

C Series

Charge, Diversion, or Load Controllers

Features

- ▶ The C Series offers three models, the C35, C40, and C60, that can handle 35, 40, and 60 amps of DC current.
- ▶ Silent, pulse width modulated (PWM), high efficiency operation.
- ▶ Three-stage battery charging (bulk, absorption, and float).
- ▶ Automatic overload protection in both active and passive modes.
- ▶ PV array short circuit and reverse polarity protection.
- ▶ Durable construction.
- ▶ Backed by a two year warranty.
- ▶ 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 system and field adjustable set points that govern automatic low and high voltage disconnect.
- ▶ Manual reset switch for emergency low voltage operation.

As a Diversion Load 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.



CM/R



C35



C40 & C60

Electrical Specifications	C35	C40	C60
Voltage Configurations	12 and 24 VDC	12, 24, and 48 VDC	12 and 24 VDC
Maximum 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
Maximum Peak Current	85 amps	85 amps	85 amps
Maximum 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)	Adjustable (sticker provided with unit)	Adjustable (sticker provided with unit)
Low Voltage Disconnect	User selectable manual or automatic reconnection - includes warning flash before disconnect and provides a one time, user selected grace period		

Mechanical Specifications			
Specified Temperature Range	32 °F to 104 °F (0 °C to 40 °C)	32 °F to 104 °F (0 °C to 40 °C)	32 °F to 104 °F (0 °C to 40 °C)
Enclosure Type	Indoor, ventilated, powder coated steel with 3/4" and 1" knockouts	Indoor, ventilated, powder coated steel with 3/4" and 1" knockouts	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	Vertical wall mount - indoor only	Vertical wall mount - indoor only
Altitude			
Operating	15,000' (4,572 m)	15,000' (4,572 m)	15,000' (4,572 m)
Non-Operating	50,000' (15,240 m)	50,000' (15,240 m)	50,000' (15,240 m)

Features and 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
Control 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

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