

CML series (5 – 20 A)

Solar Charge Controllers with LED Indication



- Battery state-of-charge indication by means of 3 LEDs
- Load disconnect prewarning by acoustic signal
- Three-stage PWM charging algorithm with (integrated) temperature compensation (boost, equalization, and float charging)
- Automatic 12/24 V detection
- Large terminals: up to 16 mm² cable
- SOC- and voltage-controlled LVD
- Fully electronically protected

The CML charge controllers are equipped with a number of outstanding features like status display, warning, and protection functions.

The temperature-compensated three-stage PWM charging algorithm (boost-equalization-float) is adjustable to sealed and vented lead-acid batteries. The CML series also allows

either SOC- or voltage-controlled low-voltage disconnect function.

The battery status is clearly indicated by three LEDs. This was the first controller in its price class available on the market to incorporate an alarm signal for low-voltage disconnect.

CX series (10 – 40 A)

Solar Charge Controller with LCD Display

Type	CX 10	CX 20	CX 40
System voltage	12/24 V auto recognition		
Max. charge/load current	10 A	20 A	40 A
Float charge	13.7/27.4 V (25 °C)		
Main charge	14.4/28.8 V (25 °C), 30 min. (daily)		
Boost charge	14.4/28.8 V (25 °C), 2 h Activation: battery voltage < 12.3/24.6 V		
Equalization	14.8/29.6 V (25 °C), 2 h Activation: battery voltage < 12.1/24.2 V		
Deep discharge protection: State-of-charge dependent	A: 11.4 – 11.9 V / 22.8 – 23.8 V B: 11.0 – 11.75 V / 22.0 – 23.5 V		
Voltage dependent	A: 11.0/22 V B: 11.5/23 V		
Adaptive	11.0 – 12.2 V / 22.0 – 24.4 V		
Reconnect level	12.8/25.6 V		
Overvoltage protection	15.5/31.0 V		
Undervoltage protection	10.5/21.0 V		
Max. panel voltage	30 V in 12 V system		
(Overvoltage protection by varistor)	50 V in 24 V system		
Temperature compensation (Charge voltage)	–25 mV/K at 12 V –50 mV/K at 24 V		
Own consumption	< 4 mA		
Grounding	Positive grounding possible		
Ambient temperature	–20 to +50 °C		
Max. height	4,000 m above sea level		
Battery type	Lead acid (GEL, AGM, flooded)		
Wire cross section	Up to 16 mm ²		
Weight	168 g		179 g
Dimensions (W x H x D)	92 x 93 x 38 mm		
Type of protection	IP22		