

Features 200% Peak Power!

- ◆ 3-phase input 3AC 400V or 3AC 500V
- ◆ 200 % boost power for up to 5 seconds
- ◆ Alternative to AC transformers
- ◆ Fully regulated 24 VDC output with 10 A, 20 A or 40 A
- ◆ Rugged metal case design qualified for harsh industrial environment
- ◆ High efficiency >92%
- ◆ Operating temperature range: -25°C to +60°C (full power)
- ◆ Overload and over temperature protection
- ◆ Industrial safety approvals
- ◆ Cost effective design
- ◆ 3-year product warranty



The TRACOPOWER TSP-3P series of high performance DIN-rail power supplies offers an economical solution to generate a regulated DC voltage from three-phase mains networks. The smart design achieves a very high efficiency at ultra compact size and very competitive cost. The series provides models with 240, 480 and 960 Watt output power all with additional power reserve of up to 200%. This high peak power guarantees a reliable start-up of loads with high inrush currents such as motors, valves and other industrial loads. In many applications these switching power supplies can also replace mains transformers with rectifiers.

Models

Order Code	Output Power (nom.)	Input Voltage (nom.)	Output Voltage (nom.)	*Output Current (nom.)
TSP 240-124-3PAC400	240 W	3 AC 400 V	24 VDC	10 A
TSP 240-124-3PAC500		3 AC 500 V	24 VDC	10 A
TSP 480-124-3PAC400	480 W	3 AC 400 V	24 VDC	20 A
TSP 480-124-3PAC500		3 AC 500 V	24 VDC	20 A
TSP 960-124-3PAC400	960 W	3 AC 400 V	24 VDC	40 A
TSP 960-124-3PAC500		3 AC 500 V	24 VDC	40 A

* 200% peak current for up to 5 sec.

Input Specifications

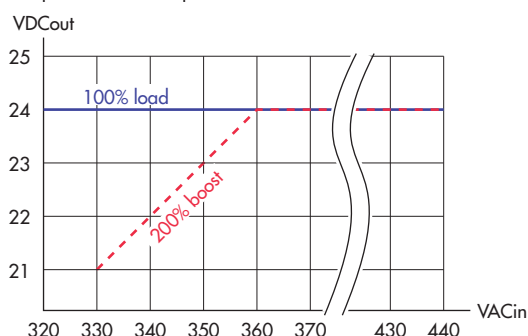
Input voltage range	400 VAC models: 320 – 440 VAC 500 VAC models: 400 – 550 VAC (derating below 410 VAC see graph 2)	star-net configuration (2-phase operation not possible)
Input voltage frequency	47 – 63 Hz	
Harmonic limits	EN 61000-3-2, Class B (for <16 A per phase)	
Power factor	>0.8 at full load	
Recommended circuit breaker,	6.0 A characteristic B	

Output Specifications

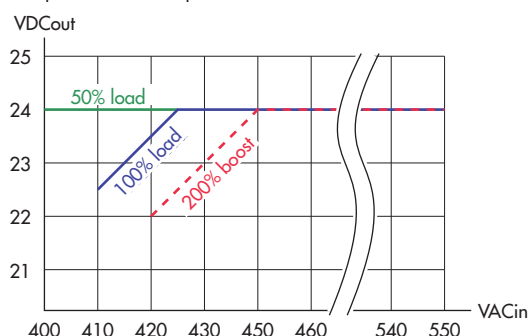
Output voltage:	24 VDC (fixed)	
Regulation	– Input / load variation	1 % max. + voltage drop at low input voltage and/or boost power, see graph 1 & 2
Boost power	– max. current – duty cycle – max. cycle time – input voltage requirements	200 % of nominal output current <10 % 5 sec limited by timer (automatic restart after 30 sec.) see graph 1 & 2
Ripple and noise (20MHz bandwidth)	– nominal operation – boost power operation	100 mV pk-pk typ. up to 750 mV pk-pk
Rise time	200 ms typ.	
Current limitation	at 230 % of nominal output current, constant current	
Overvoltage protection	33 V typ.	
Overtemperature protection	switch off at overtemperature (automatic restart)	
Power back immunity	35 VDC continuous, 40 VDC for one second	

Output Power Derating

Graph 1: 400 VAC input models



Graph 2: 500 VAC input models



General Specifications

Temperature range	– Full power operation – Max. operating – Start up – In accordance to UL508	–25°C to +60°C +70°C, 2.5 %/K derating above +60°C –40°C –25°C to +40°C
Cooling	convection cooling, no internal fan	
Humidity (non condensing)	95 % rel. H max.	
Reliability, calculated MTBF at +25°C acc. to IEC 61709	– TSP 240 & 480 – TSP 960	>1 Mio h >800'000 h
Isolation	according to IEC/EN 60950-1, UL 60950-1, UL 508	
Class of protection	safety class I (IEC 536)	
Degree of protection	IP 20 (IEC/EN 60529)	

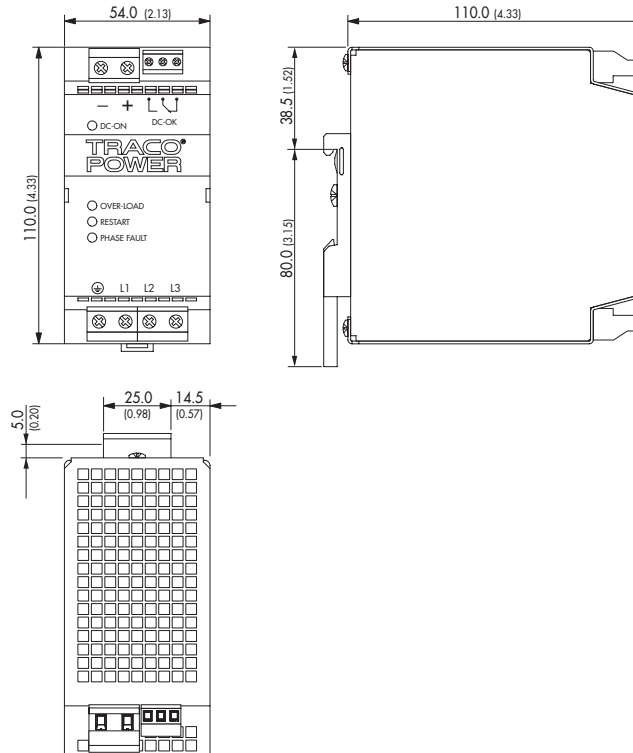
General Specifications

Electromagnetic compatibility (EMC), Emissions		EN 61000-6-3		
– Conducted RI suppression on input		EN 55011 class B, EN 55022 class B,		
– Radiated RI suppression		EN 55011 class B, EN 55022 class B,		
Electromagnetic compatibility (EMC), Immunity		EN 61000-6-2		
– Electrostatic discharge (ESD)		IEC/EN 61000-4-2	8 kV / 15 kV	criteria tba
– Radiated RF field immunity		IEC/EN 61000-4-3	10 V/m	criteria tba
– Electrical fast transient		IEC/EN 61000-4-4	4 kV	criteria tba
burst immunity input		IEC/EN 61000-4-4	2 kV	criteria tba
burst immunity output		IEC/EN 61000-4-4	2 kV	criteria tba
– Surge immunity		IEC/EN 61000-4-5	2 kV	criteria tba
L – L		IEC/EN 61000-4-5	4 kV	criteria tba
L – PE		IEC/EN 61000-4-5	4 kV	criteria tba
+ Output – - Output		IEC/EN 61000-4-5	0.5 kV	criteria tba
+ Output – PE		IEC/EN 61000-4-5	0.5 kV	criteria tba
– Output – PE		IEC/EN 61000-4-5	0.5 kV	criteria tba
– Immunity to conducted RF disturbances		IEC/EN 61000-4-6	10 V	criteria tba
– Mains voltage dips and interruptions		IEC/EN 61000-4-11		
Safety standards		IEC/EN 60950-1, UL 60950-1		
– Information technology equipment		UL 508 listed, CSA C22.2 No. 107.1		
– Industrial control equipment		ATEX 94/9/EC		
– Equipment for use in explosive atmospheres		EN 60204		
– Electrical equipment for machines		EN 50178		
– Electronic equipment for power installations		EN 61558-2-16		
– Safety of power transformers				
Safety approvals and		www.tracopower.com/products/tsp3p-cb.pdf www.tracopower.com/products/tsp3p-siq.pdf www.tracopower.com/products/tsp3p-atex.pdf www.tracopower.com/products/tsp3p-ul508.pdf www.tracopower.com/products/tsp3p-ul.pdf www.tracopower.com/products/tsp3p-bv.pdf		
– CB report for IEC 60950-1				
– SIQ certificate for EN 60950-1				
–  II 3G Ex nA nC IIC T3				
– UL approvals for UL 508 listed				
– Curtis-Straus certificate for UL 60950-1 (2nd)				
– Bureau Veritas for other standards				
Environmental compliance		www.tracopower.com/products/tsp3p-reach.pdf RoHS directive 2002/95/EC		
– Reach				
– RoHS				
Environment		0.075 mm / 10 – 55 Hz, 11ms / 15 g		
– Vibration acc. IEC 60068-2-6;				
– Shock acc. IEC 60068-2-27				
Status signals		DC OK = contact closed at >20...22 VDC rated: 30 VDC/1.0 A for 24 VDC models green LED at >20...22 VDC red blinking LED if one or two phases are missing (function only if earth is connected) red LED on at >100% nominal load (5 sec. count down for boost power is activated) red blinking LED at temperature shut down (manual restart required - mains disconnect for 5 sec.) red blinking LED during overload recovery periode		
– DC-OK relay contact				
– DC-OK indication				
– Phase error indication				
– Overload / Overtemperature				
– Automatic restart indication				
Enclosure material		aluminium (chassis) / stainless steel (cover)		
Mounting		for DIN-rails as per EN 50022-35x15/7.5 (snap-on with self-locking spring) with wall mounting bracket - see page 6		
– DIN-rail mounting				
– Wall mounting (option)				
Connection		screw terminals		
Installation instructions		www.tracopower.com/products/tsp3p-inst.pdf		

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

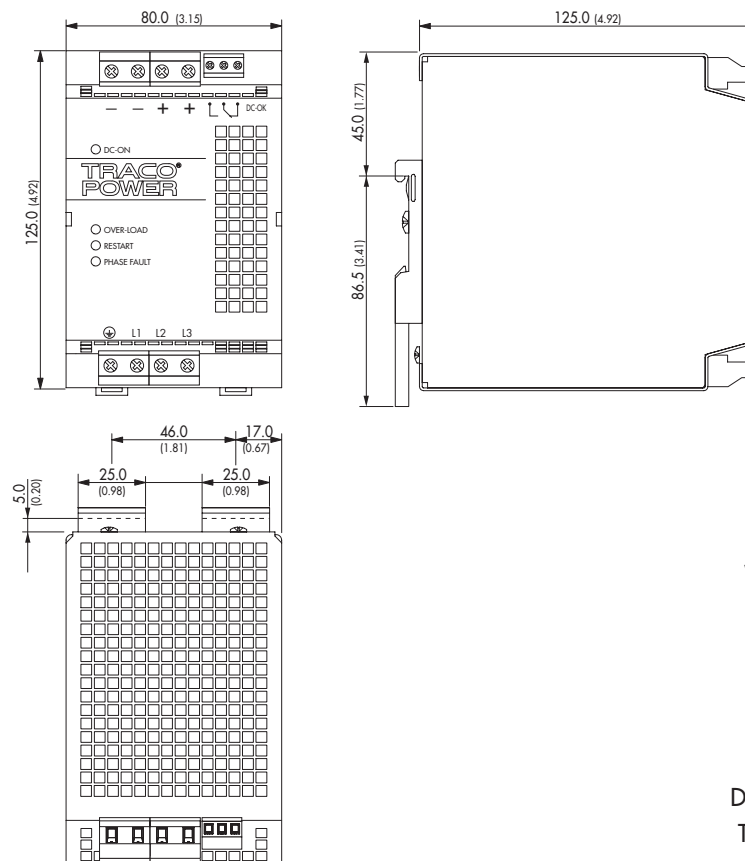
Outline Dimensions

240 Watt models



Weight: 575 g (1.27 lb)

480 Watt models

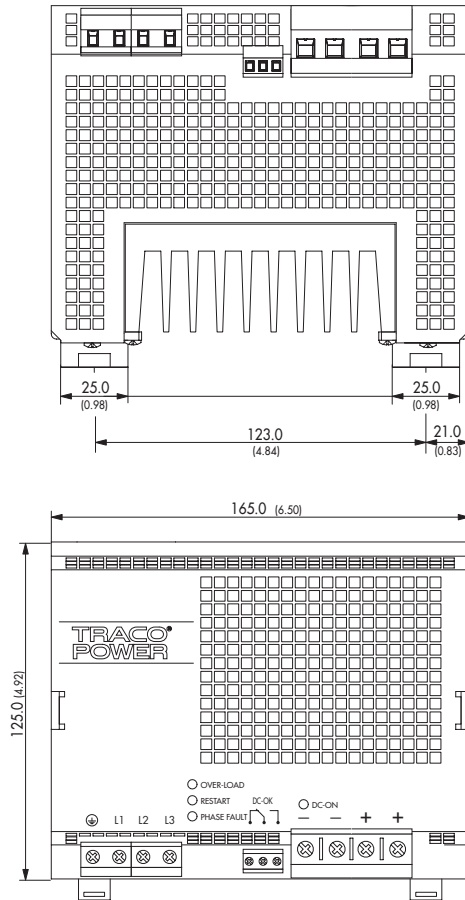


Weight: 1.05 kg (2.31 lb)

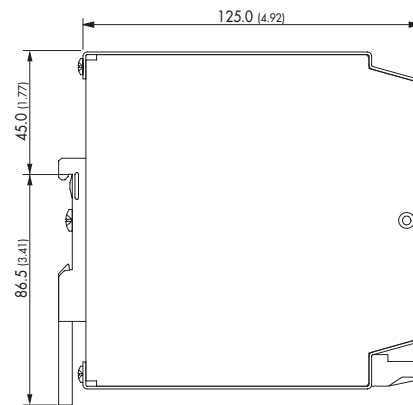
Dimensions in [mm], () = Inch
Tolerances: ± 0.5 mm (± 0.02)

Outline Dimensions

960 Watt models



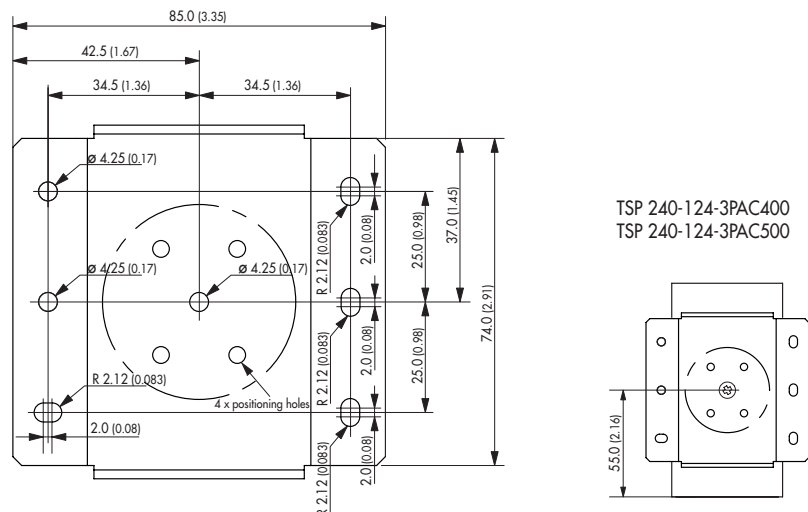
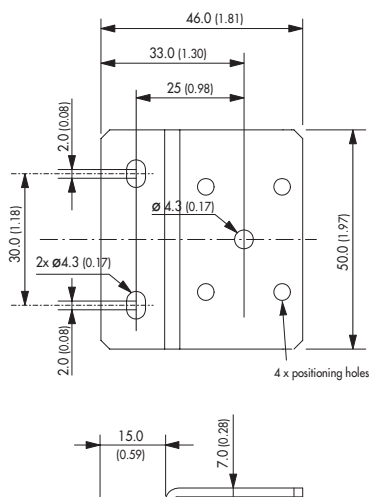
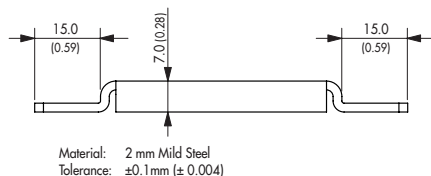
Weight: 2.35 kg (5.19 lb)



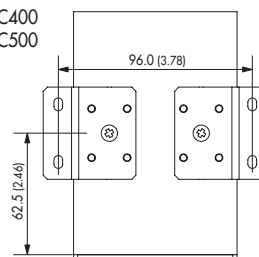
Dimensions in [mm], () = Inch
Tolerances: ± 0.5 mm (± 0.02)

TSP-WMK Wall Mounting Bracket

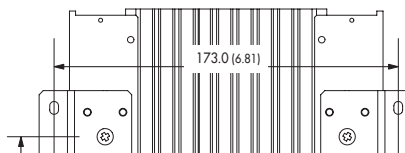
Order code	For models	Content of kit
TSP-WMK03	240 W	1 bracket
TSP-WMK02	480 W & 960 W	2 brackets

TSP-WMK03

TSP-WMK02


TSP 480-124-3PAC400
TSP 480-124-3PAC500



TSP 960-124-3PAC400
TSP 960-124-3PAC500



Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at www.tracopower.com



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.