



FEATURES AND BENEFITS



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

Meets “Heavy Industrial” Levels of EN61000 EMC Requirements

Up to 12W of AC-DC Power

>10 Year E-Cap Life

IP22 Rated Enclosure

>1,000,000 Hours MTBF

Approved to EN/CSA/IEC/UL62368-1

3 Year Warranty

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

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:

1. 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.
2. Order blade kit KT-1027K for other blades (EU, UK, Australia).
3. 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".
4. 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).
5. 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

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|----------------------------|--|
| 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

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



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. |

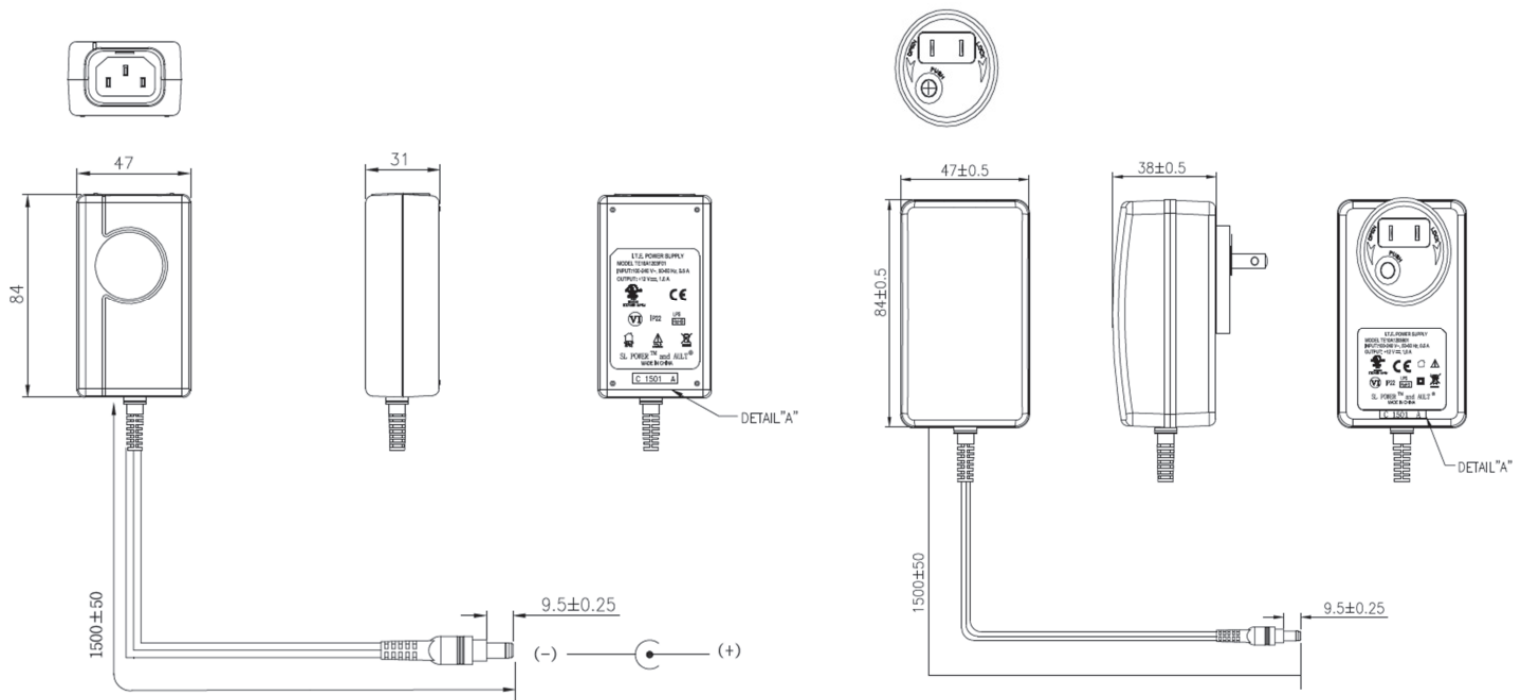
EMI/EMC COMPLIANCE

| | |
|--|--|
| 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



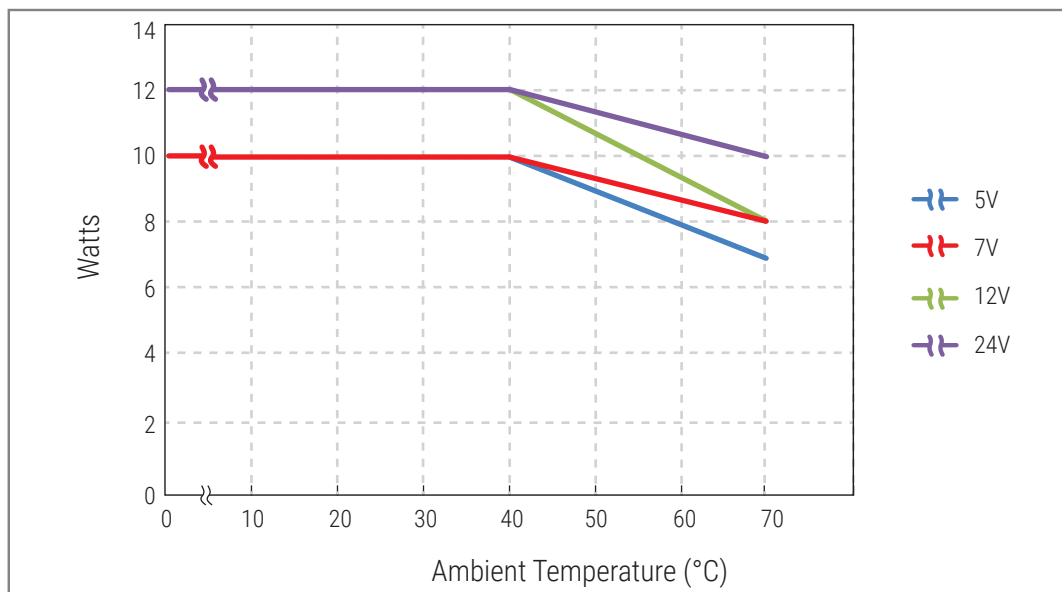
IEC60320C 14 Receptacle, 2.5mm x 5.5mm x 9.5mm Barrel Connector

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, Australia) order blade kit KT1027K.
4. The unit should not be covered or enclosed to protect against excessive case temperature rise.

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 = (-); pins 5, 6 = NC) |  |
| 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
 $\leq 5.9V$