# HELIOS
## POWER SOLUTIONS
*Global Solutions Personal Focus*

*Communication options available*

♦ 24 Month Warranty

**Z367**

- High performance *No-Break*$^{TM}$ DC UPS system
- Automatic battery condition test option
- Separate outputs for load and battery
- Battery detection - regular battery presence and battery circuit integrity checks
- Battery deep discharge protection
- ECB for battery overload & short circuit protection
- Reverse battery polarity protection
- Automatic temperature compensated output volts
- Power loss & battery system alarms
- No transition switching to backup battery
- LED flash codes for precise fault indication
- Optional communication interface allows remote monitoring & user control of BCT function - *i* versions

## SPECIFICATIONS    All specifications are typical at nominal input, full load and at 20°C unless otherwise stated.

### ELECTRICAL

| | |
|---|---|
| **Input voltage** | |
| ▪ standard | 180V - 264VAC 45-65Hz |
| ▪ optional | 88V- 132VAC 45-65Hz, |
| **Fusing / protection** | Input fuse & varistor<br>Output fuse & ECB for battery circuit |
| **Isolation** | 1KV DC input - output / earth |
| **Efficiency** | ≥ 85% |
| **Inrush current** | <30A, 1.8ms |
| **Output power** | 100W |
| **Output voltage** | 13.8, 27.6, 34.5, 41.4, 55.2VDC |
| **Voltage adj. range** | 85 - 105% of Vout |
| **Temp. compensation** | Temperature sensor on 1.7m lead with adhesive pad: -4mV / °C / cell ±10% |
| **Current Limit** | **PSU:** 100% rated current<br>**Battery:** 25-100% PSU current |
| **Line regulation** | <0.04% over AC input range |
| **Load regulation** | <0.5% open circuit to 100% load |
| **Noise** | <0.3% |
| **Transient response** | 200mV over / undershoot,<br>load step 20-100%, 400us settling time |
| **Thermal protection** | Yes, self-resetting |
| **Hold-up time** | 15 - 20 ms (nom. - max. Vin) without battery |

### STANDARDS

| | |
|---|---|
| **EMI** | to CISPR 22 / EN55022 class A, C-tick compliance |
| **Safety** | to IEC950 / EN60950 / AS/NZS3260 |

### No-Break™ FUNCTIONS AND ALARMS

| | |
|---|---|
| **Battery charge current limit** | 100% of PSU rated current unless specified on ordering |
| **Reverse polarity protection** | Battery reverse connection will open internal fuse (and produce alarm) |
| **Battery monitoring** | Detects for presence of battery on start up, then every 60 minutes when charge current < 200mA |
| **Battery circuit protection** | Electronic circuit breaker (ECB) operates under the following conditions: |
| *- low battery volts* | • battery voltage drops to 1.67V/cell - auto reset on power on |
| *- overload* | • < 300ms for I bat > 6 x I $_{PSU\ rated}$ , allows ~1.5x rated PSU current from battery without acting, |
| *- short circuit* | • < 2ms, backed up by fuse |
| **LED indication** | Green: Power OK<br>Green: Battery OK |
| **Alarms** | • Power OK (Mains/PSU fail)<br>• Battery System OK - alarms when battery voltage low (on mains fail) , battery missing, battery circuit wiring faulty, BCT fail (if enabled) |
| **Alarm relay contacts** | C - NO - NC full changeover rated 30VDC,2A /110VDC,0.3A/125VAC,0.5A |
| **Battery condition test (BCT)** | Standard on SR100 *i* versions<br>BCT relay contact provided to control an external test load. |

### PHYSICAL

| | |
|---|---|
| **AC input connector** | IEC320 input socket (similar to PCs etc.) |
| **DC connections** | Plug-in style socket & mating screw terminal block: (max. wire 2.5mm² / way) |
| **Alarm connections** | Plug in screw terminal block |
| **Enclosure** | Zinc plated & powder coated steel |
| **Dimensions** | 147W x 177D x 62H mm |
| **Weight** | 0.95 Kg |

Specifications are subject to change without notice.    No liability accepted for errors or omissions.

# 100 Watt
## *No-Break™ DC* charger for lead acid batteries

**SR100C**

*incl. SR100i*

## STANDARD MODEL TABLE

| MODELS | DC Output | | | | |
|--------|-----------|---|---|---|---|
| | Output (V) | PSU Rated (A) | Charge Limit (A) *[1] | Recomm. Load (A) | Peak load on power fail (A) |
| **SR100C12** | 13.8 | 7.5 | 7.5 | 6.0 | 11 |
| **SR100C24** | 27.6 | 3.7 | 3.7 | 3.0 | 5.5 |
| **SR100C30** | 34.5 | 2.9 | 2.9 | 2.3 | 4.3 |
| **SR100C36** | 41.4 | 2.4 | 2.4 | 1.9 | 3.6 |
| **SR100C48** | 55.2 | 1.9 | 1.9 | 1.5 | 2.8 |

SR100*i* with RS485 serial port

## ENVIRONMENTAL

| | |
|---|---|
| **Operating temperature** | *Standard:* 0 to 50 °C ambient at full load |
| | *Option - Low temp:* -20 to 50 °C ambient at full load, add suffix **-LT** |
| | De-rate linearly >50 °C to 0 load @ 70 °C |
| **Storage temperature** | -20 to 85 °C ambient |
| **Humidity** | 0 - 95% relative humidity non-condensing |
| **Cooling** | Natural convection |

## OPTIONS

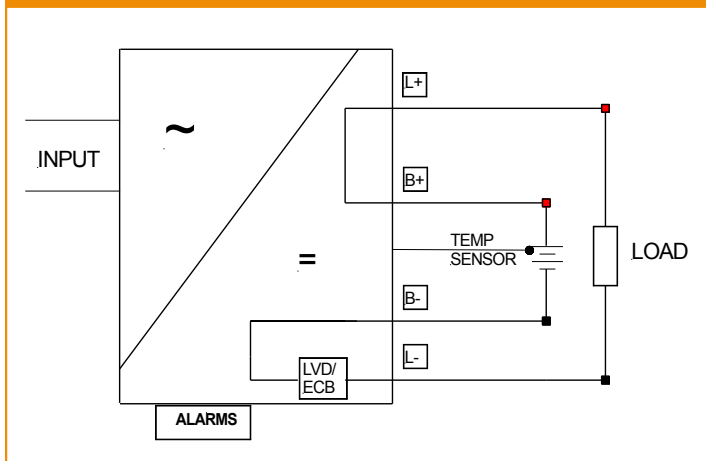| | |
|---|---|
| **Battery Condition Test** | Add option **SFMCT xxxxx** on SR100C. Default setting 20mins/28 days. |
| | **SR100i :** default setting is scheduled BCT disabled at start up |
| **Communication Port for -i & V versions** | Choice of RS485, RS232, LAN+ (SNMP), LAN (ASCII) |
| **Modbus converter** | For **SR100i … 485**, use protocol converter, with programming port for PC. *Power MBLink* setup software supplied. add **+PROTOCONMB** or add **+PROTOCONMB-OE** with ethernet port |
| *[1] **Charge current limit** | 25% & 50% settings available |

## SCHEMATIC BLOCK DIAGRAM



INPUT · ~ · = · L+ · B+ · TEMP SENSOR · LOAD · B- · L- · LVD/ECB · ALARMS

## CABINET OPTIONS

| | |
|---|---|
| **19"Rack Mount** | 2U sub rack option: add **SR-RM2U** Optional V/I meter for subrack: **SR-METER** |
| **Wall Mount Enclosure** | PSU may be fitted into enclosure with MCBs and terminals: add **SEC-SR** |

## ACCESSORIES SUPPLIED

Mounting feet together with screws
AC power cord 1.5m with IEC320 socket & AUS/NZ plug
Mating screw terminal plug for DC output
Mating screw terminal plug for alarms

## MODEL CODING AND SELECTION CHART

# SR100C 12 T X G-485

| | | |
|---|---|---|
| Optional Communications Interface Port | For SR100*i* versions: **485** = RS485  **232** = RS232  **LAN** = Ethernet (ASCII)  **LAN+** = Ethernet (SNMP) |
| Input voltage and front panel standby switch | **Blank =** 230V AC no switch  **G** = 110V AC no switch  **J** = 88-135VDC no switch |
| Output DC connector | **X** = Plug in /screw terminal block |
| Temperature Compensation | **T** = Yes          Blank = No |
| DC output (nominal battery voltage) | **12, 24, 30, 36, 48V** |
| Function | **C = No-Break™** DC PSU/charger  **i** = **C** with serial or ethernet communications port |
| Power | **100W** |

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