

30W / 60W AC to DC Power Supply DIN Rail Mount

multicomp PRO

**RoHS
Compliant**



Features

- Universal Input 90V AC to 264V AC
- Short Circuit Protection
- Internal Input Filter
- 3 Years Warranty



Model List

Model No.	Input Voltage	Output Wattage	Output Voltage	Output Current	EFF. (Min.)	EFF. (Typ.)
Single Output Models						
MP-DRA18-05	90 ~ 264 V AC	15 WATTS	+5 V DC	3 A	73%	75%
MP-DRA18-12		18 WATTS	+12 V DC	1.5 A	75%	77%
MP-DRA18-24			+24 V DC	0.75A		

Specification

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

General

Characteristics	Conditions	Min.	Typ.	Max.	Unit
Switching Frequency	Vi nom, Io nom	55		135	kHz
Isolation Voltage	Input - Output	3,000 / 4,242			V AC / V DC
	Input-FG	1,500 / 2,121			
	Output-FG	500 / 710			
Isolation Resistance	Input- Output, @ 500V DC	100			MΩ
Ambient Temperature	Operating at Vi nom	-40		+ 71	°C
Derating (see Derating curve)	Vi nom, from +61°C to +71°C			2.5	% / °C
Storage Temperature	Non operational	-40		+ 85	°C
Relative Humidity	Vi nom, Io nom	20		95	% RH
Temperature Coefficient	Vi nom, Io min			± 0.03	% / °C
MTBF	MP-DRA18 Bellcore Issue 6 @40°C, GB	5V		704,000	Hours
		12V		721,000	
		24V		764,000	
Altitude During Operation	EN 60950-1			5,000	m
Dimension	Spring terminal type	L90 × W22.5 × D114			mm
Cooling	Free air convection				
Installation Position	Vertical (other direction may derating using)				
Pollution Degree		2			

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Input Specifications					
Characteristics	Conditions	Min.	Typ.	Max.	Unit
Rated input voltage	Io nom	100		240	V AC
Absolute input max. Range	Ta min ... Ta max, Io nom	AC in DC in	85 90	264 375	V AC V AC
Input Current	Vi : 115 / 230 V AC, Io nom		335 / 210		mA
Rated input Current	Vi : 90 VAC, Io nom			500	mA
Line Frequency	Vi nom, Io nom	47		63	Hz
Inrush current	Vi : 115 / 230 VAC , Io nom			15 / 30	A
Power Dissipation	Vi : 230 VAC, Io nom	5V 12V 24V	4.65 4.25 4.45		W
Leakage Current	Input-Output			0.25	mA
	Input-FG			3.5	mA

Output Specifications

Characteristics	Conditions	Min.	Typ.	Max.	Unit
Output voltage accuracy (Adjusted before shipment)	Vi nom, Io max	0		+ 1	%
Minimum Load	Vi nom	0			%
Line Regulation	Io nom, Vi min ...Vi max			± 1	%
Load Regulation	Vi nom, Io min ...Io nom			± 2	%
Voltage trim Range	Vi nom, 0.8 Io nom	5V 12V 24V	5 12 24 48	5.5 14 28 55	V DC
Rated continuous loading	MP-DRAN30 series Vi nom	5V 12V 24V	3 A @ 5Vdc / 2.6 A @ 5.75 Vdc 1.5 A @ 12Vdc / 1.3 A @ 13.8 Vdc 0.75 A @ 24Vdc / 0.6 A @ 28.8 Vdc		
Hold up Time	Vi : 115 / 230 V AC , Io nom	20 / 30			ms
Turn on Time	Vi nom, Io nom			1,000	ms
	Vi nom, Io nom →with 7000µF CAP			1,500	ms
Rise Time	Vi nom, Io nom				ms
	Vi nom, Io nom with Capacitor load			150	ms
	Vi nom, Io nom →with 7000µF CAP			500	ms
Fall Time	Vi nom, Io nom			150	ms
Transient Recovery Time	Vi nom, 1 to 0.5 Io nom			2	ms
Ripple & Noise	Vi nom, Io nom, BW = 20MHz			50	mV
Power Back Immunity	Vi nom, Io nom 1 second	5V 12V 24V	7.5 18 35		V DC
Capacitor Load	Vi nom, Io nom			7,000	µF

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Characteristics	Conditions	Min.	Typ.	Max.	Unit
DC ON indicator Threshold at start up (Green LED)	Vi nom, Io nom	5V	3.5	4.5	V DC
		12V	9	10.8	
		24V	18	21.6	
DC LOW indicator Threshold at start up (Green LED)	Vi nom, Io nom	5V	3.5	4.5	V DC
		12V	9	10.8	
		24V	18	21.6	
Efficiency	Vi nom, Io nom, Po / Pi	Up to 77%, See model list and typ efficiency curve			

Control and Protection						
Characteristics	Conditions	Min.	Typ.	Max.	Unit	
Input fuse		T2A / 250V AC internal				
Internal surge voltage protection	IEC 61000-4-5	Varistor				
Rated over load protection	Vi nom (see typ current limited curve)	110		165	%	
Over voltage protection	Vi nom, 0.8 Io nom (Auto Recovery)	5V	6.25	7.25	V	
		12V	15	17.4		
		24V	30	34.8		
Output short circuit		Hiccup mode				
Degree of protection		IP20				

Approvals and Standards	
UL / cUL	UL 508 Listed UL 60950-1, UL 1310 Class 2 Power Recognized ISA 12.12.01(Class I, Division 2, Groups A, B, C and D)
TUV	EN 60950-1
CE	EN 61000-6-3, EN 55032 Class B, EN 61000-3-2, EN 61000-3-3 EN 61000-6-2, EN 55024, EN 61000-4-2 Level 4, EN 61000-4-3 Level 3 EN 61000-4-4 Level 4, EN 61000-4-5 L-N Level 3, L / N-FG Level 4 EN 61000-4-6 Level 3, EN 61000-4-8 Level 4, EN 61000-4-11 ENV 50204 Level 2, EN 61204-3
CCC	GB4943.1, GB9254, GB17625.1
Vibration resistance	meet IEC 60068-2-6 (Mounting on rail : 10-500 Hz, 2G, along X, Y, Z each Axis, 60 min for each Axis)
Shock resistance	meet IEC 60068-2-27 (15G, 11ms, 3 Axis, 6 Faces, 3 times for each Face)

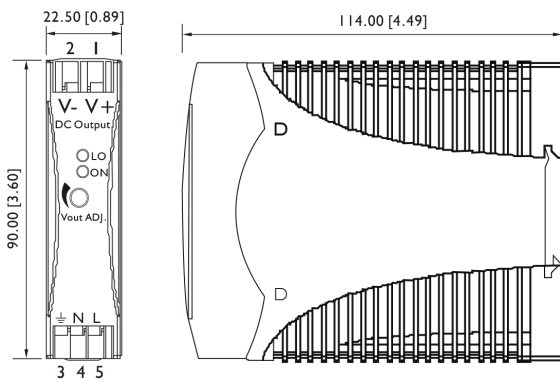
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Physical Characteristics

Case Size	90mm × 22.5mm × 114mm (3.6 inches × 0.89 inches × 4.49 inches)
Case Material	Plastic
Weight	MP-DRAN18 : 150 g

Mechanism & Pin Configuration



Construction

Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safely and firmly on the rail.

Installation

Ventilation / Cooling Normal convection

All sides 25mm free space For cooling recommended Connector size range

Spring terminal:

AWG24-14 (0.2mm² to 2mm²) flexible / solid

cable, 10 m/m stripping at cable end recommends

4-5m/m stripping at cable end recommends Use

Copper Conductors only, 60/75°C

General Tolerance	
0[0.00] - 30[1.18]	±0.3[0.01]
30[1.18] - 120[4.72]	±0.5[0.02]

Dimensions : Millimetres (Inches)

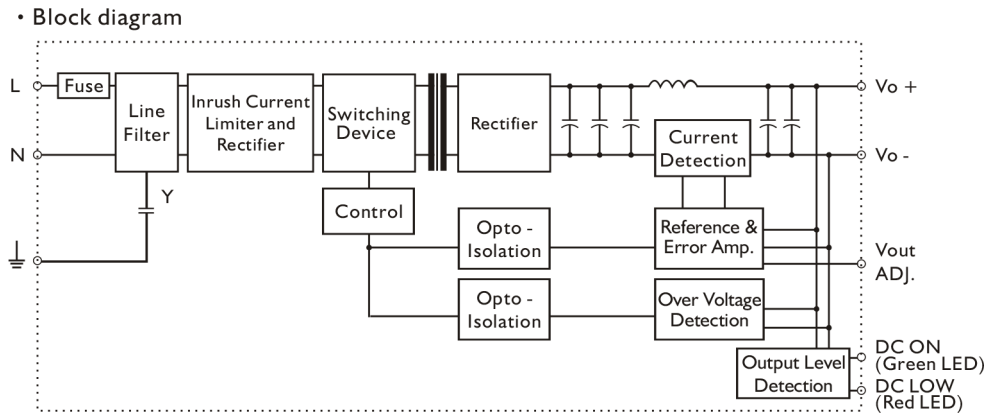
Pin Assignment

PIN NO.	Designation	Description
1	OUT	V +
2		V -
3	IN	⏏
4		N
5		L
	OTHER	ON
		LO
		Vout ADJ.

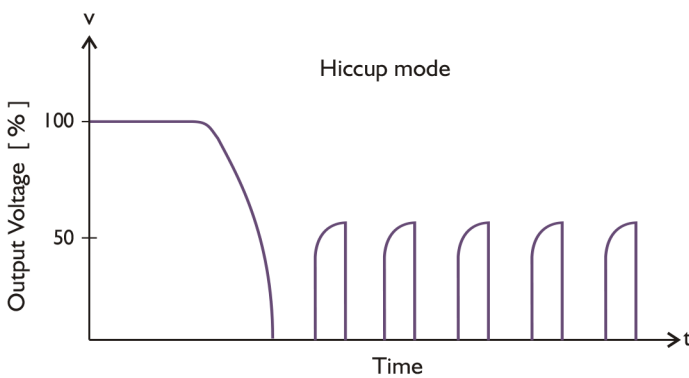
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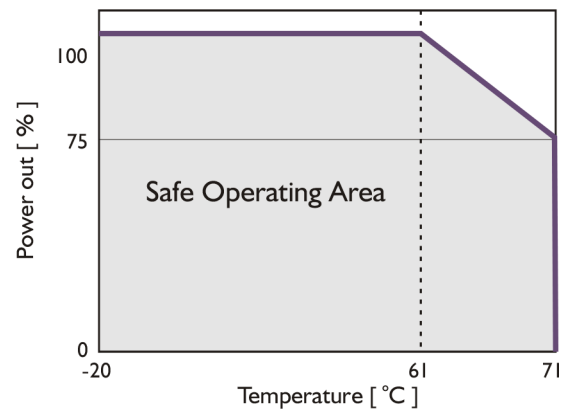
Circuit Schematic



Type Current Limited Curve



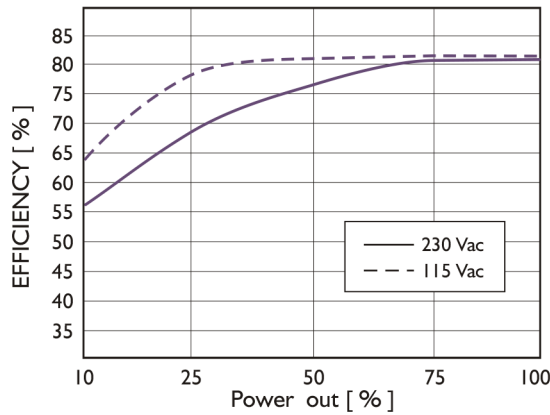
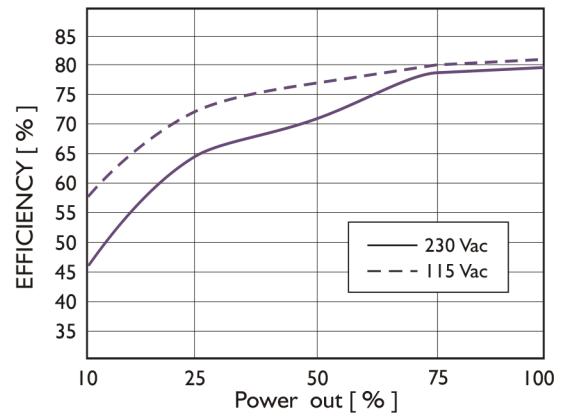
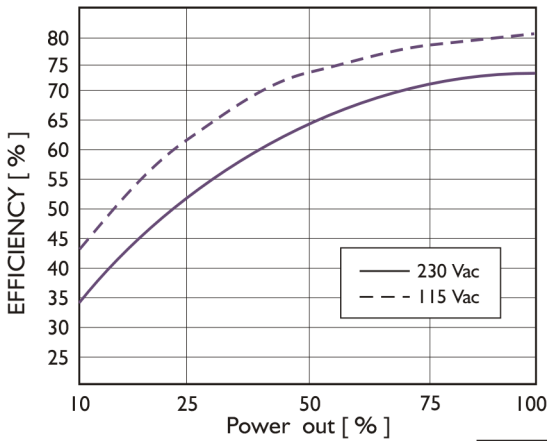
Derating Curve



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Type Efficiency Curve



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