



**POWER FACTOR
CORRECTED
200 WATTS**

**TEK 200
PFC SERIES**

POWER FACTOR CORRECTED 200 WATTS


SMX POWER

3005 Avenida Simi, Simi Valley, CA 93063

TEL: (805) 582-2804 FAX: (805) 582-2308

www.smxpower.com

FEATURES

- Universal AC input power factor correction
- Wide selection of single outputs
- World-wide agency approval
- 100% Burn-in, hi pot tested
- Stock to 6 week delivery
- High quality
- Superior performance
- Price competitive
-  Marked

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DESCRIPTION

The **TEK Series**, Power Factor Corrected Switch Mode Power Supplies are available in 6 single output models and provide output power up to 200 watts. These high performance switchers are low profile and available in U channel configuration. The **TEK Series** is an ideal choice and a powerful solution for any application where up to 200 watts may be required. They are intended for installation as a component in OEM systems.

SPECIFICATION

AC Input Specifications

Input Frequency: 47-63 Hz
Input Voltage: 90-264V AC full range
Input Current: 4A at 100V AC
Inrush Current: 75A Peak maximum (Measured at 230V AC and full load, cold start.)
PFC: Passes Power Factor Correction requirements to EN61000-3-2 Class 'D'

DC Output Specifications

Output Rating: Measured at the output power connector.
Output Current:

Model	Output	Min	Max	Regulation Max.	Ripple & Noise
TEK200UPSA	3-4V DC	0.5A	30A	+/- 1%	50mV
TEK200UPSB	5-6V DC	0.5A	40A	+/- 1%	50mV
TEK200UPSC-12	12V DC	0.5A	16.7A	+/- 1%	+/- 1%
TEK200UPSC-15	15V DC	0.5A	13.3A	+/- 1%	+/- 1%
TEK200UPSD	24-30V DC	0.5A	8.34A	+/- 1%	+/- 1%
TEK200UPSE	35-56V DC	0.5A	5.55A	+/- 1%	+/- 1%

Notes:

- Maximum 200W continuous output, with minimum 17 cfm forced ventilation.
- Maximum 150W continuous output with air convection, except TEK200UPSA and TEK200UPSB for which current is limited to 22A.
- Outputs are fully isolated.
- Ripple and noise is measured from 10KHZ to 20MHZ bandwidth at output terminals with parallel 0.1µF ceramic and 22µF electrolytic capacitors.

Fan Drive: 12VDC/160mA is available to drive an external fan.

Electrical Characteristics

Transient Response: Output voltage returns to within 1% in less than 500µs for a 50% load change. Voltage deviation not to exceed +/- 5%.

Overshoot: Turn-on and turn-off overshoot should not exceed 5% of nominal voltage.

Efficiency: 70% minimum (Measured at 230V and full load)

Turn On Delay: 1 Second maximum at 120V AC input

Hold Up Time: 20 mS minimum at 120V AC input and 80% of rated maximum load

Adjustability: Output user adjustable +/- 5% minimum

Remote On-Off: Designated as S/D on the CN3. Requires a low signal to inhibit output.

Power Supply On: Green LED designated as LED 1 on the PCB. When this LED is on, the power supply is operating.

Power Good: Designated as PG on CN3. This is a Power On Reset signal. This signal will go high 100-500 mSec after the output reaches regulation. It goes low at least 1 mSec before loss of regulation.

Protection Circuit

Input Circuit (Primary):

A protective fuse is installed in the primary circuit of the power supply. The fuse shall blown only by an internal fault of the power supply. Any overload or short on the output either momentarily or permanently, shall not blow the input fuse, or create a fire or shock hazard.

Input Circuit (Secondary):

Overcurrent Protection:

Current limits at 110-135% of the rated output current and recovers automatically.

Short Circuit Protection:

Short circuit can be continuous without damage and the power supply recovers automatically.

Over Voltage Protection:

Output is protected against over voltage. Unit will latch down when the output exceeds 130% of the output voltage. Recycle AC input to reset.

Over Temperature Protection:

Power supply protected in the event of excessive operating ambient of 85°C. Recovers automatically when ambient gets to within the operating temperature range.

Mechanical Specifications

Enclosure: 172.70mm(6.8")L X 96.5mm(3.8")W X 38.1mm(1.5")H
U-Channel construction.

AC Input Connector: Mating Molex Part No. 09-91-0500 or equivalent (5 pin,3 used) PCB is Labeled: L = Line; N = Neutral; G = Chassis Ground Mating Pins; Molex Engineering Series 2478, 2578, 8818.
OR Howder Terminal block Part No. FTB-702-3P (3 pin)

Output Connector: Mating Molex Part No. 09-91-1200 (12 pin), or Howder Terminal block Part No. HD-301-4P (4 pin)

Output Pin Assignment:

Molex:	Howder:
VO+ (Pins 1-6)	(Pins 1-2)
VO- (Pins 7-12)	(Pins 3-4)

Logic signal connectors (CN3):
Mating JST XHP-6 or equivalent (CHYAO SHIUNN JS-2001-06)
Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 TO 26

Mounting Inserts: 8 places M4. Maximum penetration 4mm, see outline drawing for location

Weight: Maximum weight is 650g.

Environmental Specifications

Operating Temperature: 0 to 50°C
Storage Temperature: -25 to +85°C
Operating Humidity: 5% to 90% RH Non-condensing
Storage Humidity: 5% to 95% RH Non-condensing
Vibration: Frequency: 5 to 50Hz
Acceleration: +/- 7.35 ms² on X, Y and Z Axis

Safety and EMI Requirement:

EMI specifications: Designed to meet FCC Part 15 Subpart B class B, CISPR 22 class B.
Safety Regulation: PASS, UL, CUL, TUV, CE
Leakage Current: The AC leakage current shall not exceed 3.5mA when the power supply is connected to a supply voltage equal to the upper limit of the rated voltage range.

HI-POT and Grounding test

HI-POT: The power supply shall withstand for 3 Sec without breakdown the application of a 1500 VAC supply voltage applied between both input line and chassis (10mA DC cut off current). Isolating transformers shall withstand 3000VAC applied between primary and secondary windings and primary to core 1500VAC.


Grounding Test: Apply 25A current from the ground pin of the three prong plug to the far most earthed connection point. The maximum allowable resistance measured during the test is 0.1 ohm.

Reliability and MTBF

Reliability: The operational life of the power supply is one year.
MTBF: 100,000 hours (According to MIL-HBK-217F) at 30°C.
Cooling: Full ratings can be obtained when unit is force cooled with 16 CFM of air.

Burn In

Input Voltage: Applying 230V AC for input voltage.
Burn In Condition: Applying full load for this product in 45 (+/-5)°C burn in room for one hour.

 These component power supplies meet the requirements of EC Directive 73/23/EEC (LVD)

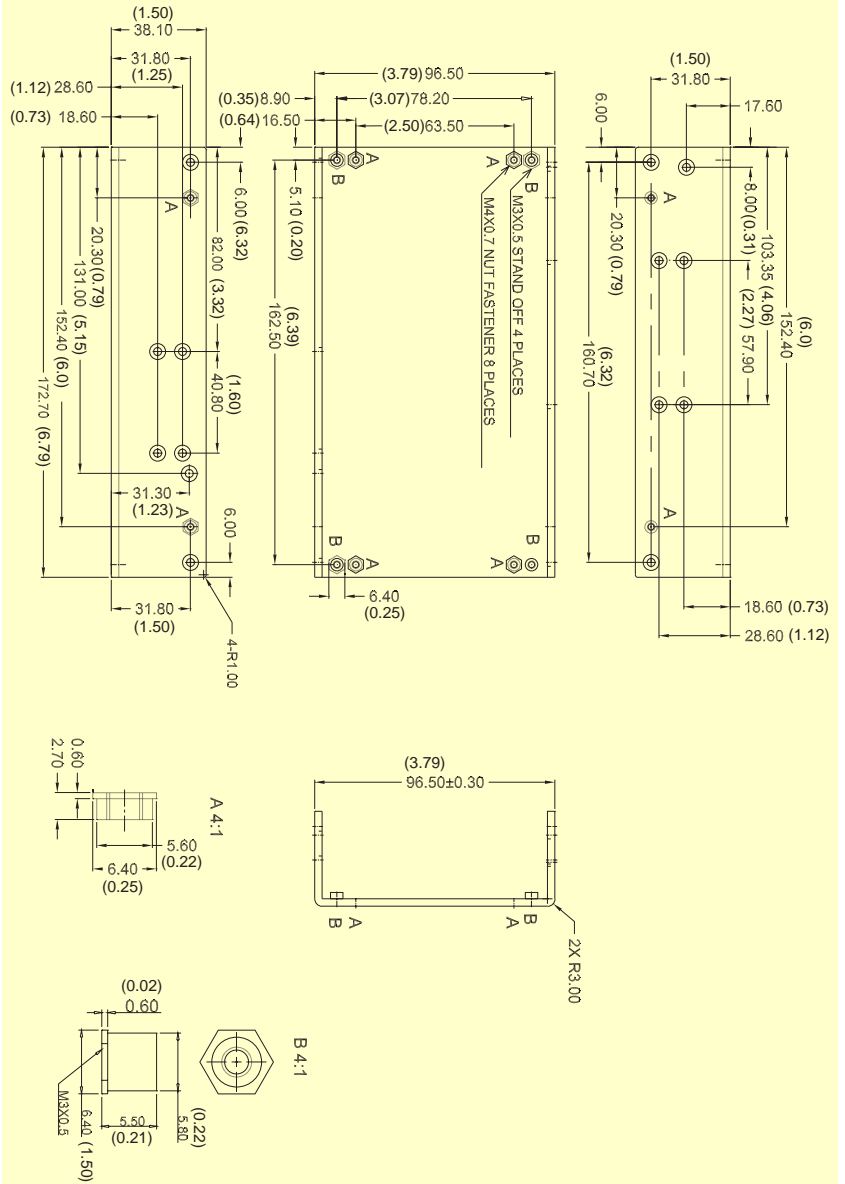
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SPECIFICATION OUTLINE DRAWING



Drawing dimensions are in mm (inches)

Design developments may result in specification changes

Revision: 07/03



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