

240W AC to DC Power Supply DIN Rail Mount

multicomp PRO

**RoHS
Compliant**



Features

- PFC Function Available
- Parallel Function Available (Switch)
- Input Voltage 115/230V AC Auto Select
- Selv Components Design



Model List						
Model No.	Input Voltage	Output Wattage	Output Voltage	Output Current	EFF. (Min.)	EFF. (Typ.)
Single Output Models						
MP-DRA240-48A	115 / 230 V AC	240 WATTS	+48 V DC	5 A	88%	90%

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		40		kHz	
Isolation Voltage	Input- Output	3,000 / 4,242			V AC / V DC	
	Input-FG	1,500 / 2,121			V AC / V DC	
	Output-FG	500 / 710			V AC / V DC	
Isolation Resistance	Input- Output, @ 500V DC	100			MΩ	
Ambient Temperature	Operating at Vi nom MP-DRA240	-40		+ 71	°C	
Derating (see Derating curve)	Vi nom, from +61°C to +71°C MP-DRA240			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	Bellcore Issue 6 @40°C, GB		MP-DRA240-48A	568,000	Hours	
Altitude During Operation	EN 60950-1			5,000	m	
Dimension	Screw terminal type	L124.5 × W83.5 × D123.6			mm	
	Detachable connector type	L143.5 × W83.5 × D123.6				
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		115 / 230 (auto select)			V AC
Absolute input max. Range	Ta min ... Ta max,	AC in	115V selected	90	132	V AC
	Io nom	AC in	230V selected	180	264	V AC
		DC in		210	375	V DC
Input Current	Vi : 115 / 230 V AC, Io nom		MP-DRA240	4 / 1.55		A
Rated input Current	Vi : 90 / 180 V AC, Io nom		MP-DRA240		5.4 / 2.2	A
Line Frequency	Vi nom, Io nom		47		63	Hz
Inrush current	Vi : 115 / 230 V AC , Io nom		MP-DRA240		30 / 60	A
Power Dissipation	Vi : 230 V AC, Io nom		MP-DRA240(24V/48V)	35 / 32		W
Leakage Current	Input-Output				0.25	mA
	Input-FG				3.5	mA
Power factor (Passive)	Vi : 230V AC, Io nom		MP-DRA240	0.75		

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				± 0.5	%
Load Regulation	Vi nom, single mode				± 1	%
	Io min ...Io nom parallel mode				± 5	%
Voltage trim Range	Vi nom, 0.8 Io nom	24V 48V	22.5 47		28.5 56	V DC
Rated continuous loading	Vi nom	MP-DRA240-48A			5A @ 48V DC / 4.2A @ 56 V DC	
Hold up Time	Vi : 115 / 230 V AC , Io nom		25 / 30			ms
Turn on Time	Vi nom, Io nom				2,500	ms
	Vi nom, Io nom with 7000µF CAP				2,500	ms
Rise Time	Vi nom, Io nom				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				100	mV
Power Back Immunity	Vi nom, Io nom	24V / 48V	35 / 63			V DC
Capacitor Load	Vi nom, Io nom				7,000	µF
DC ON indicator Threshold at start up (Green LED)	Vi nom, Io nom		24V	17.6	19.4	V DC
			48V	37	43	

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Characteristics	Conditions	Min.	Typ.	Max.	Unit
DC LOW Indicator Threshold after start up (Red LED)	Vi nom, Io nom 24V 48V	17.6 37		19.4 43	V DC
Parallel operation	0.1 Io min to 0.9 Io max			3	unit
Efficiency	Vi nom, Io nom, Po / Pi	Up to 90%, See model list and type efficiency curve			

Control and Protection					
Characteristics	Conditions	Min.	Typ.	Max.	Unit
Input fuse	MP-DRA240	T6.3A / 250V AC internal			
Internal surge voltage protection	IEC 61000-4-5	Varistor			
Rated over load protection	Vi nom (see typ current limited curve)	120		145	%
Power Rdy (for 24V model only)	Threshold voltage of contact closed(at start up)	17.6		19.4	V DC
	Electrical isolation	500			V DC
	Contact rating at 60V DC			0.3	A
Over voltage protection	Vi nom, 0.8 Io nom (Auto Recovery) 24V	30		33	V
	48V	60		66	V
Output short circuit		Fold forward			
Degree of protection		IP20			

Approvals and Standards	
UL / cUL	UL 508 Listed UL 60950-1 Recognized ISA 12.12.01(Class I, Division 2, Groups A, B, C and D)
TUV	EN 60950-1 EN 61558-1, EN 61558-2-16 (meet EN 60204-1)
CE	EN 61000-6-3, EN 55032 Class B, EN 61000-3-2 Class D, 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 (for DRA240 model only)
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)

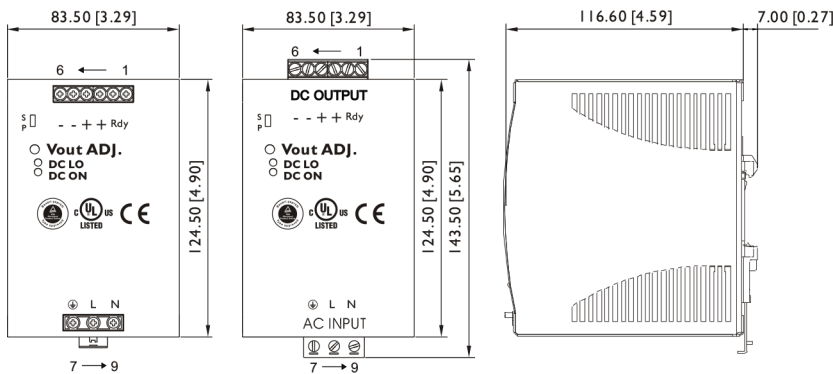
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Physical Characteristics

Case size	Screw terminal type	124.5mm × 83.5mm × 123.6 mm (4.9 × 3.29 × 4.87 inches)
Case material	Metal	
Weight	MP-DRA240 : 1380g	

Mechanism & Pin Configuration



Construction

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

Installation

Ventilation / Cooling Normal convection

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

Screw terminal:

-Input connector can withstand torque at
-Output connector can withstand torque at maximum 5.5 pound-inches.

8 m/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]
120[4.72] - 400[15.75]	±0.8[0.03]

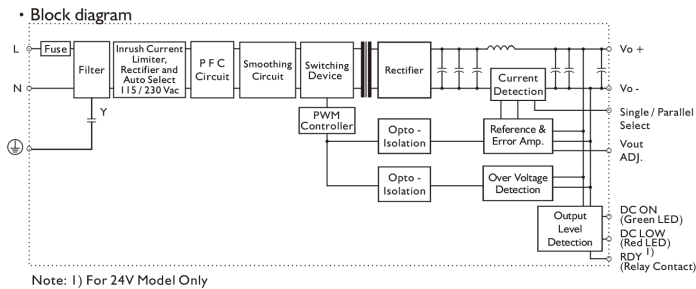
Pin Assignment

PIN NO.	Designation	Description
1	OUT	RDY
2		A normal open circuit of PhotoMOS Relay (24V model only)
3, 4		V +
5, 6		V -
7	IN	⊕
8		L
9		N
	OTHER	DC ON
		DC LO
		Vout ACJ.
		S/P

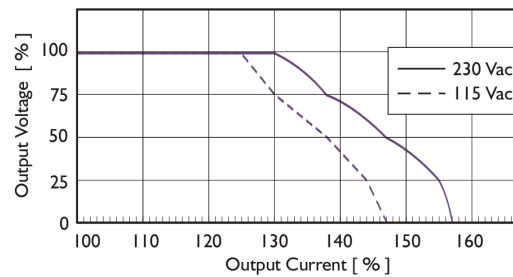
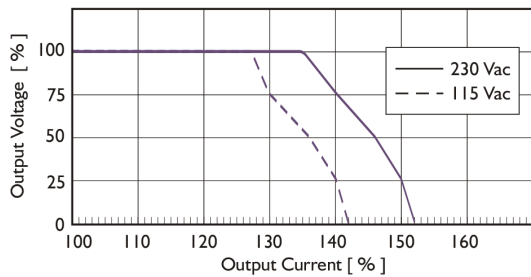
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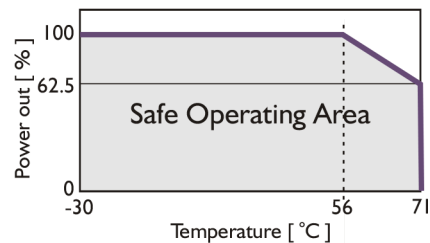
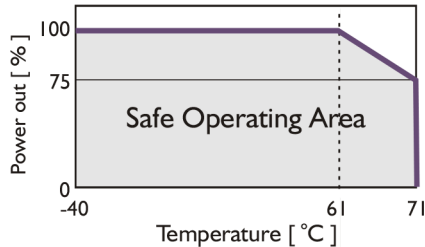
Circuit Schematic



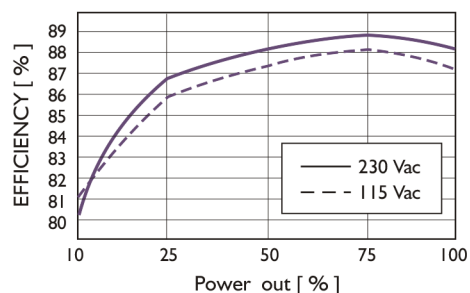
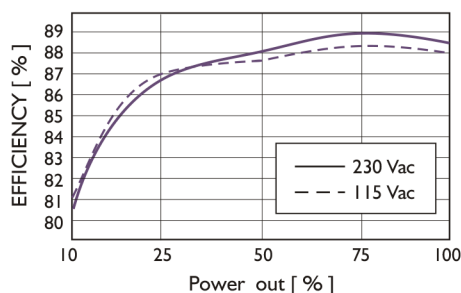
Type. Current Limited Curve



Derating Curve



Type Efficiency Curve



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