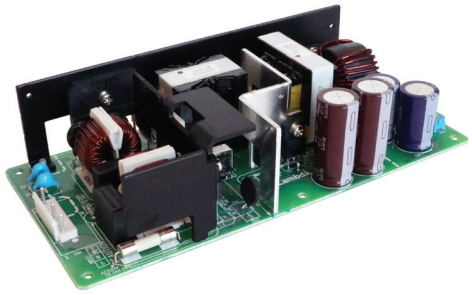
https://product.tdk.com/en/power/zws-bp
www.emea.lambda.tdk.com/zws-bp

240W 24V Output Power Supply with EN62477-1 OVC III



Industrial

The ZWS240RC industrial grade power supplies are used in applications where equipment down-time cannot be tolerated during years of operation. Developed for robotic and machine controllers, the ZWS240RC is certified to EN62477-1 Over Voltage Category (OVC) III. This enables direct connection to the incoming AC distribution panel, saving the cost and space of an isolation transformer. Conservatively rated electrolytic capacitor temperatures offer field life-times of up to 12 years.

Features	Benefits
• Certified to IEC/EN62477-1 OVC III	• Allows Direct Connection to the Distribution Panel
• 12 Year Electrolytic Capacitor Lifetimes	• Improved Field Life
• Convection Cooled	• Reduced Dirt and Dust Contamination
• Curve B Radiated and Conducted EMI	• Easier System Compliance
• 5 year Warranty	• Low Cost of Ownership

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Output Power (W)
ZWS240RC-24	24	21.6 - 26.4	10	240

ZWS	240RC	-	24	-

240RC = 240W

Output voltage: 24

Suffix	Description
Blank	Open frame, no remote on/off
/R	Remote on/off

Specifications

Model		ZWS240RC-24
Input		
AC Input Voltage range[1]	Vac	85 - 265
Input Frequency	Hz	47 - 63
Input Current (100/200Vac)	A	2.8 / 1.5
Inrush Current at 200Vac (typ) (Cold Start)	A	30
Leakage Current	mA	<0.5
Power Factor (100/200Vac)	-	0.93 / 0.90
Harmonic Compliance	-	Meets IEC61000-3-2
Hold Up Time (typ) at 100/200Vac Input	ms	31
Efficiency (100/200Vac)	-	87 / 90
Conducted & Radiated EMI	-	Conducted: EN55011 / EN55032-B, FCC-B, VCCI-B Radiated: EN55011 / EN55032-A, FCC-A, VCCI-A
Immunity	-	IEC61000-6-2, EN61000-4-2 , -3, -4, -5, -6, -8, -11 (See immunity table)
Insulation Class	-	Class I
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, 60950-1, EN62477-1 (OVC III), CE Mark and UKCA Mark

Immunity

Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	Air ± 8kV and contact ± 4kV	B	See IEC61000 immunity test report on website
Radiated Susceptibility	EN61000-4-3	80M -1GHz: 10V/m 1.4 - 2.0GHz: 3V/m 2.0 - 2.7GHz: 1V/m	A	
Electrical Fast Transient Burst	EN61000-4-4	± 2kV	B	
Surge	EN61000-4-5	Normal ± 2kV Common ± 4kV	B	
Conducted Susceptibility	EN61000-4-6	10Vrms	A	
Magnetic Fields	EN61000-4-8	30A/m	A	
Voltage Dips	EN61000-4-11	30% 500ms 60% 200ms 100% 20ms 100% 5000ms	B B B B	

Specifications

Model		ZWS240RC-24
Output		
Output Voltage Adjustment	-	See Model Selector Table
Switching Frequency (Main converter)	kHz	130
Line Regulation	mV	96
Load Regulation	mV	150
External Load Capacitance	uF	Not specified
Ripple & Noise	mV	200
Temperature Coefficient	%/°C	0.02
Minimum Load	-	No minimum load required
Overcurrent Protection	%	>105, constant current limit with automatic recovery
Overvoltage Protection	V	27.6 - 32.4, latching, cycle AC input to reset
Remote Sense	-	-
Remote On/Off	-	Optional, see model selector and instruction manual for details
Parallel Operation	-	Not possible
Environmental		
Operating Temperature(2)	°C	-10 to +70, derate linearly to 30% load from 50 to 70
Storage Temperature	°C	-30 to +75
Humidity (non condensing)	%RH	30 - 90 Operating, 10 - 90 storage
Cooling	-	Convection
Altitude	m	5,000
Withstand Voltage (For 1 minute)	Vac	Input to Ground 2,000, Input to Output 3,000, Output to Ground 500
Isolation Resistance	MΩ	>100 at 25°C, 70%RH & 500VDC
Vibration (Non operating)	-	10-55Hz (Sweep for 1min.) 19.6m/s^2 Constant X,Y,Z 1 hour each
Shock (Non operating)	-	Less than 196m/s^2
Other		
Weight (Typ)	g	520
Size (LxWxH)	mm	180 x 84 x 42
Size (LxWxH)	Inches	7.09 x 3.31 x 1.65
Connectors	-	JST
MTBF - JEITA RCR-9102B(3)	Hours	216,512
Warranty	Years	5

Notes:

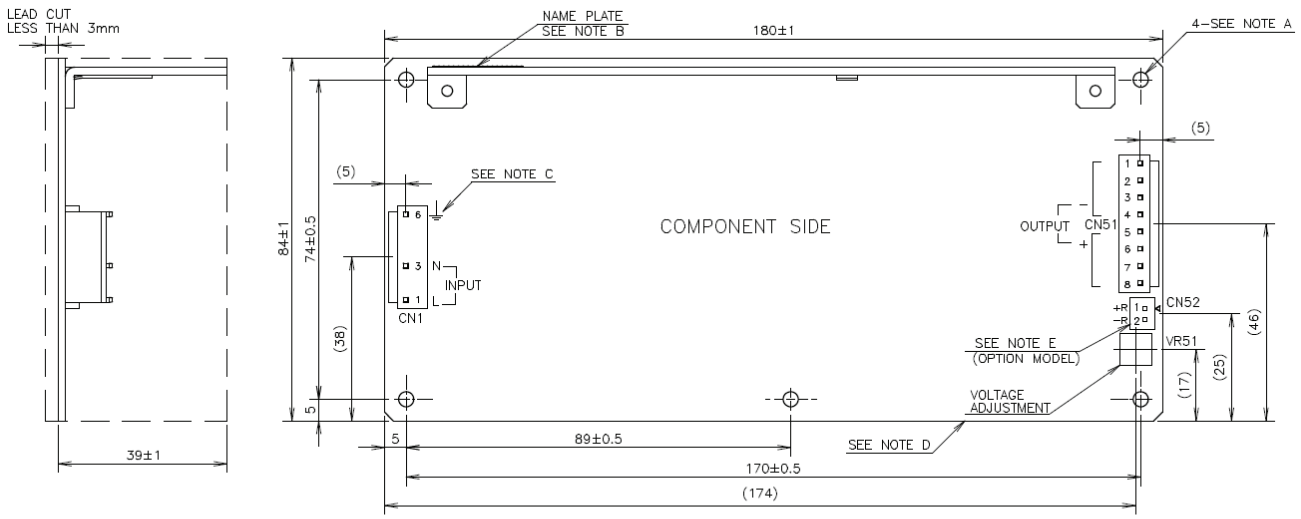
See website for detailed specifications, test methods and installation manual

(1) Derate linearly to 80% load from 90 to 85Vac input

(2) See Instruction manual for further details and mounting orientations

(3) Component count method, ground fixed. Note the JEITA RCR-9102B calculation method produces figures significantly lower than Telcordia

Outline Drawing ZWS240RC



CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	B3P(6-2.4.5)-VH(LF)(SN)	JST	1
PIN HEADER (OUTPUT SIDE CN51)	B8P-VH(LF)(SN)	JST	1

MATCHING HOUSINGS (NOT INCLUDED WITH THE PRODUCT):

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
SOCKET HOUSING (CN1)	VHR-6N	JST	1
SOCKET HOUSING (CN51)	VHR-8N	JST	1

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

■ INPUT SIDE (CN1)

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
TERMINAL PINS	SVH-21T-P1.1 BVH-21T-P1.1	JST	3
HAND CRIMPING TOOL	YC-160R	JST	–

■ OUTPUT SIDE (CN51)
DEPENDING ON THE REQUIRED OUTPUT CURRENT, SELECT THE TERMINAL PIN (1) OR (2).
(1) WHEN EACH CONNECTOR PIN USED AT OUTPUT CURRENT IS LESS THAN 5A.

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
TERMINAL PINS	SVH-21T-P1.1 BVH-21T-P1.1	JST	8
HAND CRIMPING TOOL	YC-160R	JST	–

(2) WHEN EACH CONNECTOR PIN USED AT OUTPUT CURRENT IS LESS THAN 7A.

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
TERMINAL PINS	SVH-41T-P1.1 BVH-41T-P1.1	JST	8
HAND CRIMPING TOOL	YC-930R	JST	–

NOTES

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

B: MODEL NAME, INPUT VOLTAGE RANGE, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, COUNTRY OF MANUFACTURE AND SAFETY MARKING (FOR ONLY APPROVED PRODUCTS) ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

C: ⏚ IS PROTECTIVE BONDING TERMINAL.

D: TO KEEP THE DISTANCE MORE THAN 4mm BETWEEN PCB EDGE AND CUSTOMER'S CHASSIS.

E: OPTION MODEL(ZWS240RC-24/R)
REMOTE ON/OFF CONTROL CONNECTOR (CN52) : B2B-XH-AM (JST)
MATCHING HOUSING : XHP-2 (JST)
MATCHING TERMINAL : BXH-001T-P0.6 (JST) OR SXH-001T-P0.6 (JST)
HAND CRIMPING TOOL : YC-110R (JST) OR YRS-110 (JST)
MATCHING HOUSING AND TERMINAL --- NOT INCLUDED WITH THE PRODUCT

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