POWLSOJX 30A / XR1230 analogue

Third-party instruction and specification archive

Document brand / model	POWLSOJX 30 A PWM controller
Third-party guide	Manuals+ ASIN B0D99RG3JF
Matched product	XR1230 30 A color-LCD controller
Match basis	Enclosure, five-button UI, six terminals, side USB, menus, dimensions and ratings
Archive created	22 July 2026

This is not a manufacturer-issued POWLSOJX PDF. It is a clean archive of a third-party instruction page and the retail media associated with exact Amazon ASIN B0D99RG3JF. It is attached to XR1230 only as a fully checked cross-brand analogue. Settings and battery limits must be verified on the physical controller and against the battery manufacturer's requirements.

1. Safety and installation sequence

Install indoors in a dry, well-ventilated location. Protect the controller from water, condensation, direct sun and heat sources. Isolate all circuits before wiring. Use correctly sized conductors and tighten every terminal securely; loose connections can overheat.

Connection order

Step	Connect	Check
1	Battery to the centre terminal pair	Correct polarity; display starts; 12/24 V detection
2	Solar panel to the left terminal pair	Correct polarity; PV voltage within controller limit
3	DC load to the right terminal pair	Correct polarity; load current within 10 A output limit

Disconnect in the reverse order: load, then solar panel, then battery. Connecting PV before the battery can prevent correct voltage detection or damage the controller. Do not connect an inverter to the load terminals; connect high-current equipment to the battery through its own correctly rated protection.

Terminal markings

Position from front	Printed symbol	Circuit
Left pair	solar panel + / –	PV input
Centre pair	battery + / –	Battery connection and controller supply
Right pair	lamp/load + / –	Controlled low-current DC load output

2. Display, buttons and settings

The color screen shows PV/battery/load state, voltage, current, temperature, battery profile and load mode. The five keys are the lamp/load key, gear/enter key, + and – navigation keys, and back key. Menu items shown by the source include battery type, load mode, advanced settings, restart, factory reset, language, backlight and history.

Battery-profile labels and default voltages can differ by firmware. Do not select a profile from its short label alone. Confirm charge, equalization, low-voltage disconnect and reconnect values against the battery data sheet. Equalization is generally unsuitable for lithium batteries and for many sealed lead-acid batteries.

3. Ratings and limits

Batt voltage	12V-24V		
Charge current	10A	20A	30A
Discharge current	10A	10A	10A
Max solar input	12V battery, the highest 23V; 24V battery when the highest 46V		
Battery type	Lead acid battery 12V/24Vauto Lithium-ion battery (lithium battery) 3 strings 3.7V=11.1V Lithium iron phosphate battery 4 strings 3.2V=12.8V		
Equalization	14.4V(B1)	12.6V(B2)	14.6V(B3)
Discharge stop	10.7V(B01)	9V(B2)	10V(B3)
Discharge reconnect	12.6V(B1)	10.5(B2)	12V(B3)
Voltage of open light	Solar panel 8V(Light lights delay)		
Voltage of close light	Solar panel 8V(Light off delay)		
USB output	USB output, 5V/2.5A(MAX)		
Self-consume	<10mA		
Operating temperature	-35 ~ +60℃		

*All red color voltage x2 while using 24V system

*This instruction is a general manual, such as a slight difference in the physical.

*Product specifications are subject to change without prior notice

Parameter	30 A model
Battery system	12 V / 24 V automatic detection
Maximum charge current	30 A
Maximum load/discharge current	10 A
Maximum PV input with 12 V battery	23 V; up to 360 W
Maximum PV input with 24 V battery	46 V; up to 720 W
USB output	5 V / 2.5 A maximum
Self-consumption	<10 mA
Operating temperature	–35 °C to +60 °C (source claim)

4. Dimensions, maintenance and troubleshooting

Published dimensions are 10.3 × 6.6 × 2.6 cm. Keep ventilation openings clear. Periodically isolate the system, check terminals for looseness, heat discoloration or corrosion, and remove dust with a dry cloth. Do not use liquid cleaner and do not open or modify the controller.

Symptom	Checks
No display	Battery connected first; battery charged; correct polarity; secure centre terminals
Battery not charging	Sunlight; PV polarity; PV voltage; power below 360/720 W limit; no loose wire
Load does not work	Load mode; battery state; correct polarity; load below 10 A; no short circuit
Unexpected voltage setting	Confirm 12/24 V detection and verify every profile value for the battery

5. Source and analogue-compatibility record

Manuals+ exact ASIN B0D99RG3JF instruction page

Manuals+ PDF endpoint (blocked by site protection when archived)

Ubuy listing preserving ASIN and POWLSOJX provenance

Compatibility was checked individually against the XR1230 product photographs. Both units use the same black enclosure, side cut-outs, color LCD, five grey buttons in the same layout, amber six-screw terminal cover, side USB connection, terminal order, menu structure and 10.3 × 6.6 × 2.6 cm dimensions. The published 30 A, 12/24 V, 360/720 W ratings also match the stored product data and nameplate.

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