

## SOLARCON SCM

### MPPT Charge Controller



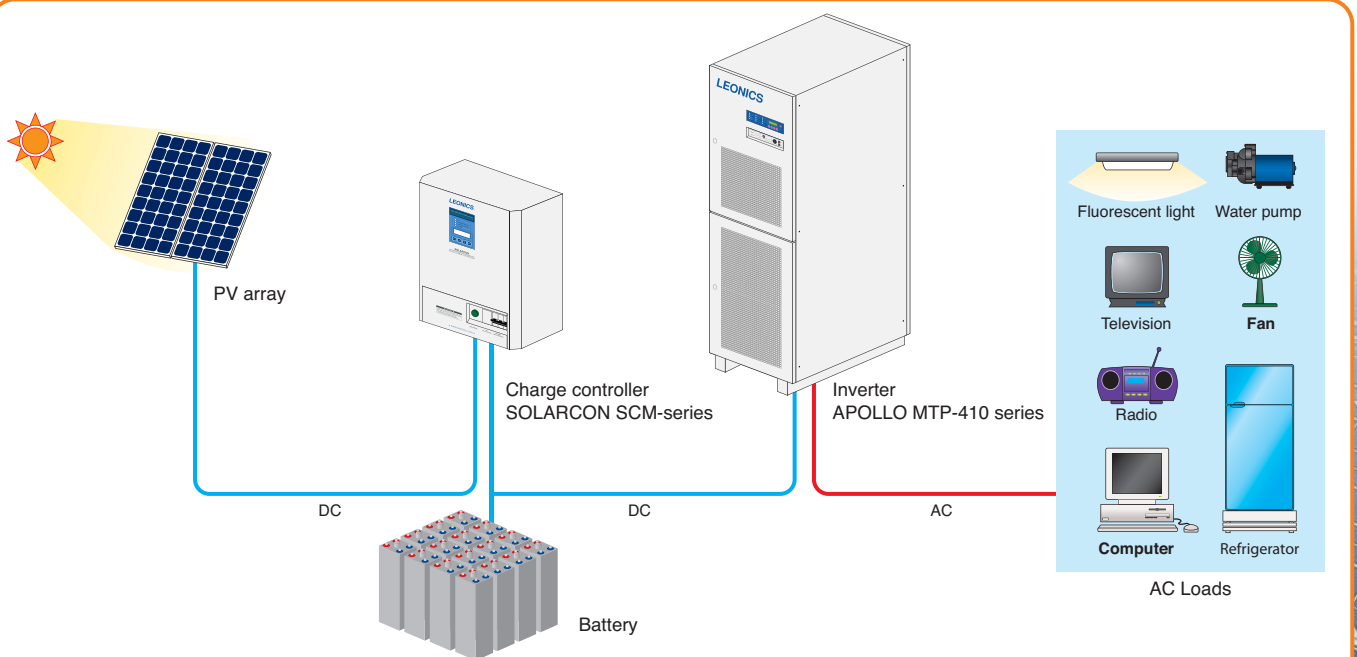
Wall mount type

- Battery reverse polarity alarm
- Over charge, over discharge protection
- Lightning surge protection
- Automatic cooling fan (outside enclosure)
- Comprehensive LED indication and LCD display
- Power and event data logger
- Reverse PV polarity protection and alarm (option)
- 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

- Advanced microprocessor control
- Maximum Power Point Tracking (MPPT)
- Boost regulator wide input range
- Automatic ON-OFF
- 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



Rack mount type



The SOLARCON SCM-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

# LEONICS® SOLARCON SCM-series MPPT Charge Controller



| Wall Mount/Tower Model | SCM-12035    | SCM-12070    | SCM-120105    | SCM-120140 | SCM-24035    | SCM-24070    | SCM-240105    | SCM-240140    | SCM-360200 | SCM-360300 | SCM-360400 | SCM-480150 | SCM-480200 | SCM-480300 |
|------------------------|--------------|--------------|---------------|------------|--------------|--------------|---------------|---------------|------------|------------|------------|------------|------------|------------|
| Rack Mount Model       | SCM-12035/RM | SCM-12070/RM | SCM-120105/RM |            | SCM-24035/RM | SCM-24070/RM | SCM-240105/RM | SCM-240140/RM |            |            |            |            |            |            |

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

|                        |              |          |          |          |               |          |          |          |               |        |         |          |               |           |
|------------------------|--------------|----------|----------|----------|---------------|----------|----------|----------|---------------|--------|---------|----------|---------------|-----------|
| V <sub>mp</sub> of PV* | 85 - 110 Vdc |          |          |          | 170 - 220 Vdc |          |          |          | 255 - 330 Vdc |        |         |          | 340 - 440 Vdc |           |
| Tracking voltage range | 48 - 110 Vdc |          |          |          | 96 - 220 Vdc  |          |          |          | 144 - 330 Vdc |        |         |          | 192 - 440 Vdc |           |
| V <sub>oc</sub> of PV* | < 138Vdc     |          |          |          | < 276 Vdc     |          |          |          | < 414 Vdc     |        |         |          | < 552 Vdc     |           |
| Maximum current        | 35 A         | 70 A     | 105 A    | 140 A    | 35 A          | 70 A     | 105 A    | 140 A    | 200 A         | 300 A  | 400 A   | 150 A    | 200 A         | 300 A     |
| Maximum PV power**     | 3.4 kWp      | 6.88 kWp | 10.3 kWp | 13.7 kWp | 6.88 kWp      | 13.7 kWp | 20.6 kWp | 27.5 kWp | 61.95 kWp     | 91 kWp | 124 kWp | 60.6 kWp | 82.6 kWp      | 121.1 kWp |

OUTPUT (at 25°C)

|                              |                   |  |  |  |                   |  |  |  |                   |  |  |  |                   |  |
|------------------------------|-------------------|--|--|--|-------------------|--|--|--|-------------------|--|--|--|-------------------|--|
| Nominal battery voltage      | 120 Vdc           |  |  |  | 240 Vdc           |  |  |  | 360 Vdc           |  |  |  | 480 Vdc           |  |
| Boost charging voltage       | 130.0 - 150.0 Vdc |  |  |  | 260.0 - 300.0 Vdc |  |  |  | 390.0 - 450.0 Vdc |  |  |  | 520.0 - 600.0 Vdc |  |
| Float charging voltage       | 120.0 - 140.0 Vdc |  |  |  | 240.0 - 280.0 Vdc |  |  |  | 360.0 - 420.0 Vdc |  |  |  | 480.0 - 560.0 Vdc |  |
| Low voltage alarm            | 100.0 - 120.0 Vdc |  |  |  | 200.0 - 240.0 Vdc |  |  |  | 300.0 - 360.0 Vdc |  |  |  | 400.0 - 480.0 Vdc |  |
| Low voltage cut off (signal) | 99.0 - 119.0 Vdc  |  |  |  | 198.0 - 238.0 Vdc |  |  |  | 297.0 - 357.0 Vdc |  |  |  | 396.0 - 476.0 Vdc |  |
| Reconnect voltage (signal)   | 115.0 - 135.0 Vdc |  |  |  | 230.0 - 270.0 Vdc |  |  |  | 345.0 - 405.0 Vdc |  |  |  | 460.0 - 540.0 Vdc |  |

BATTERY

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

EFFICIENCY

|                         |       |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Charger peak efficiency | > 98% |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|

PROTECTION

|            |                                                                                                        |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------------|--------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Protection | PV transient voltage surge, High battery voltage, Low battery voltage, Over temperature, Over charging |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alarm      | Battery reverse polarity                                                                               |  |  |  |  |  |  |  |  |  |  |  |  |  |

INDICATOR

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

COMMUNICATION INTERFACE

|                    |                                                   |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|---------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| RS-232             | DB-9 connector                                    |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RS-485             | Option                                            |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 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 - 45°C                                |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Relative humidity               | 0 - 95% (non-condensing)                |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pollution degree classification | III                                     |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Max. operating 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 | 42 x 53 x 24            | 50 x 64 x 26.6     | 42 x 53 x 24 | 50 x 64 x 26.6          | -                       |                |
| Rack mount case | 48.2 x 22.2 x 64.5 (5U) | 48.2x28.2x64.5(6U) | -            | 48.2 x 22.2 x 64.5 (5U) | 48.2 x 28.2 x 64.5 (6U) | -              |
| Tower case      | -                       |                    |              |                         | 60 x 210 x 100          | 60 x 210 x 100 |

WEIGHT (approximate in kg.)

|                              |             |              |             |          |             |             |             |             |     |     |     |     |     |     |
|------------------------------|-------------|--------------|-------------|----------|-------------|-------------|-------------|-------------|-----|-----|-----|-----|-----|-----|
| Wall mount / Rack mount case | 24kg / 25kg | 27kg / 28 kg | 40kg / 41kg | 48kg / - | 23kg / 24kg | 30kg / 31kg | 34kg / 37kg | 38kg / 40kg | -   | -   | -   | -   | -   | -   |
| Tower case                   |             |              |             |          |             |             |             |             | 361 | 414 | 467 | 400 | 419 | 460 |

\*The V<sub>mp</sub> and V<sub>oc</sub> 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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