

100W AC to DC Power Supply - DIN Rail Mount

multicomp PRO

**RoHS
Compliant**

Features

- Universal 85V AC to 264V AC or 120V DC to 370V DC input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -40°C to +70°C
- High I/O isolation test voltage up to 4000V AC (Input - output)
- Industrial product technology design
- Over-voltage class III (Designed to meet EN61558 standards)
- Low standby power consumption, high efficiency
- Low ripple & noise
- Output short circuit, over-current, over-voltage protection
- Withstand 300V AC surge input for 5s
- UL/EN/IEC62368 safety approval
- DIN rail TS35X7.5/ TS35X15 mountable



This is AC-DC series featuring a cost-effective, energy efficient solution for standard DIN-rail mounting. The products offer a high level of stability and immunity to noise, compliant with international IEC62368 standards for EMC and safety specifications meet IEC/EN61000-4, CISPR32, EN55032, UL62368, IEC62368 and EN62368. These light weight AC-DC converters also have an extremely compact design for space saving and are ideal for applications such as industrial control equipment machinery and all kinds of applications in a harsh environment.

Selection Guide

Certification	Part No.*	Output Power (W)	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range(V)*	Efficiency at 230V AC (%) Typ.	Max. Capacitive Load (µF)
UL/CE/CB	MP-LI100-20B12PR2	90	12V/7.5A	12 to 13.8	88	10000
	MP-LI100-20B24PR2	100.8	24V/4.2A	21.6 to 29	90	2500
MP-LI100-20B48PR2	48V/2.1A		43.2 to 55.2	1100		

Note: * The actual adjustment range may extend outside the values stated, care should be exercised to ensure that the output voltage and power levels remain within the published maximum values.

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input voltage Range	AC input	85	-	264	V DC
	DC input	120		370	
Input Frequency		47		63	Hz
Input Current	115V AC	-		3	A
	230V AC			1.6	
Inrush Current	115V AC	-	35	-	
	230V AC		70	-	
Leakage Current	240V AC/50Hz	0.5mA RMS Max.			
Hot Plug		Unavailable			

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Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy	0% - 100% load			±2		
Line Regulation	Rated load		-	±0.5	-	-
Load Regulation	230V AC			±1.5		
Output Ripple & Noise*	20MHz Bandwidth (peak-to-peak value)	12V Output	1	1	120	mV
		15V Output				
		24V Output			150	
		48V Output			240	
Temperature Coefficient				±0.03	-	%/°C
Stand-by Power Consumption	230V AC Input	12V/15V Output			0.3	W
		24V Output			0.35	
		48V Output			0.4	
Short Circuit Protection			Hiccup, continuous, self-recovery			
Over-voltage Protection	12V Output		≤20V			
	15V Output		≤25V			
	24V Output		≤35V			
	48V Output		≤60V			
Minimum Load			0	-	-	%
Start-up Time			-	-	3	-
Hold-up Time	230V AC		-	30	-	ms
Note: *Ripple and noise tested with "parallel cable" method, Testing at rated load. Please see AC-DC Converter Application Notes for specific operation methods.						

General Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Isolation Test	Input-output	Electric Strength Test for 1min., Leakage current<5mA	4000	-	-	V AC
Operating Temperature			-40	-	+70	°C
Storage Temperature					+85	
Storage Humidity			-	-	95	%RH
Operating Altitude			-	-	2000	m
Switching Frequency			-	65	-	kHz
Power Derating	-40°C to -30°C	12V /48V Output	3	-	-	% /°C
		24V Output	7			
		15V Output	8			
	+45°C to +70°C		2			
	85V AC to 115V AC		0.67			%/V AC
Safety Standard			UL62368/EN62368/IEC62368			
Safety Certification			UL62368/EN62368/IEC62368			
Safety Class			CLASS II			
MTBF			MIL-HDBK-217F@25°C>300,000 h			

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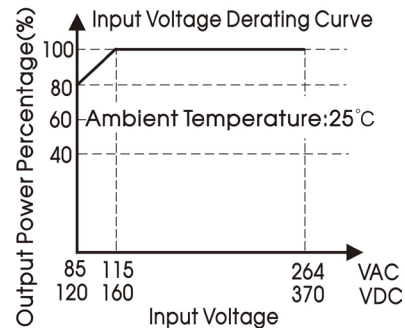
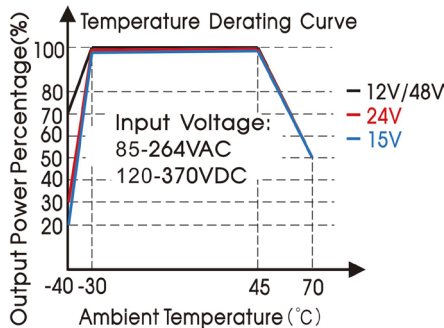
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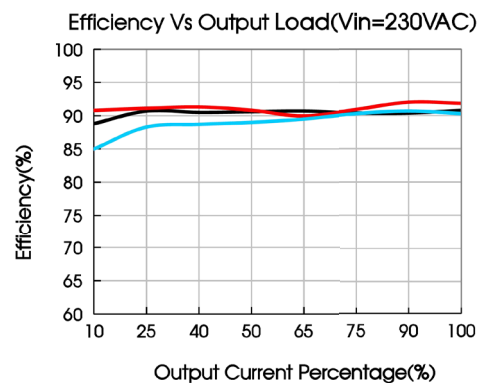
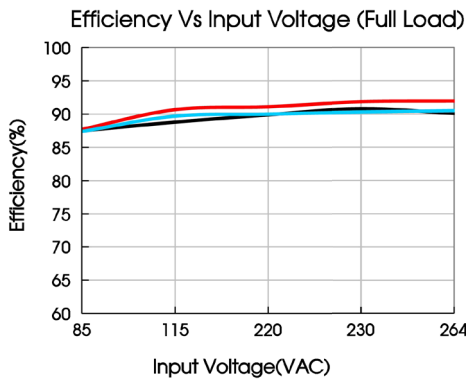
Mechanical Specifications	
Casing Material	Plastic, Heat-Resistant (UL94V-0)
Dimension	70mm × 92.66mm × 58mm
Weight	235g (Typ.)
Cooling Method	Free air convection

Electromagnetic Compatibility (EMC)			
Emissions	CE	CISPR32/EN55032	CLASS B
	RE	CISPR32/EN55032	CLASS B
Immunity	ESD	IEC/EN61000-4-2	Contact ±6KV/ Air ±8KV perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m perf. Criteria A
	EFT	IEC/EN 61000-4-4	± 4KV perf. Criteria A
	Surge	IEC/EN 61000-4-5	line to line ± 2KV perf. Criteria A
	CS	IEC/EN61000-4-6	10Vr.m.s perf. Criteria A
	Voltage dips, short interruptions and voltage variations	IEC/EN61000-4-11	0%,70% perf. Criteria A

Product Characteristic Curve



Note: ① With an AC input between 85-115VAC and a DC input between 120-160VDC, the output power must be derated as per temperature derating curves; ② This product is suitable for applications using natural air cooling; for applications in closed environment please consult factory or one of our FAE.



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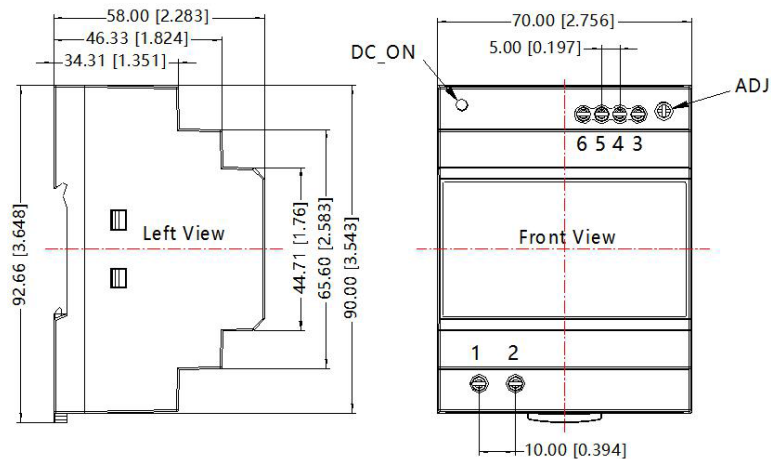
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Dimensions and Recommended Layout

THIRD ANGLE PROJECTION 



Pin-Out	
Pin	LI100-20B
1	AC(L)
2	AC(N)
3	+Vo
4	+Vo
5	-Vo
6	-Vo

Note:

Unit: mm[inch]

ADJ: adjustable resistance to change output voltage

Wire range: 24-12 AWG

Tightening torque: Max 0.4 N·m

Mounting rail: TS35

General tolerances: $\pm 1.00[\pm 0.039]$

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