MPWD Board Description

The MPWD board is an AC power board, consisting of an AC power unit and a monitoring unit. The board supplies power to the device and supports the lead-acid battery for power backup. The AC power unit provides overcurrent protection, output overvoltage protection, short circuit protection, and over-temperature protection. The monitoring unit provides comprehensive management for the power system and storage battery, and also provides certain environment monitoring functions.

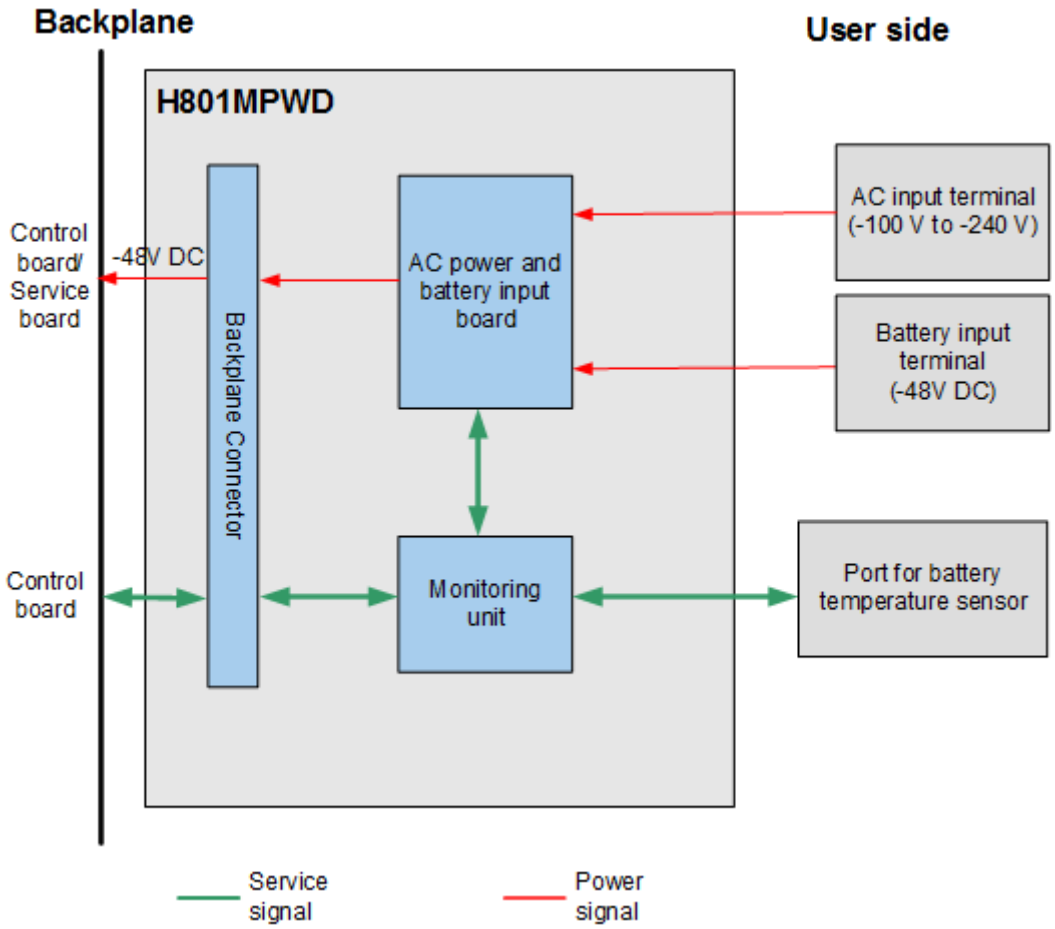
Functional Specifications

The MPWD board supports the following functions and specifications:

- Input AC voltage: -100 V to -240 V
- Input AC frequency: 50 Hz to 60 Hz
- Single-phase three-wire AC power input
- Connection to battery backup power (-48V DC)
- Rated output power: 400 W
- Alarm monitoring
- Battery low voltage disconnection; charge and discharge management of storage batteries

Working Principle

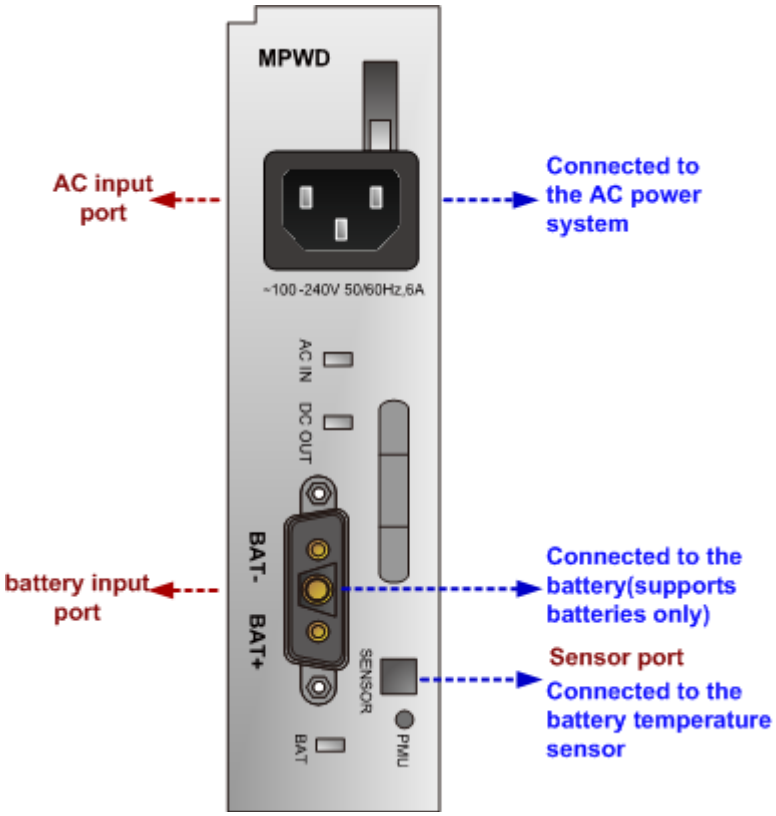
Working principle of the MPWD board



The basic working principle of the H801MPWD board is as follows:

- AC input power is supplied to the board. After AC/DC conversion, the power is supplied to the system backplane at -48 V (adjustable).
- The board supports battery input. The monitoring unit manages the charging and discharging of batteries.
- The board communicates with the system through the backplane, reporting board hardware and electronic label information to the backplane.
- The board supports communication with the monitoring unit through the 485 protocol to adjust voltage and current and report alarm information.
- The monitoring unit manages lead-acid batteries.
- The optical coupler implements the battery low voltage disconnection function.
- The board provides power distribution checking and alarm reporting functions.

Front Panel Ports



Indicator

Indicator	Name	Color	Status	Meaning
AC IN	AC input indicator	Green	On	Indicates that the AC input power is normal
		-	Off	Indicates that the AC input power is abnormal
DC OUT	DC output indicator	Green	On	Indicates that the DC output power is normal
		-	Off	Indicates that the DC output power is abnormal

Indicator	Name	Color	Status	Meaning
BAT	Power board battery connection indicator	Green	On	Indicates that battery connection is normal
		-	Off	Indicates that battery connection is abnormal
PMU	Monitoring board running status indicator	Green	Blinking quickly (on for 0.25 s and off for 0.25 s repeatedly)	Indicates that program loading is in progress
		Green	Blinking slowly (on for 1 s and off for 1 s repeatedly)	Indicates that the board runs normally
		Red	Blinking	Indicating that the board is starting up
		Red	On	Indicates that a critical alarm is reported
		Orange	Blinking	Indicates that a minor alarm (such as the high temperature alarm) is reported

Power:

- Static: 2 W
- Maximum transfer efficiency: 93% (220 V, 100% load, 25°C)