





### INPUT

AC Input	100-240Vac, ±10%, 47-63Hz, 1
Input Current	115Vac: 0.5A, 230Vac: 0.25A
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
Common Mode Noise	High Frequency (100kHz-20MHz): <40mA pk-pk
No Load Input Power	<0.1W per DoE Efficiency Level VI Requirements

### PROTECTION

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

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

### OUTPUT

Output Voltage	See models chart on pg 1
Output Power	15 to 20W 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, return to within 0.5% of final value for any 50% load step over 5% to 100% of rated load, $\Delta i/\Delta t < 0.2A/\mu s$ . Max. voltage deviation is +/-3.5%

### EMI/EMC COMPLIANCE

Conducted Emissions	EN55011/CISPR22 Class B, FCC Part 15.107, Class B: 6db margin typ, at 115 and 230Vac
Radiated Emissions	EN55022/CISPR22 Class B, FCC Part 15.109, Class B: 3db margin typ, at 115 and 230Vac
Electro-Static Discharge (ESD) Immunity on Power ports	EN55024/IEC61000-4-2, Level 4: +/- 8kV contact, +/- 15kV air, Criteria A
Common Mode Noise	High Frequency (100kHz-20MHz): <40mA pk-pk
Radiated RF EM Fields Susceptibility	EN55022/EN61000-4-3, 10V/m, 80MHz-2.7GHz, 80% AM at 1kHz
Electrical Fast Transients (EFT) /Bursts	EN55024/IEC61000-4-4, Level 4, +/- 4.4kV, 100Khz rep rate, 40A, Criteria A
Surges, Line to Line (Diff Mode) and Line to GND (CMN Mode)	EN55024/IEC61000-4-5, Level 4, +/-2kV DM, +/-4kV CM, Criteria A
Conducted Disturbances induced by RF Fields	<ul style="list-style-type: none"> <li>- EN55022/IEC61000-4-6, 3V/m – Level 4, 0.15 to 80Mhz; and 12V/m) in ISM and amateur radio</li> <li>- bands between 0.15Mhz and 80Mhz, 80% AM at 1KHz</li> </ul>
Rated Power frequency QERIMGIPHW	EN55024/IEC1000-4-8, Level 4: 30A/m, 50/60Hz
Voltage Interruptions, Dips, Sags & Surges	EN55024/IECEN61000-4-11: <ul style="list-style-type: none"> <li>- 100% dip for 20mS, Criteria A</li> <li>- 100% dip for 500mS (250/300 cycles), Criteria B</li> <li>- 60% dip for 100mS, Criteria B</li> <li>- 30% dip for 500mS, Criteria A</li> </ul>
Harmonic Current Emissions	EN55011/EN61000-3-2, Class A
Flicker Test	EN61000-3-3

### ENVIRONMENT

Operating Temperature	-20°C to +70°C Start Up at -40°C, full load, (warmup period before all parameters are within published specifications)
Relative Humidity	5% to 95%, non-condensing
Weight	110g
Temperature Derating	See Derating Chart
Altitude	Operating: to 5000m. Non-operating: -500 to 40,000 ft.
Storage Temperature	-40°C to +85°C
Vibration	Operating: 0.003g/Hz, 1.5grms overall, 3 axes, 10 min/axis, 1-500Hz. Non-Oper.: random waveform, 3 minutes per axis, 3 axes; Sine waveform, Vib. frequency/ acceleration: 10-500Hz/1g, sweep rate of 1 octave/min., 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 6 mS, Number of shocks: 3 for each of the three axis

### SAFETY

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

### RELIABILITY

MTBF	>1,000,000 hours, full load, 110 & 220Vac input, 25°C amb., per Telcordia 332 Issue 6, Stress Method
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### ISOLATION

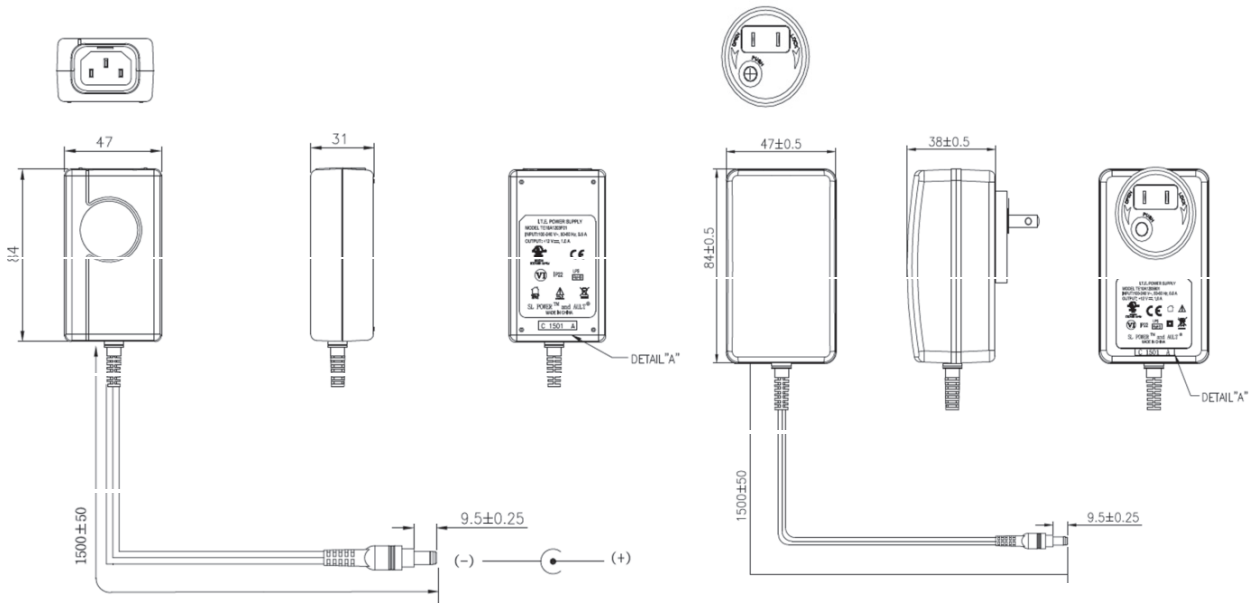
Isolation	Input-Output: 4000Vac Input-Ground: 1500Vac Output-Ground: 1500Vac
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All specifications are typical at nominal input, full load, at 25°C ambient unless noted

#### Notes:

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

**MECHANICAL DRAWING**



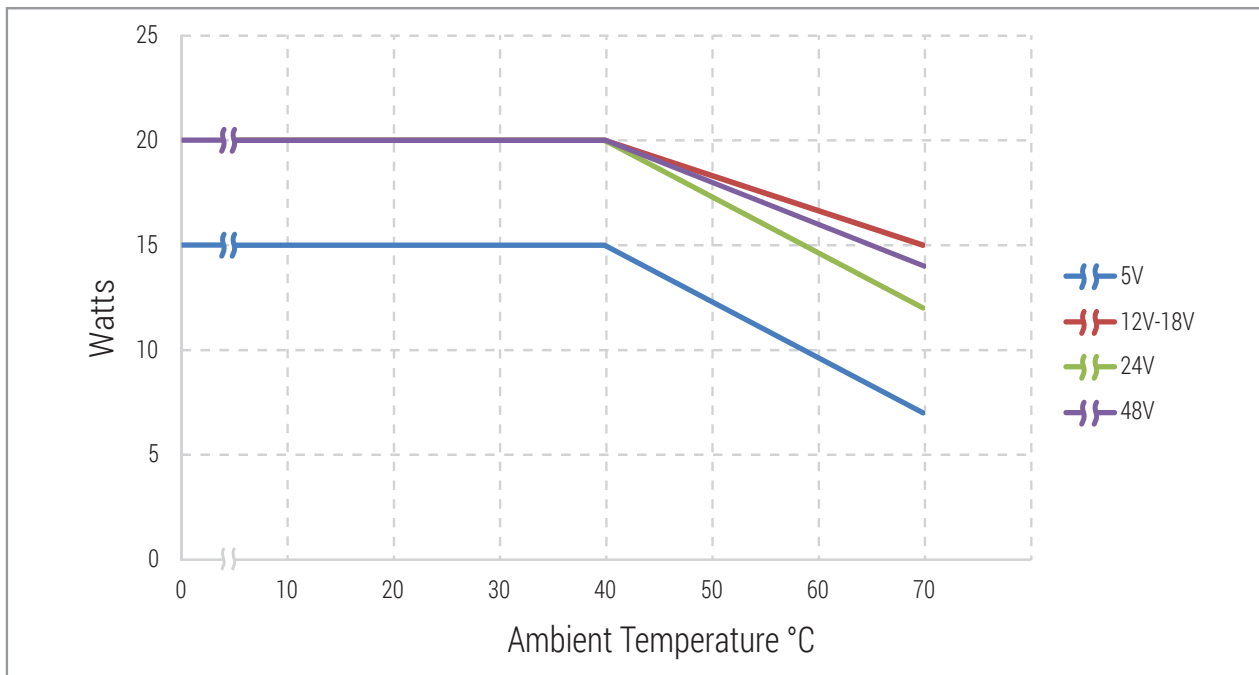
IEC60320C 14 Receptacle, 2.5 x 5 x 9.5mm Barrel Connector

Interchangeable N.A. Blade, 2.5x 5.5x 9.5mm barrel connector

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

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

**DERATING CHART**



**CONNECTOR INFORMATION**

Standard models include a 2.5 x 5.5 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	2.1 x 5.5 x 9.5 mm straight barrel plug - Center positive		44	2.1 x 5.5 x 9.5 mm straight barrel plug, locking - Center positive	
03	2.5 x 5.5 x 9.5 mm straight barrel plug - Center positive (Standard models)		45	2.5 x 5.5 x 9.5 mm 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 Minit - 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	2.5 x 5.5 x 12.5 mm straight barrel plug - Center positive		70	2.1 x 5.5 x 11mm right angle barrel plug (high retention) - Center positive	
40	2.1 x 5.5 x 9.5 mm right angle barrel plug (High retention) - Center positive		71	2.5 x 5.5 x 11mm right angle barrel plug (high retention) - Center positive	
41	2.5 x 5.5 x 9.5 mm right angle barrel plug (High retention) - Center positive		72	2.1 x 5.5 x 9.5 mm straight barrel plug (High retention, no spark ) - Center positive	
42	2.1 x 5.5 x 11 mm straight barrel plug (High retention) - Center positive		73	2.5 x 5.5 x 9.5 mm straight barrel plug (High retention, no spark ) - Center positive	
43	2.5 x 5.5 x 11 mm 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]
$P_{out} \leq 1$ W	$\geq 0.5 \times P_{out} + 0.16$	$\leq 0.100$
$1$ W < $P_{out} \leq 49$ W	$\geq 0.071 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.67$	$\leq 0.100$
$49$ W < $P_{out} \leq 250$ W	$\geq 0.880$	$\leq 0.210$
$P_{out} > 250$ W	$\geq 0.875$	$\leq 0.500$

TE20ASeries

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]
$P_{out} \leq 1$ W	$\geq 0.517 \times P_{out} + 0.087$	$\leq 0.100$
$1$ W < $P_{out} \leq 49$ W	$\geq 0.0834 \times \ln(P_{out}) - 0.0014 \times P_{out} + 0.609$	$\leq 0.100$
$49$ W < $P_{out} \leq 250$ W	$\geq 0.870$	$\leq 0.210$
$P_{out} > 250$ W	$\geq 0.875$	$\leq 0.500$