

Features

- 5 x 3 x 1.65 Inches
- Force cooling 350 Watts & Conduction cooling 250 Watts
- Efficiencies up to 92 %
- No Load Power < 1 Watts
- Remote ON/OFF **New**
- +5 Vdc Standby Output **New**
- -40°C to 70°C operating temperature
- Now IEC62368-1:2018 Certified **New**
- 12 V / 0.5 A Fan Output, Thermal Shut-Down feature
- Hybrid Technology Design
- 7 Years Warranty option on Request

Electrical Specifications

Input Voltage	90-264 VAC/390 VDC, Universal (Derate from 100% at 115VAC to 78% at 90VAC)		
Input Frequency	47-63 Hz		
Input Current	115 VAC: 6.0 A max.	230 VAC: 3.0 A max.	
No Load Power	< 1.0W @ 115VAC		
Inrush Current	75A max		
Efficiency	92% typical at full load, nominal line (Voltages measured at the PCB connector pads, 25°C ambient air and after a 5 minute warm up.)		
Hold-up Time	Full Load > 16 ms typical	Convection Load > 55 ms typical	Conduction Load > 30ms typical
Power Factor	exceeds 0.95 with Full Load		
Output Power	up to 350W max with 400 LFM (Forced Air Cooled) up to 250W (Conduction Cooled) up to 150W (Convection Cooled)		
Output Voltage Adjustability	+/-3%		
Line Regulation	+/-0.5%		
Load Regulation	+/-1%		
Transient Response	max excursion 5 %, 50-100% step load change, at 0.1A/uS slew rate, 50% duty cycle, 50/60Hz , recovery time < 5 ms		
Rise Time	55 ms typical		
Set Point Tolerance	+/-1%		
Over Current Protection	>110% ,Hiccup mode / Auto Recovery		
Over Voltage Protection	110 to 140% , Hiccup mode / Auto Recovery		
Short Circuit Protection	Hiccup mode / Auto Recovery		
Operating Temperature	-40 to +70°C, * -40°C to 0°C startup is guaranteed with spec deviation (ref note 6)		
Storage Temperature	-40 to +85°C		
Relative Humidity	5% to 95%, noncondensing		
Altitude	Operating: 16,000 ft.; Nonoperating: 40,000 ft.		

Model Number	Voltage	Max. Load (Convection)	Max. Load ⁷ (Conduction)	Max. Load (350 LFM)	Min. Load	Ripple ¹
WLC550-2012	12V	9.17A	16.67A	25A	0.0A	2%
WLC550-2015	15V	7.33A	13.33A	20A	0.0A	2%
WLC550-2024	24V	6.25A	10.42A	14.58A	0.0A	1%
WLC550-2030	30V	5.00A	8.33A	11.67A	0.0A	1%
WLC550-2048	48V	3.13A	5.21A	7.29A	0.0A	1%
WLC550-2058	58V	2.59A	4.31A	6.03A	0.0A	1%

Pin Connections		
J1	Pin 1	AC LINE
	Pin 2	NOT FITTED
	Pin 3	AC NEUTRAL
J2	Pin 1	V1 +VE
	Pin 2	V1 -VE
J3	Pin 1	FAN +VE
	Pin 2	FAN -VE
J21	Pin 1	REMOTE ON/OFF
	Pin 2	GND
	Pin 3	5V STANDBY
	Pin 4	GND

Notes

1. Ripple is peak to peak with 20 MHz bandwidth and 10 μ F (Electrolytic capacitor) in parallel with a 0.1 μ F capacitor at rated line voltage and load ranges.
2. Combined output power of main output, fan supply and standby supply shall not exceed max. Power rating..
3. Fan supply output voltage tolerance including set point accuracy, line and load regulation is +/-10% and Ripple and noise is less than 10%.
4. Specifications are for nominal input voltage, 25°C unless otherwise stated.
5. Thermal shutdown feature : The power supply goes in hiccup mode when the temperature of Substrate PCB exceeds 110 °C (+/-10 °C).
6. Output ripple can be more than 10% of the output voltage.
7. Refer Recommended Conduction Plate & Clearance on Page No. 6.
8. PSU is supplied with J21, Pin-1 and Pin-2 shorted to enable main output without remote on/off feature.
9. Standby output voltage 5 V/ 0.5A(convection) with tolerance including set point accuracy, line and load regulation is +/-10 %.Ripple and noise is less than 5 %..



Mechanical Specifications

AC Input Connector (J1)	JST : B3P-VH-B(LF)(SN) or equivalent Mating: VHR-3M or equivalent Pins : SVH-41T-P1.1 or equivalent
Earth (J4)	Molex: 19705-4301 Mating: 19003-0001
DC Output Connector (J2) (Screw Terminal)	6-32 inches Screw Pan HD Mating: Designed to accept Ring Tongue Terminal AMP : 8-31886-1, wherein one 16 AWG(max) wire can be crimped. Note : One Ring Tongue Terminal with 16 AWG is recommended for current up to 11A only. Use multiple tongue terminals with wire for more current
Aux (Fan) Output(J3)	AMP :640456-2 Mating: 640440-2
Signal Connector (J21)	MOLEX :10-89-7041 or equivalent Mating: 1053082204 or equivalent Pins : 1053001100 or equivalent
Dimensions	5 x 3 x 1.65 inches (127 x 76.2x 42 mm)
Weight	550 gm approx

EMC

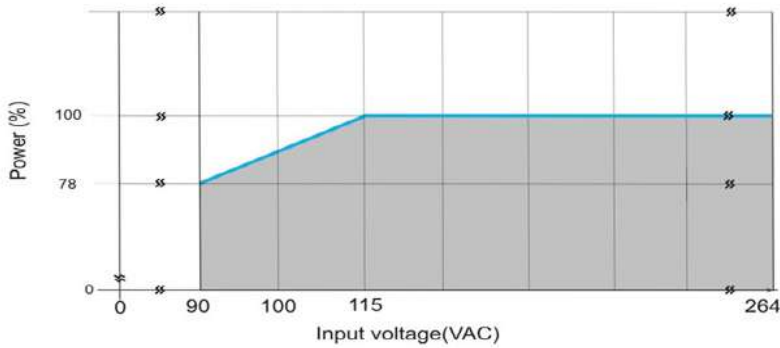
Parameter	Conditions/Description	Criteria
Conducted Emissions	EN55032-B, CISPR22-B, FCC PART15-B	Pass
Radiated Emissions	EN 55032 A	Pass
		Level B with external core (King core K5B RC 25x12x15-M in input cable)
Input Current Harmonics	EN 61000-3-2	Class D
Voltage Fluctuation and Flicker	EN 61000-3-3	Pass
ESD Immunity	EN 61000-4-2	Level 3, Criterion A
Radiated Field Immunity	EN 61000-4-3	Level 3, Criterion A
Electrical Fast Transient Immunity	EN 61000-4-4	Level 3, Criterion A
Surge Immunity	EN 61000-4-5	Level 3, Criterion A
Conducted Immunity	EN 61000-4-6	Level 3, Criterion A
Magnetic Field Immunity	EN 61000-4-8	Level 3, Criterion A
Voltage dips, interruptions	EN 61000-4-11	Criterion A & B

Safety

CE Mark	Complies with LVD Directive
Approval Agency	Nemko, UL, C-UL
Safety Standard(s)	IEC62368-1: 2018, EN62368-1: 2014
Safety File Number(s)	CB Certificate. No.: NO112394, Nemko certificate No.: P20224603

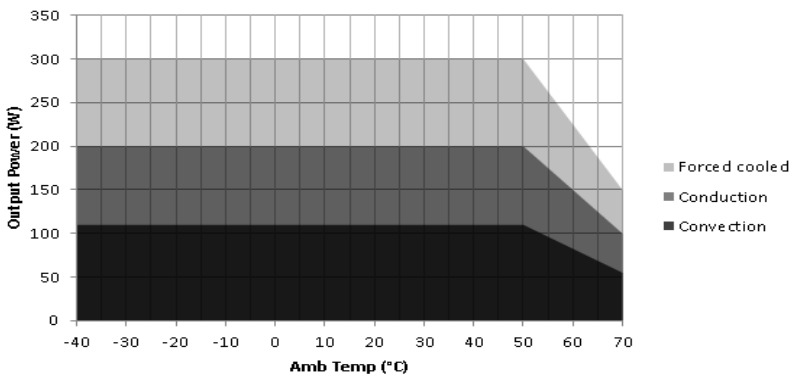
Derating Curve

Derating w.r.t Input



De-rate linearly from 100% at 115VAC to 78% at 90VAC

Power De-rating : 12V, 15V
For all mounting options a to f

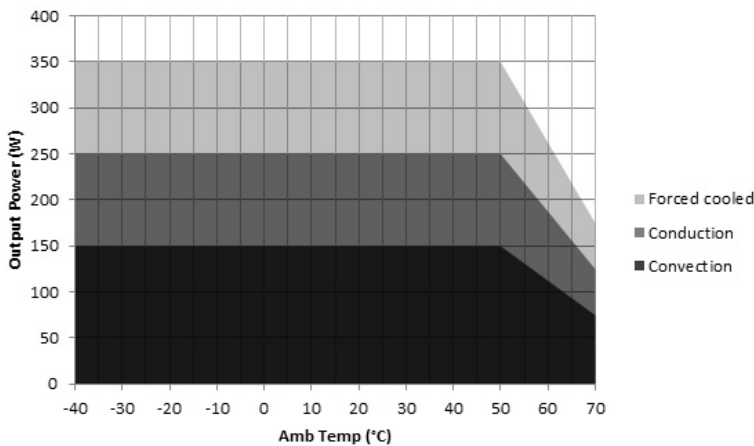


Convection load: 110W up to 50 °C
De-rate above 50 °C @ 2.5% per °C

Conduction load: 200W up to 50 °C
De-rate above 50 °C @ 2.5% per °C

Forced air cooled load : 300W up to 50°C
De-rate above 50 °C @ 2.5% per °C

Power De-rating : 24V, 30V, 48V, 58V
For all mounting options a to f



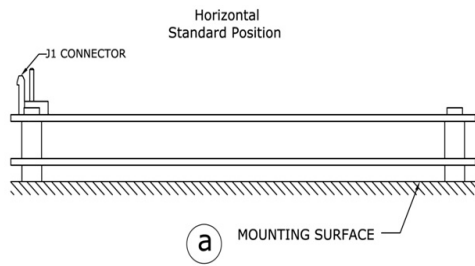
Convection load: 150W up to 50 °C
De-rate above 50 °C @ 2.5% per °C

Conduction load: 250W up to 50 °C
De-rate above 50 °C @ 2.5% per °C

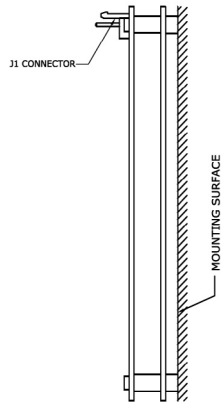
Forced air cooled load : 350W up to 50°C
De-rate above 50 °C @ 2.5% per °C



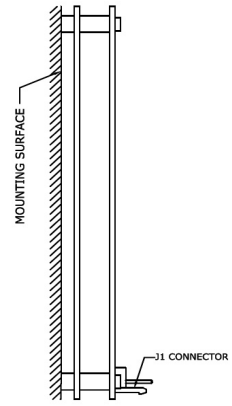
Mounting Option



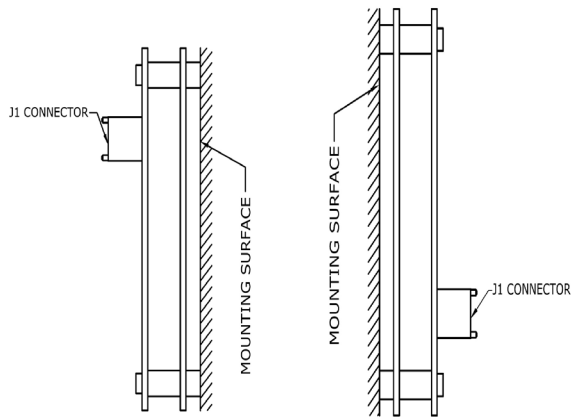
(a)



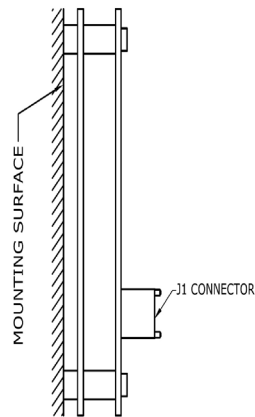
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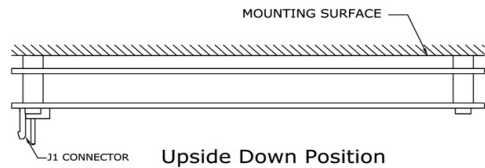
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(d)

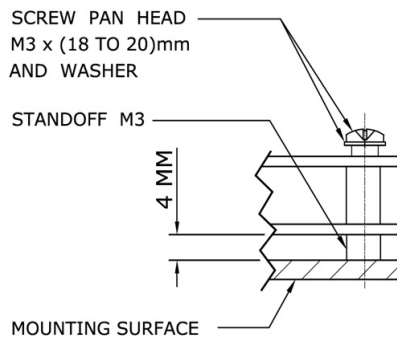


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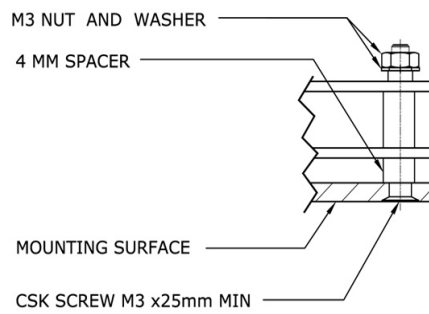


(f)

FIXING OPTION - 1



FIXING OPTION - 2



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