

Product Description

AC-DC switching power supply with built-in active PFC function. Provides high efficiency and high reliability solutions for industrial, street lighting and instrumentation applications. These converters offer excellent EMC performance, meeting CISPR32/EN55032 Class B and IEC/EN61000-4. Safety approval UL/EN/IEC62368, EN60335, GB4943

Model	AC-DC Enclosed 200W
Mounting Type	Chassis Mount
MTBF	MIL-HDBK-217F@25°C > 250,000 h
Applications	Industrial control systems, instrumentation, and lighting

RS Stock#	Input Voltage	Output Voltage	Output Current	Adj' range (V)	Wattage	Efficiency (Typ)
2580580	85 to 305V ac 120 to 430V dc	5V DC	40A	4.5 - 5.5V	200W	85%

Input Specifications

Item	Operating Conditions		Min	Typ	Max.	Unit
Input Voltage Range	AC Input		85	-	305	VAC
	DC Input		120	-	430	VDC
Input Voltage Frequency			47	-	63	Hz
Input Current	115VAC		-	2.5	3	A
	230VAC		-	1.3	2	
Inrush Current	115VAC	Cold Start	-	35	-	A
	230VAC		-	65	-	
Power Factor	115VAC	At full Load	-	0.98	-	A
	230VAC		-	0.95	-	
Hot Plug			Unavailable			

Output Specifications

Item	Operating Conditions	Min	Typ	Max.	Unit
Output Voltage Accuracy	Full Load Range 5V	-	±2	-	%
Line Regulation	Rated Load	-	±0.5	-	
Load Regulation	0% - 100% load	-	±1	-	
Output Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	-	60	-	mV
Temperature Coefficient		-	±0.03	-	%/°C
Minimum Load		0	-	-	%
Hold-up Time	230VAC	12	-	-	ms
Short Circuit Protection	Recovery time <5s after the short circuit disappear	Hiccup , continuous, self-recover			
Over-current Protection		105% - 150% Io, hiccup, self-recover			
Over-voltage Protection	5V	≤ 7V (Output voltage turn off, re-power on for recover)			
Over-temperature Protection*	Over-temperature Protection Activation	-	-	85	°C
	Over-temperature Protection Deactivation	55	-	-	
Note : *The “Tip and barrel method” is used for ripple and noise test, output parallel 47uF electrolytic capacitor and 0.1uF ceramic capacitor, please refer to Enclosed Switching Power Supply Application Notes for specific information. *Over-temperature Protection needs to be tested under rated full load conditions.					

EMC Specifications

Emissions	CE	CISPR32/EN55032 CLASS B	
	RE	CISPR32/EN55032 CLASS B	
	Harmonic Current	IEC/EN61000-3-2 CLASS A and D	
	Voltage Flicker	IEC/EN61000-3-3	
Immunity	ESD	IEC/EN 61000-4-2 Contact ±6KV /Air ±8KV	Perf. Criteria A
	RS	IEC/EN 61000-4-3 10V/m	Perf. Criteria A
	EFT	IEC/EN 61000-4-4 ±2KV	Perf. Criteria A
	Surge	IEC/EN 61000-4-5 ±1KV/±2KV	Perf. Criteria A
	CS	IEC/EN61000-4-6 10 Vrms	Perf. Criteria A
	DIP (AC input)	IEC/EN61000-4-11 0%, 70%	Perf. Criteria B
Note: 1.*One magnetic bead(nickel-zinc ferrite)should be coupled with the output load line during CE/RE testing. 2.*The power supply is considered a component as part of system, all EMC items are tested on a metal plate (LxWxH, 450mm x 450mm x 3mm). Power supply should be combined with final equipment for EMC confirmation.			

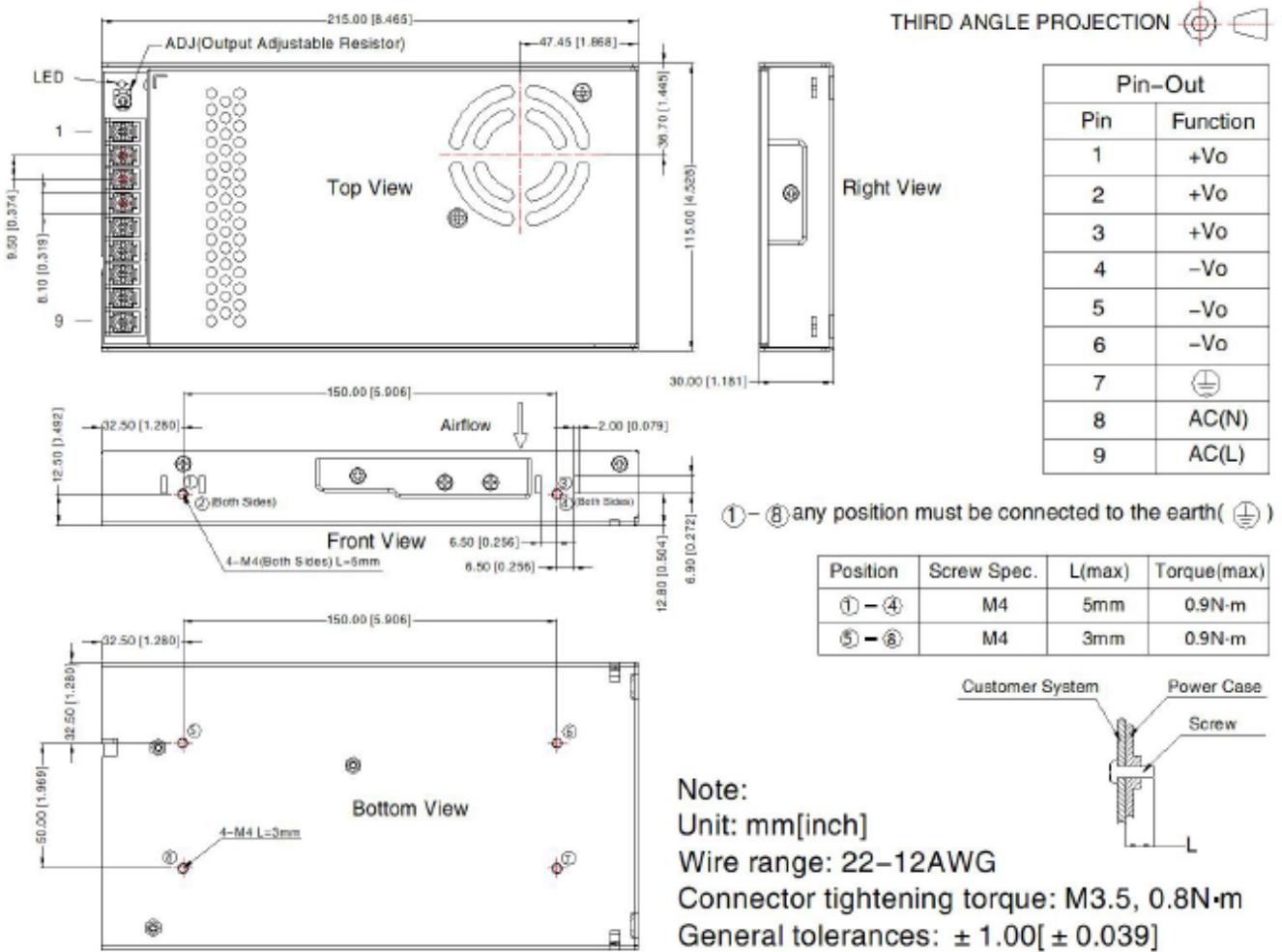
General Specifications

Item	Operating Conditions	Min	Typ	Max.	Unit	
Isolation	Input-Earth	Electric Strength Test for 1min, leakage current <10mA	2000	-	-	VAC
	Input-output	Electric Strength Test for 1min, leakage current <10mA	4000	-	-	
	Output-Earth	Electric Strength Test for 1min, leakage current <5mA	500	-	-	
Insulation Resistance	Input-Earth	500VDC, 25±5°C,	100	-	-	MΩ
	Input-output	Humidity < 95%RH, non-	100	-	-	
	Output-Earth	condensing 500VDC	100	-	-	
Operating Temperature		-30	-	+70	°C	
Storage Temperature		-40	-	+85		
Storage Humidity	Non-condensing	10	-	95	%RH	
Power Derating	-30°C to + 45°C	0	-	-	% / °C	
	+45°C to + 70°C	2.5	-	-		
	85VAC-100VAC 50Hz	2	-	-	%/VAC	
	120VDC - 140VDC	1.25	-	-	%/VDC	
Safety Standard		UL62368-1, GB4943.1, IS 13252 (Part1) safety approval & EN62368-1 (Report) Design refer to IEC62368-1				
Safety Class		CLASS I				
MTBF	MIL-HDBK-217F@25°C	> 250,000 h				

Mechanical Specifications

Case Material	Metal (AL1100, SGCC)
Dimensions	215.00 mm x 115.00 mm x 30.00 mm
Weight	750g (Typ.)
Cooling Method	Free air convection

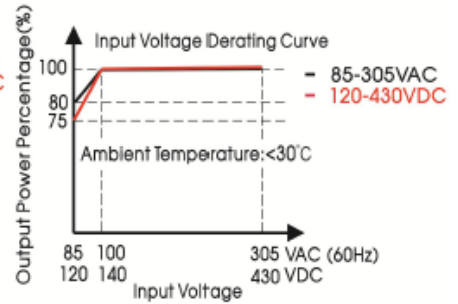
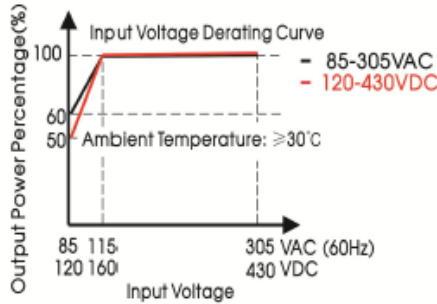
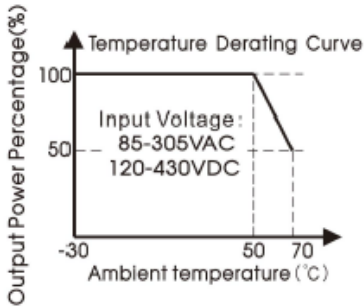
Dimensions & Recommended Layout



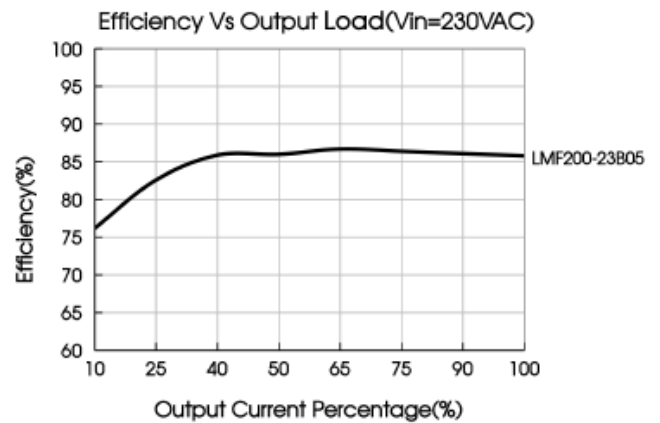
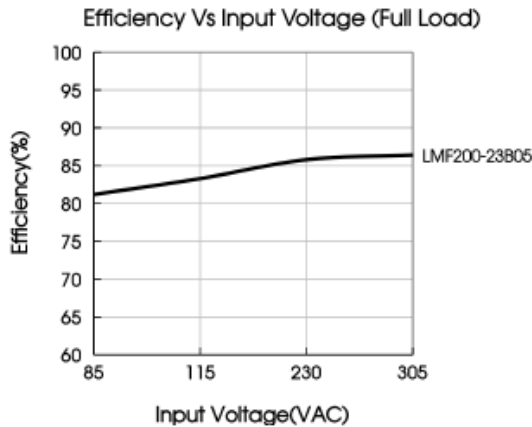
Approvals

Safety Standard	Meet IEC/EN/UL62368/EN60335/GB4943
Safety Certification	IEC/EN/UL62368/GB4943
Safety Class	Class I (PE and must be connected)

Product Curve



- Note: 1. With an AC Input voltage between 85-100VAC/85-115VAC and a DC Input between 120-140VDC/120-160VDC the output power must be derated as per the temperature derating curves:
 2. This product is suitable for applications using natural air cooling; for applications in closed environment please consult
 3. The power supply is considered a component as part of system, under the conditions of full power application, the product should be assembled on a metal plate (L x W x H greater than 450mm x 450mm x 3mm).



Note:

- Unless otherwise specified, parameters in this datasheet were measured under the conditions of $T_a=25^{\circ}\text{C}$, humidity.
- All index testing methods in this datasheet are based on our company corporate standards.
- To improve the efficiency at high input voltage, there will be audible noise generated, but it does not affect product performance and reliability.
- Products are related to laws and regulations: see "Features" and "EMC".
- The out case needs to be connected to PE of system when the terminal equipment in operating.
- Our products shall be classified according to ISO14001 and related environmental laws and regulations and shall be handled by qualified units.
- The power supply is considered a component which will be installed into a terminal equipment. All EMC tests should be confirmed with the final equipment.