

SOLARX-Lithium™ Series. Rechargeable Solar Lithium Iron Batteries



SOLARX-Lithium™ family



SOLARX-Lithium™ 240-24

SOC-State of Charge and T³ Display Integrated
(for SOLARX-Lithium-240-24 model)



SOLARX-Lithium™ Series - XUNZEL

Hi-performance Rechargeable Lithium Iron Batteries specially designed for solar photovoltaic off-grid and back-up applications with integrated Battery Management System-BMS.

High performance in off-grid solar systems and high delivery power.

Specially designed for optimal and fast photovoltaic off-grid solar charging and to directly replace traditional SLA (Sealed Lead-Acid) Batteries.

Reduce replacement and total costs.



Product Overview

Safe Lithium-ion Chemistry with integrated Battery Management System -BMS

Superior Performance

- More Energy
- Faster and Powerful
- Superior and Longer Cycle Life
- Wider Temperature Range Operation
- Very Low Self-Discharge
- Very Light
- Modular Design enables to connect in parallel and series

Superior Safety

- Maintenance Free
- Sealed. IP56
- Multi-position
- BMS- Battery Management System Integrated
- Full Protections Integrated
- Environment Friendly
- UN38.3 Certified
 - **BULLET-PROOF Design.**
 - **Over charge, Over discharge, Over current, Dual Short-circuit and Temperature protections.**
 - Over-charge: No fire, No explosion
 - Over-discharge: No fire, No explosion, No leakage
 - Short-circuit: No fire, No explosion, Maximum temperature <130°C
 - Crush: No fire, No explosion, Maximum temperature <130°C
 - Hot oven (130°C) Test: No fire, No explosion
 - Thermal cycling properties: No leakage \ No fire \ No explosion
 - Seawater immersion: No fire, No explosion
 - Drop: No leakage \ No fire \ No explosion
 - Depression: No leakage \ No fire \ No explosion

Available Models

SOLARX-Lithium-5-6	(≥ 29Wh - 6.4V)
SOLARX-Lithium-5-12	(≥ 58Wh - 12.8V)
SOLARX-Lithium-8-12	(≥ 96Wh -12.8V)
SOLARX-Lithium-14-12	(≥ 154Wh -12.8V)
SOLARX-Lithium-30-12	(≥ 333Wh -12.8V)
SOLARX-Lithium-48-12	(≥ 512Wh -12.8V)
SOLARX-Lithium-120-12	(≥ 1280Wh -12.8V)
SOLARX-Lithium-120-24-C	(≥ 1280Wh -25.6V)
<i>(model with Serial Comm. Port UART-485)</i>	
SOLARX-Lithium-240-24	(≥ 2400Wh -25.6V)



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XU-92250713MA

Industry Leading Technology for Off-Grid, Off-Shore and Backup Power Applications



SOLARX-Lithium™ Series. Rechargeable Solar Lithium Iron Batteries

Model	SOLARX-Lithium-5-6	SOLARX-Lithium-5-12	SOLARX-Lithium-8-12	SOLARX-Lithium-14-12	SOLARX-Lithium-30-12	SOLARX-Lithium-48-12	SOLARX-Lithium-120-12	SOLARX-Lithium-120-24-COM (UART 485)	SOLARX-Lithium-240-24
Code Order Part Number	SOLARXL56	SOLARXL512	SOLARXL812	SOLARXL1412	SOLARXL3012	SOLARXL4812	SOLARXL12012	SOLARXL12024C	SOLARXL24024
Chemistry	Lithium Iron Phosphate – LFP - LiFePO ₄								
Battery Type	Rechargeable - Secondary – With No Memory Effect								
Average Service Life	15 years (at 25°C)								
Nominal Voltage	6.4V	12.8V	12.8V	12.8V	12.8V	12.8V	12.8V	25.6V	25.6V
Rated Capacity	29Wh	58Wh	96Wh	154Wh	333Wh	512Wh	1280Wh	1280Wh	2400Wh
Internal Resistance	≤ 30-40mΩ								
Efficiency	99%								
Cycle Life	100%DoD 0.2C >2000 cycles / 80%DoD 0.2C >4000 cycles / 30%DoD 0.2C >8000 cycles								
Self Discharge	< 2% in 30 days (Recommended minimum recharge period: every 3 months do at least one complete charge/discharge cycle)								
Maximum batteries in Series/Parallel	4S/20P	4S/20P	4S/20P	4S/20P	4S/20P	4S/20P	4S/20P	2S/20P	2S/20P
Dimensions (mm)	70 x 47 x 101	90 x 70 x 101	151 x 65 x 94	151 x 98 x 95	166 x 175 x 125	197 x 165 x 170	330 x 173 x 212	330 x 173 x 212	522 x 240 x 224
Net Weight (kg)	0.34	0.75	0.95	1.4	3.4	5.75	10.00	10.00	20.30
Case Terminal	IP56. ABS, UL-94-V0 T2		IP56. ABS, UL-94-V0 T2	IP56. ABS, UL-94-V0 T2	IP56. ABS, UL-94-V0 M5	IP56. ABS, UL-94-V0 M6	IP56. ABS, UL-94-V0 M8		
Charge Method	Method: CC-CV								
Charge Voltage	7.2~ 7.4V	14.4~ 14.8V	14.4~ 14.8V	14.4~ 14.8V	14.4~ 14.8V	14.4~ 14.8V	14.4~ 14.8V	28.8~ 29.6V	28.8~ 29.6V
Recommended Float Voltage	6.9V	13.8V	13.8V	13.8V	13.8V	13.8V	13.8V	27.6V	27.6V
Recommended/Maximum Charge Current	2A / 4.5A	2A / 2.5A	4A / 7.5A	6A / 12A	18A / 26A	20A / 40A	50A / 100A	25A / 50A	50A / 100A
BMS Charge Cut-off Voltage	7.8V ± 0.1V 3.75V±0.05V	15.6V ± 0.2V 3.75V±0.05V	15.6V ± 0.2V 3.90V±0.025V	15.4V ± 0.1V 3.85V±0.025V	15.0V ± 0.2V 3.75V±0.05V	15.6V ± 0.2V 3.75V±0.05V	15.6V ± 0.2V 3.75V±0.05V	29.2V ± 0.4V 3.75V±0.05V	30.0V ± 0.4V 3.75V±0.05V
Continuous Discharge Current	4.5A	5A	10A	15A	30A	50A	100A	50A	100A
Pulse Discharge Current	8A (<3 seconds)	12A (<10 seconds)	20A (<3 seconds)	30A (<3 seconds)	40A (<3 seconds)	80A (<3 seconds)	200A (<5 seconds)	75A (<1 seconds)	200A (<3 seconds)
Recommended Voltage Disconnect	4.6V	10V± 0.2V	10V± 0.2V	10V± 0.2V	10V± 0.2V	10V	10V	20V	20V
BMS Discharge Cut-off Voltage	4V± 0.2V 2.0V±0.08V	8V± 0.3V 2.0V±0.08V	8V± 0.3V 2.0V±0.08V	8.0V± 0.3V 2.0V±0.08V	8.8V± 0.2V 2.2V±0.05V	8.8V± 0.2V 2.2V±0.05V	8.8V± 0.2V 2.2V±0.05V	17.6V 2.2V±0.05V	17.6V 2.2V±0.05V
Reconnect Voltage	4.6V	9.2V± 0.2V	9.2V± 0.2V	9.2V± 0.2V	10.8V± 0.2V	10.8V	10.8V	22V	21.6V
Short Circuit Protection	200~600 μs								
Charge/Discharge Temperature	0° to +60°C / -20° to 60°C								
Storage Temperature	0° to 40°C [Recommended long-term storage: 15° to 30°C]								
BMS High T° Cut-off	65°C ± 5°C								
Compliance Shipping Class	CE UKCA UL RoHS3 and REACH Compliant WEEE Compliant IEC62133, UL1642 UN3480, Class 9, UN38.3								

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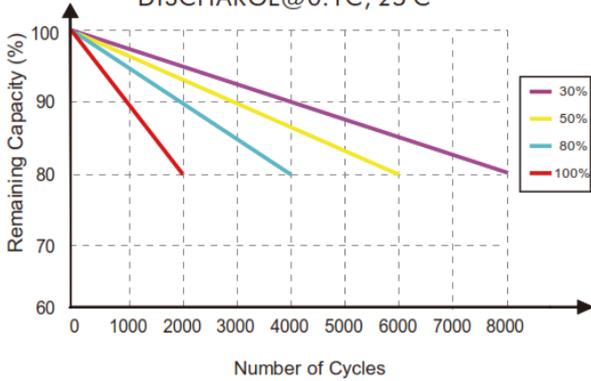
Industry Leading Technology for Off-Grid, Off-Shore and Backup Power Applications



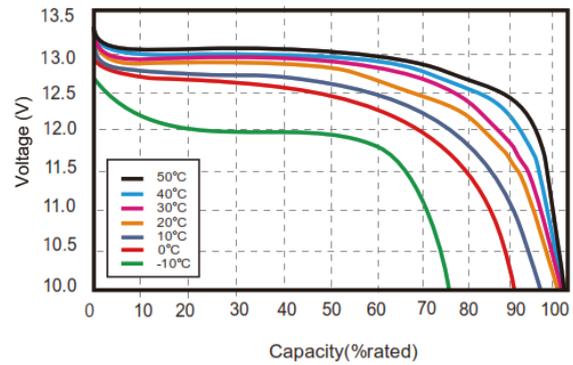
SOLARX-Lithium™ Series. Rechargeable Solar Lithium Iron Batteries

Specifications – 12.8V models

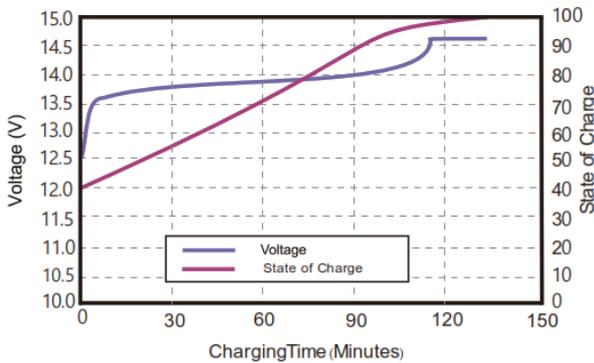
**CYCLE LIFE vs. DEPTH OF DISCHARGE(DOD)
DISCHARGE@0.1C, 25 °C**



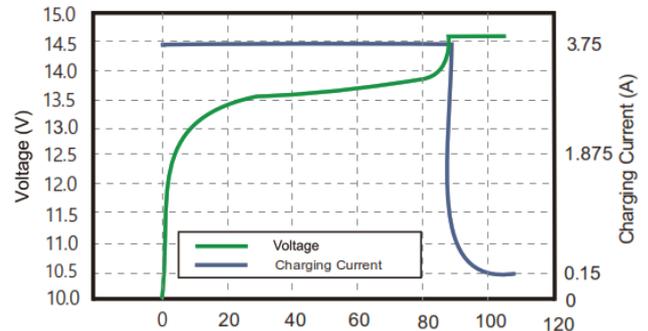
**DISCHARGE CAPACITY at VARIOUS TEMPERATURES
DISCHARGE @1C**



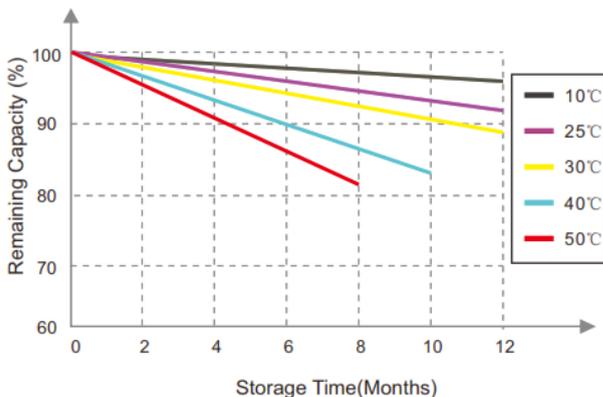
STATE OF CHARGE CURVE @0.5C, 25 °C



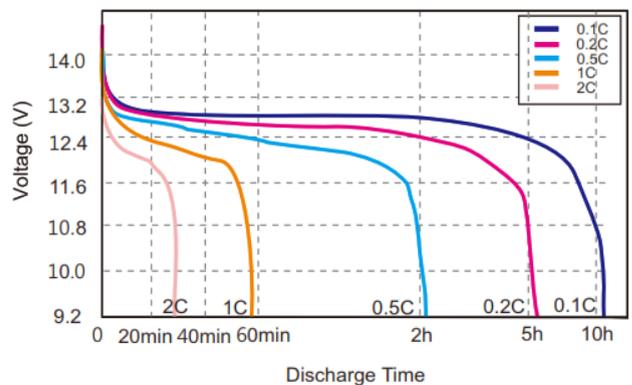
CHARGING CHARACTERISTICS @0.5C, 25 °C



Different Temperature Self Discharge Curve



Different Rate Discharge Curve @25°C

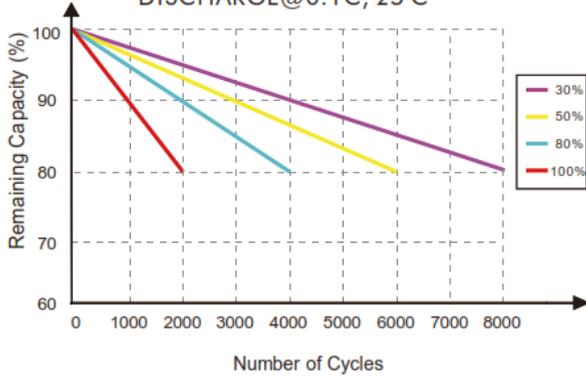


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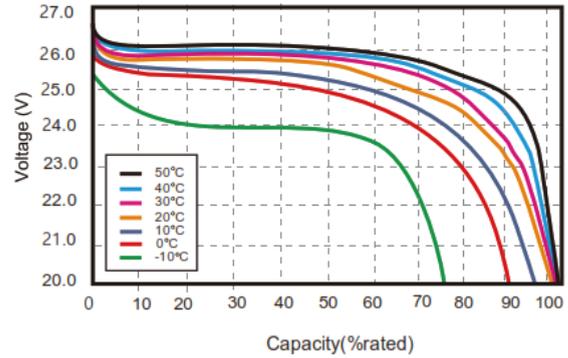
SOLARX-Lithium™ Series. Rechargeable Solar Lithium Iron Batteries

Specifications – 25.6V models

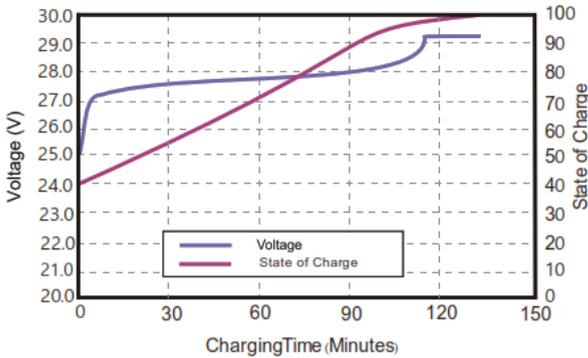
CYCLE LIFE vs. DEPTH OF DISCHARGE(DOD)
DISCHARGE@0.1C, 25 C



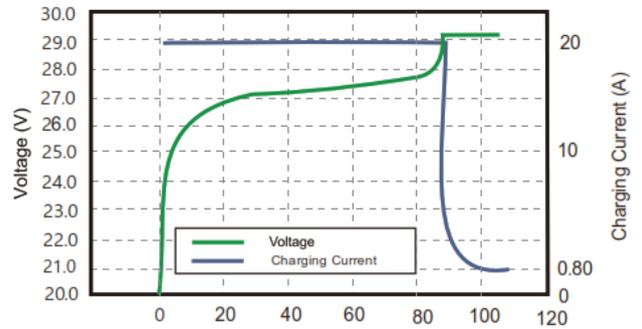
DISCHARGE CAPACITY at VARIOUS TEMPERATURES
DISCHARGE @1C



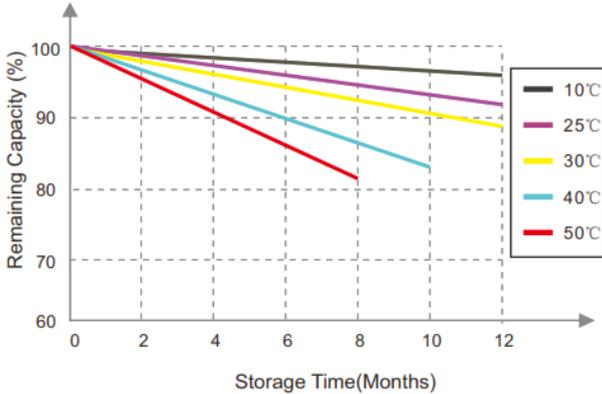
STATE OF CHARGE CURVE @0.5C, 25 C



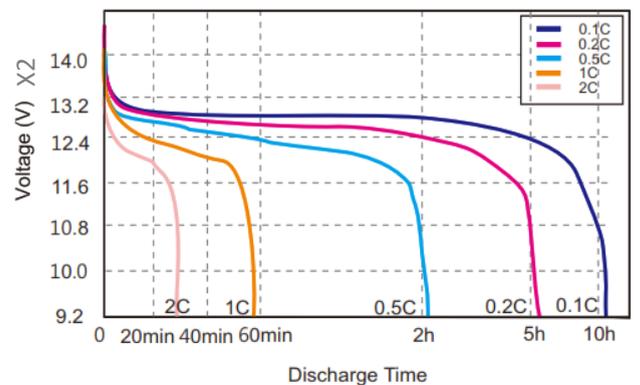
CHARGING CHARACTERISTICS @0.5C, 25°C



Different Temperature Self Discharge Curve



Different Rate Discharge Curve @25°C



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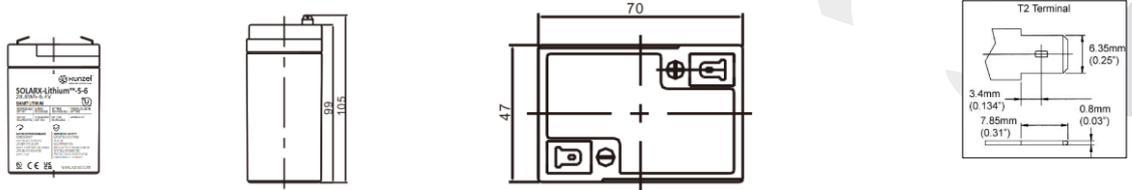
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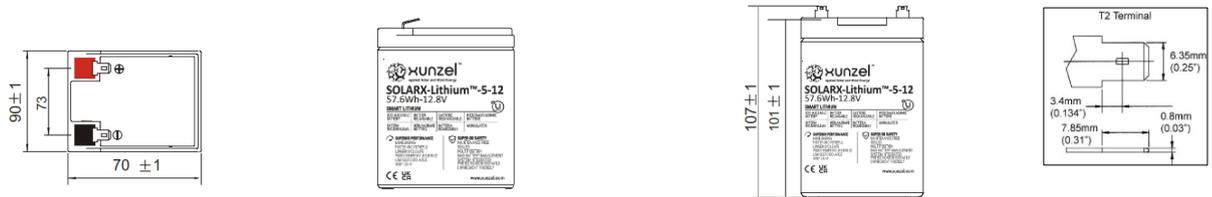
SOLARX-Lithium™ Series. Rechargeable Solar Lithium Iron Batteries

Dimensions (mm)

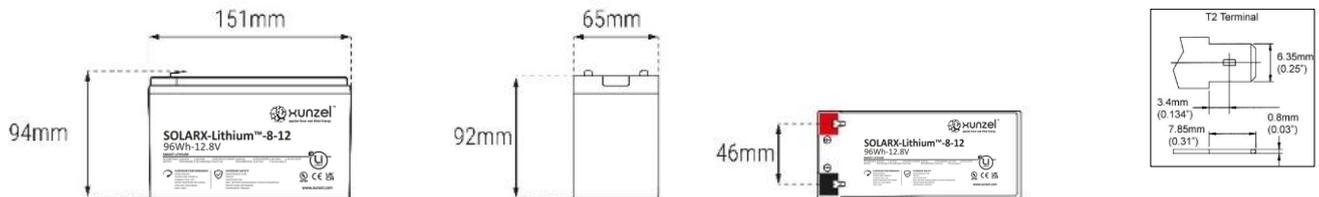
SOLARX-Lithium-5-6



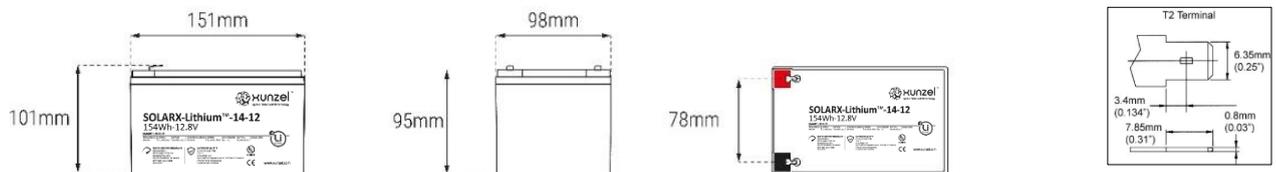
SOLARX-Lithium-5-12



SOLARX-Lithium-8-12



SOLARX-Lithium-14-12



SOLARX-Lithium-30-12



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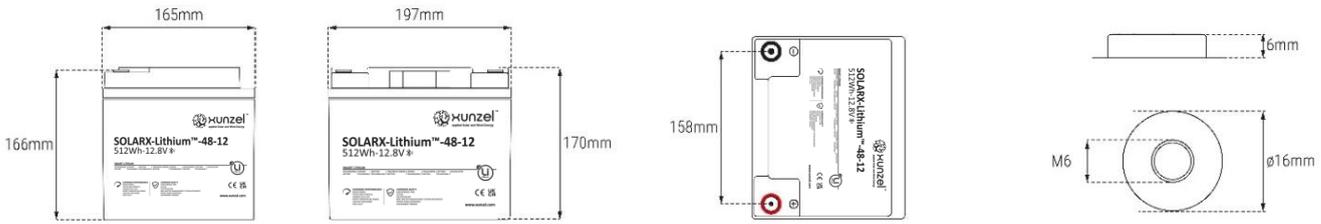
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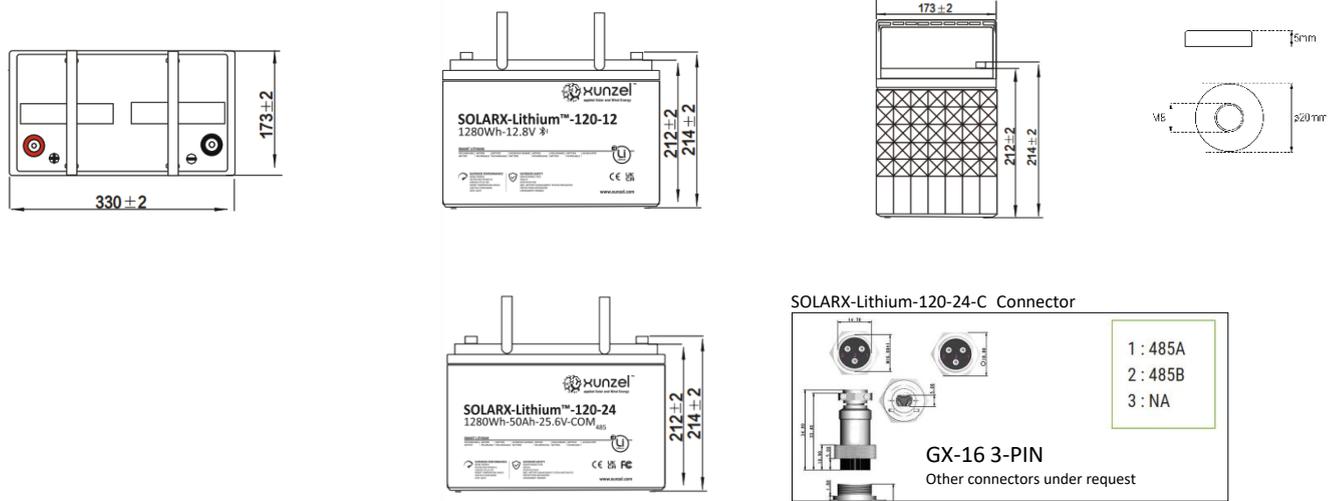
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Dimensions (mm)

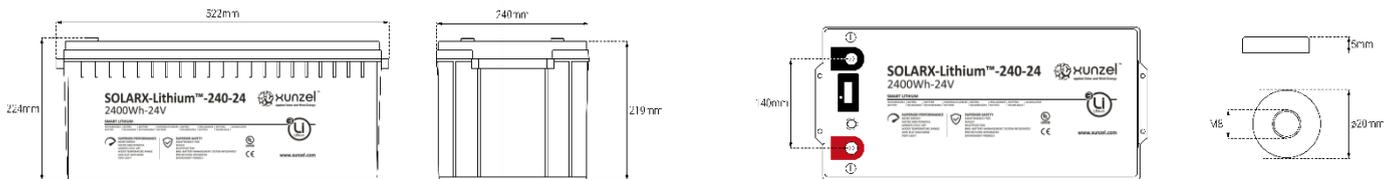
SOLARX-Lithium-48-12



SOLARX-Lithium-120-12
SOLARX-Lithium-120-24-C



SOLARX-Lithium-240-24



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SOLARX-Lithium™ Series. Rechargeable Solar Lithium Iron Batteries

SOLARX-Lithium-5-6
Code | Order Part Number: SOLARXL56



SOLARX-Lithium-5-12
Code | Order Part Number: SOLARXL512



SOLARX-Lithium-8-12
Code | Order Part Number: SOLARXL812



SOLARX-Lithium-14-12
Code | Order Part Number: SOLARXL1412



SOLARX-Lithium-30-12
Code | Order Part Number: SOLARXL3012



SOLARX-Lithium-48-12
Code | Order Part Number: SOLARXL4812



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SOLARX-Lithium™ Series. Rechargeable Solar Lithium Iron Batteries

SOLARX-Lithium-120-12

Code | Order Part Number: SOLARXL12012



SOLARX-Lithium-120-24-COM

Code | Order Part Number: SOLARXL12024C

SOLARX-Lithium-120 / 24V COMM
UART/485 Communications Protocol



SOLARX-Lithium-240-24

Code | Order Part Number: SOLARXL24024



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