





Features

- Ultra-wide input voltage range
- Output voltage adjustable
- Overload and short circuit protection
- Low ripple and noise
- I/O isolation 1500 VDC
- Compact, slim plastic case
- Reliable snap-on mount on DIN-rail
- Bracket for wall mount included
- 3-year product warranty



In the TCL range of DIN-rail power supplies are 6 models for DC input voltage available. The wide input ranges of 9.5–18 VDC resp. 18–75 VDC means these models can be operated from all popular DC supply voltage systems.

With tightly regulated output voltage these DC/DC converters provide a reliable power source for sensitive loads in industrial process controls, factory automation and other equipment exposed to a critical industrial environment. Further applications for these converters are isolation of a specific load or refreshing the 24 V bus voltage. Easy installation is provided with snap-on mounting on DIN-rails and detachable screw terminal block.

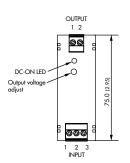
Models				
Order Code	Input Voltage Range	Output Voltage	Output Current max.	
TCL 012-124 DC	9.5 – 18.0 VDC	24 VDC	1.0 A	
TCL 024-105 DC		5 VDC	5.0 A	
TCL 024-112 DC	18 – 75 VDC	12 VDC	2.0 A	
TCL 024-124 DC		24 VDC	1.0 A	
TCL 060-112 DC	18 – 75 VDC	12 VDC	5.0 A	
TCL 060-124 DC	18 - 75 VDC	24 VDC	2.5 A	

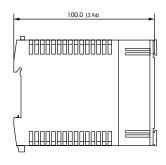


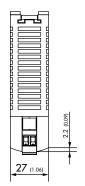
Input power at no load			1.0 Watt max.
Start-up voltage/under voltage shut down TCL 012 model: TCL 024 & TCL 060 models:			8.4 VDC / 7.6 VDC 17.2 VDC / 15.7 VDC
Reverse polarity protection			by internal fuse
Efficiency			86 % typ.
Output Specifications	5		
Output voltage adj. range	1	12 VDC models:	5.0 – 5.25 VDC 12.0 – 15.0 VDC 24.0 – 28.0 VDC
Regulation	Input variation Vin min. to Vin max.Load variation 0100%		0.5 % max 0.5 % max
Ripple and noise (20 MHz I	pandwidth)		<50 mV pk-pk
Electronic short circuit prote	ction		current limitation at 110 % typ. (constant current, automatic recovery)
Overvoltage protection, trig	2	5 VDC model: 12 VDC models: 24 VDC models:	<6.5 V <24 V <42 V
General Specification	ns		
Temperature ranges	OperatingStorage (non operating)		−25°C to +70°C max. −25°C to +85°C
Temperature derating			1.5 %/K above +50°C
Humidity (non condensing)			95 % rel. H max.
Temperature coefficient			0.02 %/K
Switching frequency			55 – 180 kHz depending on load (frequency modulation)
Isolation voltage (60 sec.)	- Input/Output		1500 VDC
·	at +25°C (according to IEC 61709)		>2.5 Mio h
Safety standards	- Information technology equipment - Industrial control equipment - Electronic equipment for power installation - Electrical equipment for machines		IEC 60950-1, EN 60950-1 (output SELV), UL Std. 60950-1 (2nd Edition) +Am1:2011, CAN/CSA-C22.2 No. 60950-1-07 +Am1:201 UL 508 EN 50178 EN 60204
Safety approvals	- CB test certificate (IEC 60950-1) - UL approval - CSA certification - GS certification		www.tracopower.com/products/tcl-cb.pdf www.ul.com -> certifications UL 508C listed, CSA C22.2 No.14 File e21000 UL 60950-1, CSA 60950-1-03 www.tracopower.com/products/tcl-csa.pdf www.tracopower.com/products/tcl060dc_gs.pdf
Electromagnetic compatibilit	y (EMC), emissions – Conducted RI suppression on input – Radiated RI suppression		EN 61000-6-3 EN 55022 class B EN 55022 class B
Electromagnetic compatibilit	tromagnetic compatibility (EMC), immunity - Electrostatic discharge (ESD) - Radiated RF field immunity - Electrical fast transient / burst immunity - Surge immunity - Immunity to conducted RF disturbances		EN 61000-6-2 EN 61000-4-2 4 kV / 8 kV EN 61000-4-3 10 V/m EN 61000-4-4 Level 3 EN 61000-4-5 Level 3 EN 61000-4-6 10 Vrms
Environmental compliance	- Reach - RoHS		www.tracopower.com/products/reach-declaration.p RoHS directive 2011/65/EU
Case protection			IP 20 (IEC 60529)
Enclosure material			plastic UL 94V-0 rated
Mounting			DIN-rails as per EN 50022-35x15/7.5 (snap-on with self-locking spring) bracket for wall/chassis mount included
Installation instructions			www.tracopower.com/products/tcl-dc-inst.pdf

Case Dimensions

TCL 012 and TCL 024 models







Output Input

1 + Vout 1 Protective earth

2 -Vin 2 - Vout

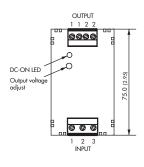
3 +Vin

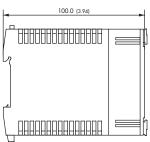
Weight: 140g (4.9 oz)

Wall Mounting Bracket

Instead on a DIN-rail, the modules can be also mounted on a chassis or wall with help of a mounting bracket which is supplied as standard with each Converter

TCL 060 model





Output

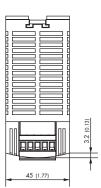
Input



1 Protective earth

2 - Vout 2 -Vin

3 +Vin



Weight: 265 g (9.4 oz)



Dimensions in [mm], () = InchTolerances: $\pm 0.5 (\pm 0.02)$