



MWS65 Series

2 x 4" 55 to 67W AC-DC Power Supplies

- Medical & ITE Certifications
- BF Rated
- Very Low 1" profile
- Industry Standard Footprint
- Up to 89% Efficient
- <0.3W Off-load Power Draw

Key Market Segments & Applications

Medical
Test & Measurement
Point of Sale
Datacom

MWS65 Features and Benefits

Features

- Industry standard footprint
- <0.3W off-load power draw
- BF rated
- 25mm Profile

Benefits

- Availability to second source
- Suitable for "Green" products
- Easy system compliance
- Less system space needed

Specifications

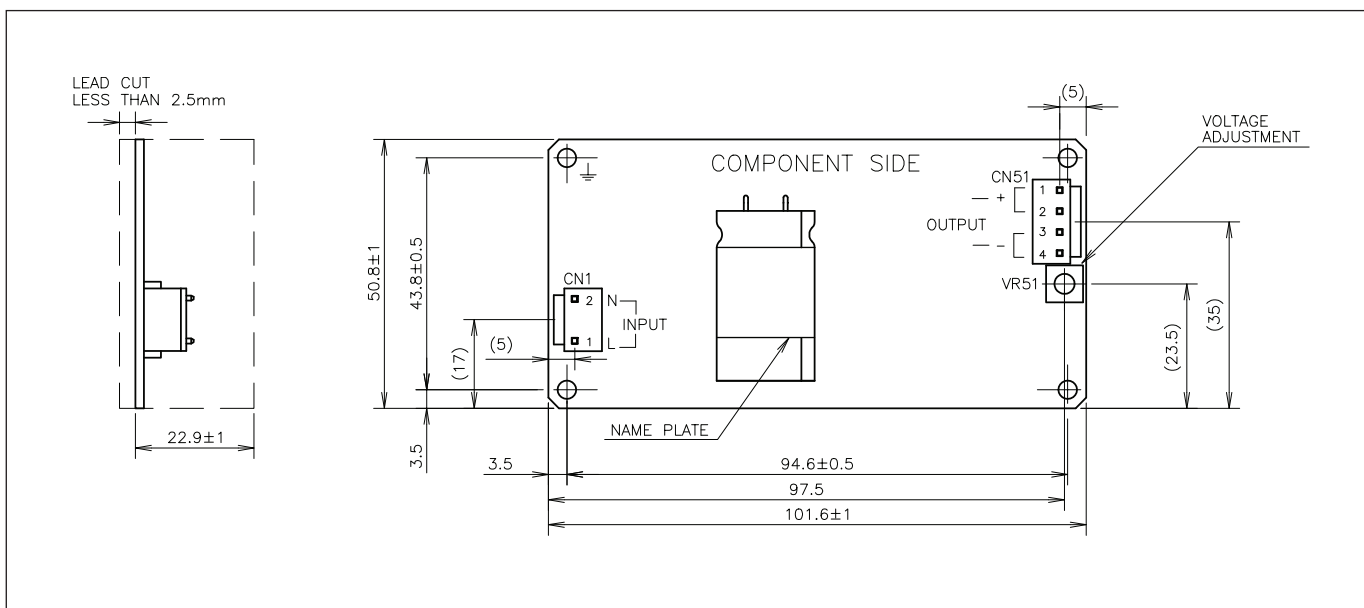
Model		MWS65
ITEMS		
AC Input Voltage Range	(1)	85 - 265VAC (47 - 440Hz)
DC Input Voltage Range	-	120 - 370VDC
Input Current (115 / 230VAC)	A	1.25 / 0.62A
Inrush Current (115 / 230VAC)	A	30 / 60A (Cold Start)
Temperature Coefficient	-	±0.02%/°C
Minimum Load	-	None
Off-load Power Draw	W	<0.3W at 230VAC
Overcurrent Protection	%	> 105%
Overvoltage Protection	%	115 - 135%
Load Regulation	%	0.8%
Line Regulation	%	0.4%
Hold Up Time (Typ)	ms	10ms / 20ms (115VAC / 230VAC input)
Leakage Current	mA	<0.25mA at 265VAC, 63Hz
Operating Temperature	°C	-20°C to +70°C, derate linearly to 50% load from 50°C to 70°C, Guaranteed start up at -25°C
Cooling	-	Convection
Operating Humidity (non condensing)	%RH	10 - 90% RH
Storage Temperature	°C	-40°C to +85°C
Storage Humidity (non condensing)	%RH	10 - 95% RH
Withstand Voltage	-	Input to Ground 1.5kVAC, Input to Output 4kVAC, Output to Ground 1.5kVAC for 1 min.
Isolation Resistance	-	>100M at 25°C & 70%RH, Output to Ground 500VDC
Vibration (non operating)	-	19.6m/s ² (10 - 500Hz: constant sweep 1 min X, Y, Z for 1 hour)
Shock	-	< 196.1 m/s ² (20G), MIL-STD810-F
Safety Agency Certifications	-	UL60950-1, CSA60950-1, EN60950-1, EN50178 (OV II), CE Mark UL60601-1, EN60601-1 (2nd & 3rd edition)
Conducted & Radiated EMI	-	EN55011/EN55022-B, FCC Class B, VCCI-B
Immunity	-	EN61000-4-2 (lv 2,3), -3 (lv 3), -4 (lv 3), -5 (lv 2,3), -6 (lv3), -8 (lv4), -11
Weight (Typ)	g	150
Size (WxLxH)	mm	50.8 x 101.6 x 25.4 (including underside components)
Warranty	yrs	3

Notes: (1) < 90VAC Input See Derating Curve

Model Selector

Model	Output Voltage (V)	Adjustment Range (V)	Maximum Output (A)	Output Power (W)	Ripple/Noise (mV)	Efficiency (115/230VAC) (%)
MWS65-5	5V	4.5 - 5.5V	11A	55	120mV	80 / 82
MWS65-12	12V	10.8 - 13.2V	5A	60	150mV	84 / 86
MWS65-15	15V	13.5 - 16.5V	4.4A	66	150mV	85 / 87
MWS65-24	24V	21.6 - 26.4V	2.8A	67.2	150mV	86 / 88
MWS65-48	48V	43.2 - 52.8V	1.4A	67.2	200mV	87 / 89

Outline Drawing MWS65 Series



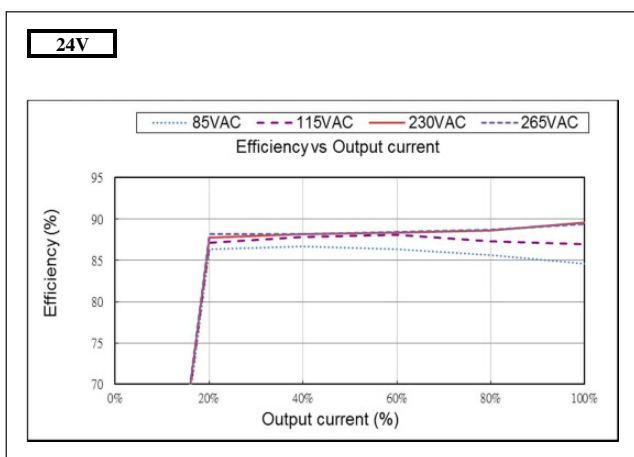
Connectors Used:

Part Description	Part Name	Manufacturer	Qty
Pin Header (input side CN1)	B2P3-VH(LF)(SN)	J.S.T	1
Pin Header (output side CN51)	B4P-VH(LF)(S)(SN)	J.S.T	1

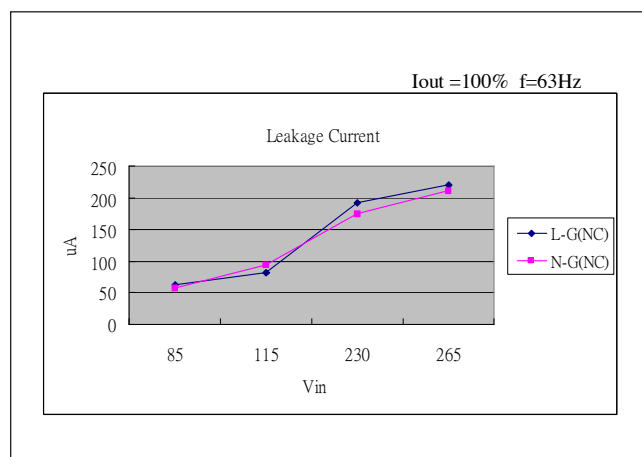
Matching Housings, Pins & Tools (not included with product):

Part Description	Part Name	Manufacturer	Qty
Socket Housing (CN1)	VAR-2/VHR-3N	J.S.T	1
Socket Housing (CN5)	VHR-4N	J.S.T	1
Terminal Pins	SVH-21T-P1.1	J.S.T	6
	BVH-21T-P1.1	J.S.T	6
Hand Crimping Tool	YC-160R	J.S.T	-

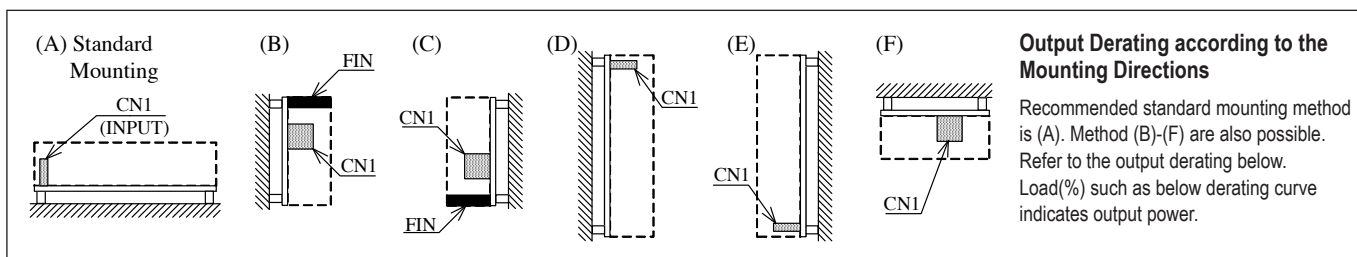
Efficiency vs Output Current



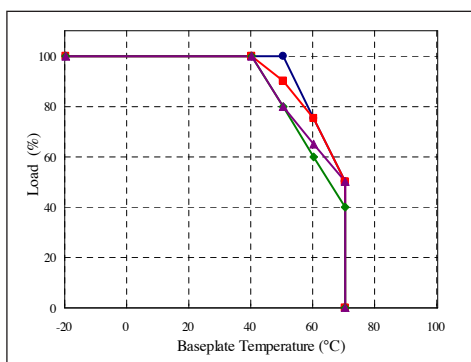
Leakage Current



Typical Mounting Method MWS65-24



Convection Cooling

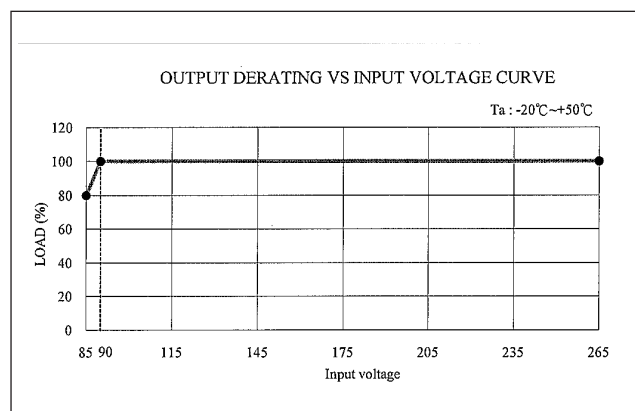


(*1) Output derating is different depending on the output voltage

- MOUNTING: (A)-(B): 5V - 48V
- MOUNTING: (C): 12V
- ▲ MOUNTING: (D)-(E): 12V/48V
- ◆ MOUNTING: (D)-(E): 15V/24V
- ▲ MOUNTING: (D)-(E): 5V
- ◆ MOUNTING: (F): 5V - 48V

Ta(°C)	Load(%)	Load(%)	Load(%)	Load(%)
Mounting	A,B,C,D,E	C,D,E	D,E	F
-20~40	100	100	100	100
50	100	90	80	80
60	75	75	65	60
70	50	50	50	40

Derating Curve MWS65



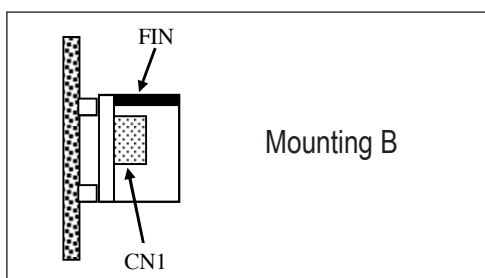
Example Electrolytic Capacitor Lifetime MWS65-24

Ta = 40°C — = 50°C ---- = 60°C

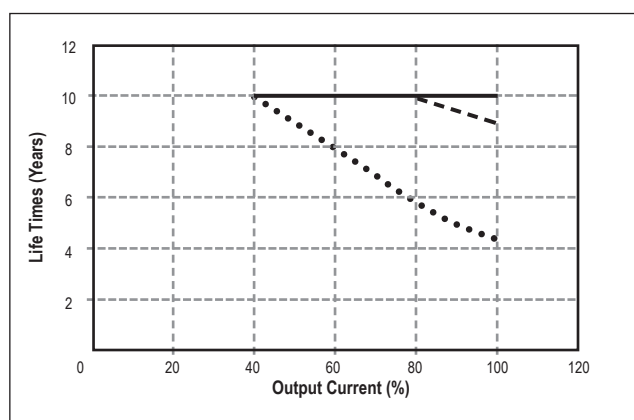
Vin = 230VAC

Load (%)	Life Time (Years)		
	Ta= 40°C	Ta= 50°C	Ta= 60°C
40	10.0	10.0	10.0
60	10.0	10.0	8.1
80	10.0	10.0	5.5
100	10.0	9.1	4.5

Mounting Method MWS65-24



Convection Cooling



For Electrolytic Cap life of other models
Please contact Technical Sales
or visit www.emea.tdk-lambda.com/mws

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