

# Powerful and Reliable 24V Communication Power Systems

Input: 90-176Vac; output: 21-28Vdc

## Features

- ◆ Powered by the compensation technology, the rectifier module provides a power factor of up to 0.99.
- ◆ The range of operating AC input voltage is extended to 90-176 Vac;60Hz.
- ◆ Using the full-bridge soft switch technology, the rectifier module delivers efficiency up to 92%.
- ◆ Powerful battery management: Load power-off and low-voltage protection (LVLD+LVBD) and secondary power-off; temperature compensation, automatic even and float charging management; automatic voltage adjustment; power capacity calculation; online battery testing etc.
- ◆ Non-intrusive hot swapping shortens the time for rectifier module replacement to less than 1 minute.
- ◆ Supports flexible networking through various communication ports (e.g. RS485 and dry contact) to enable local and remote monitoring without human intervention;
- ◆ Mature AC/DC lightning protection, making it suitable for use in thunder-prone areas;
- ◆ A complete set of fault protection and alarm features;
- ◆ Front access servicing; supports space-efficient wall mounting;
- ◆ Ultra-low radiation: Based on a cutting-edge EMC design, the rectifier module fully complies with the requirements specified in *Limits and Methods of Measurement of Electromagnetic Compatibility for Telecommunication Power Supply Equipment YD/T983*;
- ◆ Safe and reliable: compliant with EN60950 and GB4943
- ◆ Remote monitoring SNMP V2 (OPTION)
- ◆ Hot-Swappable
- ◆ 4 sets dry contact provided



## TSPE-2490-2

### Application:

- Access Network
- PABX system
- Mobile communications
- Microwave communication
- Signalling system
- Transmission Equipment
- Data Centre
- Satellite communication Ground Station

### System Configurations:

Sub-rack	Module	Monitoring Unit	Distribution	Remarks
TSPE-2490-2	30A x 3 TPR2430	X 1 TPM24C/SU	DC output ×4 Breakers (for Load); Battery Breaker ×1 for TPE2490-2 only	For details, please refer to the specifications of modules.

## Technical Specifications

※ Common Technical Specifications of Embedded Systems

Input					
Parameter	Min.	Typical	Max.	Unit	Description
Input voltage range	90	110	176	Vac	
Input frequency		60		Hz	
Power factor	0.98				

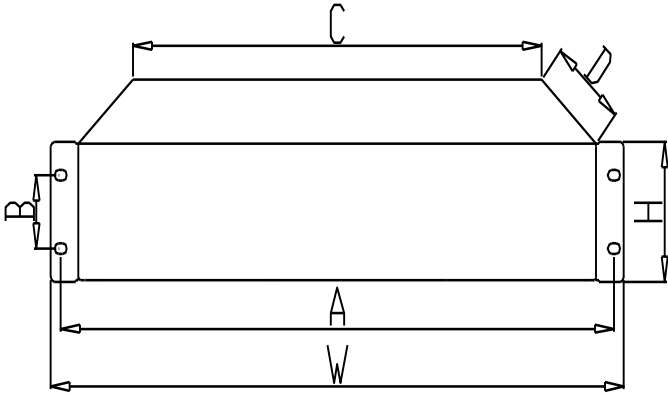
Output					
Parameter	Min.	Typical	Max.	Unit	Description
Output voltage range	21	28.8	31.5	Vdc	
Output current range	0		90	A	
Ripple (peak-to-peak value)			200	mv	
Output efficiency	≥91			%	
Accuracy of voltage stabilization			≤±1	%	
Load regulation			≤±1	%	
Line regulation			≤±1	%	

Insulation Level		
Parameter	Min.	Description
Input-output	3000Vdc/10mA//1min	
Input-enclosure	2500Vdc/10mA//1min	
Output-enclosure	700Vdc/10mA//1min	
Insulation resistance	The insulation resistance between power input and output, input and ground, output and ground terminals must be no lower than 10MΩ with a leakage current of less than 3.5mA when the relative humidity is 90% and test voltage is 500Vac under normal atmospheric pressure.	

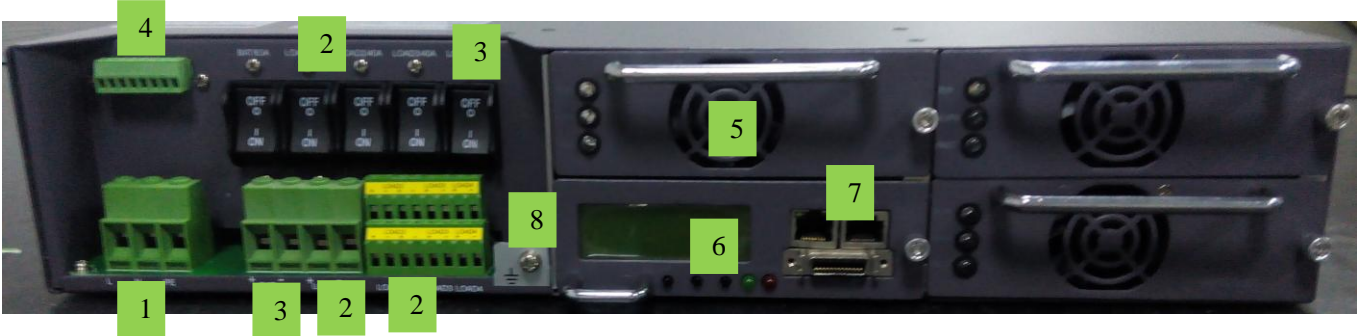
Environment					
Parameter	Min.	Typical	Max.	Unit	Description
Operating temperature	-25		55	°C	≥55°C: down rating
storage temperature	-40		80	°C	
Relative humidity (RH)	10		90	%	Relative humidity, non-condensing
Atmospheric pressure	70		106	KPa	
Altitude	0		3000	m	
Cooling mode	Forced air cooling				

Mechanical Characteristics								
Category	Weight (KG)		Dimensions (mm)					
	With modules	Without modules	W	D	H	A	B	C
Model								
TSPE-4890-2	≤12	≤6.2	482.6	255	88.1	465	76.2	436

Dimension:



Front View Description



- 1) AC Terminal
- 2) DC output Load Breaker's & Terminal
- 3) Battery Breaker and Terminal
- 4) 4 Sets Dry Contact Point
- 5) Rectifier Module
- 6) Monitoring Module
- 7) RS485 and LAN Port and SNMP card interface
- 8) Grounding Point