



±48V DC Input Industrial PC ATX 2.01 & 2.03 Switching Mode Power Supply

Series	Model No.	Output Watts	Input Voltage	Input Voltage range	Polarity reverse protection
48	STC-481400	1400 W continuous	±48V DC	±36V ~ ±72V DC	Not Protected
	STC-481200	1200 W continuous	±48V DC	±36V ~ ±72V DC	Not Protected

* H version (Black color chassis)

ENVIRONMENTAL CONDITIONS:

- ▶ Cooling: Forced Air 80x80x25 mm Fan x 2 pcs (**1200W**), 80x80x38 mm Fan x 1 pc (**1400W**)
- ▶ Fan type: DC type, 2 x Ball Bearing, 6200 rpm, Optional 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** -30°C~+60°C Full Load
- ▶ Output Power: 100% @ 50°C, 70% @ 60°C, 50% @ 70°C
- ▶ Output Power: / **H version** 100% @ 60°C, 70% @ 65°C, 50% @ 70°C
- ▶ Operating Humidity: 20%~85% RH (Non condensing)
- ▶ Operating Humidity / **H version** 95% RH Non condensing
- ▶ 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 (*) 220A thickness 1.0mm/ 1port Positive Terminal/ 1port Negative Terminal (**1200W**)
- ▶ Input connector type (*) 200A/300V UL Approved Gold Plated Brass 2 Pin 12.5mm Screw Terminal (**1400W**)
- ▶ Input Current 22.3A/44.7A(**1400W**) 19A/38A(**1200W**) @Full Load High Line & Low Line
- ▶ Inrush Current Less than 90A Cold start @25°C ambient

(*) Note: See pictures of Input Terminal Connector at the Bottom of this document

DC OUTPUT CHARACTERISTICS:

Output Voltage	Regulation			Output Current				Ripple & Noise
	Load	Line	Cross	1400W		1200W		
				Min.	Max.	Min.	Max.	
+5V	±5%	±1%	±5%	0A	25A	0A	35A	50mV
+12V				0A	112A	0A	92A	120mV
+3.3V				0A	22A	0A	22A	50mV
-12V				0A	0.3A	0A	0.3A	120mV
+5VSB	±5%			0A	3.5A	0A	4A	50mV
The output current of combined load on +3.3 V & +5V DC output shall not exceed				40A		40A		A
Maximum continuous total DC output power shall not exceed				1400		1200		Wattage

OVERALL PERFORMANCE:

- ▶ Efficiency: 75% (**1200W**), 85% (**1400W**) typical @48V 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@4.4V, +5V@6V, +12V@15.6V

RELIABILITY:

- ▶ MTBF: >90,000 hours @max. Load, 48V DC & 25°C ambient
- ▶ Safety Standards: Meet IEC60950-1, EN60950-1
- ▶ 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: 1000V DC for 60 seconds
- ▶ Dielectric Withstand: INPUT to FRAME GROUND: 1000V DC for 60 seconds
- ▶ Leakage Current: <0.005μA @ 48V DC

Output Device Connector Specific:

- ▶ ATX 24 Pins x 1 Molex 29-01-2240 or equivalent
- ▶ 12V(P4) 4 Pins x 1 Molex 39-01-2040 or equivalent
- ▶ HDD, DVD 4 Pins x 2 Molex 8981-04P or equivalent
- ▶ FDD 4 Pins x 2 AMP 171822-4 or equivalent
- ▶ Serial ATA x 8 Molex 675820000 or equivalent
- ▶ CPU EPS 8 Pins x 1 Molex 39-01-2080 or equivalent
- ▶ PCIe x 4

Standard Output Cable Length:

610 mm / 24 Inches

PCB specific:

- ▶ 4 layers 1.6 mm **STC-481200**
- ▶ 8 layers 1.78 mm **STC-481400**
- ▶ Copper: 3 Oz
- ▶ Material: FR4
- ▶ PCB material origin: Taiwan

Power Chassis Dimension:

270(L) x 150(W) x 86(H) mm / 10.63(L) x 5.9(W) x 3.39(H) Inches

Net Weight:

4.7 kg / 10.36 lbs

Gross Weight:

5.3 kg / 11.68 lbs

Packing Detail

2 PCs / Carton
N.W. 10.8 kg / 23.8 lbs
G.W. 11.8 kg / 26.0 lbs

Measurement of Carton

0.045 m³ / 1.58 Cu. Ft

Input Connector Terminal Pictures:

