

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