

**Efficient**

- > Active MPP tracking
- > Efficiency over 98%

**Robust**

- > Indoor and outdoor through IP65
- > Fanless
- > Maximum nominal power up to 40 °C

**Easy to use**

- > Easy installation and commissioning
- > Automatic control via Sunny Island
- > Single point of operation from Sunny Island

**Flexible**

- > For 12 / 24 / 48 V
- > Up to four devices in parallel
- > Modular and extendable



# SUNNY ISLAND CHARGER 40

DC coupling by SMA: maximum efficiency, anywhere

AC and DC coupling optimally calibrated to each other and for the first time from one manufacturer: The Sunny Island Charger 40 developed by SMA can be used universally for 12, 24, and 48 V. Its broad DC input voltage range makes sensible system configuration possible for almost all PV modules. Thanks to the integrated MPP tracking, the charger guarantees an energy yield that is 15 - 30 % higher than that of conventional shunt and serial charge controllers. What is unique about charge controllers of this power range is the high protection class, the fanless operation, and the broad temperature range that makes worldwide use even in harsh ambient conditions possible. The easy installation and completely automatic customization of the controller settings by the Sunny Island make its commissioning very easy. Integrated in Sunny Island's battery management, the battery is always optimally charged.

# Technical data

## SUNNY ISLAND CHARGER 40

	SIC40 MPT		
	12 V	24 V	48 V
<b>Input (PV generator)</b>			
Max. PV power	630 W	1250 W	2100 W
Max. DC voltage	140 V DC		
Optimal MPPT voltage range	25 V - 60 V	40 V - 80 V	70 V - 110 V
Number of MPP trackers	1		
Max. PV power	40 A	40 A	30 A
<b>Output (battery)</b>			
DC nominal power to 40 °C	600 W	1200 W	2000 W
Nominal battery voltage	12 V	24 V	48 V
Battery voltage range	8 - 15.6 V	16 - 31.5 V	36 - 63 V
Battery type	Locked and self-contained lead batteries		
Max. charging current	50 A	50 A	40 A
Continuous charging current	50 A	50 A	40 A
Charge control	IUoU		
<b>Efficiency / Power consumption</b>			
Max. efficiency	98 %		
Euro-eta	97.3 %		
Internal consumption during the day	< 5 W		
Internal consumption at night	< 3 W		
<b>General Information</b>			
Dimensions (width x height x depth) in mm	421 x 310 x 143		
Protection class according to DIN EN 60529	IP65		
Weight	10 kg		
Device protection	Short circuit / pole confusion / overload / overvoltage and undervoltage / overtemperature and undertemperature		
Certificates and approvals	CE		
Display Screen	1 x multicolored LED		
Setting the Parameters	Plug and play in combination with SI 5048, SI 2224, SI 2012 (SIC-PB required) DIL switch with stand-alone applications		
Parallel operation	up to 4 devices over the sync bus		
Interface for Sunny Island sync bus	sync bus piggy back (SIC-PB)		
External temperature sensor	optional (type KTY)		
Warranty	5 years		
<b>Ambient conditions</b>			
Allowable ambient temperature during operation	-25 °C ... +60 °C		
Humidity	0 % - 100 %		

