

# Switching Power Supply

## ESPS4830\_DS101 & ESPS48120\_DS201

### Features

- ◆ wide input voltage: 85V ac ~ 300V ac
- ◆ multiple battery management functions
- ◆ hot-swappable modular design, front access wiring
- ◆ remote operation and maintenance: configured with ethernet and RS485/RS232 interface, support Modbus\_RTU/SNMP, Web and network management system
- ◆ user-friendly interface: configured with a LCD display, buttons and indicators.

### Introduction

ESPS48 series is 19" embedded switching power supply used for -48Vdc communication equipment. It consists the rectifying unit, a monitoring unit, a DC distribution unit and a BMS. All of the unit are hot swappable.



### Scenarios

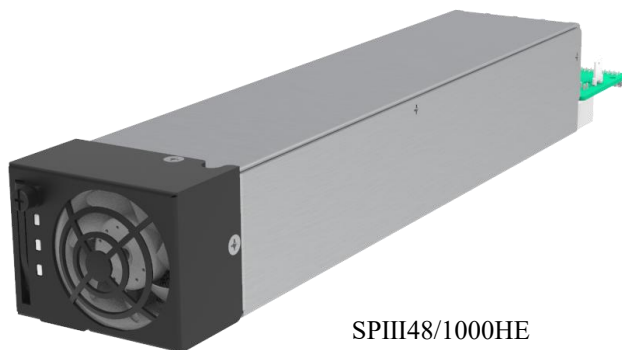
- ◆ Medium and small-size communication base stations
- ◆ Indoor and outdoor communication cabinets, computer rooms, data centers

### Table of Configuration

| Item                              | ESPS4830_DS101                                 | ESPS48120_DS201                                             |
|-----------------------------------|------------------------------------------------|-------------------------------------------------------------|
| 1 Dimension(W*H*D)                | 19 inch *1U*340mm(W*H*D)                       | 19 inch *2U*400mm(W*H*D)                                    |
| 2 AC input circuit breaker        | 1U/1P, 63A*1                                   | 1U/1P, 63A*1                                                |
| 3 AC SPD                          | Class II, In20kA, Imax 40kA, (8/20μs), 1       |                                                             |
| 4 Rectifier module<br>RM48-1000HE | 1kw per module, 2 max.                         | 1kw per module, 6 max.                                      |
| 5 DC SPD                          | Class II, DC48V, In20kA, Imax40kA, (8/20μs), 1 |                                                             |
| 6 Load circuit breaker            | 1U/1P DC , 32A*2+16A*3, BLVD optional          | LLVD: 1U/1P DC, 32A*1+16A*2<br>BLVD: 1U/1P DC , 32A*3+16A*2 |
| 7 Battery circuit breaker         | 1U/1P DC, 50A*2                                |                                                             |
| 8 Monitoring unit                 | ZTKD PMU-01, 1 pcs                             |                                                             |
| 9 User interface module           | ZTKD SIU-01, 1 pcs                             |                                                             |

## Rectifier

|                     |                              |
|---------------------|------------------------------|
| input voltage       | 85 ~ 300Vac(nominal 220Vac)  |
| input current max.  | <5A                          |
| power factor        | >0.99                        |
| THDi                | <5%                          |
| output voltage      | 42 ~ 58Vdc (nominal 53.5Vdc) |
| output current max. | 21A at 48Vdc                 |
| efficiency          | 95.5%                        |
| input protection    | 2KA lightning protection     |
| output protection   | 59Vdc overvoltage shutdown   |
| operating temp.     | -40°C ~ +75°C                |



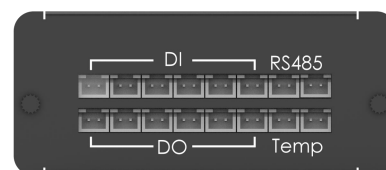
SPIII48/1000HE

## Monitor

- Monitor the status of the rectifier, PV module, BMS, and it sends out audio and visual alarms.
- Configured with RS485 and ethernet port which support MODBUS\_RTU and SNMP, the monitor enables remote detecting, remote control and remote adjusting.
- User-friendly interface includes LED indicators, buttons, and a LCD display.



ZTKD PMU-01



ZTKD SIU-01

## Functions

### Detection

|             |                                                                                            |
|-------------|--------------------------------------------------------------------------------------------|
| AC input    | voltage, current, frequency                                                                |
| DC output   | voltage, current                                                                           |
| Load        | total load current                                                                         |
| Battery     | lithium BMS, voltage, current, capacity, remaining capacity, number of cycles, temperature |
| Environment | ambient temperature                                                                        |

### Alarm

Output voltage  
output current  
current limiting point  
AC input voltage  
temperature

### Rectifier management

Rectifier power-on and power-off control  
Rectifier operation status  
Rectifier output power control  
Rectifier Over-voltage protection  
Rectifier dormancy management  
PV module management

### Battery management

Battery manual and automatic control  
Battery boosting and floating charge  
Disconnection protection  
Battery charging management  
Battery testing  
Battery temperature compensation  
Battery high temperature protection  
Battery capacity detection and report  
Battery backup time setting

### Load management

Load low voltage disconnection (LLVD)  
Battery low voltage disconnection (BLVD)