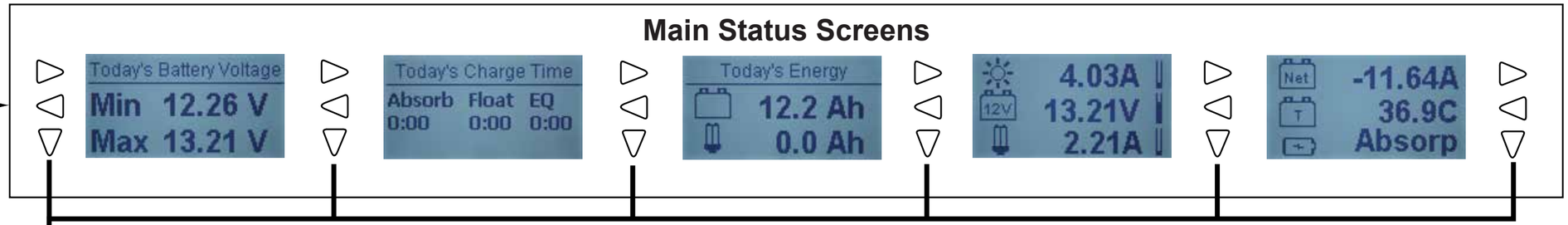
ProStar MPPT Meter Map

MORNINGSTAR
World's Leading Solar Controllers & Inverters

Main Status Screens



GENERAL NOTE:

Refer to MSView Help tab-> PS-MPPT Set-up Wizard for definitions of all settings, and other MSView Help for information on all features.

Main Menu

- Commands
- Status
- History
- Settings
- Custom
- Display

Commands
- Start Equalize
- Disconnect Charge
- Disconnect Load (DIP 1 OFF)
- Start Lighting Test (DIP 1 ON)
- Factory Reset
- Reset Control

Status
- Faults
- Alarms
- Charge State
- Load State
- Voc
- Vmp
- PMax
- Target Voltage
- Battery Temp.
- Battery Sense
- Input Voltage
- LVD
- Last EQ
- Hourmeter

Error Log
- Alarms
- Array Faults
- Load Faults

Graphs
- Battery Voltage
- Ah Charge
- Ah Load
- Absorb Time
- Float Time
- EQ Time

Records
- VBatt Min
- VBatt Max
- Alarms
- Array/Load Faults
- Va Max
- Charge Ah
- Load Ah
- Time Absorb
- Time EQ
- Time Float

History
- Error Log
- Graphs
- Records

Settings
- Serial Number
- Firmware Version
- Battery Type
- Absorption Volt.
- Float Voltage
- EQ Voltage
- Solar Input Mode
- System Voltage

Custom
- Charging[1]
- Load Control[1]
- Communications
- Advanced[1]

1. Only accessible with DIPs 4,5,6 ON

Display
- Backlight Enable — Off, On, Timed
- Backlight Timer — Edit Variable
- Brightness — 0-100%
- Contrast — 0-100%
- Auto Scroll — Off, On, Timed
- Auto Scroll Timer — Edit Variable
- Auto Return — Off, On
- Temp. Units — Fahrenheit, Celsius
- Language — English, French, German, Spanish

Charging
- Absorption Volt. — Edit Variable
- Float Voltage — Edit Variable
- EQ Voltage — Edit Variable
- Absorption Timer — Edit Variable
- EQ Timer — Edit Variable
- EQ Schedule — Edit Variable

Load Control
- Normal
- Lighting

Communications
- Modbus ID — 1-247
- Meterbus ID — 1-15

Normal
- LVD — Edit Variable
- LVR — Edit Variable

Lighting
- LVD — Edit Variable
- LVR — Edit Variable
- Timers
- Sunrise — Edit Variable
- Sunset — Edit Variable
- Summary — See reverse side for details
- Save Config — Confirm

Timers
- Channel 1
- Channel 2
- Channel 3
- Channel 4

Channel 1-4*
- Timer 1
- Timer 2
- Combine

Timer 1-2**
- Event
- Action

Combine
- OR Current
- AND Current

Event
- Before Sunrise
- Before Midday
- Before Sunset
- Before Midnight
- After Sunrise
- After Midday
- After Sunset
- After Midnight

Action
- Do Nothing
- Lights On
- Lights Off

NOTES:

*Menu and sub-menus are the same for channels 1-4

**Menu and sub-menus are the same for timers 1-2

Advanced
- Charging
- Load Control
- Solar Input

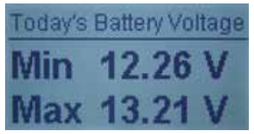
Charging
- HVD (future use) — Edit Variable
- HVR (future use) — Edit Variable
- Abs Ext T — Edit Variable
- Abs Ext V — Edit Variable
- Float Cancel Voltage — Edit Variable
- Float Timeout — Edit Variable
- EQ Timeout — Edit Variable
- Max Battery V — Edit Variable
- Max Battery I — Edit Variable
- Temp. Compensation — Edit Variable
- Max Temp. Compensation — Edit Variable
- Min Temp. Compensation — Edit Variable
- Low Batt. Temp. Imax = 100% — Edit Variable
- Low Batt. Temp. Imax = 0% — Edit Variable

Load Control
- Load I Compensation — Edit Variable
- LVD Warning — Edit Variable
- Load HVD — Edit Variable
- Load HVR — Edit Variable

Solar Input
- Fixed V
- MPPT

Fixed V
- Fixed Vmp — Edit Variable
- Fixed %VOC — Edit Variable

Main Status Screen Icon Explanation



Min: Minimum battery voltage recorded today

Max: Maximum battery voltage recorded today

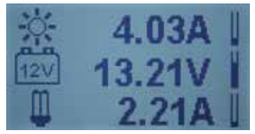
Absorb: Cumulative time spent in the Absorption stage during today's charge cycle

Float: Cumulative time spent in the float stage during today's charge cycle

EQ: Cumulative time spent in the Equalization stage during today's charge cycle

Battery Icon: Cumulative Amp-Hours delivered to the battery during today's charge cycle

Load Icon: Cumulative Amp-Hours delivered to the Load today

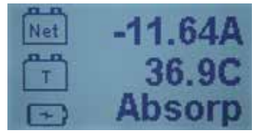


Sun Icon: Array Current

Moon Icon: Night state (no array voltage)

Battery Icon: Real-time battery voltage

Load Icon: Real-time load current draw (Will display 'LVD' for Low Voltage Disconnect and 'LVDW' for Low Voltage Disconnect imminent warning)



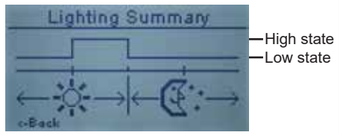
Net Icon: Real-time Net current into or out of the battery

T Battery Icon: Real-time Battery temperature as measured by the Remote Temperature Sensor (if no RTS present, displays local temperature)

Charge Icon: Real-time Charging Stage

Lighting Summary

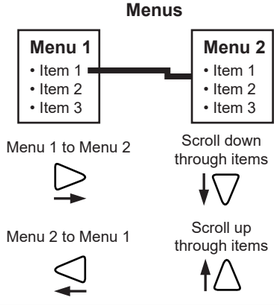
Custom ▷ Load Control ▷ Lighting ▷ Summary



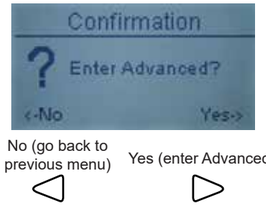
Lighting Summary uses a line graph to show when the load will be turned on or off, if timers are set by the user. The sun icon represents daytime and the moon icon represents nighttime. When the line graph is in the 'low' state, the load will be turned off. When the graph is in the 'high' state, the load will be turned on.

How to Navigate

Menus



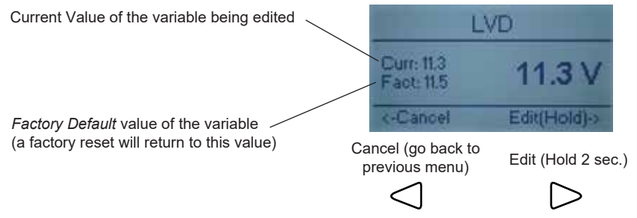
Confirmation Screens

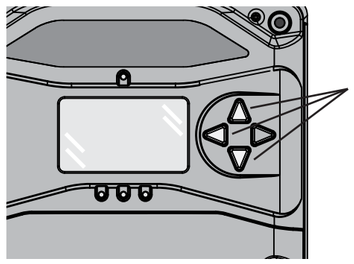


No (go back to previous menu)

Yes (enter Advanced)

Edit Variable Screens





Illuminated arrow buttons indicate which direction(s) are possible on each screen.

Faults and Alarms

Array Faults

- *Output Overcurrent*
- *FET Short*: Possible power MOSFET damage
- *Software*: Software fault
- *Batt HVD*: Battery Voltage exceeded High Voltage Disconnect threshold
- *Array HVD*: Array Voltage exceeded
- *Settings*: Custom settings change
- *Batt TS Short*: Remote Temperature Sensor shorted
- *Batt TS Discon*: Remote Temperature Sensor disconnected
- *THS Failed*: Heatsink Temperature Sensor failure
- *Batt LVD*: Battery Voltage too low for charging

Load Faults

- *Ext Short*: Wiring error
- *Overcurrent*: Load draw exceeded current rating
- *FET Short*: Possible power MOSFET damage
- *Software*: Software fault
- *HVD*: Battery Voltage exceeded Load High Voltage Disconnect threshold
- *HS Overtemp*: Heatsink temperature too hot
- *DIP switch*: DIP switch settings changed
- *Settings*: Custom settings change

Alarms

- *Batt TS Open*: Remote Temperature Sensor open
- *Batt TS Short*: Remote Temperature Sensor shorted
- *Batt TS Discon*: Remote Temperature Sensor disconnected
- *THS Open*: Heatsink temperature failure
- *THS Short*: Heatsink temperature failure
- *THS Hot*: Heatsink temperature too hot
- *TIND Open*: Inductor temperature sensor open
- *TIND Short*: Inductor temperature sensor shorted
- *TIND Hot*: Inductor temperature too hot
- *Current Limit*: Battery charge current limit
- *Current Offset*: Current measurement error
- *Batt Sense*: Battery Sense Voltage out of range
- *Batt Sense Discon*: Battery Sense Voltage disconnected
- *Uncalibrated*: Voltage and/or Current measurement uncalibrated
- *TB5v*: 5V supply out of range
- *FP10*: Floating 10V supply out of range
- *Miswire*: External wiring error
- *FET Open*: Possible power MOSFET damage
- *Ia offset*: Current measurement error
- *II offset*: Current measurement error
- *P3*: 3V supply out of range
- *P12*: 12V supply out of range
- *High VA*: Array Voltage too high
- *Reset*: Controller was reset
- *LVD*: Low Voltage Disconnect
- *Log Timeout*: Log entry write timeout