

Innovative and Powerful Features!

- ◆ For global use with single- and two phase wide-range input 100/230–500 VAC
- ◆ Rugged metal case for harsh industrial environments
- ◆ Industrial operating temperature range: -25°C to $+70^{\circ}\text{C}$
- ◆ Power OK signal
- ◆ Remote On/Off
- ◆ Shock and vibration-proof
- ◆ Indefinite short circuit, overvoltage and overtemperature protection
- ◆ Redundancy module
- ◆ Buffer module for power backup
- ◆ Battery controller module
- ◆ 3-year product warranty



The successful TSP series of high performance DIN-rail mount power supplies has been expanded with models featuring wide input ranges of 85-132 / 187-264 / 323-550 VAC. With these input ranges the power supplies can be used in almost all single- and multi phase power networks worldwide.

A high, continuously available power reserve guarantees reliable start-up of loads with high inrush currents. Excellent electrical specifications and high immunity against electrical disturbances make these compact power supplies the best choice to power sensitive loads in industrial process control systems, machine tools or any other demanding industrial application. The power supplies comply also with IEC/EN 61204-3, the EMC standard for Industrial environment.

3 add-on modules for extra functions offer a great flexibility in system applications. A module for redundant operation with true power sharing is available. With the battery controller module the power supplies can be extended to a perfect DC-UPS system. The buffer module provides power back-up for up to 4 seconds without the need of any batteries. Easy and vibration proof installation with pluggable screw terminal block and snap-on mounting on DIN-rails.

Models

Order Code	Output Voltage (Vnom)	*Output Current (Imax)	Output Power (Pmax)
TSP 180–124WR	24 VDC (adjustable 24 - 28 VDC)	7.5 A	180 W
TSP 360–124WR		15.0 A	360 W
TSP 600–124WR		25.0 A	600 W

* Max. current at nominal output voltage and operating temperature up to 40°C max.

Input Specifications

Applicable 3-phase networks	– TN, TT Systems:	500 VAC Star configuration (EN60950, UL508) 500 VAC Delta (UL508 only)
	– IT Systems:	400 VAC Delta (IEC-62103) 230 VAC Delta (IEC-60950) 500 VAC (UL508)
Input ranges	select (low/high) by manual switch: auto range selection in high ranges: input frequency:	85–132 VAC / 187..550 VAC 187–264 VAC / 323–550 VAC 47–63 Hz
Harmonic limits		EN 61000-3-2, Class A (for limited output power)
Holdup time		20 ms min. (full load 230 – 500 VAC)
Inrush current	TSP 180-124VWR TSP 360-124VWR TSP 600-124VWR	< 23 A < 46 A < 50 A
Efficiency		88 % typ.

Output Specifications

Output voltage adjustable range		24–28 VDC
Regulation	– Input variation – Load variation (10–100 %) – Load variation (10–100 %) parallel mode	0.5 % max. 0.5 % max. 2.0%
Ripple and noise (20MHz bandwidth)		100 mV pk-pk typ. (150 mV pk-pk max. at I _{max})
Electronic short circuit protection		current limitation at 125 % of I _{max} . constant current, automatic recovery
Output overvoltage protection		34 V
Overload protection		electronic overload protection
Overtemperature protection		switch off at overtemperature, automatic restart
Status indicator		dual colour LED (green: DC OK, red: DC off)
Power OK signal	– trigger threshold – relay output	18 – 22 V DC OK = contact closed (rated: 30 VDC/1.0 A)
Max. capacitive load		unlimited

General Specifications

Operating temperature range		–25°C to +70°C max. (for derating see graph A on page 3)
Cooling		convection cooling, no internal fan
Storage temperature		–25°C to +85°C
Humidity (non condensing)		95 % rel. H max.
Pollution degree		2
Temperature coefficient		0.02 %/K
Reliability, calculated MTBF at +25°C acc. to IEC 61709		>350'000 heures in accordance to IEC 61709
Remote On/Off		by ext. contact. DC on: -S contact open DC off: -S connected via 1 Kohm to -Vout
Safety standards	– Information technology equipment – Industrial control equipment – Electrical equipment of machines – Electronic equipment for power installation – Safety transformers for SMPS	IEC/EN 60950-1, UL 60950-1, CSA-C22.2 No. 60950-1-03, CSA-C22.2 No. 1071-01 UL 508 EN 60204 EN 50178 EN 61558-2-16

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.