

Solar Charge Controller XW MPPT-60-150



The Xantrex XW Solar Charge Controller (XW SCC) is a photovoltaic (PV) charge controller that tracks the electrical maximum power point of a PV array to deliver the maximum available current for charging batteries. When charging, the XW SCC regulates battery voltage and output current based on the amount of energy available from the PV array and state-of-charge of the battery.

The XW SCC can be used with 12, 24, 36, 48, and 60-volt DC battery systems and is able to charge a lower nominal-voltage battery from a higher nominal-voltage array. For example, the XW SCC can charge a 12-volt battery from a 36-volt array. This provides flexibility for installers to use longer wiring runs without compromising efficiency. The XW Solar Charge Controller can be installed (in single or multi-unit configurations) with Xantrex XW Hybrid Inverter/Charger(s) or can be used in other solar energy systems where a solar charge controller is needed.

The XW SCC incorporates a dynamic Maximum Power Point Tracking (MPPT) algorithm designed to maximize energy harvest from the PV array. The MPPT constantly adjusts the operating points of the array to ensure it stays on the maximum power point. It does not stop energy harvest to sweep the array like some other competing products. This feature is beneficial all sunlight conditions, especially in areas with fast moving cloud cover and quickly changing solar conditions.

Standard features of the Solar Charge Controller include:

- ▶ Maximum Power Point Tracking (MPPT) delivers maximum available power from PV array to battery bank
- ▶ Integrated PV ground-fault protection
- ▶ Ultra-reliable, convection cooled design does not require a cooling fan – large, aluminum, die-cast heat-sink allows full output current up to 45°C without thermal derating
- ▶ Selectable two or three-stage charging algorithms with manual equalization to maximize system performance and improve battery life
- ▶ Configurable auxiliary output
- ▶ Two-line, 16-character liquid crystal display (LCD) and four buttons for configuration and system monitoring
- ▶ Input over-voltage and under-voltage protection, output over-current protection, and back-feed (reverse current) protection (warning and fault messages appear on LCD when unit shuts down as a protective measure)
- ▶ Over-temperature protection and power derating when output power and ambient temperature are high
- ▶ Battery Temperature Sensor (BTS) included – automatically provides temperature-compensated battery charging
- ▶ Xanbus™-enabled network communications protocol (developed by Xantrex)
- ▶ Communicates settings and activity to other Xanbus™-enabled devices, such as the XW Hybrid Inverter/Charger, the XW System Control Panel (XW SCP), XW Automatic Generator Start (XW AGS), and other XW Solar Charge Controllers.
- ▶ Five-year warranty

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XW Solar Charge Controller

Electrical Specifications

Nominal battery voltage	12, 24, 36, 48, 60 Vdc
Maximum PV array voltage (operating)	140 Vdc
Maximum PV array open circuit voltage	150 Vdc
Array short-circuit current	60 Adc maximum
Maximum and minimum wire size in conduit	#6 AWG to #14 AWG
Total power consumption while operating	15 mA (typical) At idle: 2.5 W (tare)
Charger regulation method:	Three-stage (bulk, absorption, float) Two-stage (bulk, absorption)

Environmental Specifications

Enclosure type	Indoor, ventilated, sheet metal chassis with 7/8" and 1" (22.22 mm and 27.76 mm) knockouts and aluminum heat-sink
Operating temperature range (full power)	-4 to 113 °F (-20 to +45 °C)
Storage temperature	-40 to 185 °F (-40 to +85 °C)
Altitude limit (operating)	Sea level to 15,000 feet (4572 m) @ 15 °C
Dimensions (H × W × D)	14 1/2 × 5 3/4 × 5 1/2" (368 × 146 × 138 mm)
Shipping dimensions (H × W × D)	19 × 9 × 9 3/4" (483 × 229 × 350 mm)
Mounting	Vertical wall mount
Weight (Controller only)	10.75 lb (4.8 kg)
Weight (shipping)	17.6 lb (8 kg)

Optional Accessories

XW System Control Panel	865-1050
XW Automatic Generator Start	865-1060
Network cables:	
3 feet (0.9 m)	809-0935
5 feet (1.5 m)	809-0936
7 feet (2.0 m)	809-0937
10 feet (3.0 m)	809-0938
14 feet (4.3 m)	809-0939
25 feet (7.6 m)	809-0940
50 feet (15.2 m)	809-0941
75 feet (22.9 m)	809-0942
Network terminators:	Male (two per pack): 809-0901 Female (two per pack): 809-0905

Regulatory Approvals

Certified to UL 1741 1st Edition and to CSA 107.1-01 and carries the c(CSA)us mark

For complete details about the XW-MPPT-50-160 please visit www.xantrex.com/xwmppt