



# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

AC/DC SWITCHING POWER SUPPLY  
SINGLE CHANNEL OUTPUT  
360 WATTS  
UNIVERSAL INPUT

### ZWF360-SX-F-W-D SERIES

#### General Description



#### Features

1. Current sharing ("-D"), up to 4 units can be paralleled within 10% accuracy at full load (optional)
2. Short circuit protection
3. Over load protection
4. Over voltage protection
5. Remote inhibit function
6. >83% efficiency typical at 115VAC

#### Options

Comes with either top fan (denoted by suffix "-T") or end fan (denoted by "-S")

**+5Vsb/0.25A convection cooling, 1.0A forced air cooling**

**+12V/1A DC fan output**

#### Application

Broad needs

#### Input

<b>Input Voltage Range:</b>	AC90~264V
<b>Frequency:</b>	50/60 Hz
<b>Frequency Range:</b>	47~63 Hz
<b>Phase:</b>	Single
<b>Inrush Current: *1, *4</b>	<25A peak@115VAC; <50A peak@230VAC cold start at 25 degrees C
<b>Input Current (rms):</b>	4.5A max at 115VAC; 2.25A at 230VAC
<b>Power Factor:</b>	>0.95 at 115VAC; >0.9 at 230VAC full load





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Output Characteristic	Unit	Models						
		ZWF360-12SX-F-W-D	ZWF360-24SX-F-W-D	ZWF360-30SX-F-W-D	ZWF360-36SX-F-W-D	ZWF360-48SX-F-W-D	ZMP500-54SX-F-W-D	ZWF360-57SX-F-W-D
Output Voltage	Vdc	12	24	30	36	48	54	57
Output Current (with fan)	A	30	15	12	10	7.5	6.67	6.32
Max Output Current (convection cooling: 270W max)	A	22.5	11.25	9	7.5	5.63	5.01	4.74
Ripple & Noise(max)	mVpp	120	240	300	360	480	540	570
Hold up time	mS	20 mS at 360W load, 115VAC input						
<b>Regulation</b>								
O/P Regulation [max]	mV	±1% at 25°C with input and output adjusted to factory settings						
Efficiency *1	%	At AC100V 83% At AC 200V 86%						
Power Factor *1		>0.95 @ 115VAC / >0.9 @ 230VAC						





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Environmental Specification	
Operating Temperature*3	0 to +70 °C Derating 2.5% / °C from 50°C to 70°C
Operating Humidity	5~95% RH non condensing
Cooling	Forced air cooling ("-T" or "-S") (360W max) ; convection cooling (270W max)
Leakage current	<300µA @ 264VAC
MTBF	>100,000 hours
Environmental Agencies	
Safety	UL60950-1, CSA-C22.2 No. 950-1 , TUV EN60950-1, CB IEC60950-1
EMI Safety	EN55022 Class B, FCC Part 15 Class B, CE
Function/Protection	
Over current Protection	110% to 150% max rating. Auto recovery
Over voltage Protection	130% of output. Shutdown and latch off
Remote Sense	Not Available
Remote Control	Not Available
Series Operation	Available
Parallel Operation	Available, up to 4
Standby	5V/1A standby output, 12V/1A for fan
Short Circuit Protection	Auto recovery
Mechanical	
Dimension and weight [mm] [g] (no fan)	203.2L x 118.5W x 38.5H 860g
End Fan ("-S")	229.4L x 118.5W x 41.5H 980g
Top Fan ("-T")	203.2L x 118.5W x 66.0H 990g

Conditions:

- \*1 Rated input and Rated output
- \*2 at Output current quick change 25% to 75%
- \*3 At 100% load (convection cooling)
- \*4 Cold start at 25 °C Ambient temp.



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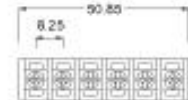
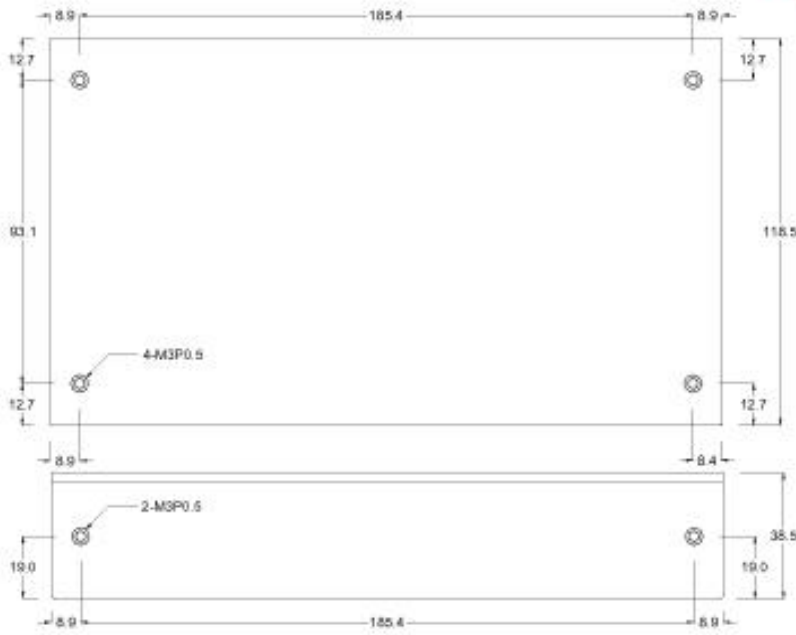
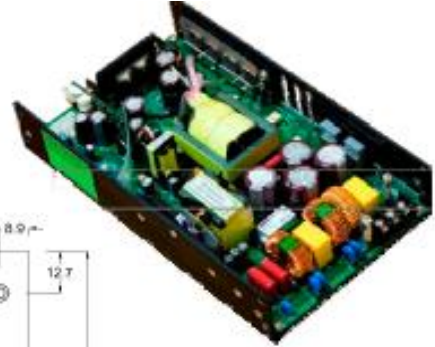
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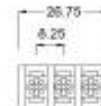
### Mechanical Drawings

#### ZWF360-SX-F-W-D

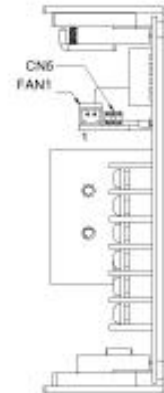
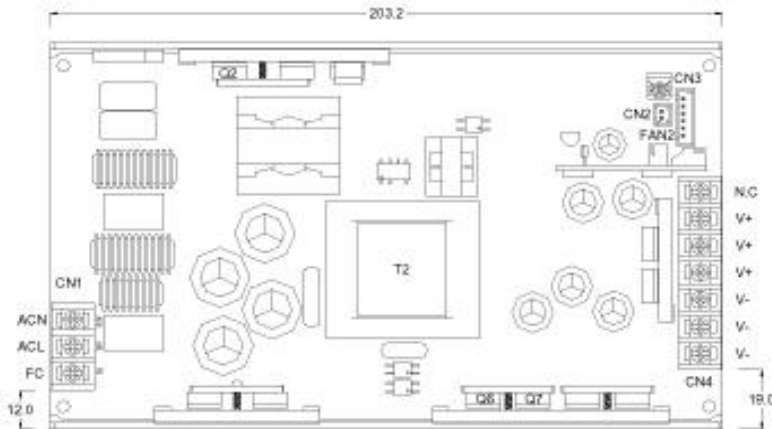
Option : U, U-Channel



CN4



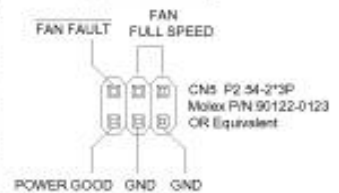
CN1



Recommended direction  
for force airflow

CN3 P2 5-6P (OPTION) Molex P/N 48152-0610 OR Equivalent	PIN1	Current Sense
	PIN2	Inhibit
	PIN3	GND
	PIN4	5Vsb
	PIN5	-Sensor
	PIN6	+Sensor

CN2 P2 5-2P Molex P/N 48152-0210 OR Equivalent	PIN1	5Vsb
	PIN2	GND
FAN1 P2 5-2P Molex P/N 48153-0210 OR Equivalent	PIN1	12V FAN +
	PIN2	12V FAN -
FAN2 P2 5-2P (With speed control) Molex P/N 48152-0210 OR Equivalent	PIN1	FAN +
	PIN2	FAN -



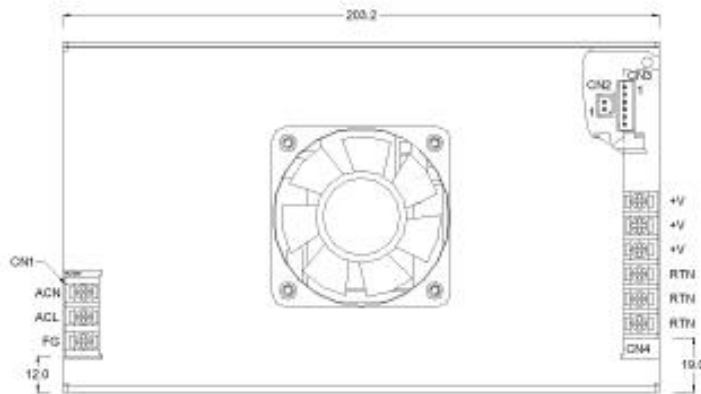
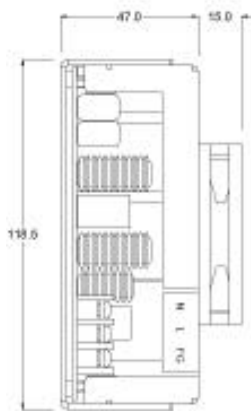
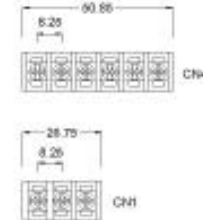
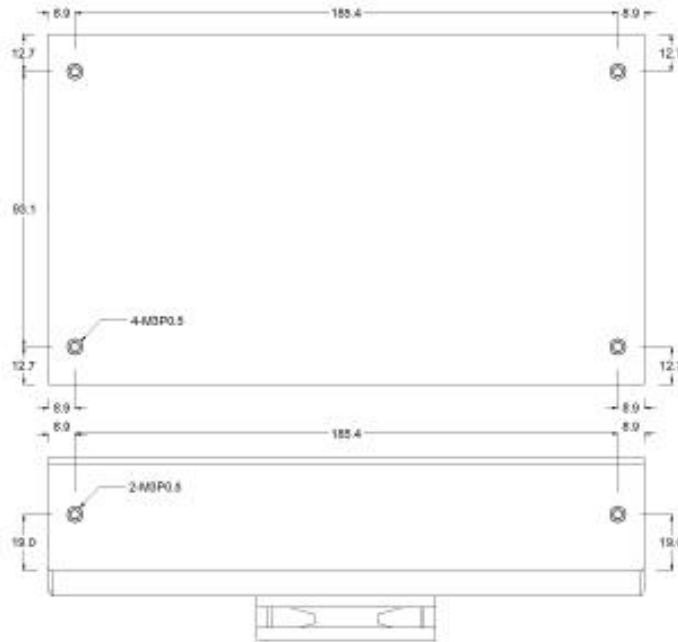


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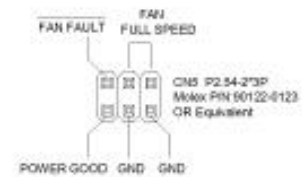
## Top fan (“-T”)

Option : T, Fan on top



CN3, P2 5-6P (OPTION) Molex P/N 48152-0210 OR Equivalent	PIN1	Current Sense
	PIN2	Inhibit
	PIN3	GND
	PIN4	5Vsb
	PIN5	-Sensor
	PIN6	+Sensor

CN2, P2 5-2P Molex P/N 48152-0210 OR Equivalent	PIN1	5Vsb
FAN1, P2 5-2P Molex P/N 48153-0210 OR Equivalent	PIN1	12V FAN+
	PIN2	12V FAN-



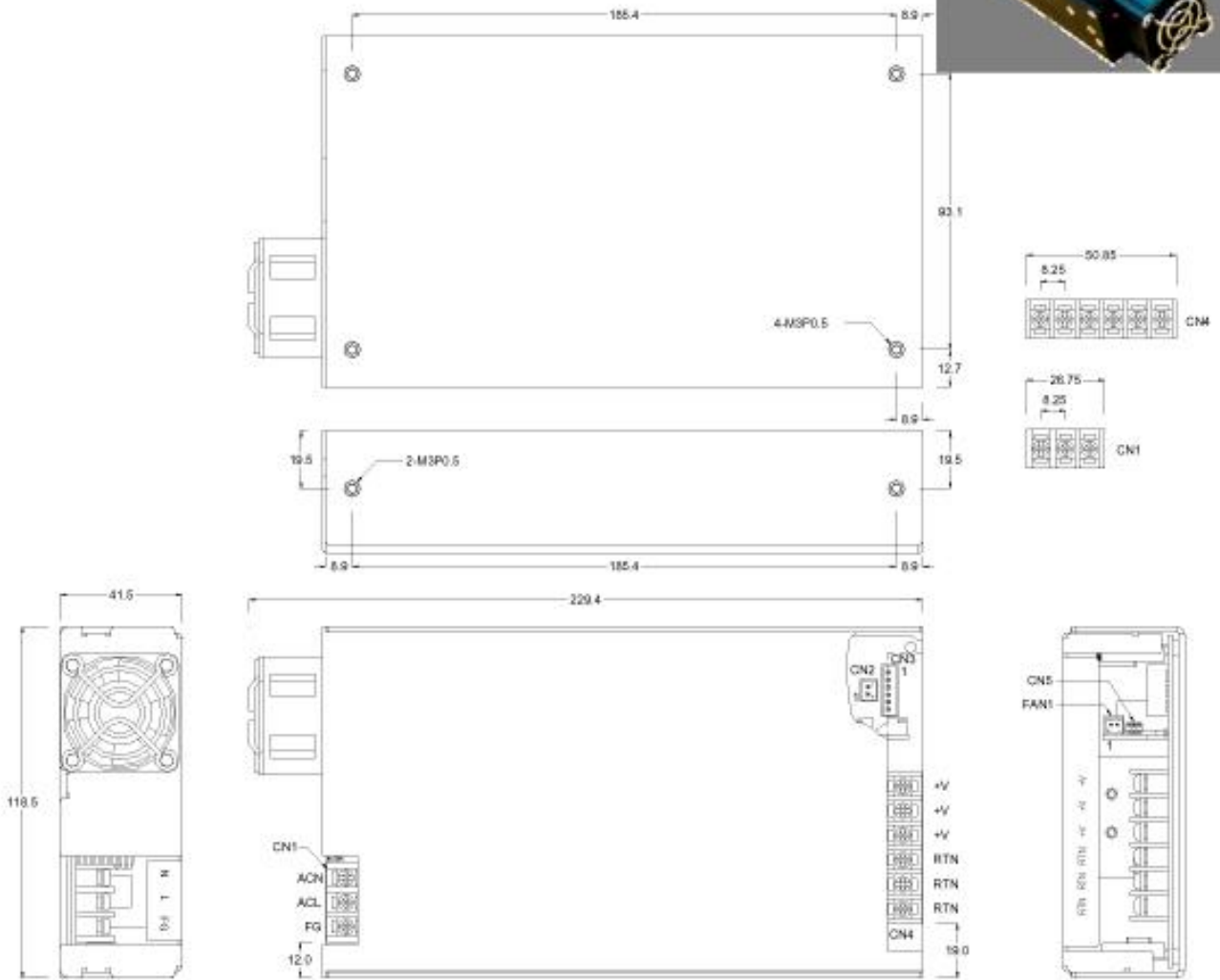
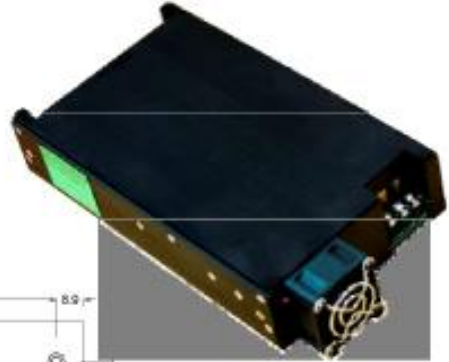


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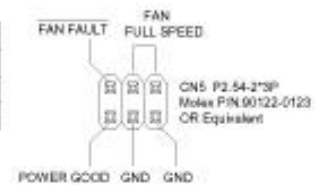
## End fan (“-S”)

Option : S, End Fan



CN3 P2.5-6P (OPTION) Molex PIN-45152-0210 OR Equivalent	PIN1	Current Share
	PIN2	Inhibit
	PIN3	GND
	PIN4	5Vsb
	PIN5	-Sensor
	PIN6	+Sensor

CN2 P2.5-2P Molex PIN-45152-0210 OR Equivalent	PIN1	5Vsb
	PIN2	GND
FAN1 P2.5-2P Molex PIN-45153-0210 OR Equivalent	PIN1	12V FAN +
	PIN2	12V FAN -





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### MATCHING CONNECTORS

#### CN1: Input Connector

3-Pole Terminal block pitch: 8.25mm rate 20A/300V

Pin #	Signal
1	AC Neutral
2	AC Line
3	F.G.

#### CN2: +5VSB Output Connector

JST B2B-XH-A pitch: 2.5mm or equivalent, mates w female housing JST XHP-2 or equivalent

Pin #	Signal
1	+5VSB
2	GND

#### CN3: Remote Sense Connector

JST B6B-XH-A pitch: 2.5mm or equivalent, mates w female housing JST XHP-6 or equivalent

Pin #	Signal
1	Sense +
2	Sense -
3	+5VSB
4	GND
5	INHIBIT (Remote control)
6	Current Share

INHIBIT: Logic level HIGH(+5V): Enable, Logic level LOW: Disable(0V)

#### CN4: Main Output Connector

6-Pole Terminal block pitch: 8.25mm rate 20A/300V

Pin #	Signal
1	+Vo
2	+Vo
3	+Vo
4	RTN
5	RTN
6	RTN

#### FAN1: Fan Output Connector

JST S2B-XH-A pitch: 2.5mm or equivalent, mates w female housing JST XHP-2 or equivalent

Pin #	Signal
1	+12VDC FAN+
2	+12VDC FAN-

#### FAN2: Fan Output Connector

JST B2B-XH-A pitch: 2.5mm or equivalent, mates w female housing JST XHP-2 or equivalent

Pin #	Signal
1	+12VDC FAN+
2	+12VDC FAN-





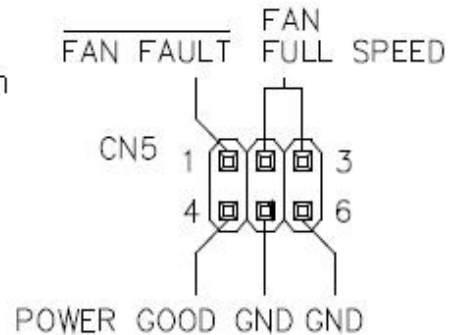
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### CN5: Fan control & Power Good Signal Connector

JST RF-H062TD-1130 pitch: 2.54mm or equivalent, mates with female housing JST RF-06 or equivalent

Pin #	Signal	
1	FAN FAULT	
2, 3	FAN FULL SPEED	
4	POWER GOOD	
5	GND	
6	GND	



FAN FAULT: Fan status indication, Fan Good: Logic level HIGH(+5V), Fan Fault: Logic level LOW(0V)

FAN FULL SPEED: Short these 2 pins ( #2 and #3 ) with mini-jumper to get highest fan speed

POWER GOOD: Power Good: Logic level HIGH(+5V), Power Fault: Logic LOW(0V)

### DERATING CURVE

