



±120V DC Input Industrial PC ATX Switching Mode Power Supply

Series	Model no.	Output watts	Input voltage	Input voltage range	Polarity reverse protection
120	STC-120650	650W	±120V DC	±80V ~ ±150V DC	Fuse protected
	STC-120500	500W			Fuse protected
	STC-120450	450W			Protected (Max.200V DC)
	STC-120400	400W			Protected (Max.200V DC)

* H version (Black color chassis)

ENVIRONMENTAL CONDITIONS:

- ▶ Cooling: Forced Air-cooling, 80x80x25 mm Fan x 1 pc
- ▶ Fan type: DC type, 2 x Ball Bearing, 4000 rpm, with Fan Control Card
- ▶ Fan Noise Level: 40 dBA (DELTA fan brand Official Data at 4000 rpm, 46.62 CFM) @ Full Load
- ▶ Fan Noise Level tested: 58 dBA @ Distance 1m (DELTA fan brand 4000 rpm, 46.62 CFM) @ Full Load
- ▶ Fan brand: DELTA, NMB, SUNON, SUNON IP68 (for H version) with the same specification
- ▶ Operating Temp.: 0°C~+50°C Full Load
- ▶ Operating Temp.: / H version -20°C~+60°C Full Load
- ▶ Operating Humidity: 20%~85% RH Non condensing
- ▶ Operating Humidity: / H version 90% RH Non condensing
- ▶ Output power: 100% @ +50°C, 70% @ +60°C, 50% @ +70°C
- ▶ Output power: / H version 100% @ +60°C, 70% @ +65°C, 50% @ +70°C
- ▶ Storage Temperature: -20°C~+80°C
- ▶ Storage Humidity: 10%~90% RH. (Non condensing)
- ▶ Operating Altitude: 10M Below Sea level to 3000M Above Sea level

DC INPUT CHARACTERISTICS:

- ▶ Input connector type 25A/300V UL Approved Gold Plated Brass 1.2t/3-Pin Terminal
- ▶ Input connection Make sure plug power source according to the label instruction.
- ▶ Input Current 5.5A/10.3A(**650W**) 4A/7.5A(**500W**) 3.2A/6A(**400W**)
@ Full Load High Line & Low Line
- ▶ Inrush Current Less than 6A Cold start @25°C ambient

DC OUTPUT CHARACTERISTICS:

Output Voltage	Regulation			Output Current								Ripple & Noise
	Load	Line	Cross	650W		500W		450W		400W		
				Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
+5V	±5%	±1%	±5%	1A	30A	1A	30A	0A	45A	0A	40A	50mV
+12V				1A	45A	1A	40A	0A	35A	0A	30A	120mV
+3.3V				0A	22A	0A	22A	0A	30A	0A	30A	50mV
-5V								0A	0A	0A	0A	50mV
-12V	±8%	±1%	±5%	0A	0.3A	0A	0.3A	0A	1A	1A	1A	120mV
+5VSB	±5%			0A	2.5A	0A	2.5A	0A	3A	3A	3A	50mV
Maximum continuous combined load on +3.3 V & +5V DC output shall not exceed				200		200		200		200		Wattage
Maximum continuous total DC output power shall not exceed				650		500		450		400		

OVERALL PERFORMANCE:

- ▶ Efficiency: 80% (400W, 450W), 85% (500W, 650W) typical @120V DC Full Load
- ▶ Hold up time:
- ▶ Rise time:
- ▶ Power Good Signal: TTL Compatible signal, on delay 100~500ms, off delay 1ms min.
- ▶ Short Circuit Protection (SCP): All output equipped with SCP (shutdown and latch off)
- ▶ Over Power Protection (OPP): Peak power protected to 130%±10% of continuous rated power (shutdown and latch off)
- ▶ Over Voltage Protection (OVP): +3.3V@4.5V, +5V@6V, +12V@15.6V

RELIABILITY:

- ▶ MTBF: >100,000 hours @max. Load, 120V DC & 25°C ambient
- ▶ Safety Standards: Meet IEC60950-1, EN60950-1, EN62368-1
- ▶ Safety Approved:
- ▶ EMI Compatibility (EMC): EN55032:2015/AC:2016, CISPR32:2015, EN61000-3-2:2014, EN61000-3-3:2013, EN55024:2010 +A1:2015

ISOLATION:

- ▶ INPUT and OUTPUT are isolated by transformers and optical couplers
- ▶ Dielectric Withstand: INPUT to OUTPUT: 2000V DC for 60 seconds
- ▶ Dielectric Withstand: INPUT to FRAME GROUND: 2000V DC for 60 seconds
- ▶ Leakage Current: <0.005μA @120V DC

Output Device Connector Specific:

- ▶ ATX 24 Pins x 1 Molex 29-01-2240 or equivalent
- ▶ 12V(P4) 4 Pin x 1 Molex 39-01-2040 or equivalent / **STC-120400, STC-120450**
- ▶ HDD, DVD 4 Pin x 2 Molex 8981-04P or equivalent
- ▶ FDD 4 Pin x 1 AMP 171822-4 or equivalent
- ▶ Serial ATA x 4 Molex 675820000 or equivalent
- ▶ CPU EPS 8 Pin x 1 Molex 39-01-2080 or equivalent / **STC-120400, STC-120450**
- ▶ CPU EPS 8(4+4) Pin x 2 Molex 39-01-2080 or equivalent / **STC-120500, STC-120650**
- ▶ PCIe (6+2) x 1
- ▶ PCIe (6+2) x 2 **STC-120650**

Standard Output Cable Length:

550 mm / 21.65 Inches

PCB specific:

- ▶ Layers: 2 / **STC-120400, STC-120450**

▶ Layers:	4 / STC-120500, STC-120650
▶ Copper:	3 Oz
▶ Thickness:	1.6mm
▶ Material:	FR4
▶ PCB material origin:	Taiwan

Power Chassis Dimension:

140(L) x 150(W) x 86(H) mm / 5.51(L) x 5.9(W) x 3.39(H) Inches

Net Weight:

2 kg / 4.4 lbs / **STC-120400, STC-120450**
2.3 kg / 5.07 lbs / **STC-120500, STC-120650**

Gross Weight:

2.5 kg / 5.51 lbs / **STC-120400, STC-120450**
2.8 kg / 6.17 lbs / **STC-120500, STC-120650**

Packing Detail:

8 PCs

Measurement of Carton:

0.054 m³ / 1.92Cuft