

C Series Controllers

Charge, Diversion, or Load Controllers



A charge controller is an important system component that regulates the voltage generated from your renewable energy system and properly maintains your batteries. It protects your batteries from being over and under charged, and ensures maximum battery life. Considered to be the best in the industry, Xantrex Charge Controllers offer a variety of features. The C Series offers three models, the C35, C40, and C60, designed for 35, 40, and 60 amps of DC current.

Features

- ▶ Silent, pulse width modulated (PWM), high efficiency operation.
- ▶ Three-stage battery charging (bulk, absorption, and float) with optional temperature compensation.
- ▶ Automatic overload protection in both active and passive modes.
- ▶ PV array short circuit and reverse polarity protection.
- ▶ Durable construction.
- ▶ Microprocessor controlled.

As a Solar Charge Controller

- ▶ When used as a solar charge controller, the C40 can control 12, 24, or 48 VDC array operation and the C35 and C60 can control 12 and 24 VDC array operation.
- ▶ All units offer selectable settings for NiCad, flooded lead acid, gel, or absorbed glass mat batteries.

As a DC Load Controller

- ▶ As a DC load controller, the C Series has a low voltage disconnect warning indicator and field adjustable set points that govern automatic low and high voltage disconnect.
- ▶ Manual reset switch for emergency low voltage operation.

As a Diversion Controller

- ▶ The C Series automatically directs extra power to a dedicated load, such as an electric water heater, and ensures batteries are never over-charged.

Options

- ▶ Plug-in remote temperature sensor (BTS) for increased charging precision.
- ▶ Cumulative amp-hour meter (CM) that can be installed on the face of the controller, or remotely (CM/R), up to 100 feet (30 m) away.

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Electrical Specifications

Model	C35	C40	C60
Voltage Configurations	12 and 24 VDC	12, 24, and 48 VDC	12 and 24 VDC
Max. PV Open Circuit Array Voltage	55 VDC	125 VDC	55 VDC
Charging / Load Current (@ 25 °C)	35 amps DC	40 amps DC	60 amps DC
Max. Peak Current	85 amps	85 amps	85 amps
Max. Voltage Drop Through Controller	0.30 volts	0.30 volts	0.30 volts
Typical Operating Consumption	15 ma	15 ma	15 ma
Typical Idle Consumption	3 ma	3 ma	3 ma
Recommended Breaker Size	45 amps	50 amps	60 amps rated at 100% continuous duty
Recommended Wire Size	#8 AWG	#8 AWG	#6 AWG rated at 90 °C
Lead Acid Battery Settings	Adjustable	Adjustable	Adjustable
NiCad Battery Settings	Adjustable	Adjustable	Adjustable
Load Control Mode	Low Voltage Reconnect - Adjustable (sticker provided with unit) all models		
	Low Voltage Disconnect - User selectable manual or automatic reconnection - includes warning flash before disconnect and provides a one time, user selected grace period) all models		

General Specifications

Specified Temperature Range	32 °F to 104 °F (0 °C to 40 °C)		
Enclosure Type	Indoor, ventilated, powder coated steel with 3/4" and 1" knockouts		
Unit Weight	2.5 lb (1.2 kg)	3.0 lb (1.4 kg)	3.0 lb (1.4 kg)
Shipping	3.0 lb (1.4 kg)	3.5 lb (1.6 kg)	3.5 lb (1.6 kg)
Dimensions (H x W x D)	8.0" x 5.0" x 2.5" 20.3 cm x 12.7 cm x 6.4 cm	10" x 5" x 2.5" 25.4 cm x 12.7 cm x 6.35 cm	10" x 5" x 2.5" (25.4 cm x 12.7 cm x 6.35 cm)
Shipping Dimensions (H x W x D)	12.4" x 7" x 2.5" 31.5 cm x 17.8 cm x 6.4 cm	12.4" x 7" x 2.5" 31.5 cm x 17.8 cm x 6.4 cm	12.4" x 7" x 2.5" 31.5 cm x 17.8 cm x 6.4 cm
Mounting	Vertical wall mount - indoor only		
Altitude - Operating	15,000' (4,572 m)		
Altitude - Non-Operating	50,000' (15,240 m)		
Warranty	2 years		
Part numbers	C35, C40, C60 - Controllers		
	CM - Front Display Panel		
	CM/R-50, CM/R-100 - Remote Display Panel		
	BTS - Battery temperature sensor		

Features & Options

Regulation Method	Solid state, three-stage (bulk, absorption, and float), pulse width modulation
Field Adjustable Control Setpoints	Two user adjustable voltage setpoints for control of loads or charging sources - settings retained if battery is disconnected
Display Panel	CM, CM/R-50, or CM/R-100 - optional LCD - backlit, alphanumeric display showing battery voltage, DC amperage, cumulative amp hours, and amp hours since last reset - remote includes 50' (15 m) or 100' (30.5 m) cable
Equalization Charge	User selectable manual or automatic equalization - every 30 days
Battery Temperature Sensor	BTS - optional remote battery temperature sensor for increased charging precision

Regulatory Approvals

UL Listed to UL 1741 - 1999 and to CSA 22.2 No. 107.1-95 Standards, CE compliant