

# AC to 12VDC Power Adapter with Terminal Block

## TC3PS-TB-25

- AC Input 100-240 VAC, 50-60Hz
- DC Output 12V, 2.5A, 30W Max
- IP22 Rated Enclosure
- EN55022/CISPR22 and FCC Part 15.109 Class B Compliant
- IEC61000 High EMC Immunity Compliant, ideal for industrial applications
- DoE Level VI efficiency
- RoHS Compliant
- CSA/IEC/EN/UL62368-1



TC3PS-TB-25-01  
(North American Version)



The TC3PS-TB-25 Universal Power Adapter draws 2.5 Amps and is compatible with standard and large TC Communications products. It is a 100/240VAC to 12V DC Power Adapter with Terminal Block connector.



TC3PS-TB-25-03  
(European/German Version)



TC3PS-TB-25-04  
(United Kingdom Version)

### Applications

This power adapter applies to the following products:

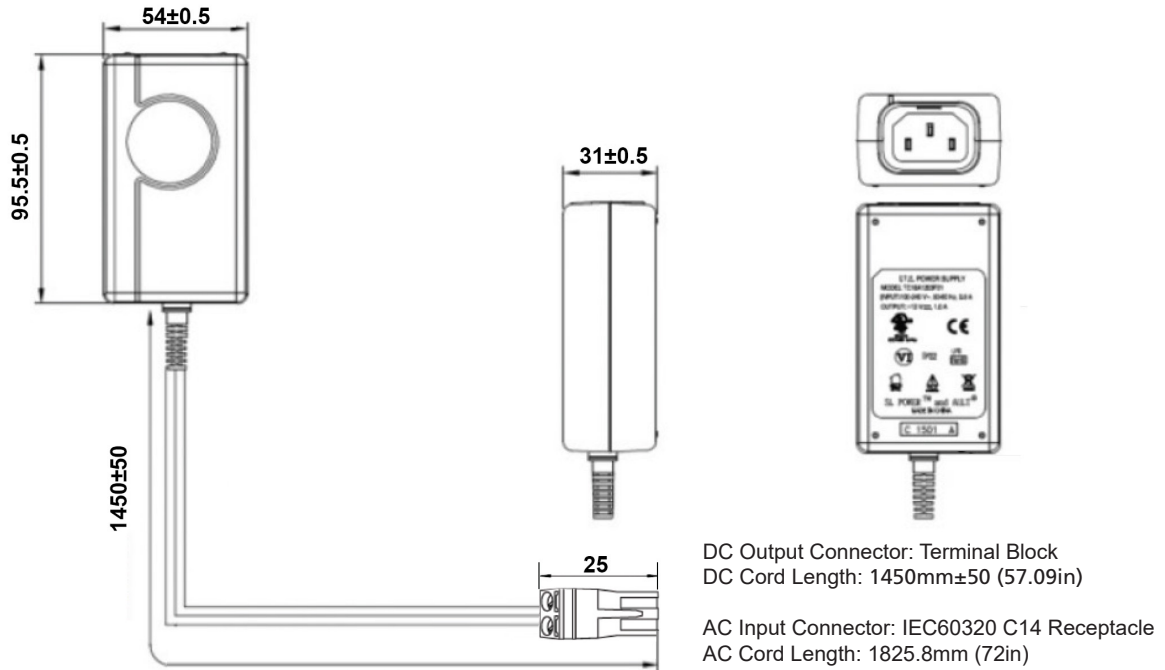
- TC8930
- TC8916
- TC8800S/R
- TC861X
- TC8530
- TC8520
- TC8510
- TC8300
- TC8116
- TC8108
- TC8000
- TC3848
- TC3847
- TC3846
- TC3845
- TC3840DR
- TC3847-1DR
- TC3400/3420
- TC3340
- TC3300
- TC3240
- TC3210
- TC302X
- TC3007/3006
- TC3005/3004
- TC2900
- TC2850
- TC2800
- TC2400
- TC2200
- TC2100
- TC1920
- TC1905
- TC1903
- TC1901
- TC1900
- TC1631
- TC1720
- TC1710
- TC1705
- TC1680

## Technical Information

	Parameter	Specification
Electrical	<b>Input</b>	
	Input Range	100 to 240 VAC, 47 to 63 Hz
	Input Current	0.4 A @ 115 VAC, 0.2 A @ 230 VAC
	Inrush Current	40 A max., cold start @ 264 VAC input
	Input Fuses	0.75 A, 250 VAC
	Earth Leakage Current: Input To GND Output To GND	<500 $\mu$ A @ 264 VAC, 60 Hz, NC <4 mA @ 264 VAC, 60 Hz, NC
	Efficiency	Meets US DoE Efficiency Level VI average efficiency levels
	No Load Input Power	<0.1 W per DoE Efficiency Level VI requirements
	<b>Output</b>	
	Output Voltage	12VDC
	Output Power	30 W continuous
	Turn On Time	Less than 700 mS @ 115 VAC, full load
	Hold-Up Time	20 mS min., at full load, 100 VAC input
	Ripple And Noise	120mV pk-pk
	Transient Response	500 $\mu$ S response time for return to within 0.5% of final value for any 50% load step over the range of 5% to 100% of rated load, $\Delta i/\Delta t < 0.2$ A/ $\mu$ S Max. voltage deviation is $\pm 3.5\%$
	<b>Reliability</b>	
	MTBF	>1,000,000 hours, full load, 110 VAC & 220 VAC input, 25°C amb., per Telcordia 332 Issue 6, Stress Method
	E-Cap Life	>8 years life based on calculations at 115 VAC/60 Hz & 230 VAC/50 Hz, ambient 25°C at 24 hrs per day, 365 days/year, 6 power up cycles per day
	<b>Protection</b>	
	Over-temperature Protection	Will shutdown upon an over-temperature condition, auto-recovery
	Overload Protection	130% to 180% of rating, hiccup mode
	Over-voltage Protection	Hiccup mode.
	Short Circuit Protection	Hiccup mode. Auto-recovery
	<b>Safety</b>	
	Safety Standards	Approved to EN/CSA/IEC/UL62368-1
	Shock	Operating: Half-sine, 20 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine waveform, impact acceleration of 100 G, Pulse duration of 6 ms Number of shocks: 3 for each of the three axis
	<b>Isolation</b>	
	Isolation	Input to Output: 4000 VAC Input to Ground: 1500 VAC Output to Ground: 1500 VAC

## Environmental & EMC Compliance

	Parameter	Specification
Temperature/Humidity	Operating Temperature	-20°C to +70°C Start up at -40°C, full load (warmup period before all parameters are within published specifications)
	Storage Temperature	-40°C to +85°C
	Relative Humidity	5% to 95%, non-condensing
Environmental	Altitude	Operating: to 5000 m Non-operating: -500 ft to 40000 ft
	Vibration	Operating: 0.003 g/Hz, 1.5 grams overall, 3 axes, 10 min/axis, 1 Hz to 500 Hz Non-Operating: random waveform, 3 minutes/axis, 3 axes and sine waveform, Vib. frequency/acceleration: 10 to 500 Hz/1g, sweep rate of 1 octave/minutes, Vibration time of 10 sweeps/axes, 3 axes
	Shock	Operating: half-sine, 20 gpk, 10 mS, 3 axes, 6 shocks total Non-Operating: half-sine waveform, impact acceleration of 100 G, pulse duration of 6 mS, Number of shocks: 3 for each of the 3 axis
ElectroMagnetic Compatibility	Electrostatic Discharge Immunity	EN55024/IEC61000-4-2, Level 4: ±8 kV contact, ±15 kV air, Criteria A
	Radiated RF Immunity	EN55022/EN61000-4-3, 10 V/m, 80 MHz to 2.7 GHz, 80% AM at 1 kHz
	EFT/Burst immunity	EN55024/IEC61000-4-4, Level 4, ±4.4 kV, 100 kHz rep rate, 40 A, Criteria A
	Surge Immunity	EN55024/IEC61000-4-5, Level 4, ±2 kV DM, ±4 kV CM, Criteria A
	Conducted RF immunity	EN55022/IEC61000-4-6, 3.6 V/m - Level 4, 0.15 MHz to 80 MHz; and 12 V/m in ISM and amateur radio bands between 0.15 MHz and 80 MHz, 80% AM at 1 kHz
	Magnetic Field Immunity	EN55024/IEC1000-4-8, Level 4: 30 A/m, 50/60 Hz
Variations and Emissions	Conducted Emissions	EN55022/CISPR22 Class B, FCC Part 15, Class B: 6db margin type, at 115 VAC and 230 VAC
	Radiated Emissions	EN55022/CISPR22 Class B, FCC Part 15, Class B: 3db margin type, at 115 VAC and 230 VAC
	AC Voltage Dips	EN55024/IEC/EN61000-4-11: --100% dip for 20 mS, Criteria A --100% dip for 5000 mS (250/300 cycles), Criteria B --60% dip for 100 mS, Criteria B --30% dip for 500 mS, Criteria A
	Harmonic Current Emissions	EN55011/EN61000-3-2, Class A
	Flicker Test	EN61000-3-3
	Common Mode Noise	High frequency (100 kHz to 20 MHz): <40 mA pk-pk



TC3PS-25 Dimensions

**Mechanical Characteristics**

Length.....95.5mm±0.5 (3.76in±0.2)  
Width.....54mm±0.5 (2.13in±0.2)  
Height.....31mm±0.5 (1.22in±0.2)  
Weight.....250g (0.55lbs)

**Input**

**AC Input**

Voltage Rating ..... 100VAC to 240VAC  
Frequency .....50Hz to 60Hz  
Input Current..... 400mA @ 115VAC  
..... 200mA @ 230VAC

**Output**

DC Output Voltage .....+12V  
DC Output Power..... 30W  
Maximum Load ..... 2.50A  
Efficiency ..... 88% Typical

**Environmental**

Operating Temperature.... -20° to 70°C  
Storage Temperature..... -40° to 85°C  
Operating Humidity..... 20% to 90%

**Protections**

Over-Voltage .....120% - 150%  
Over-Current  
Over-Temperature  
Short Circuit

**MTBF** ..... >1,000,000 Hours

**RoHS Compliant**

**Safety Approvals**

CSA/IEC/EN/UL62368-1

**Standards Approvals**

FCC Part 15 Class B, EN55022/CISPR22  
Class B

\*Contact factory for higher requirements and detailed specifications



TC Communications, Inc.  
17881 Cartwright Road  
Irvine, CA 92614 U.S.A.  
Factory Tel: (949) 852-1972  
Fax: (949) 852-1948

Web Site: [tcomm.com](http://tcomm.com)

Note: Information contained in this data sheet is subject to change without prior notice.



TC Communications Quality Management System is certified as being in conformity with ISO 9001:2015 by Intertek

