



### Applications

- Telecom
- IT
- Industrial

**Safety** in compliance with IEC60950:1999, 3<sup>rd</sup> edition;  
EN60950:2000; UL60950, 3<sup>rd</sup> edition; CSA Standard C22.2  
No.60950-00, 3<sup>rd</sup> edition



### Features

- New, compact design: 1U height x 19" width x 14.94" depth; 19" rack-mountable
- High efficiency: up to 93%
- True sine wave output
- Parallelable output with current share and synchronization of multiple inverters working in parallel
- Front panel LCD display to monitor and set the main parameters
- RS-485 serial link
- Constant input current sink from battery for extended life
- Optional hot-swappable configuration
- Optional internal Static Transfer Switch
- In the -STS version, ON line (primary source to the load) or OFF line mode (UPS like)
- Configurable for being used as Three Phase source, 3 units

### Description

The SLI 15 Inverter Series provides an ideal solution for telecom, IT, and industrial applications. Due to innovative technology solutions like the patent-pending "Compact Coil", the SLI 15 inverters pack 1500 watts of power into a light (5.6 kg) and compact package that is mountable in 19" racks and is only one rack unit high. The SLI 15 Inverter Series offers four models for different input (24 and 48 VDC) and output (115 and 230 VAC) voltage combinations. An integrated controller, along with an optional internal Static Transfer Switch (STS) enable flexible and scalable systems which are truly "plug and play", and require no external subsystems. The inverters can be stacked up to the power level needed by each application and also have the capability to be configured for generating a 3-phase voltage source.

Electrical performance of the SLI 15 is exemplary of a top-of-the-market product with efficiency that peaks at 93% and a patent-pending control algorithm that compensates current harmonics on the DC side without using bulky and expensive filters. The SLI 15 includes a powerful on-board Digital Signal Processor (DSP) that allows easy programming of main parameters through use of its front-panel keypad and LCD display. In addition, the SLI 15 can be interfaced with an RS-485 serial communications link.

### SLI Inverter Model Selection and Ordering Information

| Model <sup>1</sup> | Input Voltage (VDC) | Output Voltage Nominal (VAC) | Overall Output Voltage Range (VAC) | Frequency Range (Hz) |
|--------------------|---------------------|------------------------------|------------------------------------|----------------------|
| SLI-24-115         | 24                  | 115                          | 100 to 120                         | 47 to 63             |
| SLI-24-230         | 24                  | 230                          | 200 to 240                         | 47 to 63             |
| SLI-48-115         | 48                  | 115                          | 100 to 120                         | 47 to 63             |
| SLI-48-230         | 48                  | 230                          | 200 to 240                         | 47 to 63             |

<sup>1</sup> The following suffixes should be added to the model number to order options. For an internal Static Transfer Switch, please add the suffix "-STS". For AC terminal blocks, please add the suffix "-SC". For Hot Plug version, please add the suffix "-HP". For Neutral tied to Ground, please add the suffix "-GN".

## ELECTRICAL SPECIFICATIONS

### Input Specifications

| Parameter              | Conditions / Description                           | Min.     | Nom.     | Max.      | Units |
|------------------------|----------------------------------------------------|----------|----------|-----------|-------|
| DC Input Voltage Range |                                                    | 20<br>40 | 24<br>48 | 36<br>72  | VDC   |
| Input Current          | 24 VDC Models @ 18 VDC:<br>48 VDC Models @ 36 VDC: |          |          | 100<br>48 | Amps  |
| Inrush current         |                                                    |          |          | <10       | Amps  |

### Output Specifications

| Parameter                   | Conditions / Description                                                                                                                                            | Min.       | Nom.       | Max.       | Units |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|------------|-------|
| Output Power                |                                                                                                                                                                     |            |            | 1500       | Watts |
| Output AC Voltage Range     | Standard is Vac floating from Ground; -GN version is available with Neutral connected to Ground (Grid Input shall be supplied by means of an isolation transformer) | 110<br>200 | 115<br>230 | 120<br>240 | VAC   |
| Frequency                   | 50Hz/230Vac, 60Hz/115Vac                                                                                                                                            | 50         |            | 60         | Hz    |
| Efficiency                  |                                                                                                                                                                     |            |            | 93         | %     |
| Load Power Factor           | lagging or leading                                                                                                                                                  | 0,33       |            | 1          |       |
| Crest Factor                | Ip/Im                                                                                                                                                               |            |            | 4          |       |
| Regulation in single mode   | Load: over full operating range. R-Load<br>Line: over full operating range. R-Load                                                                                  | -3<br>-0,1 |            | +1<br>+0,1 | %     |
| Regulation in parallel mode | Load: over full operating range. R-Load<br>230<br>115                                                                                                               | -6<br>-8,5 |            | 0<br>0     | %     |
| Total Harmonic Distortion   | On Resistive Load.                                                                                                                                                  |            |            | <2         | %     |

#### Fault Protection

| Parameter                     | Conditions / Description                                                                            | Min.         | Nom. | Max. | Units |
|-------------------------------|-----------------------------------------------------------------------------------------------------|--------------|------|------|-------|
| Input Overcurrent Protection  | 24 VDC Models; Internal Fuse.<br>48 VDC Models; Internal Fuse.                                      | 140<br>70    |      |      | Amps  |
| Input Overvoltage Protection  | 24 VDC Models:<br>48 VDC Models:                                                                    | 37,5<br>74   |      |      | VDC   |
| Input Undervoltage Protection | 24 VDC Models:<br>48 VDC Models:                                                                    | 18<br>36     |      |      | VDC   |
| Output Overload               | 115 VAC Models:<br>230 VAC Models:                                                                  | 1610<br>1840 |      |      | W     |
| Surge                         | 115 VAC Models for 200 ms:<br>230 VAC Models for 200 ms:                                            | 1750<br>2300 |      |      | VA    |
| Overvoltage Protection        | All outputs are set at 115%, $\pm 2$ % of nominal.                                                  |              |      |      |       |
| Undervoltage Protection       | All outputs are set at 85%, $\pm 2$ % of nominal.                                                   |              |      |      |       |
| Overcurrent Protection        | 115 VAC Models: 1 A to 14 A selectable.<br>230 VAC Models: 1 A to 8 A selectable.                   |              |      |      |       |
| Safety Overcurrent Protection | By safety circuit breaker:<br>115 VAC Models: 15 A.<br>230 VAC Models: 10 A.                        |              |      |      |       |
| Short-Circuit Protection      | Peak Current type protection:<br>115 VAC Models: 60 A.<br>230 VAC Models: 30 A.                     |              |      |      |       |
| Overtemperature Protection    | Visual and acoustic indication 5 °C before shutdown at $T_{amb} > 65$ °C and at $T_{int} > 100$ °C. |              |      |      |       |
| Protection Restore Modes      | The restore mode of each protection can be individually selected to "latch" or "auto-restart".      |              |      |      |       |

#### Environmental Specifications

| Parameter                              | Conditions / Description                       | Min. | Nom. | Max.       | Units            |
|----------------------------------------|------------------------------------------------|------|------|------------|------------------|
| Operating Temp at Full Load            | Power Derating: 75W/°C: +55 °C to +65 °C.      | -25  |      | 55         | °C               |
| Altitude                               | Operating.<br>Non-Operating.                   |      |      | 13K<br>40K | ASL ft<br>ASL ft |
| Storage Temp                           |                                                | -40  |      | 85         | °C               |
| Humidity                               | 90% relative humidity @ 40 °C, non-condensing. |      |      |            |                  |
| Output Voltage Temperature Coefficient | 0.02% per °C within rated load.                |      |      |            |                  |

### Interface Signals/Controls

| Parameter            | Conditions / Description                                                                                                                                                                                                               | Min. | Nom. | Max. | Units |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| LCD Panel            | 2-line LCD panel with keypad for menu navigation.                                                                                                                                                                                      |      |      |      |       |
| LED Indicators       | 4 LED indicators:<br>Front panel GREEN LED indicates inverter is ON.<br><br>Front panel RED LED indicates a generic fault categorized as:<br>a. Overtemperature (OT),<br>b. Fan fail,<br>c. Input OV, UV, OC, or Output OV, UV, or OC. |      |      |      |       |
| General Alarm Signal | Activated by an open photo-relay if in fault mode, available at rear signal connector                                                                                                                                                  |      |      |      |       |
| Serial link          | RS485 port, 500Vdc isolated, available at rear signal connector                                                                                                                                                                        |      |      |      |       |

### Regulatory & Safety

| Parameter          | Conditions / Description                                                                                                          | Min. | Nom. | Max. | Units |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------|------|------|------|-------|
| cCSAus             | Approved.                                                                                                                         |      |      |      |       |
| Kema               | Approved.                                                                                                                         |      |      |      |       |
| CB Report Approval | Approved.                                                                                                                         |      |      |      |       |
| CE Mark for LVD    | Approved.                                                                                                                         |      |      |      |       |
| RoHS               | Compliant.                                                                                                                        |      |      |      |       |
| Isolation          | Primary-to-Secondary: 3000 Vrms.<br>Primary-to-Ground: 1000 Vrms.<br>Secondary-to-Ground: 1500 Vrms.<br>Signal-to-Ground: 0 Vrms. |      |      |      |       |

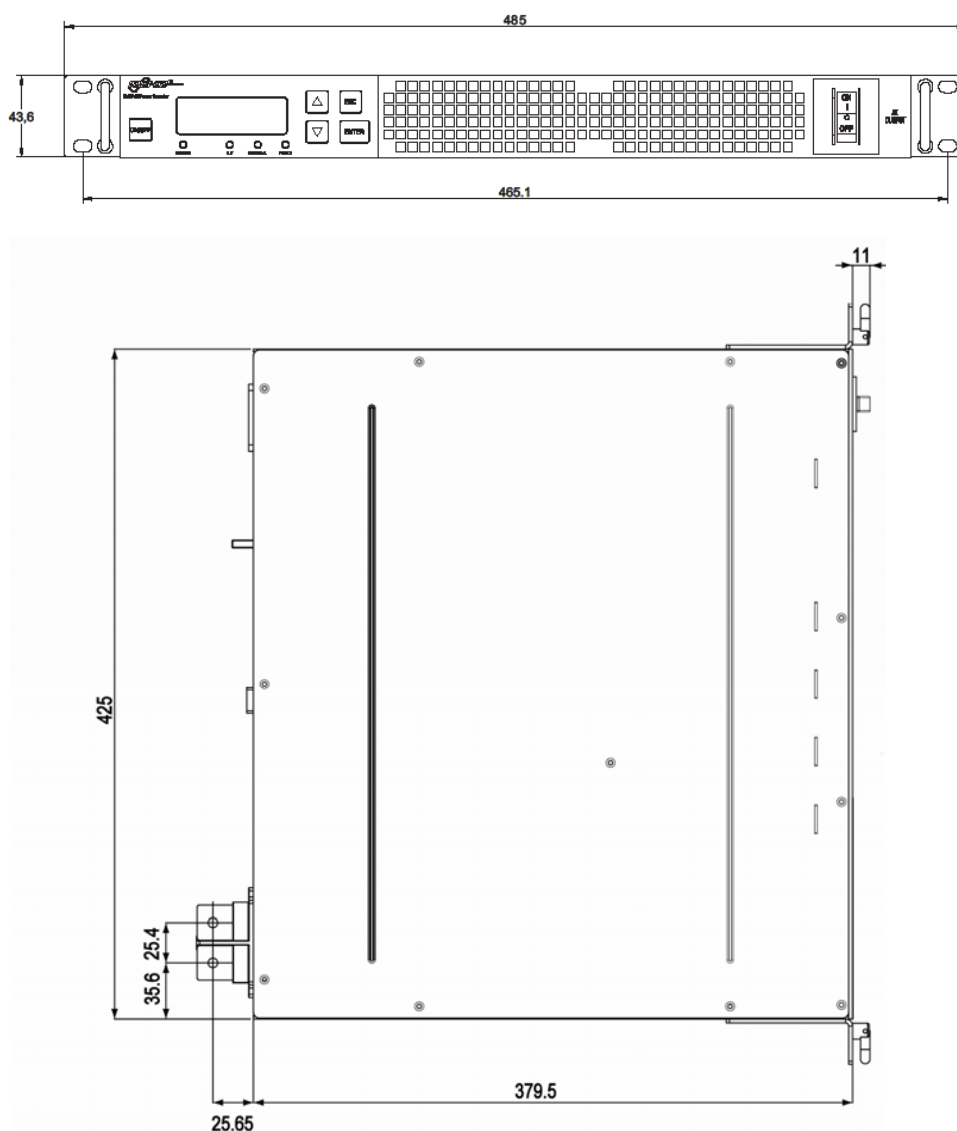
### Mechanical Specifications

| Parameter   | Conditions / Description                                                                                                                                                                                                                                                                        | Min. | Nom. | Max.  | Units |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-------|-------|
| Dimensions  | Depth (inches)                                                                                                                                                                                                                                                                                  |      |      | 14.94 | in    |
|             | Depth (mm)                                                                                                                                                                                                                                                                                      |      |      | 379.5 | mm    |
|             | Width (inches)                                                                                                                                                                                                                                                                                  |      |      | 19.00 | in    |
|             | Width (mm)                                                                                                                                                                                                                                                                                      |      |      | 482.6 | mm    |
|             | Height (inches)                                                                                                                                                                                                                                                                                 |      |      | 1.71  | in    |
|             | Height (mm)                                                                                                                                                                                                                                                                                     |      |      | 43.5  | mm    |
| Weight      | Pounds                                                                                                                                                                                                                                                                                          |      |      | 12.34 | lb    |
|             | Kilograms                                                                                                                                                                                                                                                                                       |      |      | 5.6   | kg    |
| Connections | DC input: back left, one 6mm diameter hole at each input bar; hot plug version has PCB bars with pre charging system; subrack for -HP version hosts one inverter, separate purchasing part; plastic DC input cover is available, separate purchasing part                                       |      |      |       |       |
|             | AC output: back right, IEC320 plug is the standard; screw terminal blocks are with the option -SC; -STS version has IEC320 socket marked "Grid Input"                                                                                                                                           |      |      |       |       |
|             | Signal: back centre, female Sub-D 15 poles connector, Molex 89263-6062 or equivalent; general failure alarm, serial port, synchronism for paralleling or three phase, remote on/off.<br>For paralleling inverters, up to 6, ask for paralleling kit, one per inverter, separate purchasing part |      |      |       |       |
|             | Important: -STS and -GN options are compatible just supplying Grid Input by means of an isolation transformer, same indication if Neutral is tied to Ground at customer site.                                                                                                                   |      |      |       |       |

## Reliability

| Parameter       | Conditions / Description            | Min.    | Nom. | Max. | Units |
|-----------------|-------------------------------------|---------|------|------|-------|
| Calculated MTBF | At 40 °C excluding fan              | 250,000 |      |      | Hours |
|                 | -STS version, at 40°C excluding fan | 200,000 |      |      |       |

## Mechanical Outline Drawing:



**NUCLEAR AND MEDICAL APPLICATIONS** - Power-One products are not designed, intended for use in, or authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the respective divisional president of Power-One, Inc.

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- Поставка более 17-ти миллионов наименований электронных компонентов;
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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