



80-130

WATTS

POWER SUPPLY AC/DC

QUAD OUTPUT

1U height versions

**Universal input
85-265 VAC**

PFC: conforms to EN61000-3-2

EN55022 curve B

Forced air or convection cooled

**Open frame, covered, Molex
connector – options available***

Worldwide approvals

Guarantee 1 year

***Models listed are PCB versions only.**

INPUT

Input voltage range	85-265VAC, 120-330VDC	
Frequency	47-63Hz	
Input current (100VAC/200VAC)	14A/28A	ZWQ80 ZWQ130

OUTPUT

Power (convection cooled) (forced air)	80 to 130W 80 to 170W air flow $\geq 0.85\text{m}^3/\text{min.}$ (30cfm)
Output adjustable	$\pm 5\%$ for V1 fixed for V2/V3, selectable to $\pm 15\text{V}$ $\pm 5\%$ for V4
Min. load	0.9A on V1 (ZWQ80) 1.5A on V1 (ZWQ130)
Line regulation	$< 50\text{mV}$
Load regulation	100-400mV output dependent
Hold up	20ms
Ripple and noise (value peak to peak)	120mV to 200mV output dependent
Over current protection	automatic recovery
Over voltage protection	output shutdown manual reset

GENERAL

Efficiency	$> 70\%$
Isolation voltage :	
Input-output	3kVAC
Input-ground	2kVAC
Output-ground	0.5kVAC
Power factor	conforms to EN61000-3-2

ENVIRONMENTAL

Operating Temperature range	-10°C to +60°C (+70°C at forced air) -10°C to +50°C (cover version, /A)
Derating	-10°C to +40°C ~ 100% +60°C ~ 50% -10°C to +30°C ~ 100% (cover version /A) +50°C ~ 50%
Storage temperature	- 30°C to +85°C
EMC	Conforms to EN55011 B, EN55022 B, FCC-Class B, VCC1-B
Immunity	Conforms to EN61000-4-2, -3, -4, -5, -6, -8, -11

TABLE OF MODELS

Model	Series	Power Watts	Output N°1		Output N°2		Output N°3		Output N°4	
			Volts	Amp	Volts	Amp	Volts	Amp	Volts	Amp
ZWQ 80 5225 (Conv Cooling) ¹	PCB	80	5	8	12	2	-12	2	5	7
ZWQ 80 5222 (Conv Cooling)	PCB	80	5	8	12	2	-12	2	12	3
ZWQ 80 5224 (Conv Cooling)	PCB	80	5	8	12	2	-12	2	24	1.5
ZWQ 80 5223 (Conv Cooling)	PCB	80	5	8	12	2	-12	2	3.3	7
ZWQ 80 5225 (Forced Air Cooling) ²	PCB	104	5	10	12	2.5	-12	2.5	5	9
ZWQ 80 5222 (Forced Air Cooling)	PCB	104	5	10	12	2.5	-12	2.5	12	4
ZWQ 80 5224 (Forced Air Cooling)	PCB	104	5	10	12	2.5	-12	2.5	24	2
ZWQ 80 5223 (Forced Air Cooling)	PCB	104	5	10	12	2.5	-12	2.5	3.3	9
ZWQ 80 5225/A (Conv Cooling)	Cover	80	5	8	12	2	-12	2	5	7
ZWQ 80 5222/A (Conv Cooling)	Cover	80	5	8	12	2	-12	2	12	3
ZWQ 80 5224/A (Conv Cooling)	Cover	80	5	8	12	2	-12	2	24	1.5
ZWQ 80 5223/A (Conv Cooling)	Cover	80	5	8	12	2	-12	2	3.3	7
ZWQ 80 5225/A (Forced Air Cooling)	Cover	104	5	10	12	2.5	-12	2.5	5	9
ZWQ 80 5222/A (Forced Air Cooling)	Cover	104	5	10	12	2.5	-12	2.5	12	4
ZWQ 80 5224/A (Forced Air Cooling)	Cover	104	5	10	12	2.5	-12	2.5	24	2
ZWQ 80 5223/A (Forced Air Cooling)	Cover	104	5	10	12	2.5	-12	2.5	3.3	9
ZWQ 130 5225 (Conv Cooling) ¹	PCB	130	5	15	12	4	-12	4	5	10
ZWQ 130 5222 (Conv Cooling)	PCB	130	5	15	12	4	-12	4	12	4
ZWQ 130 5224 (Conv Cooling)	PCB	130	5	15	12	4	-12	4	24	2
ZWQ 130 5223 (Conv Cooling)	PCB	130	5	15	12	4	-12	4	3.3	10
ZWQ 130 5225 (Forced Air Cooling) ²	PCB	170	5	19	12	5	-12	5	5	12
ZWQ 130 5222 (Forced Air Cooling)	PCB	170	5	19	12	5	-12	5	12	5
ZWQ 130 5224 (Forced Air Cooling)	PCB	170	5	19	12	5	-12	5	24	2.5
ZWQ 130 5223 (Forced Air Cooling)	PCB	150	5	19	12	5	-12	5	3.3	12
ZWQ 130 5225/A (Conv Cooling)	Cover	130	5	15	12	4	-12	4	5	10
ZWQ 130 5222/A (Conv Cooling)	Cover	130	5	15	12	4	-12	4	12	4
ZWQ 130 5224/A (Conv Cooling)	Cover	130	5	15	12	4	-12	4	24	2
ZWQ 130 5223/A (Conv Cooling)	Cover	130	5	15	12	4	-12	4	3.3	10
ZWQ 130 5225/A (Forced Air Cooling)	Cover	170	5	19	12	5	-12	5	5	12
ZWQ 130 5222/A (Forced Air Cooling)	Cover	170	5	19	12	5	-12	5	12	5
ZWQ 130 5224/A (Forced Air Cooling)	Cover	170	5	19	12	5	-12	5	24	2.5
ZWQ 130 5223/A (Forced Air Cooling)	Cover	150	5	19	12	5	-12	5	3.3	12

- Notes: 1. Output ratings for L-shape metal plate version (/L) is similar to PCB Type.
 2. Required airflow for forced air cooling: Air flow >0.85m³/min (30cfm).
 3. V2, V3 output: ±12V to ±15V selectable on PCB.

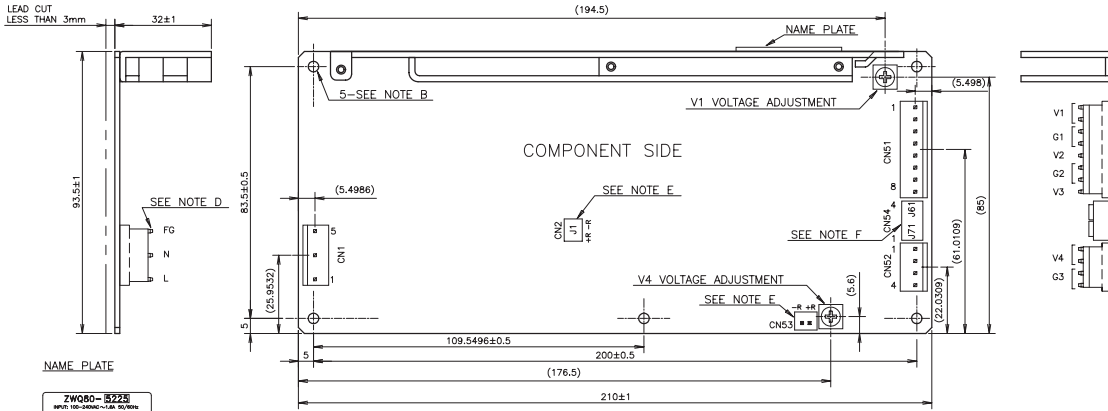
■ Model name

ZWQ 80-5225/

Series Name Output Wattage Option:
 blank: PCB type
 L: L-shape metal plate
 type
 A: with-cover type

PHYSICAL SPECIFICATION

ZWQ 80



= NOTES =

- A: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT AND COUNTRY OF MANUFACTURE ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.
- B: 5-Ø3.5 HOLES FOR CUSTOMER'S CHASSIS MOUNTING HOLES, ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.
- C: KEEP THE DISTANCE MORE THAN 4mm BETWEEN PCB EDGE AND CUSTOMER'S CHASSIS.
- D: FG IS FOR SAFETY GROUND CONNECTION.
- E: REMOTE ON/OFF CONTROL CONNECTOR (CN2,53) : B2B-XH-AM (J.S.T.)
 MATCHING HOUSING : XHP-2 (J.S.T.)
 MATCHING TERMINAL : BXH-001T-P0.6 (J.S.T.) OR SXH-001T-P0.6 (J.S.T.)
 *CN2 IS NORMALLY SHORTED BY JM-2W-96(J.S.T.)
- F: CONNECTOR TO CHANGE V2,V3 OUTPUT VOLTAGE (CN54) : B4B-XH-AM (J.S.T.)
 J61 SHORT : V2 OUTPUT VOLTAGE IS +12V.(*)
 J61 OPEN : V2 OUTPUT VOLTAGE IS +15V.
 J71 SHORT : V3 OUTPUT VOLTAGE IS -12V.(*)
 J71 OPEN : V3 OUTPUT VOLTAGE IS -15V.
 *J61 AND J71 ARE NORMALLY SHORTED BY JM-2W-96(J.S.T.).

CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	B3P-5-VH	J.S.T.	1
PIN HEADER (OUTPUT SIDE CN51)	B8P-VH	J.S.T.	1
PIN HEADER (OUTPUT SIDE CN52)	B4P-VH	J.S.T.	1

*OUTPUT CURRENT OF EACH CONNECTOR PIN MUST BE LESS THAN 5A.

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

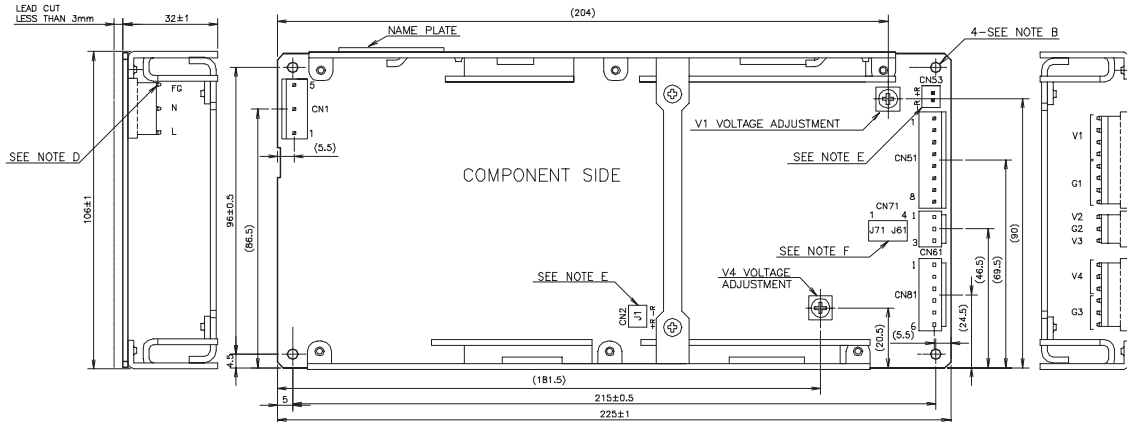
PART DESCRIPTION	PART NAME	MANUFACT.	QTY
SOCKET HOUSING (CN1)	VHR-5N	J.S.T.	1
SOCKET HOUSING (CN51)	VHR-8N	J.S.T.	1
SOCKET HOUSING (CN52)	VHR-4N	J.S.T.	1
TERMINAL PINS (CN1,51,52)	SVH-21T-P1.1	J.S.T.	15

HAND CRIMPING TOOL : YC-160R MANUFACT. : J.S.T.

(unit : mm)

MODEL NAME	ZWQ80
DENSE-LAMBDA	
A190-02-01	

ZWQ 130



= NOTES =

- A: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT AND COUNTRY OF MANUFACTURE ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.
- B: 4-Ø3.5 HOLES FOR CUSTOMER'S CHASSIS MOUNTING HOLES, ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.
- C: KEEP THE DISTANCE MORE THAN 4mm BETWEEN POWER SUPPLY EDGE AND CUSTOMER'S CHASSIS.
- D: FG IS FOR SAFETY GROUND CONNECTION.
- E: REMOTE ON/OFF CONTROL CONNECTOR (CN2,53) : B2B-XH-AM (J.S.T.)
 MATCHING HOUSING : XHP-2 (J.S.T.)
 MATCHING TERMINAL : BXH-001T-P0.6 (J.S.T.) OR SXH-001T-P0.6 (J.S.T.)
 *CN2 IS NORMALLY SHORTED BY JM-2W-96(J.S.T.)
- F: CONNECTOR TO CHANGE V2,V3 OUTPUT VOLTAGE (CN71) : B4B-XH-AM (J.S.T.)
 J61 SHORT : V2 OUTPUT VOLTAGE IS +12V.(*)
 J61 OPEN : V2 OUTPUT VOLTAGE IS +15V.
 J71 SHORT : V3 OUTPUT VOLTAGE IS -12V.(*)
 J71 OPEN : V3 OUTPUT VOLTAGE IS -15V.
 *J61 AND J71 ARE NORMALLY SHORTED BY JM-2W-96(J.S.T.).

CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	B3P-5-VH	J.S.T.	1
PIN HEADER (OUTPUT SIDE CN51)	B8P-VH	J.S.T.	1
PIN HEADER (OUTPUT SIDE CN61)	B3P-VH	J.S.T.	1
PIN HEADER (OUTPUT SIDE CN81)	B6P-VH	J.S.T.	1

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

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
SOCKET HOUSING (CN1)	VHR-5N	J.S.T.	1
SOCKET HOUSING (CN51)	VHR-8N	J.S.T.	1
SOCKET HOUSING (CN61)	VHR-3N	J.S.T.	1
SOCKET HOUSING (CN81)	VHR-4N	J.S.T.	1
TERMINAL PINS (CN1,51,61,81)	SVH-21T-P1.1	J.S.T.	20

(unit : mm)

MODEL NAME	ZWQ130
DENSE-LAMBDA	
A191-02-01	

Please contact technical sales for L Bracket/covered version drawings

Series ZWQ

LAMBDA