

SOLARCON SCO

MPPT Charge Controller



Wall Mount Enclosure

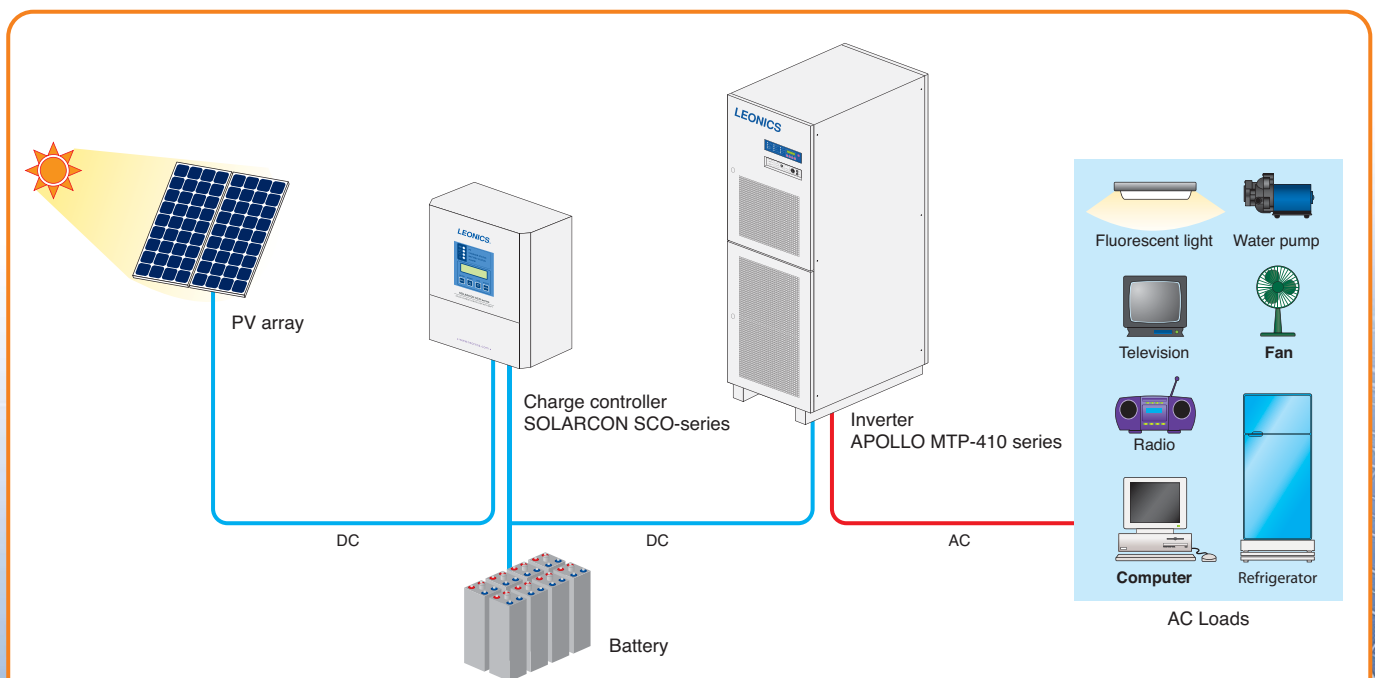


Rack Mount 2U Enclosure with LCD display



Rack Mount 2U Enclosure with LED display

- Advanced microprocessor control
- Maximum Power Point Tracking (MPPT)
- Buck regulator wide input range
- 3-step charging to provide quick and safe charging for battery
- Compatible with sealed lead acid (default), lead acid, Li-Ion (NMC, LFP) and SoNick batteries
- PV and battery reverse polarity protection
- Over charge and over discharge protection
- Lightning surge protection
- PV ground fault protection (option)
- Automatic cooling fan (outside enclosure)
- Comprehensive LED indication and LCD display
- Power and event data logger
- IP30 protection enclosure (IP31 protection enclosure is optional)
- 2 years warranty (option for 3 and 5 years)
- ISO 9001, ISO 14001 and ISO 45001 certified factory



The SOLARCON SCO-series charge controller is the most sophisticated solar charger with PV Maximum Power Point Tracking (MPPT) algorithm. The charge controller equipped with advanced microprocessor control to get the maximum power from PV to charge battery with LCD display and front panel for easy and accurate setting more over the digital meter with 180 days power and event logger are inclusive.

SOLARCON SCO-series MPPT Charge Controller

Model	Wall mount (WM)	SCO-4860	SCO-4880	SCO-48120
	Rack mount (RM)	SCO-4860/RM	SCO-4880/RM	SCO-48120/RM

INPUT (Configuration of PV in series within these voltage range)

V _{mp} of PV*	88 - 126 Vdc			
Maximum V _{oc} of PV*	150 Vdc			
Maximum PV power**	3.3 kWp	4.4 kWp	6.6 kWp	
Number of PV input	WM	1 x Terminal	1 x Terminal	2 x Terminal
	RM	3 x MC4 or 1 x terminal	3 x MC4 or 1 x terminal	4 x MC4 or 1 x terminal
Max. PV current	50 A	75 A	100 A	
Max. current (I _{sc}) per MC4	30 A			

OUTPUT (at 25°C)

Nominal battery voltage	48 Vdc		
Boost charging voltage	52.0 - 60.0 Vdc (default = 56.4 Vdc)		
Float charging voltage	48.0 - 56.0 Vdc (default = 54.0 Vdc)		
Voltage regulation	± 0.5 V (steady load)		
Low voltage alarm	40.0 - 48.0 Vdc (default = 46 Vdc)		
Low battery voltage disconnected	39.6 - 47.6 Vdc (default = 43.2 Vdc)		
Reconnect voltage	46.0 - 54.0 Vdc (default = 50.0 Vdc)		
Maximum charging current	60 A	80 A	120 A

BATTERY

Type	Sealed lead acid (VRLA) (default), Deep cycle lead acid (LA), Li-Ion (NMC, LFP), SoNick		
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EFFICIENCY

Charger peak efficiency	> 98.6%
MPPT efficiency	> 99%

PROTECTION

Protection	PV and battery reverse polarity, High battery voltage, Low battery voltage, Over temperature, Over charge and discharge, PV ground fault (option), PV transient voltage surge (option)
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INDICATOR

LED	Battery level, PV voltage level, Operation status, Alarm
LCD	Digital meter, 180 days power and event logger

COMMUNICATION INTERFACE

Selectable by setting	RS-485 (default) or RS-232 for WM, RS-485 for RM
Dry contact signal	Charger fail and low battery voltage disconnected

SYSTEM

Control	Automatic cooling fan, Maximum Power Point Tracking (MPPT)
Temp. compensation range	-5 to 7 mV / cell / celsius (option)

ENVIRONMENT

Temperature	0 - 50°C (Extended range: 0 - 70°C) (Output characteristic derate above 50°C)
Relative humidity	0 - 95% (non-condensing)
Pollution degree classification	III
Max. operation altitude	2,000 m / 6,560 feet (without derating)

DESIGN REGULATION

Standard	IEC 61683, IEC 62109-1
Ingress protection	IP30 (IP31 is optional)
Protective class	I
Overvoltage category	II (input and output) (in accordance with IEC 62109-1)

DIMENSION (W x H x D) (approximate in cm.)

Wall mount case	23 x 31 x 16 cm	32.3 x 42 x 16 cm	
Rack mount case (2U)	48.2 x 8.9 x 45.3 cm (2U)	48.2 x 8.9 x 45.3 cm (2U)	48.2 x 8.9 x 45.3 cm (2U)

WEIGHT (approximate in kg.)

Wall mount case	7.2 kg	7.6 kg	12.2 kg
Rack mount case (2U)	11 kg	11 kg	13 kg

* The V_{mp} and V_{oc} used for configuration must be considered with temperature coefficient effected by environment at each install location.

** For operation of charge controller at ambient temperature ≤ 25°C. The peak PV power must be derated 15% when charge controller operates at ambient temperature over than 25°C. Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.

Authorized Distributor

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