Industrial Power Supplies

TTL Series 480 Watt

Features

- 3-Phase Universal Input 360–575VAC, 50/60Hz
- Easy snap-on mounting on DIN-Rails
- Output Voltage adjustable
- Power Good Signal
- Low Output Ripple and Noise
- High Efficiency
- Overload Protection
- Parallel Operation possible
- Worldwide Safety Approvals
- Compliance to EN 61000-3-2 (PFHC)
- Compliance to EN 55011, Class B and FCC Part 15, Level B
- Immunity to EN 50082-2

Pending Pending

This compact switching power supply has been designed for applications in harsh industrial environments. With excellent electrical specifications and a high immunity against electrical disturbances they provide a reliable power source for sensitive loads in industrial process control equipments, machine tools or other electronic equipment exposed to difficult factory floor conditions. Wide range input voltage of 3 x 360 – 575 VAC and an impressive approval package qualifies this power supply for worldwide use.

Models

Ordercode	Input Voltage range	Output Power max.	Output Voltage range	Output Current max.
TTL 480-124	3 AC 360 – 575V	480 W	24 – 28 VDC	20 A

Input Specifications

Input Voltage	– 3 phase continuous operation:	360 – 575 VAC / 509 – 813 VAC
	– 3 phase short term operation (1 min):	340 – 600 VAC / 480 – 850 VAC
	– Dual phase operation:	Derating of 20% is required
	– continuous DC operation:	510 – 815 VDC
	– short term DC operation:	480 – 850 VDC
Input frequency		47 – 63 Hz
Input current at full load (typ.)		400 VAC 500 VAC 1.32 A 1.12 A
Recomended circuit breaker, charateristic C or fuse, slow blow type		3 x 10 A

Output Specifications

Output voltage adj. range		24 – 28 VDC
Regulation	– Input variation	0.8 % max.
	– Load variation (10 – 90 %)	0.8 % max.
Ripple and Noise (20MHz Bandwidth)		< 100 mV pk-pk
Current limitation		at 110 % of Iout max., constant current
Short circuit protection		indefinite (automatic recovery)
Parallel operation		2 auxiliary units with symetrical load line connections
Overvoltage protection, triggerpoint at		33 VDC to 40VDC
Power back immunity		up to 30 VDC
Hold-up time		360 VAC 400 VAC 500 VAC > 5 ms > 10 ms > 20 ms

Output Specifications for Power Good Signal

Output	Open collector, overload- and reverse voltage protection, isolated to input and output
Trigger point	at 90% of Vout set
Saturation voltage	< 1.5 VDC
Sink current	< 30 mA

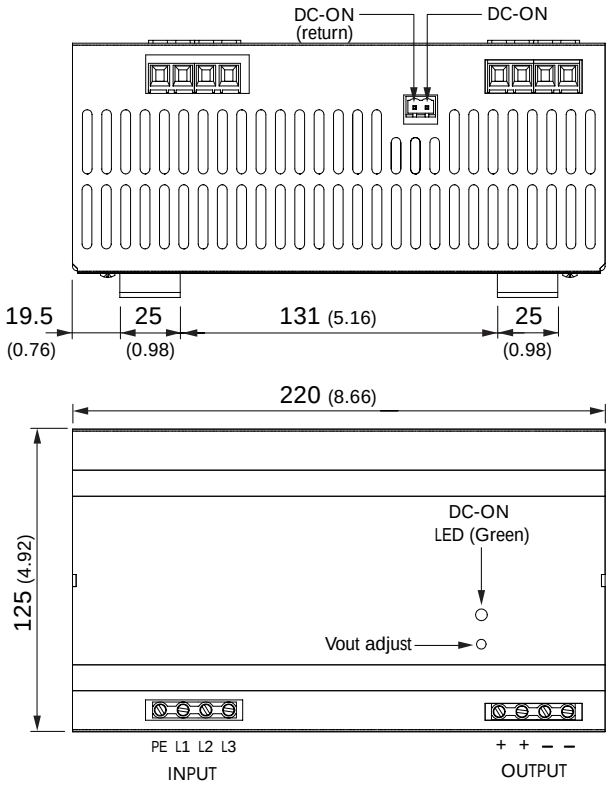
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

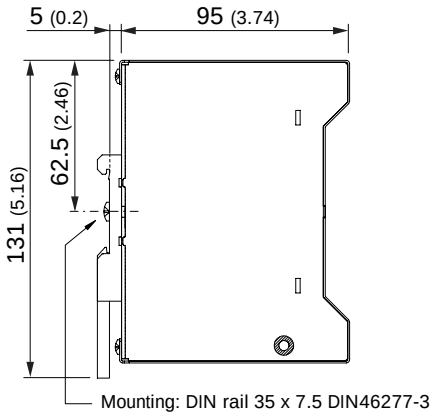
General Specifications

Temperature ranges	– Operating	– 25 °C…+70 °C ambient temp. max.
	– Derating above 60 °C	5% / K
	– Storage (non operating)	– 25 °C…+ 85 °C
Humidity (non condensing)		20 – 90 % rel H
Temperature coefficient		0.02% / °C
Switching frequency		66 kHz (Pulswidth modulation)
Efficiency		89% typ.
Isolation		according to IEC / EN 60950, UL / cUL 60950
Safety standards		IEC / EN 60950 (SELV) EN 50178 - overvoltage degree III - pollution degree II UL / cUL 60950, UL 508C
Safety approvals		UL / cUL 60950, UL 508 C listed, CSA 22.2-14 CB-Report as per IEC 60950
Electromagnetic compatibility (EMC), Emissions		EN 50081-1 / EN 50081-2 EN 55011 class B, EN 55022 class B, FCC part 15, level B
– Harmonic current emissions		EN 61000-3-2 , class A
Electromagnetic compatibility (EMC), Immunity		EN 61000-6-2
– Electrostatic discharge (ESD)		IEC / EN 61000-4-2 4 kV / 8 kV
– Radiated RF field immunity		IEC / EN 61000-4-3 10 V / m
– Electrical fast transient / burst immunity		IEC / EN 61000-4-4 2 kV
– Surge immunity		IEC / EN 61000-4-5 0.5 kV / 0.5 kV
– Immunity to conducted RF disturbances		IEC / EN 61000-4-6 10 V
– Power frequency field immunity		IEC / EN 61000-4-8 30 A / m
– Voltage dips and interruptions		IEC / EN 61000-4-11 criteria B / C
– Immunity to electromagnetic field from digital radio telephones		ENV 50204 10 V / m
Safety class		Degree of Protection 1(IEC 536)
Case protection		IP 20 (IEC 529)
Environment	– Vibration	IEC 60068-2-6, 2g from 5Hz to 500Hz (3 axes)
	– Shock	IEC 60068-2-27, 15g for 11ms (3 axes)
Enclosure material		Aluminum (chassis) / steel (cover)
Mounting (snap-on with selflocking spring)		35 mm DIN-rails as per EN 50022
Connection		Screw terminals (double terminals for output)

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

Outline Dimensions mm (inches)





Weight: 1.9 kg (4.19 lb)

Tolerances: ±0.5 mm (±0.02)

Specifications can be changed without notice