Industrial Power Supplies

TSPC Series, 50–480 Watt

EMC LVD | IEC 60950-1 | UL 60950-1 | EN 60950-1 EN 61558 EN 60204 | UL 508 | ATEX II3G

- Rugged metal case for harsh industrial environments
- Industrial operating temperature range: –25°C to +70°C
- Overload and and overtemperature protection
- Power boost up to 120 %
- Power-Good signal
- Shock and vibration proof
- International safety approval package
- ATEX certification for hazardous locations
- Decoupling module for redundant operation (optional)
- Wall mounting (opt.)
- 3-year product warranty

The TSPC series are high performance DIN-rail mount power supplies for harsh industrial environments. The design is based on the popular TRACOPOWER TSP series but with reduced electrical features to make these power supplies an easy to install and cost efficient but reliable solution for basic applications.
Excellent electrical specifications and high immunity against electrical disturbances makes these compact modules the best choice for reliable industrial systems and machines.
For system applications all models provide a Power-Good signal.
The TSPC series power supplies complies with the latest safety and EMC standards for industrial environments and include ATEX EN 60079 certification for applications in hazardous locations.

Models

Order code	Output power nominal	Output voltage nominal	Output current nominal
TSPC 050-112	50 W	12 VDC	4.0 A
TSPC 050-124HL*	50 W	24 VDC	2.1 A
TSPC 050-124	50 W	24 VDC	2.1 A
TSPC 080-112	80 W	12 VDC	6.6 A
TSPC 080-124	80 W	24 VDC	3.3 A
TSPC 120-124	120 W	24 VDC	5.0 A
TSPC 120-148	120 W	48 VDC	2.5 A
TSPC 240-124	240 W	24 VDC	10 A
TSPC 240-148	240 W	48 VDC	5.0 A
TSPC 480-124	480 W	24 VDC	20 A
TSPC 480-148	480 W	48 VDC	10 A

*Additionally complies with UL hazloc

Input Specifications

Input voltage	– nominal ranges	TSPC 050	100 – 240 VAC universal input
		other models	100 – 120 / 220 – 240 VAC by selection switch
	– effective ranges	TSPC 050	85 – 264 VAC universal input
		other models	85 – 132 / 187 – 264 VAC by selection switch
	– output power derating at input <100 VAC		3.3 %/V
Input voltage frequency			47 – 63 Hz
Harmonic limits			EN 61000-3-2
Holdup time			10 ms min.
Inrush current			40 A
Recommended circuit breaker, characteristic C or fuse, slow blow type		– TSPC 080/120	6.0 – 16.0 A
		– TSPC 240	10.0 – 16.0 A
		– TSPC 480	16.0 – 25.0 A
Efficiency			85 – 93 %

Output Specifications

Output voltage adj. range		12 VDC models:	12 – 14 VDC
			output power derating above 12 VDC : 10 %/V
		24 VDC models:	24 – 28 VDC
			output power derating above 24 VDC : 5 %/V
		48 VDC models:	48 – 56 VDC
			output power derating above 48 VDC : 2.5 %/V
Boost output current			120 % (at 24 VDC output voltage) continuous at <+50°C ambient temperature
	– power derating above 50°C ambient		2 %/°C
	– power derating at input <115 VAC		1.3 %/V
	– power derating at input <220 VAC		0.6 %/V (at upper input voltage range)
Regulation	– Input variation		1 % max.
	– Load variation (0–100 %)		1 % max.
Ripple and Noise (20MHz bandwidth)			100 mVp-p typ. (200 mVp-p max.)
Overload protection			120 – 140 % of Iout nom., constant current
Short circuit current			90 % of Iout nom. (typ.), foldback
Output overvoltage protection			45 V
Overtemperature protection			switch off at overtemperature, automatic restart
Power back immunity		12 VDC models:	16 V (18 V for 1 s)
		24 VDC models:	35 V (40 V for 1 s)
		48 VDC models:	63 V (65 V for 1 s)
Power OK signal	– trigger threshold	12 VDC models:	10.0 – 11.5 V
		24 VDC models:	21.0 – 22.5 V
		48 VDC models:	42.0 – 45.0 V
	– output signal	12 VDC models:	open collector 20 mA max.
		24 VDC models:	open collector 10 mA max.
		48 VDC models:	open collector 5 mA max.
			Active high: Connected to Vout in normal operation, high resistance at failure
Max. capacitive load			unlimited

General Specifications

Temperature range	– Operating	–25°C to +70°C max.
	– Output current derating	2.5 %/°C above 60°C
	– Storage	–40°C to +85°C
Cooling		convection cooling, no internal fan
Humidity (non condensing)		95 % rel. H max.
Pollution degree		2
Temperature coefficient		0.02 %/K