

RP- SP012C series

Solar & PoE Battery Charger

RP-SP012C Solar & PoE Battery Charger equips dual input sources to charge batteries, the first is via PoE source and secondary solar panels in order to provide redundancy and insure 100% uptime for critical applications. The solar panel input takes priority, when receive sunshine, the power usage would be minimized.

RP-SP012C has a built in PoE inserter with DC to DC converter that delivers optional PoE power 12V, 18V, 24V or 48V. The device supports full electronic protections for short circuit, reverse current, overvoltage, over charge and over discharge.

RP-SP012C helps users to monitor the current status easily and efficiently by its advanced LED indication. The 5 LEDs Indicate: current is being supplied by a POE source or solar panel, battery is charging, load output is turned on and a warning if battery is connected with reverse polarity.

Solar and Battery Connections are via terminal block for wire size up to 12AWG. PoE Input and Output is via RJ45 shielded connectors. There is a secondary output connector on the back side with terminals for connecting other electronics to the controller using up to 12AWG wire. This secondary output is equal to the battery voltage.



Features

- Dual Input: solar panel or PoE to charge 12V battery and dual outputs: PoE output on front or terminal block on rear
- Built-in DC/DC converter, with various passive PoE output, 12V, 18V, 24V, 48V available
- PoE input power 30W Min. for only charge, 80W Min. for full load
- Active PoE Output support 802.3af handshake (SP012C-48D)
- DIN Rail Mountable

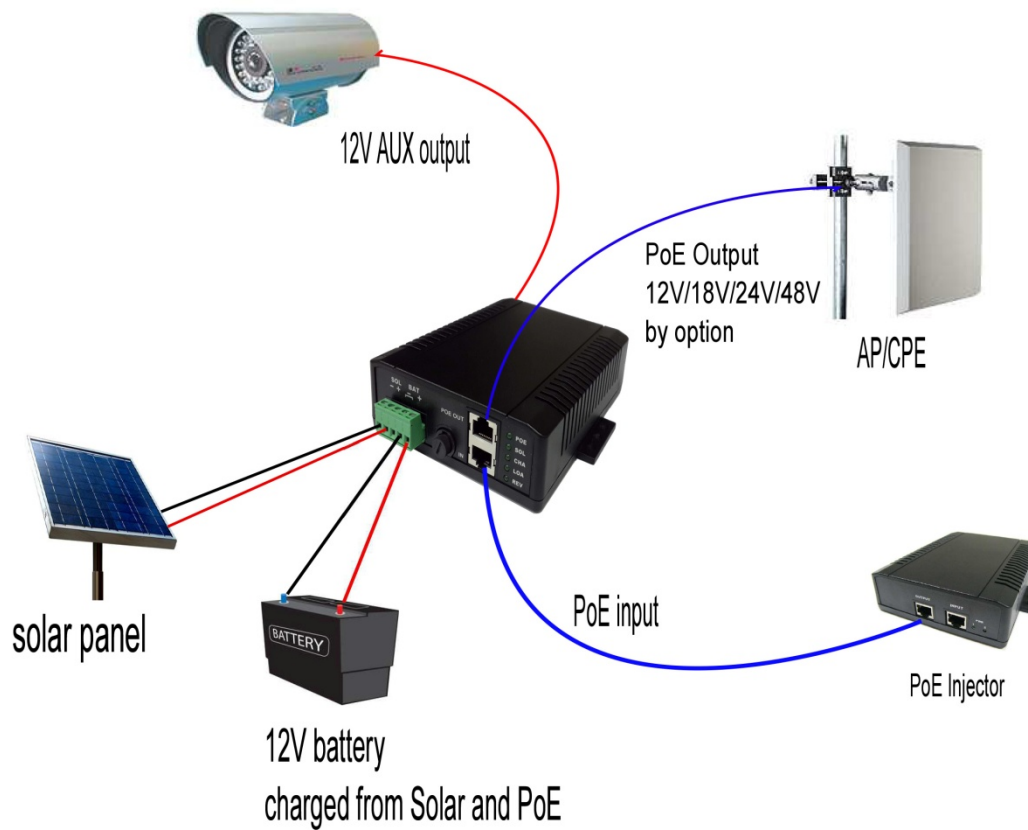
Application

- Remote Power Systems; Surveillance, Sensors
- Wireless Station; AP/Client/Repeaters
- UPS Systems; Lighting, Fences, Gates

Specifications

| Input Source type | <ul style="list-style-type: none"> • Solar Panel • PoE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|---|------------------|-----------------------------|------------------|------------|-------|----------------------------|-----------|-----------------------------|-----------|------------|------------------------|-------------|--------|-------------|---|-----|--------------------|----------|--------------|-----------|------------|--------------|-----|--------------|---|-----|---------------|-----|---------------|---|-----------------|------------------|-----------------|------------------|---|-----------------|------------------|-----------------|------------------|---|-----|---------------|-----|---------------|---|------|------------------|------|------------------|---|------|------------------|------|------------------|
| Input Voltage | <ul style="list-style-type: none"> • Solar Panel: 18V~36Vmaxe • POE: 18V~57V, 30W Min. For Only Charge, 80W Min. For Full Load | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OUTPUT | <table border="1"> <thead> <tr> <th>Model</th> <th>SP012C-12</th> <th>SP012C-18</th> <th>SP012C-24</th> <th>SP012C-48</th> <th>SP012C-48D</th> </tr> </thead> <tbody> <tr> <td>Output 1 (Terminal)</td> <td colspan="5">12V/1.5A</td> </tr> <tr> <td>Output 2 (RJ45)</td> <td>12V/1.0A</td> <td>18V/1.67A</td> <td>24V/1.25A</td> <td>48V/0.625A</td> <td>48V/0.35A</td> </tr> </tbody> </table> | | | | | Model | SP012C-12 | SP012C-18 | SP012C-24 | SP012C-48 | SP012C-48D | Output 1 (Terminal) | 12V/1.5A | | | | | Output 2 (RJ45) | 12V/1.0A | 18V/1.67A | 24V/1.25A | 48V/0.625A | 48V/0.35A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Output 2 (RJ45) | 12V/1.0A | 18V/1.67A | 24V/1.25A | 48V/0.625A | 48V/0.35A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Battery Charge Type | <ul style="list-style-type: none"> • Solar Panel: charge current depends on the wattage of the solar panel • POE: fixed current, 2.6A max | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Battery Type | <ul style="list-style-type: none"> • 12V Lead Acid Battery | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Protection | <ul style="list-style-type: none"> • Battery Polarity Reverse Protection • Battery Over Charge Protection • Battery Over Discharge Protection • Solar Panel Polarity Reverse Protection • Solar Panel Over Charge Protection • Output Short Circuit Protection • Output Over Voltage Protection • POE Output Short Circuit Protection • Externally fused with a standard replaceable fuse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Environment | <ul style="list-style-type: none"> • Operation Temperature: -20 ~ +60°C • Storage Temperature: -40 ~ +85°C • Operation Humidity: 5% ~ 90% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling | <ul style="list-style-type: none"> • Free air cooling | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dimention | <ul style="list-style-type: none"> • L150 x W118 x H40mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PoE Pinout | <table border="1"> <thead> <tr> <th></th> <th colspan="2">RJ-45 Input (Data & Power)</th> <th colspan="2">RJ-45 Output (Data & Power)</th> </tr> <tr> <th>Pin</th> <th>Symbol</th> <th>Description</th> <th>Symbol</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>RX+</td> <td>Data Receive</td> <td>RX+</td> <td>Data Receive</td> </tr> <tr> <td>2</td> <td>RX-</td> <td>Data Receive</td> <td>RX-</td> <td>Data Receive</td> </tr> <tr> <td>3</td> <td>TX+</td> <td>Data Transmit</td> <td>TX+</td> <td>Data Transmit</td> </tr> <tr> <td>4</td> <td>(-Vdc)_return +</td> <td>Feeding power(+)</td> <td>(-Vdc)_return +</td> <td>Feeding power(+)</td> </tr> <tr> <td>5</td> <td>(-Vdc)_return +</td> <td>Feeding power(+)</td> <td>(-Vdc)_return +</td> <td>Feeding power(+)</td> </tr> <tr> <td>6</td> <td>TX-</td> <td>Data Transmit</td> <td>TX-</td> <td>Data Transmit</td> </tr> <tr> <td>7</td> <td>-Vdc</td> <td>Feeding power(-)</td> <td>-Vdc</td> <td>Feeding power(-)</td> </tr> <tr> <td>8</td> <td>-Vdc</td> <td>Feeding power(-)</td> <td>-Vdc</td> <td>Feeding power(-)</td> </tr> </tbody> </table> | | | | | | RJ-45 Input (Data & Power) | | RJ-45 Output (Data & Power) | | Pin | Symbol | Description | Symbol | Description | 1 | RX+ | Data Receive | RX+ | Data Receive | 2 | RX- | Data Receive | RX- | Data Receive | 3 | TX+ | Data Transmit | TX+ | Data Transmit | 4 | (-Vdc)_return + | Feeding power(+) | (-Vdc)_return + | Feeding power(+) | 5 | (-Vdc)_return + | Feeding power(+) | (-Vdc)_return + | Feeding power(+) | 6 | TX- | Data Transmit | TX- | Data Transmit | 7 | -Vdc | Feeding power(-) | -Vdc | Feeding power(-) | 8 | -Vdc | Feeding power(-) | -Vdc | Feeding power(-) |
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| 2 | RX- | Data Receive | RX- | Data Receive | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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Application



Ordering information

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|----------------------|---|
| RP-SP012C-12 | Solar & PoE Battery Charger with 12V Passive PoE output |
| RP-SP012C-18 | Solar & PoE Battery Charger with 18V Passive PoE output |
| RP-SP012C-24 | Solar & PoE Battery Charger with 24V Passive PoE output |
| RP-SP012C-48 | Solar & PoE Battery Charger with 48V Passive PoE output |
| RP-SP012C-48D | Solar & PoE Battery Charger with 48V 802.3af PoE output |