TITIT CML-USB Series (5-20 A)

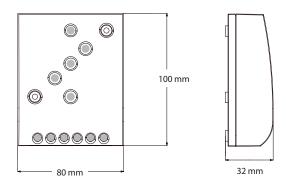
Solar Charge Controllers w/ USB Charging Output







Technical Drawing



Product Introduction

The CML-USB series is designed for-low cost applications and is ideal for small solar systems in need of a low battery disconnect feature. The electronic circuit is equipped with a microcontroller that provides high-efficiency charging technology together with a number of outstanding features like status display, warning and safety functions.

Leisure and rural electrification systems are the typical applications for the CML-USB controllers. They provide a perfect solution for cost-sensitive systems that require state-of-the-art system management.

A built-in USB charging output is ideal for charging mobile devices off a solar home system. Low-voltage disconnect prevents battery damage from deep discharging.

Product Features

- 3 battery state-of-charge LEDs
- 4-stage PWM regulation
- · Load disconnect prewarning by acoustic signal
- · Boost, equalization, and float charging
- USB charging output for mobile devices

Optional Accessories

CX-DR2

• DIN rail mounting plate that enables mounting the CML-USB controller on standard 35 mm DIN rail

Technical Data

| Туре | CML-USB-05 | CML-USB-10 | CML-USB-20 |
|------------------------------|--|------------|------------|
| System Voltage | 12 / 24 V auto recognition | | |
| Max. Charge/Load Current | 5 A | 10 A | 20 A |
| Float Charge | 13.8 / 27.6 V (25 °C) | | |
| Main Charge | 14.4 / 28.8 V (25 °C), 0.5 h daily | | |
| Boost Charge | 14.4 / 28.8 V (25 °C), 0.5 h daily activation: battery voltage <12.3 / 24.6 V | | |
| Equalization Charge | 14.8 / 29.6 V (25 °C), 0.5 h daily activation: battery voltage <12.1 / 24.2 V (at least every 30 days) | | |
| Deep-Discharge Protection | 11.4-11.9 V / 22.8 -23.8 V (by SOC) 11.0 / 22.0 V (by voltage) | | |
| Reconnect Level | 12.8 / 25.6 V | | |
| Overvoltage Protection | 15.5 / 31.0 V | | |
| Undervoltage Protection | 10.5 / 21.0 V | | |
| Max. PV Panel Voltage | 30 V / 50 V | | |
| Temperature Compensation | -24 mV/K (12 V); -48 mV/K (24 V) | | |
| Idle Self-Consumption | < 4 mA | | |
| Grounding | Common Positive | | |
| Ambient Temperature | -40 to +45 °C | | |
| Max. Altitude | 4,000 m above sea level | | |
| Battery Type | Lead acid (gel, AGM, flooded) | | |
| USB Charging Port | 5 V, 700 mA | | |
| Max. Wire Cross Section | 16 mm ² (AWG 6) | | |
| Dimensions (WxHxD) | 80 x 100 x 32 mm / 3.1 x 4 x 1.3 in | | |
| Weight | 0.16 kg / 0.35 lb | | |
| Ingress Protection | IP20 | | |
| Certificates | CE compliant, RoHS compliant | | |
| Warranty | 5 years | | |