

Technical Datasheet

# **Key Features**

- Class 2
- Universal input 90-264VAC / 120-375VDC
- · High efficiency
- · Short circuit protection
- · Internal input filter
- · Modular design
- IP20 rated protection







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# **Technical Specification - 5VDC (7.5W - 60W)**

Model	MPS-1-007-5DC	MPS-1-015-5DC	MPS-1-022-5DC	MPS-1-035-5DC*	MPS-1-060-5DC*		
Frame Size	1	2	3	4	5		
Input Voltage		90 ~ 264VAC / 120 ~ 375VDC					
Output Wattage	7.5W	15W	22W	35W	60W		
Output Voltage	5VDC						
Output Current	1.5A	3A	4.5A	7A	12A		
Efficiency (min/typ)	73/75%	80/82%	72/75%	78/80%	78/80%		
General Specification							
Approval	cURus - Class 2 cURus				cURus		
Isolation Voltage	3000VAC / 4242VDC						
Isolation Resistance		100MΩ @ 500VDC					
Ambient Temperature		-40 to +71°C					
Derating	(61 to 71°	(61 to 71°C) 2.5%/°C (56 to 71°C) 2.5%/°C					
Storage Temperature		-40 to +85°C					
Relative Humidity		20 to 95% RH					
Cooling			Free air convection				
Dimensions	91 x 18 x 56.5mm	91 x 35 x 56.5mm	91 x 53 x 56.5mm	91 x 71 x 56.5mm	91 x 90 x 57mm		
Weight	65g	130g	190g	250g	380g		
Case Material			Plastic				
Input Specifications							
Rated Input Voltage			100 to 240VAC				
Input Voltage Range		90 to 264VAC, 120 to 375VDC					
Line Frequency	47 to 63Hz						
Power Factor @ 115VAC	0.5 Typ. (0.5	53 Measured)	0.5 Typ. (0.53 Measured)	0.5 Typ. (0.52 Measured)	0.55 Typ. (0.55 Measured		
Power Factor @ 230VAC	0.4 Typ. (0.4	43 Measured)	0.4 Typ. (0.42 Measured)	0.4 Typ. (0.42 Measured)	0.45 Typ. (0.44 Measured		
Inrush Current (115/230VAC)	16/32A	20/40A	25/50A	30/60A	30/60A		
Output Specifications							
Output Voltage Accuracy			±1%				
Minimum Load		0%					
Line Regulation		±1%					
Load Regulation		±1%					
Turn On Time		1000ms after AC applied to input at full resistive load					
Voltage Fall Time		150ms					
Voltage Rise Time	150ms						
Hold Up Time (115/230VAC)	10/30ms	20/80ms	20/100ms	16/60ms	16/60ms		
Temperature Coefficient			±0.03%/°C				
Ripple & Noise			50mV				
Voltage Trim Range	N/A 5 to 5.5VDC						
DC ON Indicator (Green LED)		3.5-4.5VDC					
DC LOW Indicator (Red LED)	3.5-4.5VDC						
Control & Protection							
Rated Overload Protection			125 to 185%				
Over Voltage Protection			5.75-6.5VDC				
Output Short Circuit	Hiccu	Hiccup Mode Fold Forward					
Connector Size Range	AWG 24-12 (0.2-2.5mm²) flexible / solid cable						
Not Clase 2 listed							



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# **Technical Specification - 12VDC (10W - 72W)**

Model	MPS-1-010-12DC	MPS-1-024-12DC	MPS-1-033-12DC	MPS-1-054-12DC	MPS-1-072-12DC*	
Frame Size	1	2	3	4	5	
Input Voltage	90 ~ 264VAC / 120 ~ 375VDC					
Output Wattage	10W	24W	33W	54W	72W	
Output Voltage	12VDC					
Output Current	0.83A	2A	2.75A	4.5A	6A	
Efficiency (min/typ)	77/79%	82/84%	80/83%	82/84%	83/86%	
General Specification						
Approval	cURus - Class 2 cURus					
Isolation Voltage	3000VAC / 4242VDC					
Isolation Resistance	100MΩ @ 500VDC					
Ambient Temperature	-40 to +71°C					
Derating	(61 to 71°C) 2.5%/°C (56 to 71°C) 2.5%/°C					
Storage Temperature	-40 to +85°C					
Relative Humidity	20 to 95% RH					
Cooling			Free air convection			
Dimensions	91 x 18 x 56.5mm	91 x 35 x 56.5mm	91 x 53 x 56.5mm	91 x 71 x 56.5mm	91 x 90 x 57mm	
Weight	65g	130g	190g	250g	380g	
Case Material	Plastic					
Input Specifications						
Rated Input Voltage	100 to 240VAC					
Input Voltage Range			90 to 264VAC, 120 to 375VDC	)		
Line Frequency	47 to 63Hz					
Power Factor @ 115VAC	0.5 Typ. (0.53 Measured)	0.5 Typ. (0.53 Measured)	0.5 Typ. (0.52 Measured)	0.55 Typ. (0.55 Measured)	0.55 Typ. (0.56 Measured	
Power Factor @ 230VAC	0.4 Typ. (0.43 Measured)	0.4 Typ. (0.42 Measured)	0.4 Typ. (0.42 Measured)	0.45 Typ. (0.44 Measured)	0.45 Typ. (0.46 Measured	
Inrush Current (115/230VAC)	16/32A	20/40A	25/50A	30/60A	30/60A	
Output Specifications						
Output Voltage Accuracy			±1%			
Minimum Load	0%					
Line Regulation	±1%					
Load Regulation	±1%					
Turn On Time	1000ms after AC applied to input at full resistive load					
Voltage Fall Time	150ms					
Voltage Rise Time	150ms					
Hold Up Time (115/230VAC)	10/30ms	20/80ms	20/100ms	16/60ms	16/60ms	
Temperature Coefficient	±0.03%/°C					
Ripple & Noise	50mV					
Voltage Trim Range	N/A 12 to 14VDC					
	N/A		12 10	14VDC		
DC ON Indicator (Green LED)	N/A		9-10.8VDC	14VDC		
, ,	N/A			14VDC		
DC LOW Indicator (Red LED)	N/A		9-10.8VDC	14VDC		
DC LOW Indicator (Red LED)  Control & Protection	N/A		9-10.8VDC	14VDC		
DC ON Indicator (Green LED) DC LOW Indicator (Red LED)  Control & Protection  Rated Overload Protection  Over Voltage Protection	N/A		9-10.8VDC 9-10.8VDC	14VDC		
DC LOW Indicator (Red LED)  Control & Protection  Rated Overload Protection		D Mode	9-10.8VDC 9-10.8VDC 125 to 185%	Fold Forward		



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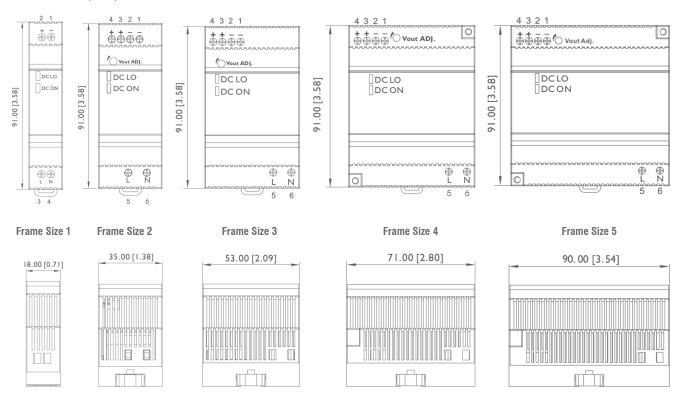
# Technical Specification - 24VDC (10W - 100W)

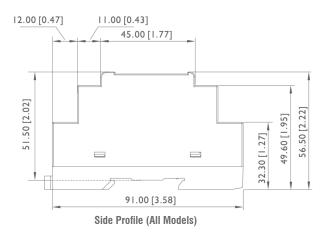
Model	MPS-1-010-24DC	MPS-1-024-24DC	MPS-1-036-24DC	MPS-1-060-24DC	MPS-1-100-24DC*		
Frame Size	1	2	3	4	5		
Input Voltage		90 ~ 264VAC / 120 ~ 375VDC					
Output Wattage	10W	24W	36W	60W	100W		
Output Voltage		24VDC					
Output Current	0.42A	1A	1.5A	2.5A	4.2A		
Efficiency (min/typ)	78/80%	83/85%	81/84%	84/86%	86/89%		
General Specification							
Approval	cURus - Class 2 cURus						
Isolation Voltage		3000VAC / 4242VDC					
Isolation Resistance		100MΩ @ 500VDC					
Ambient Temperature		-40 to +71°C					
Derating	(61 to 71°	(61 to 71°C) 2.5%/°C (56 to 71°C) 2.5%/°C					
Storage Temperature		-40 to +85°C					
Relative Humidity			20 to 95% RH				
Cooling			Free air convection				
Dimensions	91 x 18 x 56.5mm	91 x 35 x 56.5mm	91 x 53 x 56.5mm	91 x 71 x 56.5mm	91 x 90 x 57mm		
Weight	65g	130g	190g	250g	380g		
Case Material		Plastic					
Input Specifications							
Rated Input Voltage		100 to 240VAC					
Input Voltage Range		90 to 264VAC, 120 to 375VDC					
Line Frequency		47 to 63Hz					
Power Factor @ 115VAC	0.5 Typ. (0.53 Measured)	0.5 Typ. (0.53 Measured)	0.5 Typ. (0.52 Measured)	0.55 Typ. (0.55 Measured)	0.55 Typ. (0.56 Measured		
Power Factor @ 230VAC	0.4 Typ. (0.43 Measured)	0.4 Typ. (0.42 Measured)	0.4 Typ. (0.42 Measured)	0.45 Typ. (0.44 Measured)	0.45 Typ. (0.46 Measured		
Inrush Current (115/230VAC)	16/32A	20/40A	25/50A	30/60A	30/60A		
Output Specifications							
Output Voltage Accuracy			±1%				
Minimum Load		0%					
Line Regulation		±1%					
Load Regulation		±1%					
Turn On Time		1000ms after AC applied to input at full resistive load					
Voltage Fall Time		150ms					
Voltage Rise Time		150ms					
Hold Up Time (115/230VAC)	10/30ms	20/80ms	20/100ms	16/60ms	16/60ms		
Temperature Coefficient		±0.03%/°C					
Ripple & Noise		50mV					
Voltage Trim Range	N/A 24 to 28VDC						
DC ON Indicator (Green LED)		19.2-21.6VDC					
DC LOW Indicator (Red LED)	19.2-21.6VDC						
Control & Protection							
Rated Overload Protection			125 to 185%				
Over Voltage Protection			30-33VDC				
	Hiccup Mode Fold Forward						
Output Short Circuit	Hiccur	o Mode		Fold Forward			



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# **Dimensions** (mm)





#### Construction

Easy, safe and secure snap-on, snap-off DIN Rail mounting (TS25/7.5 or TS35/15)

#### Installation

**Ventilation / Cooling** 

Normal convection

All sides 25mm free space for cooling recommended

#### Terminal Size Range

2 Solid: 0.2-2.0mm (AWG24-14) - Use copper conductors only

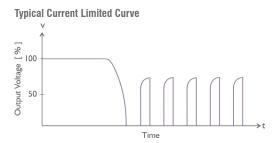
# **Terminal Assignment**

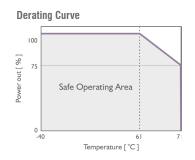
		Frame 1	Frame 2/3/4/5	Description
- Output		1	1, 2	Negative Output Terminal
Output -	+	2	3, 4	Positive Output Terminal
L		3	5	Input (phase) No Polarity at DC Input
Intput I	N	4	6	Input (neutral) No Polarity at DC Input
	DCLO	DC Low Indication		LED
	DCON	Operational Indicator		LED
	V-ADJ	V Out Adjustment		2,3,4,5 Trimmer Potentiometer for V Out Adjustment

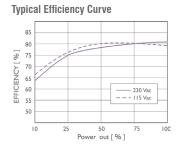


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### MPS-1-010-5DC, MPS-1-010-12DC & MPS-1-010-24DC

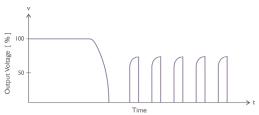


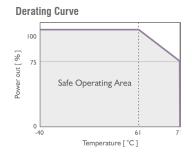


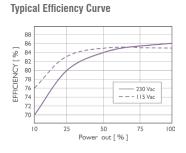


### MPS-1-015-5DC, MPS-1-024-12DC & MPS-1-024-24DC

**Typical Current Limited Curve** 

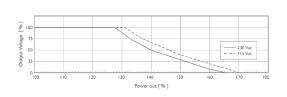


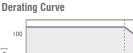


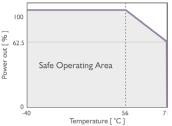


#### MPS-1-022-5DC, MPS-1-033-12DC & MPS-1-036-24DC

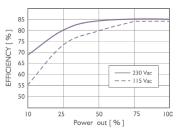
**Typical Current Limited Curve** 





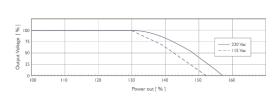


Typical Efficiency Curve

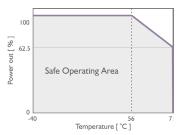


### MPS-1-035-5DC, MPS-1-054-12DC & MPS-1-060-24DC

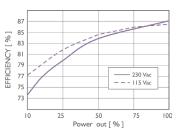
**Typical Current Limited Curve** 



**Derating Curve** 

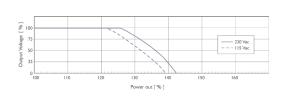


**Typical Efficiency Curve** 

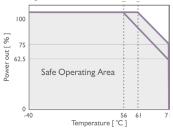


### MPS-1-060-5DC, MPS-1-072-12DC & MPS-1-100-24DC

**Typical Current Limited Curve** 



**Derating Curve** 



Typical Efficiency Curve

