



## SWITCH MODE POWER SUPPLIES 100-300 WATTS

### TEK 100-300 SERIES

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#### FEATURES

- Universal AC input
- Single, dual, triple, quad outputs
- World-wide agency approval
- 100% Burn-in, hi pot tested
- Stock to 6 week delivery
- High quality
- Superior performance
- Price competitive
-  Marked

TEK 100-300 SERIES

# SMX POWER

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[www.smxpower.com](http://www.smxpower.com)



# SWITCH MODE POWER SUPPLIES 100-300 WATTS

## TEK 100-300 SERIES

### DESCRIPTION

The **TEK Series** Switch Mode Power Supplies are available in single, dual, triple and quad output models and provide output power from 100 to 300 watts. All **TEK Series** Switchers are low profile and are available in an open-frame or covered configuration. The **TEK Series** is an ideal choice and a powerful solution for any application where up to 300 watts may be required. They are intended as a component for installation in a system.

### SPECIFICATION

#### AC Input Specifications

**Input Voltage:** TEK100, 90-264V AC, TEK200/300, 90-132/180-264V AC  
**Input Frequency:** 47-63 Hz.  
**Inrush Current:** (Cold Start): 40A (max)@115V AC, 80A (max)@230V AC  
**Efficiency:** 70% Typical @ Full Load

#### DC Output Specifications

**Output Voltage:** See Model Chart  
**Voltage Adjust:** Main output(V1) +/-5% of rated output.  
**Output Current:** See Model Chart  
**Output Power(Watts):** See Model Chart

#### Total Regulation

**(20-100% load):** Single O/P +/- 1%, Multi (Main O/P) +/- 3%, Multi (Auxiliary O/P) +/- 5%

#### Ripple and Noise:

+/-1% p-p

#### Turn-On Delay:

1 sec. max.@120V AC

#### Hold-up Time:

20ms @ 120V AC and 80% of rated load.

#### Overshoot:

Not to exceed 5% over nominal voltage

#### Step Load Response

**The TEK 100/200/300:** With a 20% dynamic load change the output will vary <=3%.

Recovery is within the 1% regulation window within 300µS.

#### Environmental Conditions

**Operating Temp:** 0-40°C. For operation above 40 °C, derate 2.5% per °C.

**Temperature Coefficient:** 0.1% per °C max.

**Storage Temp:** -20 to 85 °C.

#### Cooling:

TEK100 provides 100W convection cooled without cover, 80W convection cooled with cover. TEK200 & 300 require 18.7CFM to operate at full load.

**Operating Humidity:** 5%-95% RH, non-condensing.

**Storage Humidity:** 5%-95% RH, non-condensing.

#### Vibration:

Frequency 5 to 50 Hz, Acceleration +/-7.35M/(SxS) on X,Y,Z axis.

#### Safety:

UL, cUL, CE, TUV, VDE

**Emissions:** FCC Part 15 subpart B, Class B, CISPR 22 Class B

**Leakage:** AC leakage current shall not exceed 3.5mA when Input voltage to the power supply is at 264V AC

### MODEL NUMBERS AND OUTPUT RATINGS

#### TEK100Series

Model Number	Output V1		Output V2		Output V3		Output V4	
	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current
TEK100S01	5V	20A (30APK)						
TEK100S02	12V	8.5A (12A PK)						
TEK100S03	15V	6.5A (10A PK)						
TEK100S04	24V	4.5A (8A PK)						
TEK100S09	48V	2A (3A PK)						
TEK100D12	5V	10A (15A PK)	12V	5A (9A PK)				
TEK100D13	5V	10A (15A PK)	15V	4A (6A PK)				
TEK100D14	5V	10A (15A PK)	24V	2.5A (6A PK)				
TEK100T16	5V	10A (15A PK)	12V	5A (9A PK)	12V	0.5A (1A PK)		
TEK100T17	5V	10A (15A PK)	15V	4A (6A PK)	15V	0.5A (1A PK)		
TEK100Q56	5V	10A (15A PK)	12V	5A (9APK)	12V	0.5A (1A PK)	5V	0.5A (1A PK)
TEK100Q57	5V	10A (15A PK)	15V	4A (6A PK)	15V	0.5A (1A PK)	5V	0.5A (1A PK)
TEK100Q86	5V	10A (15A PK)	24V	2A (3A PK)	12V	0.5A (1A PK)	12V	0.5A (1A PK)

**Note:** All peak surge currents are less than 30ms and less than 50% duty cycle.

## SWITCH MODE POWER SUPPLIES 100-300 WATTS

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#### TEK200 Series

Model Number	Output V1		Output V3		Output V4		Output V2	
	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current
TEK200SA	3.3V	40A						
TEK200SB	5V	40A						
TEK200SC	12V	16.7A						
TEK200SC	15V	13.3A						
TEK200SD	24V	8.3A						
TEK200SE	48V	4.2A						
TEK200D12	5V	20A	12V	8A				
TEK200D13	5V	20A	15V	6.6A				
TEK200D14	5V	20A	24V	4.2A				
TEK200T16	5V	18A	12V	8A	12V	1.0A		
TEK200T17	5V	20A	15V	5A	15V	1.0A		
TEK200Q56	5V	20A	12V	6A	12V	1.0A	5V	1.0A
TEK200Q57	5V	20A	15V	5A	15V	1.0A	5V	1.0A
TEK200Q86	5V	15A	24V	3A	12V	1.0A	12V	1.0A

#### TEK300 Series

Model Number	Output V1		Output V3		Output V4 (Floating)		Output V2	
	Voltage	Current	Voltage	Current	Voltage	Current	Voltage	Current
TEK300SA	3.3V	60A						
TEK300SB	5V	60A						
TEK300SC	12V	25A						
TEK300SC	15V	20A						
TEK300SD	24V	12.5A						
TEK300SE	48V	6.3A						
TEK300D12	5V	30A	12V	12A				
TEK300D13	5V	30A	15V	10A				
TEK300D14	5V	30A	24V	6.2A				
TEK300T16	5V	30A	12V	10A	12V	2A		
TEK300T17	5V	30A	15V	8A	15V	2A		
TEK300Q56	5V	30A	12V	10A	12V	2A	5V	2A
TEK300Q57	5V	30A	15V	7A	15V	2A	5V	2A
TEK300Q86	5V	30A	24V	5A	12V	2A	12V	2A

#### ELECTRICAL FEATURES

##### Overcurrent Protection

All supplies are short circuit protected. Overcurrent protection at particular levels can be provided upon request.

##### Overvoltage Protection

Output is protected against overvoltage. Unit latching will occur when output exceeds 110 - 125%. Recycle AC Input to reset.

##### Over Temp. Protection

Short Circuit can be continuous without damage and recovers automatically.

##### Cold Start

After having stored the power supply at low temperatures, place it in a minimum of 10 °C environment for at least 8hrs before switching it on.

##### Power Supply On

Green LED indicates when the power supply is on.

##### Power Good

Designated as PG on the PCB. This is a power on reset signal. Signal will go high when the output reaches the regulation limit. It will go low 2-4 msec prior to losing regulation. The signal is available from a 2 pin Molex.

##### AC Good

Yellow LED designated as AC good. The LED will be on when signal is low and when the AC input is within its operating range.

##### DC Good

When the output is above the factory preset level the orange LED on the PCB will go on and the signal will be low.

##### Remote on-off

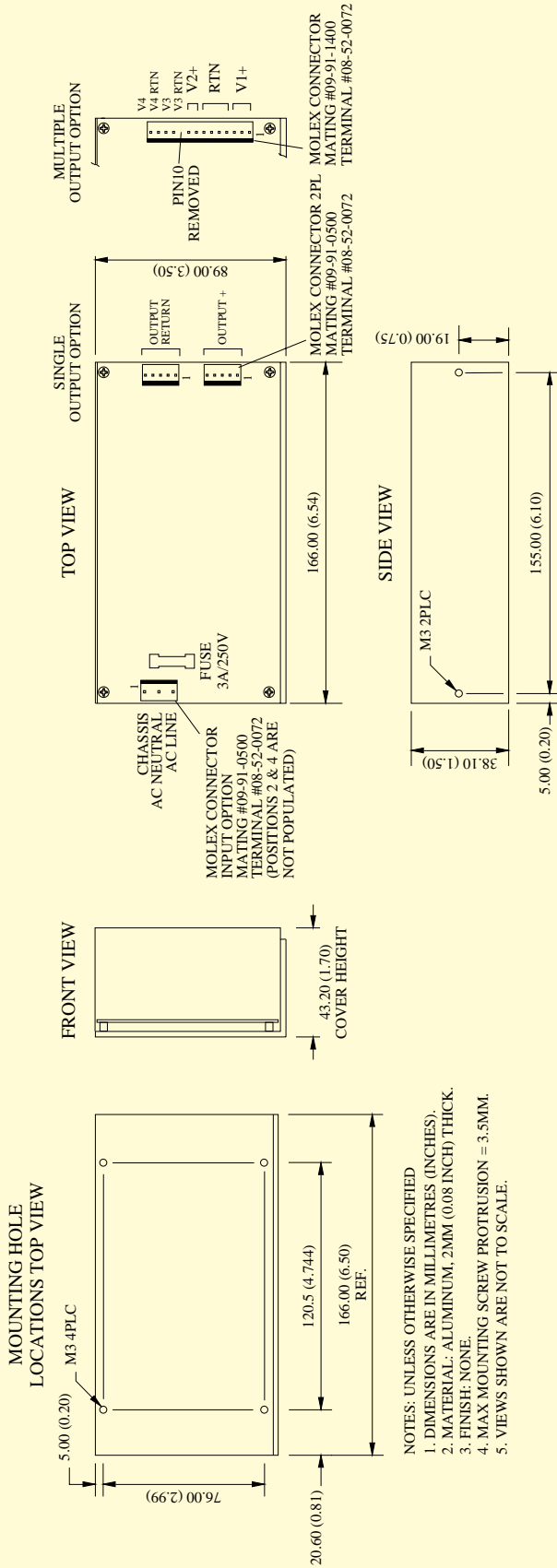
Designated as REMO SW on the PCB.

**Note:** Features explained above are not available on all models.

# SWITCH MODE POWER SUPPLIES 100-300 WATTS

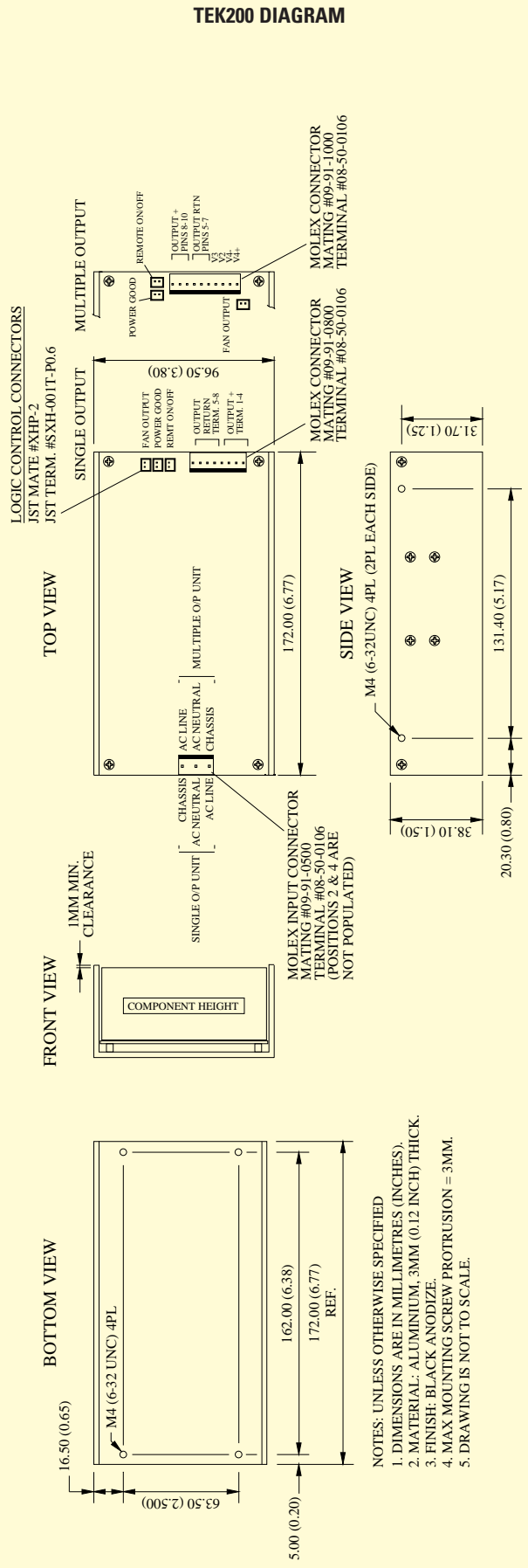
## TEK 100-300 SERIES

### TEK100 DIAGRAM



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## TEK 100-300 SERIES

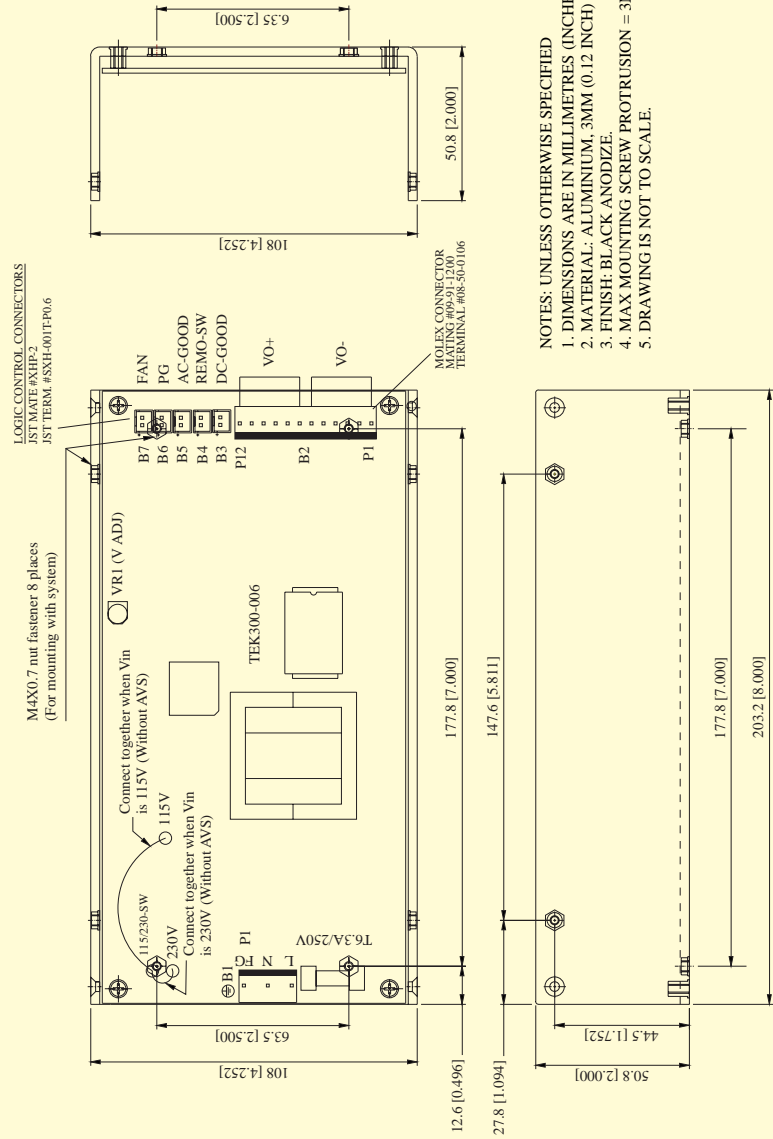


Design developments may result in specification changes

# SWITCH MODE POWER SUPPLIES 100-300 WATTS

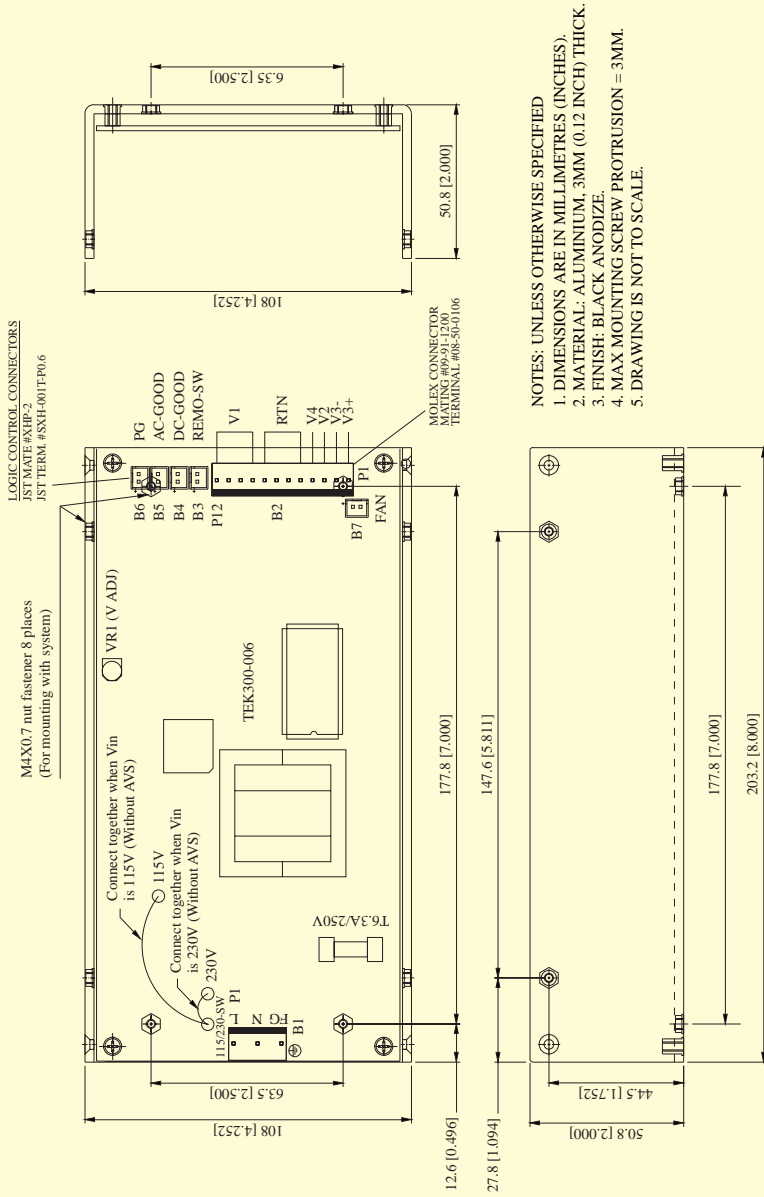
## TEK 100-300 SERIES

TEK300 SINGLE OUTPUT DIAGRAM



- NOTES: UNLESS OTHERWISE SPECIFIED
1. DIMENSIONS ARE IN MILLIMETRES (INCHES).
  2. MATERIAL: ALUMINIUM, 3MM (0.12 INCH) THICK.
  3. FINISH: BLACK ANODIZE.
  4. MAX MOUNTING SCREW PROTRUSION = 3MM.
  5. DRAWING IS NOT TO SCALE.

TEK300 MULTI OUPUT DIAGRAM



- NOTES: UNLESS OTHERWISE SPECIFIED
1. DIMENSIONS ARE IN MILLIMETRES (INCHES).
  2. MATERIAL: ALUMINIUM, 3MM (0.12 INCH) THICK.
  3. FINISH: BLACK ANODIZE.
  4. MAX. MOUNTING SCREW PROTRUSION = 3MM.
  5. DRAWING IS NOT TO SCALE.

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**INPUT & OUTPUT MATING CONNECTORS**

Power Supply Series	Molex Input Connectors		Molex Output Connector			Fan Drive & AUX. Signals	
	Mating Conn.	Mating Pins	Mating Conn.	Mating Conn.	Mating Pins	Mating Conn.	Mating Pins
TEK100	09-91-0500	08-50-0106	09-91-0500 x 2 (single o/p)	09-91-1400 (multi o/p)	08-50-0106	N/A	N/A
TEK200	09-91-0500	08-50-0106	09-91-0800 (single o/p)	09-91-1000 (multi o/p)	08-50-0106	Chtro Shiunn	
TEK300	09-91-0500	08-50-0106	09-91-1200 (single o/p)	09-91-1200 (multi o/p)	08-50-0106	JS2001-62	JS2001-T

The 100-300 Series is now produced by HiTek Power, the worlds leading manufacturer of high and low voltage power supplies.

This consolidation of high and low voltage products is aimed at providing our customers with a greater range of power solutions from a single source.

HiTek Power, design and manufacture high and low voltage power supplies for such applications as Ion Implantation, Lasers, Photomultipliers and X-ray systems.

Please contact HiTek Power sales for further details.



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