

Technical Datasheet

## **SOLAR-MSC**

Solar Charge and Discharge Controller





An upgraded 3-stage PWM charging algorithm is adopted. Application of an equalizing charging to the battery periodically or when over discharged, can effectively prevent the battery from non-equalization and sulfuration, thus extending the battery's service life.With temperature compensation employed, charging parameters can be automatically adjusted.A wide range of load working modes facilitate the product's application to different types of load. By virtue of an advanced load starting method, large-capacitance loads can be started smoothly.The product provides a dot matrix graphic LCD screen and a human-machine interface with a key.Boasting an industrial grade design, the product can function well in various tough conditions.

#### **SOLAR–MSC** Solar Charge and Discharge Controller



# Technical Data

System voltage (Auto)	Automatic recognition of 12 V/ 24 V DC	
No-load loss	< 5mA/12VI< 9mA/24V	
Rated current	10A @ Solar-MSC10 20A @ Solar-MSC20	
Max. Solar energy input voltage	<55V	
Max. voltage at the battery end	<35V	
Overvoltage protection	17.0V@12V Battery 34.0V@24V Battery	
Equalizing charging voltage	14.6V@12V Battery 29.2V@24V Battery	
Boost charging voltage	14.4V@12V Battery 28.8V@24V Battery	
Charging recovery voltage	13.2V@12V Battery 26.4V@24V Battery	
Over-discharge recovery voltage	12.6V@12V Battery 25.2V@24V Battery	
Over-discharge voltage	11.1V@12V Battery 22.2V@24V Battery	
Equalizing charging interval	7days	
Equalizing charging time	1H	
Boost charging time	2Н	
Temperature compensation	-3.0mV/°C/2V	
Light control voltage	Light control on 5V@12V Battery Light control on 10V@24V Battery Light control off 6V, set value plus 1V	
Light control judgment time	1minute	
Operating temperature	-25°C to +55 °C	
IP protection degree	IP30	
Net weight	100g @ Solar-MSC10 160g @ Solar-MSC20	
Product dimensions	103×71×36(mm) @ Solar-MSC10 130×75×38(mm) @ Solar-MSC20	
Protection functions	Solar panel short circuit and reverse-connection protection Over-temperature, overload and short circuit protection	
Certification	(150) CE 🏠	

Project	Fixture#	Date
		Firm



### Ordering Information

Choose the option that suits your need and write its corresponding code on the appropriate line to form the product code.

Example product code: Solar-MSC10

SOLAR-MSC - -

Rated charging current

Rated charging currentCodeDescription1010A2020A

#### **State Incicators**



LCD Icon	Indicated Object	State
*	Daytime or charging	Steady on
	Night recognition	Steady off
> :``@́`:	Load short circuit or overload	Quick flashing
	Load switched on	Steady on
	Load switched off	Steady off
	Normal battery	All on
	Over discharge	Only the outline flashes
	Overvoltage	3 dashes flashing

#### **Technical Drawing**





Unit: mm

#### **Technical Drawing**





Solar-MSC10

External dimensions: 103×71×36(mm) Installation dimensions: 96×60 (mm) Installation hole diameter: 3.5(mm)



#### Solar-MSC20

External dimensions: 130×75×38 (mm) Installation dimensions: 122×64(mm) Installation hole diameter: 3.5(mm)

Unit: mm