

- 90 - 150W Convection Cooled Ratings
- 1U High
- ATX SFX 12V Compatible
- Power Factor Corrected
- Peak Power Ratings
- No Minimum Loading Required

Key Market Segments & Applications

Industrial & Rack Mount
PC Applications

ZWX Series

180W to 300W
Industrial ATX Power Supplies

ZWX Features and Benefits

Features	Benefits
• Convection Cooled Ratings	• No Forced Air or Fan Needed
• Low Profile	• Fits into 1U High Enclosures
• Industrial Grade	• Greater Reliability & Field Life
• No minimum loading	• Easier to Use

Specifications

ITEMS / MODELS			ZWX180	ZWX240	ZWX300
Input Voltage		V	85-265VAC (47-63Hz)		
Input Current	(1)(2)	A	1.9 / 1.0	2.6 / 1.3	3.2 / 1.6
Inrush Current	(2)	A	14 / 28 Cold start 25°C ambient		
Power Factor		-	Meets EN61000-3-2		
Leakage Current		mA	< 0.75		
Overcurrent Protection	(3)	-	>1.05% of forced air current rating (5s delay and manual reset on V1, 2 & 3)		
Overvoltage Protection	(4)	V	+3.3V: 3.76 - 4.3V, +5V: 5.74 - 7V, +12V: 13.4 - 15.6V		
Hold Up Time (Typ)	(1)	ms	20ms at 100VAC		
Efficiency	(1)(2)	%	81 / 84		
Remote On/Off		-	High: Unit off, Low: Unit On (enabled). Meets SFX12V		
DC Good PWR_OK		-	High: Power supply is good. Meets SFX12V		
Remote Sense		-	+3.3V Only		
Output Voltage Setpoint Accuracy		-	±5% (all outputs)		
Output Voltage Adjustment		-	None		
Line Regulation		mV	3.3V: 20mV, 5V: 48mV, +12V: 48mV, -12V: 20mV, +5Vsb: 20mV		
Load Regulation		mV	3.3V: 100mV, 5V: 300mV, +12V: 300mV, -12V: 100mV, +5Vsb: 100mV		
Ripple & Noise		mV	3.3V: 120mV, 5V: 150mV, +12V: 150mV, -12V: 120mV, +5Vsb: 120mV		
Operating Temperature		°C	-10 to +70, derate linearly to 20% load from 50 to 70		
Storage Temperature		°C	-30 to +85°C		
Humidity (non condensing)		%RH	Operating: 30 - 90, Non operating: 10 - 95		
Cooling		-	Convection or forced air cooled (30CFM, 0.85m3/min)		
Withstand Voltage		-	I/P to Gnd 2kVAC (20mA), I/P to O/P 3kVAC (20mA), O/P to Gnd 500VAC (100mA) for 1 min.		
Isolation Resistance		-	>100Ω at 25°C & 70%RH, Output to Ground 500VDC		
Vibration (non operating)		-	10 - 55Hz (1 minute sweep), 19.6m/s2 constant X, Y, Z 1 hour		
Shock (non operating)		m/s^2	< 392		
Safety Agency Approvals		-	UL60950-1, CSA60950-1, EN60950-1, EN50178 (OV II), CE Mark		
Conducted & Radiated EMI		-	EN55011/EN55022-B, FCC Class B, VCCI-B		
Immunity		-	EN61000-4-2, -3, -4, -5, -6, -8, -11		
Weight (Typ)		g	500	650	800
Size (WxHxD)		mm	94 X 36 X 210	106 X 36 X 225	118 X 36 X 250
Warranty		yrs		3 Years	

Model Selector

Model		Output Voltage	Max Curr. (Convection)	Max Power (Convection)	Max Curr (Forced Air)	Max Power (Forced Air)	Peak Curr. (4) (Forced Air)	Peak Power (4) (Forced Air)
	V1	+3.3V	6A(5)		8.4A(5)		12A(5)	
	V2	+5V	5A(5)		7A(5)		10A(5)	
ZWX180	V3	+12V	6A	90W	9A	153W	13A	180W
	V4	-12V	0.2A		0.3A		0.3A	
	V5	+5V (sb)	1.4A		2A		2A	
	V1	+3.3V	7A		9.8A		14A	
	V2	+5V	6A		8.4A		12A	
ZWX240	V3	+12V	8A	120W	11.2A	204W	16A	240W
	V4	-12V	0.2A		0.3A		0.3A	
	V5	+5V (sb)	1.4A		2A		2A	
	V1	+3.3V	10A		14A		20A	
	V2	+5V	6A		8.4A		12A	
ZWX300	V3-1	+12V	4A(6)	150W	5.6A	255W	8A(7)	300W
	V3-2	+12V	8A(6)		11.2A		16A(7)	
	V4	-12V	0.2A		0.4A		0.4A	
	V5	+5V (sb)	1.4A		2A		2A	

Options

Suffix	Description
Blank	Open frame
/L1	L Bracket - input on the left side (rear mounting side facing away)
/L2	L Bracket - input on the right side (rear mounting side facing away)
/A1	L Bracket & Cover - input on the left side (rear mounting side facing away)
/A2	L Bracket & Cover - input on the right side (rear mounting side facing away)

Cable Harness

Connector	Harness	ZWX180	ZWX240	ZWX300
CN1	HA-2-IN	Y	Y	Y
CN21	ZWX-HA-04	Y	Y	Y
CN21(S-ATA)	ZWX-HA-02	Y	Y	Y
CN31/CN41	ZWX-HA-01	Y	Y	Y
CN51	ZWX-HA-03	-	-	Y

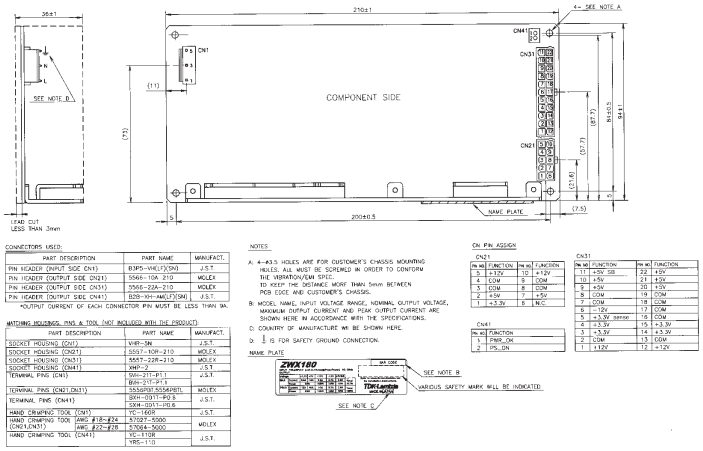
NOTES: Specification Table Page 1

(1) With output loading of:
ZWX180: V1=6.5A, V2=6.5A, V3=7.7A, V4=0.2A, V5=1A
ZWX240: V1=8.9A, V2=7.7A, V3=10.2A, V4=0.3A, V5=2A
ZWX300: V1=12A, V2=7A, V3-1=5A, V3-2=9.4A, V4=0.2A, V5=1A
(2) 100/200VAC
(3) Avoid prolonged operation in overload
(4) <5s operation at peak load

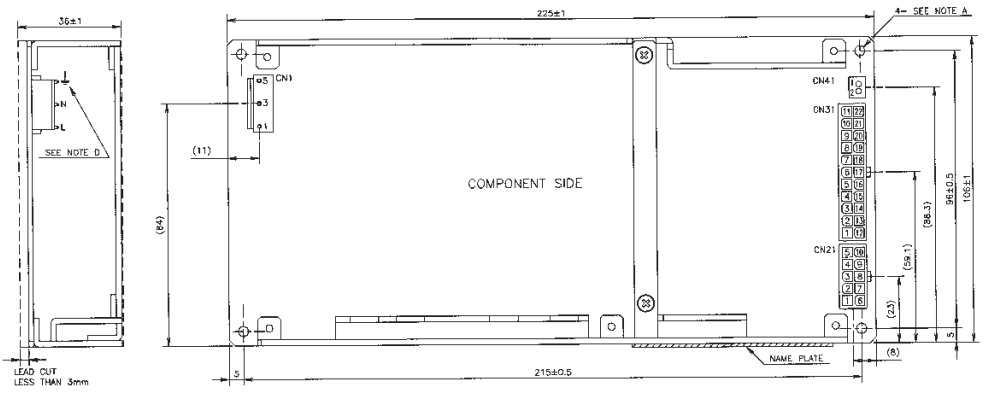
Output Ratings Table above

(5) Maxium combined power of V1 & V2: 32W convection, 54W forced air, 63W peak
(6) V3-1 & V3-2 combined current limited to 10.9A (131W)
(7) V3-1 & V3-2 combined current limited to 22A (264W)

Outline Drawing ZWX180 Series



Outline Drawing ZWX240 Series



CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.
PIN HEADER (INPUT SIDE CN1)	B3P5-VH(LF)(SN)	J.S.T.
PIN HEADER (OUTPUT SIDE CN21)	5566-10A-210	MOLEX
PIN HEADER (OUTPUT SIDE CN31)	5566-22A-210	MOLEX
PIN HEADER (OUTPUT SIDE CN41)	B2B-XH-AM(LF)(SN)	J.S.T.

*OUTPUT CURRENT OF EACH CONNECTOR PIN MUST BE LESS THAN 8A.

MATCHING HOUSINGS, PINS & TOOL (NOT INCLUDED WITH THE PRODUCT):

PART DESCRIPTION		PART NAME	MANUFACT.
SOCKET HOUSING (CN1)		VHR-5N	J.S.T.
SOCKET HOUSING (CN21)		5557-10R-210	MOLEX
SOCKET HOUSING (CN31)		5557-22R-210	MOLEX
SOCKET HOUSING (CN41)		XHP-2	J.S.T.
TERMINAL PINS (CN1)		SVH-21T-P1.1	J.S.T.
		BVH-21T-P1.1	
TERMINAL PINS (CN21,CN31)		5556PBT,5556PBTL	MOLEX
TERMINAL PINS (CN41)		BXH-001T-P0.6	J.S.T.
		SXH-001T-P0.6	
HAND CRIMPING TOOL (CN1)		YC-160R	J.S.T.
HAND CRIMPING TOOL (CN21,CN31)	AWG #18~#24	57027-5000	MOLEX
	AWG #22~#28	57064-5000	
HAND CRIMPING TOOL (CN41)		YC-110R	J.S.T.
		YRS-110	

NOTES

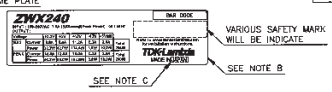
A: 4–ø3.5 HOLES ARE FOR CUSTOMER'S CHASSIS MOUNTING HOLES. ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION/EMI SPEC.

B: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT AND PEAK OUTPUT CURRENT ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

C: COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.

D: ⏚ IS FOR SAFETY GROUND CONNECTION.

NAME PLATE



CN PIN ASSIGN

CN21

PIN NO.	FUNCTION	PIN NO.	FUNCTION
5	+12V	10	+12V
4	COM	9	COM
3	COM	8	COM
2	+5V	7	+5V
1	+3.3V	6	N.C.

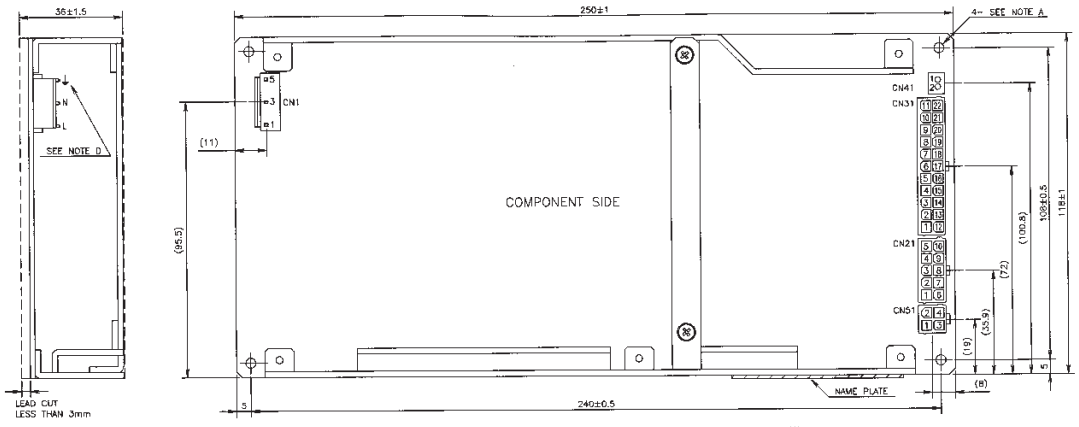
CN41

PIN NO.	FUNCTION
1	PWR_OK
2	PS_ON

CN31

PIN NO.	FUNCTION	PIN NO.	FUNCTION
11	+5V SB	22	+5V
10	+5V	21	+5V
9	+5V	20	+5V
8	COM	19	COM
7	COM	18	COM
6	–12V	17	COM
5	+3.3V sense	16	COM
4	+3.3V	15	+3.3V
3	+3.3V	14	+3.3V
2	COM	13	COM
1	+12V	12	+12V

Outline Drawing ZWX300 Series



CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.
PIN HEADER (INPUT SIDE CN1)	B3P5-VH(LF)(SN)	J.S.T.
PIN HEADER (OUTPUT SIDE CN21)	5566-10A-210	MOLEX
PIN HEADER (OUTPUT SIDE CN31)	5566-22A-210	MOLEX
PIN HEADER (OUTPUT SIDE CN41)	B2B-XH-AM(LF)(SN)	J.S.T.
PIN HEADER (OUTPUT SIDE CN51)	5566-04A-210	MOLEX

*OUTPUT CURRENT OF EACH CONNECTOR PIN MUST BE LESS THAN 9A.

MATCHING HOUSINGS, PINS & TOOL (NOT INCLUDED WITH THE PRODUCT):

PART DESCRIPTION		PART NAME	MANUFACT.
SOCKET HOUSING (CN1)		VHR-5N	J.S.T.
SOCKET HOUSING (CN21)		5557-10R-210	MOLEX
SOCKET HOUSING (CN31)		5557-22R-210	MOLEX
SOCKET HOUSING (CN41)		XHP-2	J.S.T.
SOCKET HOUSING (CN51)		5557-04R-210	MOLEX
TERMINAL PINS (CN1)		SVH-21T-P1.1	J.S.T.
		BVH-21T-P1.1	
TERMINAL PINS (CN41)		BXH-001T-P0.6	J.S.T.
		SXH-001T-P0.6	
TERMINAL PINS (CN21,CN31,CN51)		5556PBT,5556PBTL	MOLEX
HAND CRIMPING TOOL (CN1)		YC-160R	J.S.T.
HAND CRIMPING TOOL (CN41)		YC-110R	J.S.T.
		YRS-110	
HAND CRIMPING TOOL (CN21,CN31,CN51)	AWG #18~#24	57027-5000	MOLEX
	AWG #22~#28	57064-5000	

NOTES

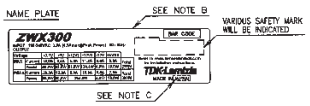
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NAME PLATE



CN PIN ASSIGN

CN21

PIN NO.	FUNCTION	PIN NO.	FUNCTION
5	+12V–1	10	+12V–1
4	COM	9	COM
3	COM	8	COM
2	+5V	7	+5V
1	+3.3V	6	N.C.

CN41

PIN NO.	FUNCTION
1	PWR_OK
2	PS_ON

CN51

PIN NO.	FUNCTION	PIN NO.	FUNCTION
2	COM	4	+12V–2
1	COM	3	+12V–2

CN31

PIN NO.	FUNCTION	PIN NO.	FUNCTION
11	+5V SB	22	+5V
10	+5V	21	+5V
9	+5V	20	+5V
8	COM	19	COM
7	COM	18	COM
6	–12V	17	COM
5	+3.3V sense	16	COM
4	+3.3V	15	+3.3V
3	+3.3V	14	+3.3V
2	COM	13	COM
1	+12V–1	12	+12V–1

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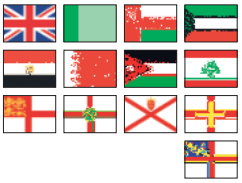
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