

Features

- Ultracompact Plastic Case
- Connection by Cage Clamps Terminals or Plug-in Screw Terminals
- Reliable snap-on Mounting on DIN-Rails
- Universal Input 85-264 VAC, 50/60 Hz
- Models with 12, 24 and 48VDC Output
- Output Voltage adjustable
- Power Good Signal
- Low Ripple and Noise
- EMC to EN 50081-1/EN 61000-6-2
- Overload and Short-circuit Protection
- Parallel Operation possible
- Worldwide Safety Approvals



The TRACOPOWER TCL series are a new generation of switching power supplies with an excellent price/performance ratio. With tightly regulated output voltage and high immunity against electrical disturbances on the mains they provide a reliable power source for sensitive loads in industrial process controls, machine tools and other equipment exposed to a critical industrial environment. Compact size, light weight, easy snap-on mounting on DIN-rails and the choice of two connection terminal versions are other features of these power supplies. The TCL series complies with all major safety standards for Europe (EN60950, EN50178), North America (UL/cUL60950, UL508C listed) or elsewhere in the world (CB-Report per IEC60950).

Models					
Ordercode	Input Voltage Range	Output Power max.	*Output Voltage nom.	Output Current max.	Connection
TCL 060-112 TCL 060-124 TCL 060-148	85-264 VAC Universal input 50 / 60 Hz	60 W	12 VDC	4.0 A	Plug-in Screw Terminals
24 VDC			2.5 A		
48 VDC		1.25 A			
120 W		12 VDC	8.0 A		
TCL 120-112 TCL 120-124			24 VDC	5.0 A	
TCL 060-112C TCL 060-124C TCL 060-148C		60 W	12 VDC	4.0 A	Cage-Clamps
	24 VDC		2.5 A		
	48 VDC	1.25 A			
TCL 120-112C TCL 120-124C		120 W	12 VDC	8.0 A	
			24 VDC	5.0 A	

*Output adjustable

Input Specifications

Input voltage range		85...264 VAC (15% derating below 93VAC)	
		85...375 VDC (15% derating below 130VDC)	
Input frequency		47 – 63 Hz	
Harmonic limits		EN61000-3-2 Class A	
Input current at full load (typ.)		115 VAC	230 VAC
	TCL 60 models	1.4 A typ.	0.8 A typ
	TCL 120 models	t.b.a.	t.b.a.
Recommended circuit breaker (characteristic C) or slow blow fuse	TCL 60 models	5.0 A	
	TCL 120 models	10.0 A	

Output Specifications

Output voltage adj. range (pot.meter on frontpanel)	12 VDC models	12 – 15 VDC	
	24 VDC models	24 – 28 VDC	
	48 VDC models	48 – 56 VDC	
Output regulation (10 to 90% load variation)		2.5% (1% for TCL 60-112)	
Ripple and Noise (20MHz Bandwidth)		< 50 mV pk-pk	
Electronic short circuit protection		current limitation at 120 % typ. (constant current, automatic recovery)	
Parallel operation		output current characteristic suitable for parallel operation of max. 5 units	
Overvoltage protection, triggerpoint	12 / 24 VDC models	< 40 VDC	
	48 VDC models	< 60 VDC	
Hold-up time		115 VAC	230 VAC
		min. 15 ms	min. 125 ms
Power good signal		treshold	signal
	12 VDC models	>11V	11.0 V ±1.0V / 60 mA max.
	24 VDC models	>22V	22.0 V ±2.0V / 30 mA max.
	48 VDC models	>44V	44.0 V ±4.0V / 15 mA max.

General Specifications

Temperature ranges	– Operating	– 10 °C...+70 °C max.
	– Storage (non operating)	– 25 °C...+ 85 °C
Temperature derating	at 93...132 VAC or 130...187 VDC operation	1.1% /K above 40°C
	at 187...264 VAC or 265...375 VDC operation	1.7% /K above 50°C
	at 85...130 VDC operation	1.3% /K above 30°C
Humidity (non condensing)		95 % rel. H max.
Temperature coefficient		0.02 % /K
Switching frequency		55 – 180 kHz depending on load (frequency modulation)

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

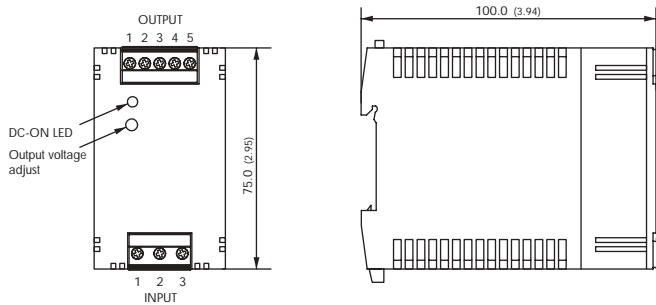
General Specifications

Efficiency	88% typ.
Isolation	according to IEC/EN 60950, UL 60950, UL 508, EN 50178, EN 60204, EN 61558-2-8
Reliability, calculated MTBF @ 45°C	>450'000 h according to SN29500
Safety standards	IEC 60950, EN 60950 (output SELV), UL 60950, UL 508, EN 50178, EN 60204, EN 61558-2-8
Safety approvals (in process)	UL/cUL 60950 recognized, UL 508C listed, CB-Report per IEC 60950
Electromagnetic compatibility (EMC), Emissions	EN 50081-1
Electromagnetic compatibility (EMC), Immunity	EN 61000-6-2
Safety class	degree of protection class 1
Case protection	IP 20 (IEC 60529)
Enclosure material	plastic FR2010-110C (UL 94V-0 rated)
Mounting	35 mm DIN-rails as per EN 50022 (snap-on with self-locking spring)
Options	output characteristic for battery charging on request

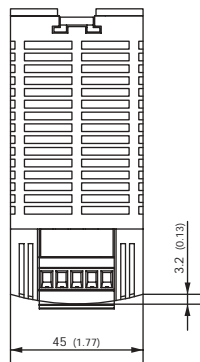
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Outline Dimensions mm (inches)

TCL 60



Weight: 265g (9.4 oz)



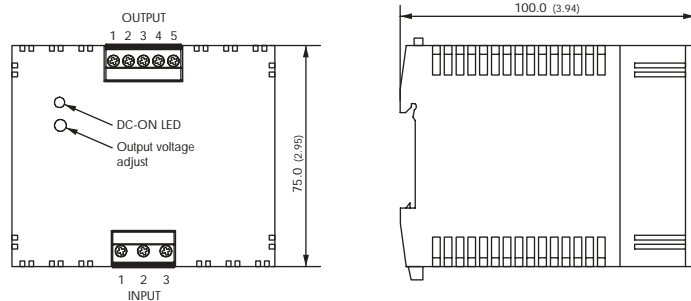
Output

- 1 +Vout
- 2 +Vout
- 3 -Vout
- 4 -Vout
- 5 Power Good

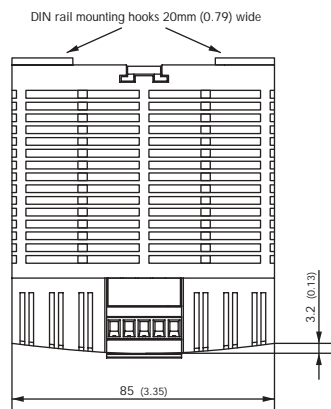
Input

- 1 AC Ground
- 2 Neutral
- 3 Live

TCL 120



Weight: 440g (15.5 oz)



Output

- 1 +Vout
- 2 +Vout
- 3 -Vout
- 4 -Vout
- 5 Power Good

Input

- 1 AC Ground
- 2 Neutral
- 3 Live

() = inches

Tolerances: ±0.5mm (±0.02)

Specifications can be changed without notice