



Industrial

FEATURES AND BENEFITS

Universal Input 90VAC–264VAC Input Range Desktop and Wall-Plug Versions

Up to 12W of AC-DC Power

IP22 Rated Enclosure

Approved to EN/CSA/IEC/UL62368-1

Meets EN55022/CISPR22, FCC Part 15.109 Class B Conducted & Radiated Emissions, with 6db Margin

Meets "Heavy Industrial" Levels of EN61000 EMC Requirements

>10 Year E-Cap Life

>1,000,000 Hours MTBF

3 Year Warranty

Meets DoE Efficiency Level VI Requirements
No Load Input Power
Average Efficiency

Note: * IP22 does not include interchangeable blade versions.



MODEL SELECTION

Model Number	Volts	Output Current	Output Power	Ripple & Noise ¹	Line Regulation	Load Regulation	Output Connector	Input Configuration
TE10A0503F01	5.0V	2.0A	10W	75mV pk-pk	±1%	±5%	2.5mm x 5.5mm x 9.5mm Straight Barrel Type, Center Positive	Class I Desktop, IEC60320 C14 Receptacle
TE10A0603F01	5.9V	1.6A	10W	75mV pk-pk	±1%	±5%		
TE10A0703F01	7.5V	1.3A	10W	75mV pk-pk	±1%	±5%		
TE10A1203F01	12.0V	1.0A	12W	120mV pk-pk	±1%	±5%		
TE10A2403F01	24.0V	0.5A	12W	240mV pk-pk	±1%	±5%		
TE10A0503N01	5.0V	2.0A	10W	75mV pk-pk	±1%	±5%	2.5mm x 5.5mm x 9.5mm Straight Barrel Type, Center Positive	Class II Desktop, IEC60320 C8 Receptacle
TE10A0603N01	5.9V	1.6A	10W	75mV pk-pk	±1%	±5%		
TE10A0703N01	7.5V	1.3A	10W	75mV pk-pk	±1%	±5%		
TE10A1203N01	12.0V	1.0A	12W	120mV pk-pk	±1%	±5%		
TE10A2403N01	24.0V	0.5A	12W	240mV pk-pk	±1%	±5%		
TE10A0503Q01	5.0V	2.0A	10W	75mV pk-pk	±1%	±5%	2.5mm x 5.5mm x 9.5mm Straight Barrel Type, Center Positive	Class II Desktop, IEC60320 C18 Receptacle
TE10A0603Q01	5.9V	1.6A	10W	75mV pk-pk	±1%	±5%		
TE10A0703Q01	7.5V	1.3A	10W	75mV pk-pk	±1%	±5%		
TE10A1203Q01	12.0V	1.0A	12W	120mV pk-pk	±1%	±5%		
TE10A2403Q01	24.0V	0.5A	12W	240mV pk-pk	±1%	±5%		
TE10A0503B01	5.0V	2.0A	10W	75mV pk-pk	±1%	±5%	2.5mm x 5.5mm x 9.5mm Straight Barrel Type, Center Positive	Class II Wall-Plug, Interchangeable Blades (North American Blade included) ²
TE10A0603B01	5.9V	1.6A	10W	75mV pk-pk	±1%	±5%		
TE10A0703B01	7.5V	1.3A	10W	75mV pk-pk	±1%	±5%		
TE10A1203B01	12.0V	1.0A	12W	120mV pk-pk	±1%	±5%		
TE10A2403B01	24.0V	0.5A	12W	240mV pk-pk	±1%	±5%		

Model Number	Volts	Output Current	Output Power	Ripple & Noise ¹	Line Regulation	Load Regulation	Output Connector	Input Configuration
TE10A0503C01	5.0V	2.0A	10W	75mV pk-pk	±1%	±5%	2.5mm x 5.5mm x 9.5mm Straight Barrel Type, Center Positive	Class II Wall-Plug, Fixed North American Blades ³
TE10A0603C01	5.9V	1.6A	10W	75mV pk-pk	±1%	±5%		
TE10A0703C01	7.5V	1.3A	10W	75mV pk-pk	±1%	±5%		
TE10A1203C01	12.0V	1.0A	12W	120mV pk-pk	±1%	±5%		
TE10A2403C01	24.0V	0.5A	12W	240mV pk-pk	±1%	±5%		

Notes:

- Measured at the output connector, with noise probe directly across output and load terminated with 0.1µF ceramic and 10µF low ESR capacitors. For 5V and 6V models, values listed are typical, 100mV pk-pk maximum with 0.1µF ceramic and 47µF low ESR capacitors used at measurement point.
- Order blade kit KT-1027K for other blades (EU, UK, Australia).
- For EU fixed blades, replace "C" in the model number with "M", for UK blades, replace "C" with "G", for Australia blades, replace "C" with "H".
- For Input Class I models: For AC GND connected to output common (-), insert a "B" in the part number where the "A" is located (TE10B0503F01).
- All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

INPUT

Input Voltage and Frequency	100VAC–240VAC, ±10%, 47Hz–63Hz, 1∅
Input Current	115VAC: 0.45A, 230VAC: 0.28A
Inrush Current	264VAC, cold start: will not exceed 40A
Input Fuses	F1, F2: 3.15A, 250VAC fuses (line & neutral lines) provided on all models
Earth Leakage Current	Input-GND: <500µA@264VAC, 60Hz, NC Output-GND: <4mA@264VAC, 60Hz, NC
Efficiency	Meets US DoE Efficiency Level VI Average efficiency levels
No Load Input Power	<0.1W per DoE Efficiency Level VI Requirements

PROTECTION

Overtemperature Protection	Will shutdown upon an overtemperature condition, Auto-recovery
Overload Protection	130% to 180% of rating, Hiccup Mode
Overvoltage Protection	130% to 150% of output voltage, Hiccup mode
Short Circuit Protection	Hiccup Mode, Auto-recovery

OUTPUT

Output Voltage	See models chart on page 1
Output Power	10W to 12W continuous - See models chart for specific voltage model ratings
Turn On Time	Less than 700mS @115VAC, full Load
Hold-up Time	20mS min., at full Load, 100VAC input
Ripple and Noise	See models chart on pg 1
Transient Response	500µs 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, $\Delta i/\Delta t < 0.2A/\mu s$. Max. voltage deviation is +/-3.5%
Total Load Regulation	See models chart on page 1

SAFETY

Safety Standards	EN/CSA/IEC/UL62368-1
Drop Test	1.4m from table top to wooden platform, 6 faces

ISOLATION

Isolation	Input-Output: 4000VAC Input-Ground: 1500VAC Output-Ground: 1500VAC
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ENVIRONMENT

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
Weight	110 grams
Dimensions	See outline drawings
Temperature Derating	See derating chart
Operating Altitude	Operating: to 5000m. Non-operating: -500ft to 40,000ft.
Vibration	Operating: 0.003g/Hz, 1.5 grams overall, 3 axes, 10 min/axis, 1Hz-500Hz. Non-Oper.: random waveform, 3 minutes/axis, 3 axes and Sine waveform, Vib. frequency/acceleration: 10-500Hz/1g, sweep rate of 1 octave/minutes, Vibration time of 10 sweeps/axes, 3 axes
Shock	Operating: Half-sine, 20gpk, 10mS, 3 axes, 6 shocks total Non-Operating: Half-sine waveform, impact acceleration of 100G, Pulse duration of 6mS, Number of shocks: 3 for each of the three axis

RELIABILITY

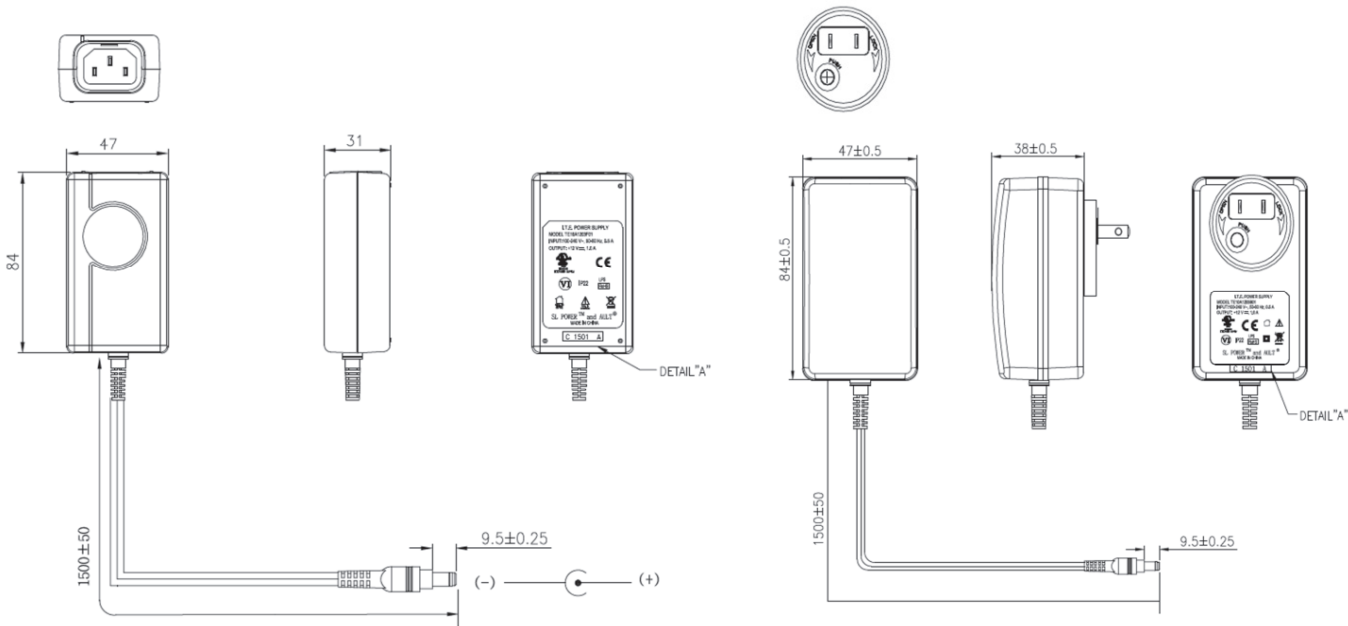
MTBF	>1,000,000 hours, full load, 110VAC & 220VAC input, 25°C amb., per Telcordia 332 Issue 6, Stress Method
E-Cap Life	>10 year life based on calculations at 115VAC/60Hz & 230VAC/50Hz, ambient 25°C at 24 hours/day, 365 days/year, 6 power up cycles/day.

EMI/EMC COMPLIANCE

Conducted Emissions	EN55022/CISPR22 Class B, FCC Part 15.107, Class B: 6db margin type, at 115VAC and 230VAC
Radiated Emissions	EN55022/CISPR22 Class B, FCC Part 15.109, Class B: 3db margin type, at 115VAC and 230VAC
Electro-Static Discharge (ESD) Immunity on Power Ports	EN55024/IEC61000-4-2, Level 4: ±8kV contact, ±15kV air, Criteria A
Radiated RF EM Fields Susceptibility	EN55022/EN61000-4-3, 10V/m, 80MHz-2.7GHz, 80% AM at 1kHz
EFT/Burst Immunity	EN55024/IEC61000-4-4, Level 4, ±4.4kV, 100kHz rep rate, 40A, Criteria A
Surges, Line to Line (DM) and Line to Ground (CM)	EN55024/IEC61000-4-5, Level 4, ±2kV DM, ±4kV CM, Criteria A
Conducted RF Immunity	EN55022/IEC61000-4-6, 3.6V/m - Level 4, 0.15MHz to 80MHz; and 12V/m in ISM and amateur radio bands between 0.15MHz and 80MHz, 80% AM at 1kHz
Power Frequency Magnetic Field Immunity	EN55024/IEC1000-4-8, Level 4: 30 A/m, 50Hz/60Hz
Voltage Dip Immunity	EN55024/IECEN61000-4-11: --100% dip for 20mS, Criteria A --100% dip for 500mS (250/300 cycles), Criteria B --60% dip for 100mS, Criteria B --30% dip for 500mS, Criteria A
Harmonic Current Emissions	EN55011/EN61000-3-2, Class A
Flicker Test	EN61000-3-3
Common Mode Noise	High Frequency (100kHz-20MHz): <40mA pk-pk

All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

MECHANICAL DRAWING



IEC60320C 14 Receptacle, 2.5mm x 5.5mm x 9.5mm Barrel Connector

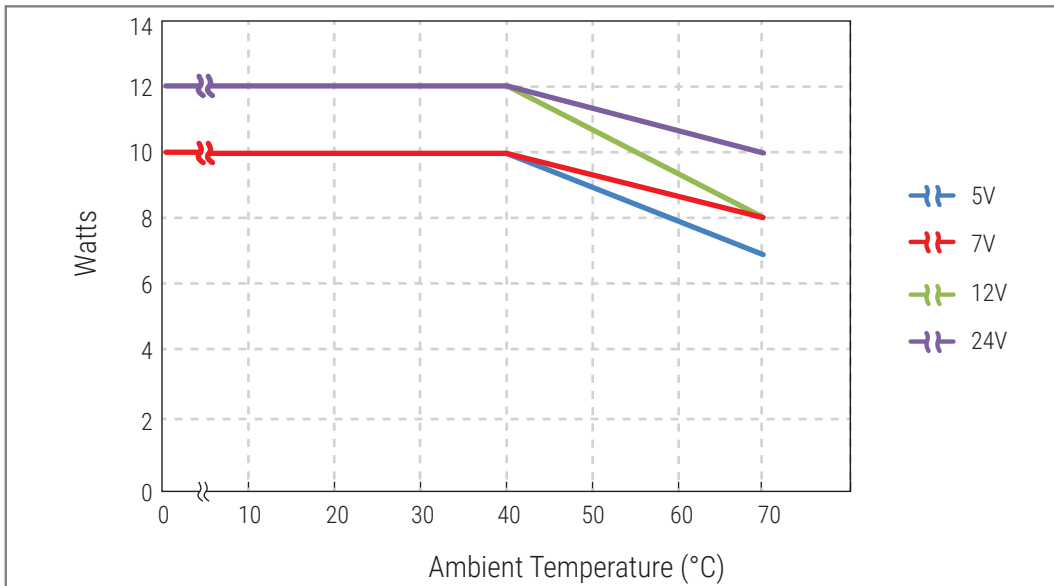
Interchangeable N.A. Blade, 2.5mm x 5.5mm x 9.5mm Barrel Connector

- NOTES:
1. Weight: 110 grams.
 2. All dimensions in mm.
 3. Interchangeable blade models come with North American blade fitted. For other blades (EU, UK, AU) order blade kit KT1027K.
 4. The unit should not be covered or enclosed to protect against excessive case temperature rise.

LEADWIRE HOOK-UP		
PIN #	FUNCTION	COLOR
1	+V	RED
2	NC	-
3	COMMON	BLACK
4	+V	WHITE
5	NC	-
6	COMMON	GREEN
	BRAID	FG4




Note: Pins 4,5,6 are located closest to the locking tab

DERATING CHART



CONNECTOR INFORMATION

Standard models include a 2.5mm x 5.5mm x 9.5mm straight barrel type connector (Ault #3), center positive. Other standard options are listed below. The "03" in the standard model number is replaced by the applicable digits below.

Connector No.	Description		Connector No.	Description	
02	2.1mm x 5.5mm x 9.5mm straight barrel plug - Center positive		44	2.1mm x 5.5mm x 9.5mm straight barrel plug, locking - Center positive	
03	2.5 x 5.5 x 9.5 mm straight barrel plug - Center positive (Standard models)		45	2.5mm x 5.5mm x 9.5mm straight barrel plug, locking - Center positive	
12	5 pin DIN - 180 male connector (Pins 3, 5 = (+); pins 1, 2, 4 = (-))		48	3 pin Snap n Lock, Kycon Kpp - 3P or equivalent (Pin 1 = (+); pin 2 = (-))	
22	6 pin DIN male connector (Pins 1, 2 = (+); pins 4, 5 = (-))		49	4 pin Snap n Lock, Kycon Kpp - 4P or equivalent (Pins 1, 3 = (+); pins 2, 4 = (-))	
23	8 pin DIN male connector (Pins 3, 7 = (+); pins 1, 4, 6, 8 = (-); shell = FG)		51	6 pin Minitit - Molex 39-01-2060 or equivalent (Pins 1, 4 = (+); pins 3, 6 = (-))	
32	9 pin "D" type, female (Pins 8 = (+); pins 5=(-); all others = NC)		65	Stripped and Tinned Leads	
33	2.5mm x 5.5mm x 12.5mm straight barrel plug - Center positive		70	2.1mm x 5.5mm x 11mm right angle barrel plug (high retention) - Center positive	
40	2.1mm x 5.5mm x 9.5mm right angle barrel plug (High retention) - Center positive		71	2.5mm x 5.5mm x 11mm right angle barrel plug (high retention) - Center positive	
41	2.5mm x 5.5mm x 9.5mm right angle barrel plug (High retention) - Center positive		72	2.1mm x 5.5mm x 9.5mm straight barrel plug (High retention, no spark) - Center positive	
42	2.1mm x 5.5mm x 11mm straight barrel plug (High retention) - Center positive		73	2.5mm x 5.5mm x 9.5mm straight barrel plug (High retention, no spark) - Center positive	
43	2.5mm x 5.5mm x 11mm straight barrel plug (High retention) - Center positive		74	EIAJ#5 style connector - Central positive	

EFFICIENCY LEVEL VI INFORMATION

Single-Voltage External AC-DC Power Supply, Basic-Voltage

Nameplate Output Power (P_{out})	Minimum Average Efficiency in Active Mode (expressed as a decimal)	Maximum Power in No-Load Mode [W]
$P_{out} \leq 1W$	$\geq 0.5 \times P_{out} + 0.16$	≤ 0.100
$1W < P_{out} \leq 49W$	$\geq 0.071 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.67$	≤ 0.100
$49W < P_{out} \leq 250W$	≥ 0.880	≤ 0.210
$P_{out} > 250W$	≥ 0.875	≤ 0.500

TE10 Series,
Output Voltage
 $\geq 6V$

Single-Voltage External AC-DC Power Supply, Low-Voltage

Nameplate Output Power (P_{out})	Minimum Average Efficiency in Active Mode (expressed as a decimal)	Maximum Power in No-Load Mode [W]
$P_{out} \leq 1W$	$\geq 0.517 \times P_{out} + 0.087$	≤ 0.100
$1W < P_{out} \leq 49W$	$\geq 0.0834 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.609$	≤ 0.100
$49W < P_{out} \leq 250W$	≥ 0.870	≤ 0.210
$P_{out} > 250W$	≥ 0.875	≤ 0.500

TE10 Series,
Output Voltage
 $\leq 5.9V$