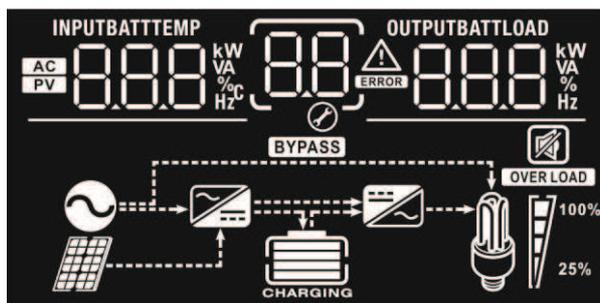


LCD Display Icons



| Icon | Function description | |
|---|--|--|
| Input Source Information | | |
| AC | Indicates the AC input. | |
| PV | Indicates the PV input | |
| INPUTBATT 888 kW VA %C Hz | Indicate input voltage, input frequency, PV voltage, battery voltage and charger current. | |
| Configuration Program and Fault Information | | |
| 88 ⌚ | Indicates the setting programs. | |
|  Warning:  flashing with warning code.  Fault:  lighting with fault code | Indicates the warning and fault codes. | |
| Output Information | | |
| OUTPUTBATLOAD 888 kW VA % Hz | Indicate output voltage, output frequency, load percent, load in VA, load in Watt and discharging current. | |
| Battery Information | | |
|  | Indicates battery level by 0-24%, 25-49%, 50-74% and 75-100% in battery mode and charging status in line mode. | |
| In AC mode, it will present battery charging status. | | |
| Status | Battery voltage | LCD Display |
| Constant Current mode / Constant Voltage mode | <2V/cell | 4 bars will flash in turns. |
| | 2 ~ 2.083V/cell | Bottom bar will be on and the other three bars will flash in turns. |
| | 2.083 ~ 2.167V/cell | Bottom two bars will be on and the other two bars will flash in turns. |
| Floating mode. Batteries are fully charged. | > 2.167 V/cell | Bottom three bars will be on and the top bar will flash. |
| | | 4 bars will be on. |

In battery mode, it will present battery capacity.

| Load Percentage | Battery Voltage | LCD Display |
|------------------|--------------------------|-------------|
| Load > 50% | < 1.717V/cell | |
| | 1.717V/cell ~ 1.8V/cell | |
| | 1.8 ~ 1.883V/cell | |
| | > 1.883 V/cell | |
| 50% > Load > 20% | < 1.817V/cell | |
| | 1.817V/cell ~ 1.9V/cell | |
| | 1.9 ~ 1.983V/cell | |
| | > 1.983 | |
| Load < 20% | < 1.867V/cell | |
| | 1.867V/cell ~ 1.95V/cell | |
| | 1.95 ~ 2.033V/cell | |
| | > 2.033 | |

Load Information

| | | | | |
|--|--|---------|---------|----------|
| | Indicates overload. | | | |
| | Indicates the load level by 0-24%, 25-50%, 50-74% and 75-100%. | | | |
| | 0%~25% | 25%~50% | 50%~75% | 75%~100% |
| | | | | |

Mode Operation Information

| | |
|--|---|
| | Indicates unit connects to the mains. |
| | Indicates unit connects to the PV panel. |
| | Indicates load is supplied by utility power. |
| | Indicates the utility charger circuit is working. |
| | Indicates the DC/AC inverter circuit is working. |

Mute Operation

| | |
|--|-----------------------------------|
| | Indicates unit alarm is disabled. |
|--|-----------------------------------|

LCD Setting

After pressing and holding ENTER button for 3 seconds, the unit will enter setting mode. Press "UP" or "DOWN" button to select setting programs. And then, press "ENTER" button to confirm the selection or ESC button to exit.

Setting Programs:

| Program | Description | Selectable option |
|---------|---|--|
| 00 | Exit setting mode | Escape 00 ESC |
| 01 | Output source priority: To configure load power source priority | Solar first 01 SOL |
| | | Utility first (default) 01 UTI |
| | | SBU priority 01 SBU |
| 02 | Maximum charging current: To configure total charging current for solar and utility chargers. (Max. charging current = utility charging current + solar charging current) | Available options in 1KVA 24V and 1KVA/3KVA 48V models: 10A 02 10A |
| | | 20A (default) 02 20A |
| | | Available options in 2-3KVA 24V models: 20A 02 20A |
| | | 30A (default) 02 30A |
| | | Available options in 2-3KVA 24V/48V Plus and 4-5KVA 48V models: |

| | | | |
|----|---|---|--|
| | | 10A (Not available for 2-3KVA 24V Plus) 02 10A | 20A 02 20A |
| | | 30A 02 30A | 40A 02 40A |
| | | 50A 02 50A | 60A (default) 02 60A |
| 03 | AC input voltage range | Appliances (default) 03 APL | If selected, acceptable AC input voltage range will be within 90-280VAC. |
| | | UPS 03 UPS | If selected, acceptable AC input voltage range will be within 170-280VAC. |
| 04 | Power saving mode enable/disable | Saving mode disable (default) 04 SDS | If disabled, no matter connected load is low or high, the on/off status of inverter output will not be effected. |
| | | Saving mode enable 04 SEN | If enabled, the output of inverter will be off when connected load is pretty low or not detected. |
| 05 | Battery type | AGM (default) 05 AGM | Flooded 05 FLD |
| | | User-Defined 05 USE | If "User-Defined" is selected, battery charge voltage and low DC cut-off voltage can be set up in program 26, 27 and 29. |
| 06 | Auto restart when overload occurs | Restart disable (default) 06 LTD | Restart enable 06 LFE |
| 07 | Auto restart when over temperature occurs | Restart disable (default) 07 LTD | Restart enable 07 LFE |
| 08 | Output voltage (only available for 120Vac models) | 110V 08 110 ^v | 120V (default) 08 120 ^v |
| 09 | Output frequency | 50Hz (default) 09 50 _{Hz} | 60Hz 09 60 _{Hz} |

| | | | |
|-------------------------------------|--|--|---|
| 11 | Maximum utility charging current | Available options in 1KVA 24V and 2KVA 24V Plus 120Vac model: | |
| | | 10A 11 10A ⊗ | 20A(default): 11 20A ⊗ |
| | | Available options in 2-3KVA 24V and 2-3KVA 24V Plus models: | |
| | | 20A 11 20A ⊗ | 30A (default) 11 30A ⊗ |
| | | Available options in 1KVA/3KVA 48V and 2-3KVA 48V Plus models: | |
| | | 10A 11 10A ⊗ | 15A(default): 11 15A ⊗ |
| | | Available options in 2KVA 48V Plus 120Vac model: | |
| | | 5A 11 5A ⊗ | 10A(default) 11 10A ⊗ |
| 12 | Setting voltage point back to utility source when selecting "SBU priority" or "Solar first" in program 01. | Available options in 24V models: | |
| | | 22.0V 12 22.0 ^{BATT} v ⊗ | 22.5V 12 22.5 ^{BATT} v ⊗ |
| | | 23.0V (default) 12 23.0 ^{BATT} v ⊗ | 23.5V 12 23.5 ^{BATT} v ⊗ |
| | | 24.0V 12 24.0 ^{BATT} v ⊗ | 24.5V 12 24.5 ^{BATT} v ⊗ |
| | | 25.0V 12 25.0 ^{BATT} v ⊗ | 25.5V 12 25.5 ^{BATT} v ⊗ |
| | | Available options in 48V models: | |
| 44V 12 44 ^{BATT} v ⊗ | 45V 12 45 ^{BATT} v ⊗ | | |

| | | | |
|----|--|---|---|
| | | 46V (default) 12 ^{BATT} 46 _v | 47V 12 ^{BATT} 47 _v |
| | | 48V 12 ^{BATT} 48 _v | 49V 12 ^{BATT} 49 _v |
| | | 50V 12 ^{BATT} 50 _v | 51V 12 ^{BATT} 51 _v |
| 13 | Setting voltage point back to battery mode when selecting "SBU priority" or "Solar first" in program 01. | Available options in 24V models: | |
| | | Battery fully charged 13 ^{BATT} FUL | 24V 13 ^{BATT} 24.0 _v |
| | | 24.5V 13 ^{BATT} 24.5 _v | 25V 13 ^{BATT} 25.0 _v |
| | | 25.5V 13 ^{BATT} 25.5 _v | 26V 13 ^{BATT} 26.0 _v |
| | | 26.5V 13 ^{BATT} 26.5 _v | 27V (default) 13 ^{BATT} 27.0 _v |
| | | 27.5V 13 ^{BATT} 27.5 _v | 28V 13 ^{BATT} 28.0 _v |
| | | 28.5V 13 ^{BATT} 28.5 _v | 29V 13 ^{BATT} 29.0 _v |
| | | Available options in 48V models: | |
| | | Battery fully charged 13 ^{BATT} FUL | 48V 13 ^{BATT} 48.0 _v |
| | | 49V 13 ^{BATT} 49.0 _v | 50V 13 ^{BATT} 50.0 _v |

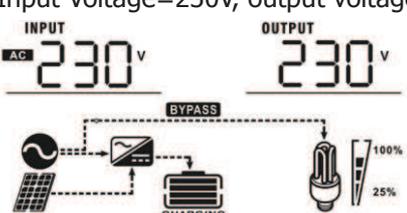
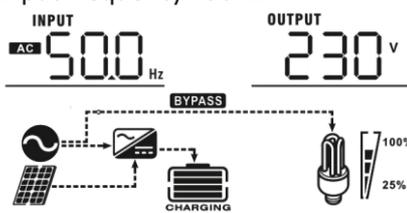
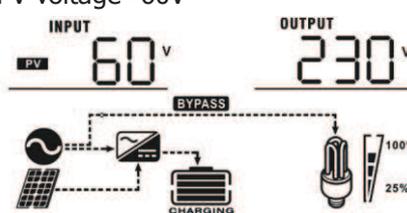
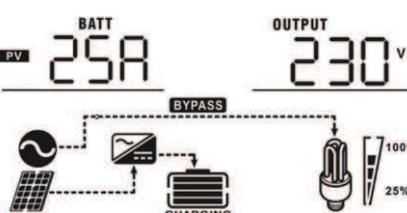
| | | | |
|----|--|--|---|
| | | 51V 13 ^{BATT} 51.0v | 52V 13 ^{BATT} 52.0v |
| | | 53V 13 ^{BATT} 53.0v | 54V (default) 13 ^{BATT} 54.0v |
| | | 55V 13 ^{BATT} 55.0v | 56V 13 ^{BATT} 56.0v |
| | | 57V 13 ^{BATT} 57.0v | 58V 13 ^{BATT} 58.0v |
| 16 | Charger source priority: To configure charger source priority | If this inverter/charger is working in Line, Standby or Fault mode, charger source can be programmed as below: | |
| | | Solar first 16 ^{C50} | Solar energy will charge battery as first priority. Utility will charge battery only when solar energy is not available. |
| | | Utility first 16 ^{CUT} | Utility will charge battery as first priority. Solar energy will charge battery only when utility power is not available. |
| | | Solar and Utility (Only available for 4KVA/5KVA model) 16 ^{SNU} | Solar energy and utility will charge battery at the same time. |
| | | Only Solar 16 ⁰⁵⁰ | Solar energy will be the only charger source no matter utility is available or not. |
| | | If this inverter/charger is working in Battery mode or Power saving mode, only solar energy can charge battery. Solar energy will charge battery if it's available and sufficient. | |
| 18 | Alarm control | Alarm on (default) 18 ^{60N} | Alarm off 18 ^{60F} |
| 19 | Auto return to default display screen | Return to default display screen (default) 19 ^{ESP} | If selected, no matter how users switch display screen, it will automatically return to default display screen (Input voltage /output voltage) after no button is pressed for 1 minute. |

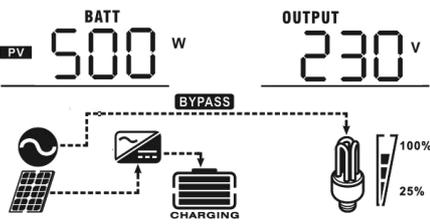
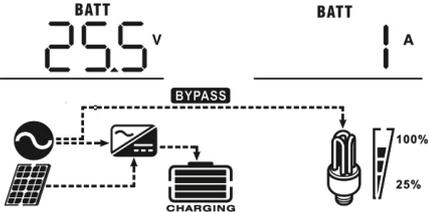
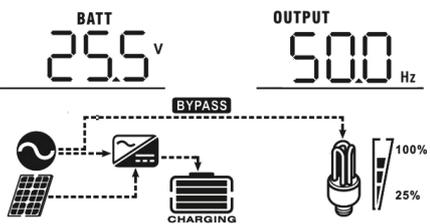
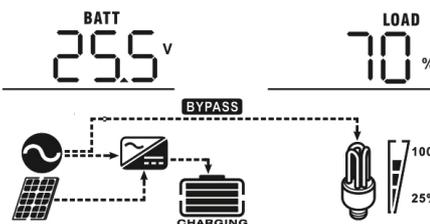
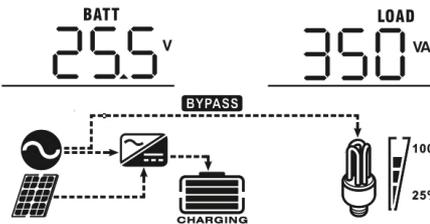
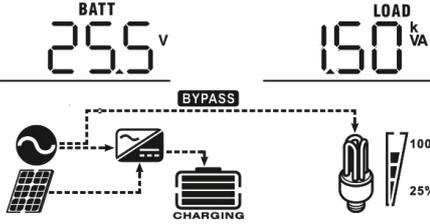
| | | | |
|----|---|---|---|
| | | Stay at latest screen 19 FEP ⊗ | If selected, the display screen will stay at latest screen user finally switches. |
| 20 | Backlight control | Backlight on (default) 20 LON ⊗ | Backlight off 20 LOF ⊗ |
| 22 | Beeps while primary source is interrupted | Alarm on (default) 22 AON ⊗ | Alarm off 22 AOF ⊗ |
| 23 | Overload bypass: When enabled, the unit will transfer to line mode if overload occurs in battery mode. | Bypass disable (default) 23 byd ⊗ | Bypass enable 23 byE ⊗ |
| 25 | Record Fault code | Record enable 25 FEN ⊗ | Record disable (default) 25 FdS ⊗ |
| 26 | Bulk charging voltage (C.V voltage) | 24V model default setting: 28.2V CU 26 28.2 ^{BATT} v ⊗ | |
| | | 48V model default setting: 56.4V CU 26 56.4 ^{BATT} v ⊗ | |
| | | If self-defined is selected in program 5, this program can be set up. Setting range is from 24.0V to 29.2V for 24V model and 48.0V to 58.4V for 48V model. Increment of each click is 0.1V. | |
| 27 | Floating charging voltage | 24V model default to 27.0V FLU 27 27.0 ^{BATT} v ⊗ | |
| | | 48V model default setting: 54.0V FLU 27 54.0 ^{BATT} v ⊗ | |
| | | If self-defined is selected in program 5, this program can be set up. Setting range is from 24.0V to 29.2V for 24V model, 48.0V to 58.4V for 48V model. Increment of each click is 0.1V. | |
| 29 | Low DC cut-off voltage | 24V model default setting: 21.0V COU 29 21.0 ^{BATT} v ⊗ | |
| | | 48V model default setting: 42.0V COU 29 42.0 ^{BATT} v ⊗ | |

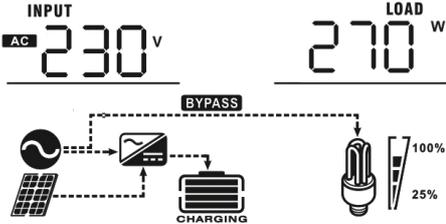
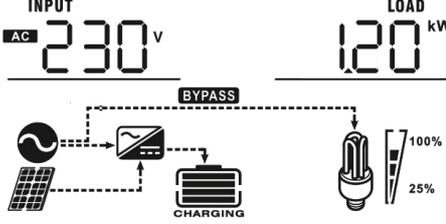
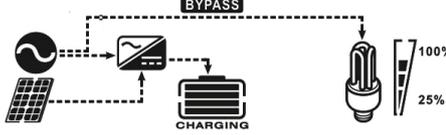
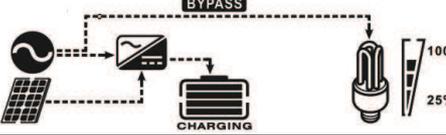
| | |
|--|---|
| | <p>If self-defined is selected in program 5, this program can be set up. Setting range is from 20.0V to 24.0V for 24V model, 40.0V to 48.0V for 48V model. Increment of each click is 0.1V. Low DC cut-off voltage will be fixed to setting value no matter what percentage of load is connected.</p> |
|--|---|

Display Setting

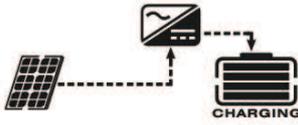
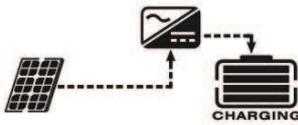
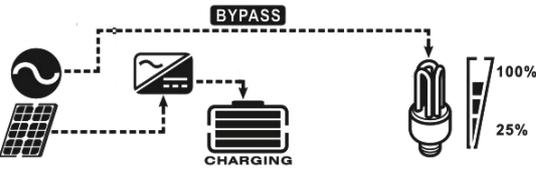
The LCD display information will be switched in turns by pressing "UP" or "DOWN" key. The selectable information is switched as below order: input voltage, input frequency, PV voltage, MPPT charging current, MPPT charging power, battery voltage, output voltage, output frequency, load percentage, load in VA, load in Watt, DC discharging current, main CPU Version and second CPU Version.

| Selectable information | LCD display |
|--|---|
| Input voltage/Output voltage (Default Display Screen) | Input Voltage=230V, output voltage=230V  |
| Input frequency | Input frequency=50Hz  |
| PV voltage | PV voltage=60V  |
| MPPT Charging current | Current $\geq 10A$  Current < 10A  |

| | |
|---|---|
| MPPT Charging power | <p>MPPT charging power=500W</p>  |
| Battery voltage/ DC discharging current | <p>Battery voltage=25.5V, discharging current=1A</p>  |
| Output frequency | <p>Output frequency=50Hz</p>  |
| Load percentage | <p>Load percent=70%</p>  |
| Load in VA | <p>When connected load is lower than 1kVA, load in VA will present xxxVA like below chart.</p>  <p>When load is larger than 1kVA ($\geq 1\text{kVA}$), load in VA will present x.xkVA like below chart.</p>  |

| | |
|---------------------------------------|--|
| <p>Load in Watt</p> | <p>When load is lower than 1kW, load in W will present xxxW like below chart.</p>  <p>When load is larger than 1kW ($\geq 1\text{kW}$), load in W will present x.xkW like below chart.</p>  |
| <p>Main CPU version checking</p> | <p>Main CPU version 00014.04</p>  |
| <p>Secondary CPU version checking</p> | <p>Secondary CPU version 00003.03</p>  |

Operating Mode Description

| Operation mode | Description | LCD display |
|---|---|--|
| <p>Standby mode / Power saving mode</p> <p>Note:</p> <p>*Standby mode: The inverter is not turned on yet but at this time, the inverter can charge battery without AC output.</p> <p>*Power saving mode: If enabled, the output of inverter will be off when connected load is pretty low or not detected.</p> | <p>No output is supplied by the unit but it still can charge batteries.</p> | <p>Charging by utility.</p>  |
| | | <p>Charging by PV energy.</p>  |
| | | <p>No charging.</p>  |
| <p>Fault mode</p> <p>Note:</p> <p>*Fault mode: Errors are caused by inside circuit error or external reasons such as over temperature, output short circuited and so on.</p> | <p>PV energy and utility can charge batteries.</p> | <p>Charging by utility. (Only available in 1K/2K/3K model)</p>  |
| | | <p>Charging by PV energy.</p>  |
| | | <p>No charging.</p>  |
| <p>Fault mode</p> <p>Note:</p> <p>*Fault mode: Errors are caused by inside circuit error or external reasons such as over temperature, output short circuited and so on.</p> | <p>Utility can power loads when the unit starts up without battery. (Only available in 4K/5K model with single operation)</p> | <p>Power from utility</p>  |
| <p>Line Mode</p> | <p>The unit will provide output power from the mains. It will also charge the battery at line mode.</p> | <p>Charging by PV energy</p>  |
| | | <p>Charging by utility.</p> |