batteries in parallel.

STORAGE

Q: How do I store my Precision Lithium batteries?
Fully charge your batteries before storage.
Unhook the main negative to prevent any drain on the batteries.
If stored in areas where it drops below 23°F for multiple days, then it is recommended to keep the batteries in a climate-controlled room.

Q: What is the recommended storage temperature of Precision Lithium Batteries?
Between 23 and 95 degrees F.

Q: What is Precision Lithium batteries' recommended operating ambient (discharge) temperature?
-4 to 104 degrees F.

The Continental Battery Systems warranty policy requires a receipt from the original purchaser. The date of this receipt establishes the beginning date of service used for the Continental Battery Systems warranty, which offers a five-year (60 months) free replacement if using an approved charger, 30-day free replacement if not using an approved charger, or 30-day undamaged return policy for all PRECISION ADVANCE LITHIUM branded batteries. We do not offer a lifetime warranty. If the Precision Advance Lithium battery is replaced under the warranty policy, your replacement battery carries a warranty period from the original Precision Advance Lithium battery purchase date.

For technical or warranty support, please call the lithium support line: (800) 929-6054.

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