30W AC to DC Power Supply - DIN Rail Mount

multicomp PRO

RoHS Compliant

Features

- Universal 85V DC 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
- Industrial product technology design
- Over-voltage class III (Designed to meet EN61558 safety 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 approved
- 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 sepecifitions 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-LI30-20B05PR2	15	5V/3A	4.9-5.5	82	12000
	MP-LI30-20B12PR2	24	12V/2A	10.8-13.8	88	6000
	MP-LI30-20B24PR2	36	24V/1.5A	21.6-29	89	1400
	MP-LI30-20B48PR2		48V/0.75A	43.2-55.2	90	600

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	-		0.9	A
	230V AC			0.5	
Inrush Current	115V AC	-	25	-	
	230V AC		45	-	
Leakage Current	264V AC	0.25mA RMS max.			
Hot Plug		Unavailable			

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Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy	0% to 100% load			±2	-	%
Line Regulation	Rated load		-	±0.5		
Load Regulation	230V AC			±1.5		
Output Ripple & Noise*	20MHz Bandwidth (peak-to-peak value)	5V Output	1	1	80	mV
		12V Output			120	
		15V Output				
		24V Output			150	
		48V Output			240	
Temperature Coefficient				±0.03	-	%/°C
Stand-by Power Consumption	230V AC Input	5V/12V/15V/24V Output			0.3	W
		48V Output			0.4	
Short Circuit Protection			Hiccup, continuous, self-recovery			
Over-current Protection			≥120 % Io, self-recovery			
Over-voltage Protection	5V Output		≤7.5V (Output voltage clamp or hiccup)			
	12V Output		≤16V (Output voltage clamp or hiccup)			
	15V Output		≤20V (Output voltage clamp or hiccup)			
	24V Output		≤36V (Output voltage clamp or hiccup)			
	48V Output		≤60V (Output voltage clamp or hiccup)			
Minimum Load			0	-	-	%
Start-up Time			-	-	3	s
Hold-up Time	115V AC		-	30	-	ms
	230V AC					

Note: *The “parallel cable” method is used for ripple and noise test, please refer to AC-DC Converter Application Notes for specific information.

General Specifications

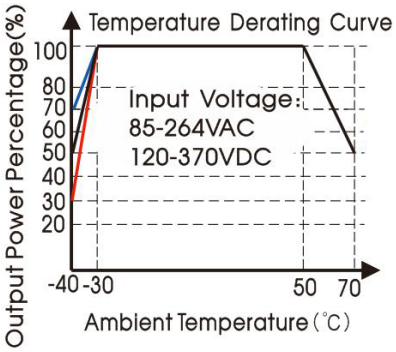
Item		Operating Conditions		Min.	Typ.	Max.	Unit
Isolation Test	Input-output	Electric Strength Test for 1min., Leakage current<5mA		4000	-	-	V AC
Operating Temperature				-40	-	+70	°C
Storage Temperature						+85	
Storage Humidity				-	-	95	%RH
Operating Altitude				-	-	2000	m
Switching Frequency				-	65	-	kHz
Power Derating		-40°C to -30°C	5V /48V Output	3	-	-	%/°C
			12V/15V Output	7			
			24V Output	5			
		+50°C to +70°C		2.5			
		85V AC to 100V AC		1			%/V AC

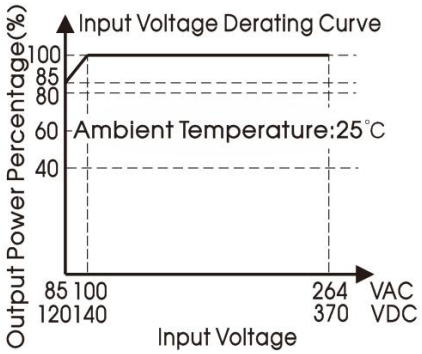
Item	Operating Conditions	Min.	Typ.	Max.	Unit
Safety Standard		UL62368/EN62368/IEC62368			
Safety Certification		UL62368/EN62368/IEC62368			
Safety Class		CLASS I I			
MTBF	MIL-HDBK-217F@25°C	> 300,000 h			

Mechanical Specifications	
Casing Material	Plastic, heat-resistant (UL94V-0)
Package Dimensions	92.66mm × 35mm × 58mm
Weight	115g (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 ±2KV	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 85-100VAC and a DC input between 120-140VDC, 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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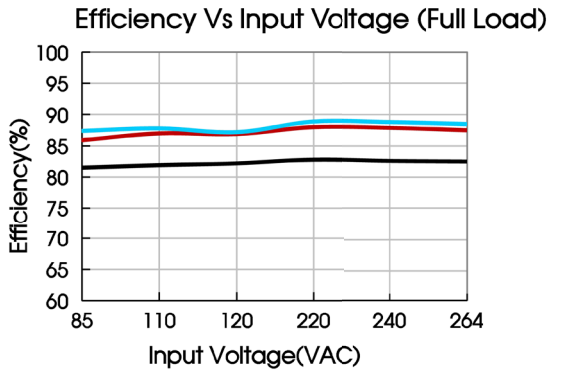
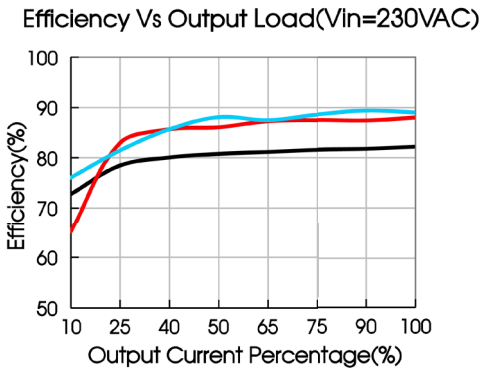
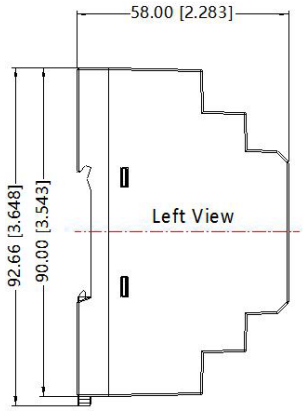
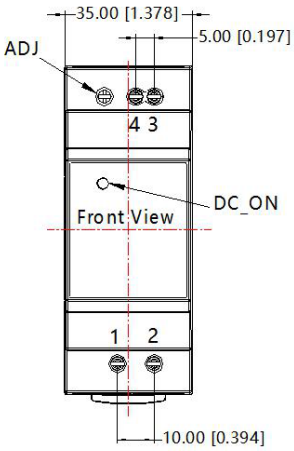




Dimensions and Recommended Layout

THIRD ANGLE PROJECTION





Pin-Out	
Pin	LI30-20B
1	AC(N)
2	AC(L)
3	-Vo
4	+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: ±1.00[±0.039]