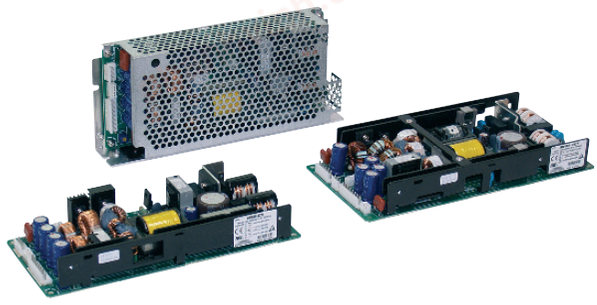
chanhvinh.com

TDK·Lambda

Innovating Reliable Power



- Universal Input (85 - 265VAC)
- Power Factor Corrected
- Floating Adjustable Fourth Output
- Low Profile <1U High

Key Market Segments & Applications

Factory Automation
Test & Measurement
Light Industrial Equipment

ZWQ Series

80W to 170W
Quad Output Power Supplies

ZWQ Features and Benefits

Features	Benefits
• Low Profile	• Fits in 1U Enclosures
• Adjustable Main and Fourth Output	• System Optimization
• Power Factor Corrected	• Supports Global Use
• Floating Fourth Output	• Can be used as Positive or Negative Output

Specifications

Items	Models		ZWQ80 -5222	ZWQ80 -5223	ZWQ80 -5224	ZWQ80 -5225	ZWQ130 -5222	ZWQ130 -5223	ZWQ130 -5224	ZWQ130 -5225
Input Voltage		-	85-265VAC (47-63Hz), 120-370VDC							
Input Current	(1)	A	1.6 / 0.8				2.6 / 1.3			
Inrush Current	(1)	A	14/28							
Power Factor		-	Meets EN61000-3-2							
Temperature Coefficient		-	<0.02%/°C							
Max Output Power (convection)		W	80				130			
Max Output Power (forced air)		W	104	88.7	104	104	170	149.6	170	170
Overpower Protection	(2)	W	>109	>93	>109	>109	>173	>152	>173	>173
Minimum Load		A	V1: 0.9A Conv, 1.4A Forced Air				V1: 1.5A Conv, 2.1A Forced Air			
Output Voltage Accuracy		%	±5% for outputs V2 and V3							
Efficiency (Typ)		%	72							
Hold Up Time	(1)	ms	20							
Leakage Current		-	0.75mA max, 0.2mA (Typ) at 100VAC / 0.44mA(Typ) at 230VAC							
Remote On / Off		-	See installation manual (Not available with /A cover option)							
Oper Temp (convection cooled)		-	-10°C to 60°C, derate linearly to 50% load from 40°C to 60°C. (3)							
Oper Temp (forced air cooled)		-	-10°C to 70°C, derate linearly to 50% load from 50°C to 70°C. (>30cfm airflow) (3)							
Storage Temperature		-	-30°C to +85°C							
Humidity (non condensing)		-	Operating: 30 - 90% RH; Non-operating 10-95% RH							
Withstand Voltage			I/P~Gnd 2kVAC (20mA), I/P~O/P 3kVAC (20mA), O/P~Gnd 500VAC (100mA) for 1 min.							
Isolation Resistance		-	>100MΩ 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		-	< 196.1 m/s²							
Safety Agency Approvals		-	IEC/UL/CSA/EN62368-1, 60950-1, 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	550				730			
Size (W x H x D)		mm	93.5 x 35 x 210				106 x 35 x 225			
Warranty		yr	1							

Notes:
(1) 100/200VAC
(2) Avoid prolonged operation in overload
(3) /A version - additional derating - See installation manual

chanhvinh.com

Model Selector

MODEL	Output	Voltage (V)	Voltage Adjust Range (V)	Convect. (A)	Peak or Forced Air (A)(4)	Max Load Reg (mV)	Max Line Reg (mV)	Ripple Noise (mV)	OVP (V)(5)
ZWQ80-5222	V1	5	5.0-5.25	8.0	10.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	2.0	2.5	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	2.0	2.5	300	48	150	16.5-22.5
	V4	12	11.4-12.6	3.0	4.0	300	48	150	13.8-16.2
ZWQ80-5223	V1	5	5.0-5.25	8.0	10.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	2.0	2.5	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	2.0	2.5	300	48	150	16.5-22.5
	V4	3.3	2.0-3.63	7.0	9.0	100	20	120	3.79-4.95
ZWQ80-5224	V1	5	5.0-5.25	8.0	10.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	2.0	2.5	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	2.0	2.5	300	48	150	16.5-22.5
	V4	24	22.8-25.2	1.5	2.0	400	96	200	27.6-32.4
ZWQ80-5225	V1	5	5.0-5.25	8.0	10.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	2.0	2.5	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	2.0	2.5	300	48	150	16.5-22.5
	V4	5	2.0-5.25	7.0	9.0	100	20	120	5.7-7.0
ZWQ130-5222	V1	5	5.0-5.25	15.0	19.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	4.0	5.0	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	4.0	5.0	300	48	150	16.5-22.5
	V4	12	11.4-12.6	4.0	5.0	300	48	150	11.4-12.6
ZWQ130-5223	V1	5	5.0-5.25	15.0	19.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	4.0	5.0	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	4.0	5.0	300	48	150	16.5-22.5
	V4	3.3	2.0-3.63	10.0	12.0	100	20	120	3.79-4.95
ZWQ130-5224	V1	5	5.0-5.25	15.0	19.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	4.0	5.0	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	4.0	5.0	300	48	150	16.5-22.5
	V4	24	22.8-25.2	2.0	2.5	400	96	200	27.6-32.4
ZWQ130-5225	V1	5	5.0-5.25	15.0	19.0	100	20	120	5.7-7.0
	V2	+12/15*	+12/+15	4.0	5.0	300	48	150	16.5-22.5
	V3	-12/15*	-12/-15	4.0	5.0	300	48	150	16.5-22.5
	V4	5	2.0-5.25	10.0	12.0	100	20	120	5.7-7.0

*** User selectable via connector on PCB. Outputs are floating from V1& V4**

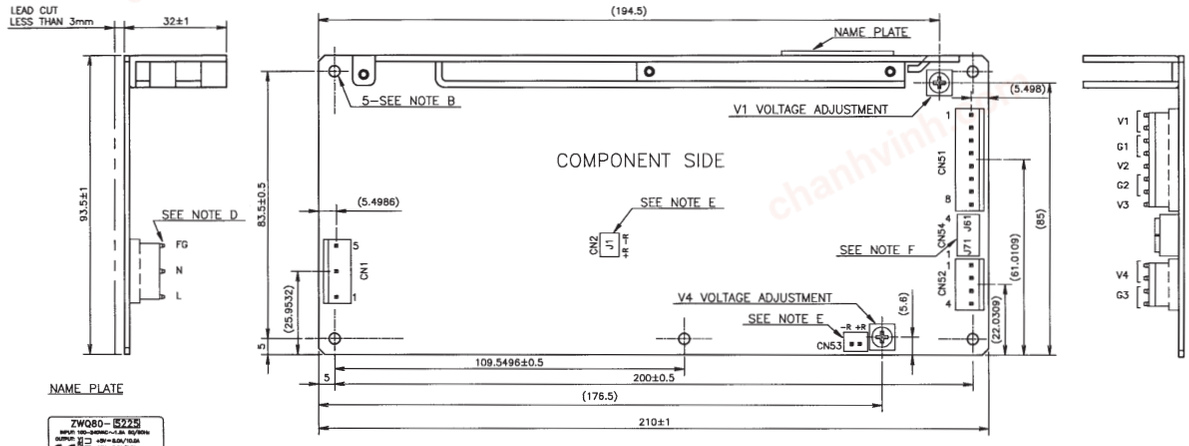
Notes:
(4) Peak current draw must not exceed 10s duration, duty cycle 35%.
(5) OVP on any output will shut down all outputs. Recycle AC input to reset.

Options

Suffix	Description
blank	No cover or L Bracket
/L	L Bracket
/A	Cover and L Bracket

chanhvinh.com

Outline Drawing ZWQ80 Series



NAME PLATE



SEE NOTE A

= 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

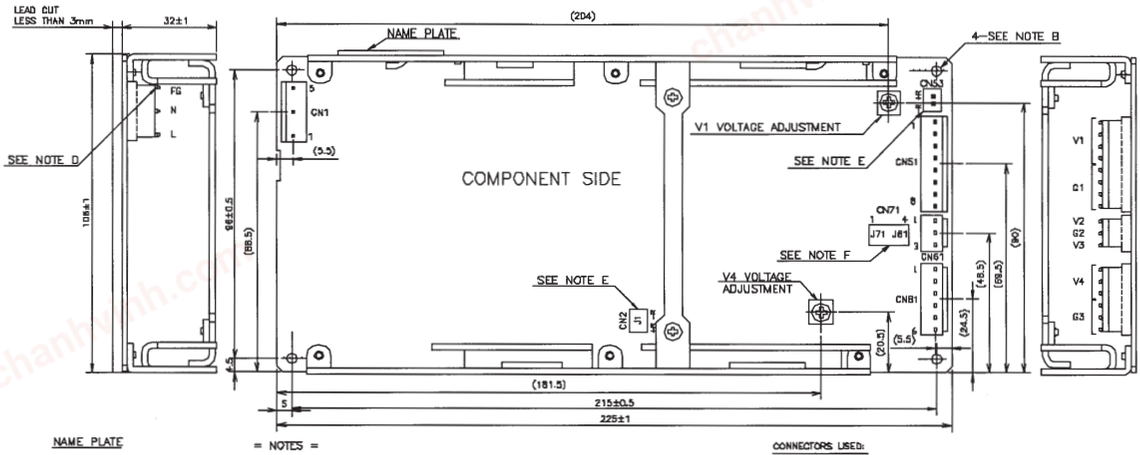
*OUTPUT CURRENT OF EACH CONNECTOR PIN MUST BE LESS THAN 5A.

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.

Outline Drawing ZWQ130 Series



NAME PLATE



SEE NOTE A

= 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)	B8P-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 (CN61)	VHR-3N	J.S.T.	1
SOCKET HOUSING (CN81)	VHR-8N	J.S.T.	1
TERMINAL PINS (CN1,51,61,81)	SVH-21T-P1.1	J.S.T.	20

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

chanhvinh.com

TDK·Lambda



TDK-Lambda France SAS
Tel: +33 1 60 12 71 65
tlf.fr.powersolutions@tdk.com
www.emea.lambda.tdk.com/fr



Italy Sales Office
Tel: +39 02 61 29 38 63
tlf.it.powersolutions@tdk.com
www.emea.lambda.tdk.com/it



Netherlands
tlf.nl.powersolutions@tdk.com
www.emea.lambda.tdk.com/nl



TDK-Lambda Germany GmbH
Tel: +49 7841 666 0
tlg.powersolutions@tdk.com
www.emea.lambda.tdk.com/de



Austria Sales Office
Tel: +43 2256 655 84
tlg.at.powersolutions@tdk.com
www.emea.lambda.tdk.com/at



Switzerland Sales Office
Tel: +41 44 850 53 53
tlg.ch.powersolutions@tdk.com
www.emea.lambda.tdk.com/ch



Nordic Sales Office
Tel: +45 8853 8086
tlg.dk.powersolutions@tdk.com
www.emea.lambda.tdk.com/dk



TDK-Lambda UK Ltd.
Tel: +44 (0) 12 71 85 66 66
tlu.powersolutions@tdk.com
www.emea.lambda.tdk.com/uk



TDK-Lambda Ltd.
Tel: +9 723 902 4333
tli.powersolutions@tdk.com
www.emea.lambda.tdk.com/il-en



TDK-Lambda Americas
Tel: +1 800-LAMBDA-4 or 1-800-526-2324
tla.powersolutions@tdk.com
www.us.lambda.tdk.com



TDK Electronics do Brasil Ltda
Tel: +55 11 3289-9599
sales.br@tdk-electronics.tdk.com
www.tdk-electronics.tdk.com/en



TDK-Lambda Corporation
Tel: +81-3-6778-1113
www.jp.lambda.tdk.com



TDK-Lambda (China) Electronics Co. Ltd.
Tel: +86 21 6485-0777
tlc.powersolutions@tdk.com
www.lambda.tdk.com.cn



TDK-Lambda Singapore Pte Ltd.
Tel: +65 6251 7211
tls.marketing@tdk.com
www.sg.lambda.tdk.com



TDK India Private Limited, Power Supply Division
Tel: +91 80 4039-0660
mathew.philip@tdk.com
www.sg.lambda.tdk.com

chanhvinh.com

For Additional Information, please visit
https://product.tdk.com/en/power/

