

MPS Series 7.5W - 100W AC-DC DIN Rail Power Supplies



Key Features

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



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
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)
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)
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	Hiccup Mode		Fold Forward		
Connector Size Range	AWG 24-12 (0.2-2.5mm ²) flexible / solid cable				

* Not Class 2 listed

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Key Features

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- Universal input 90-264VAC / 120-375VDC
- High efficiency
- Short circuit protection
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- IP20 rated protection



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			
DC ON Indicator (Green LED)	9-10.8VDC				
DC LOW Indicator (Red LED)	9-10.8VDC				
Control & Protection					
Rated Overload Protection	125 to 185%				
Over Voltage Protection	15-16.5VDC				
Output Short Circuit	Hiccup Mode		Fold Forward		
Connector Size Range	AWG 24-12 (0.2-2.5mm ²) flexible / solid cable				

* Not Class 2 listed

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Key Features

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- Universal input 90-264VAC / 120-375VDC
- High efficiency
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- IP20 rated protection



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

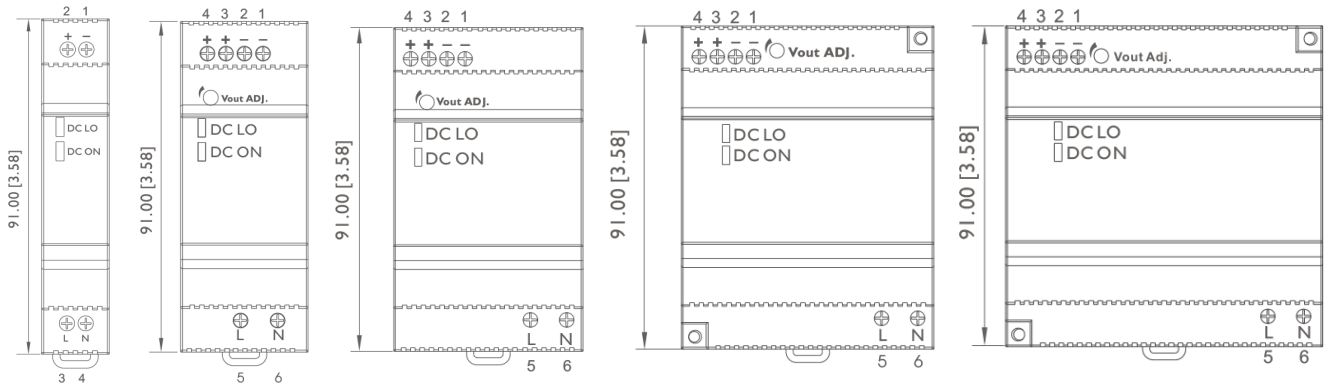
Model	MPS-1-010-24DC	MPS-1-024-24DC	MPS-1-036-24DC	MPS-1-060-24DC	MPS-1-100-24DC*
Frame Size	1	2	3	4	5
Input Voltage	90 ~ 264VAC / 120 ~ 375VDC				
Output Wattage	10W	24W	36W	60W	100W
Output Voltage	24VDC				
Output Current	0.42A	1A	1.5A	2.5A	4.2A
Efficiency (min/typ)	78/80%	83/85%	81/84%	84/86%	86/89%
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°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				
Output Short Circuit	Hiccup Mode		Fold Forward		
Connector Size Range	AWG 24-12 (0.2-2.5mm ²) flexible / solid cable				

* Not Class 2 listed

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Dimensions (mm)



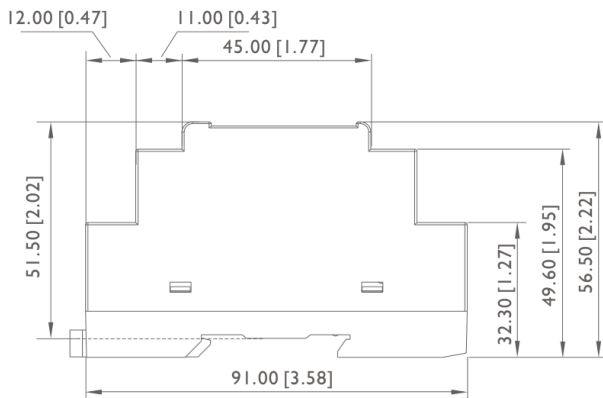
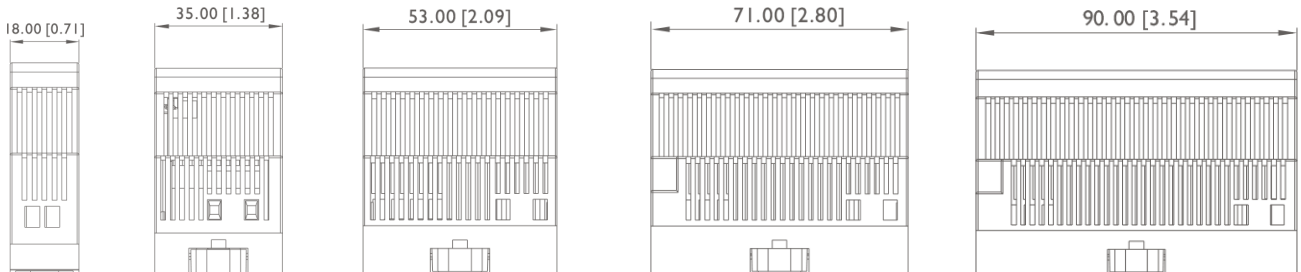
Frame Size 1

Frame Size 2

Frame Size 3

Frame Size 4

Frame Size 5



Side Profile (All Models)

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

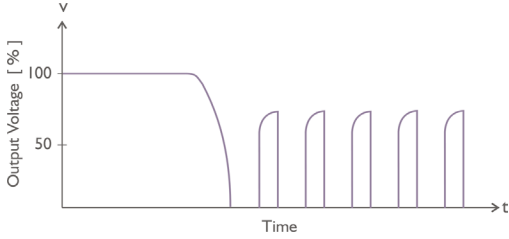
		Frame 1	Frame 2/3/4/5	Description	
Output	-	1	1, 2	Negative Output Terminal	
	+	2	3, 4	Positive Output Terminal	
Input	L	3	5	Input (phase) No Polarity at DC Input	
	N	4	6	Input (neutral) No Polarity at DC Input	
	DCLO	DC Low Indication		LED	
	DCON	Operational Indicator		LED	
	V-ADJ	V Out Adjustment	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

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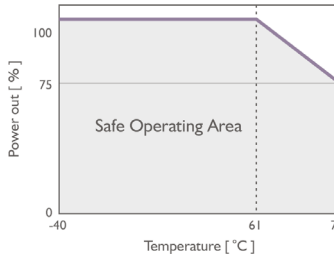


MPS-1-010-5DC, MPS-1-010-12DC & MPS-1-010-24DC

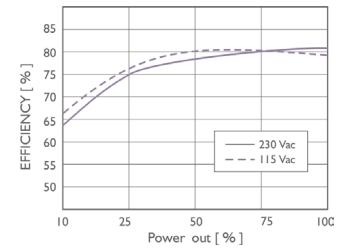
Typical Current Limited Curve



Derating Curve

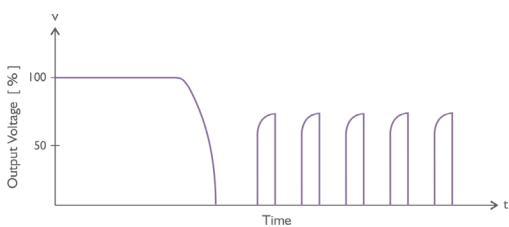


Typical Efficiency Curve

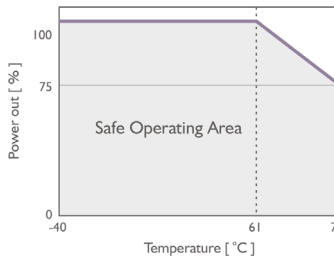


MPS-1-015-5DC, MPS-1-024-12DC & MPS-1-024-24DC

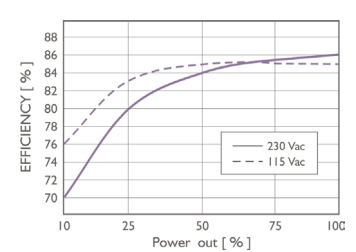
Typical Current Limited Curve



Derating Curve

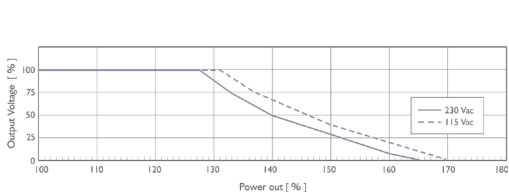


Typical Efficiency Curve

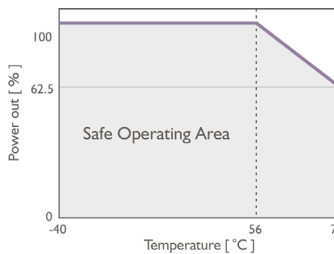


MPS-1-022-5DC, MPS-1-033-12DC & MPS-1-036-24DC

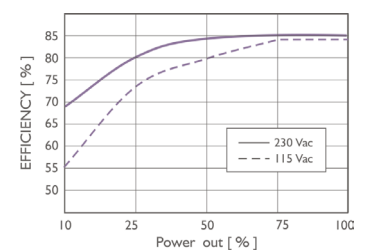
Typical Current Limited Curve



Derating Curve

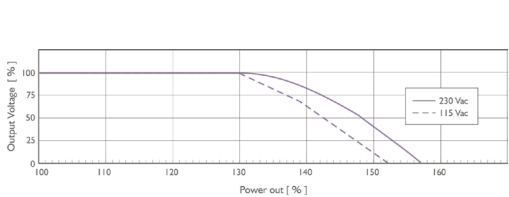


Typical Efficiency Curve

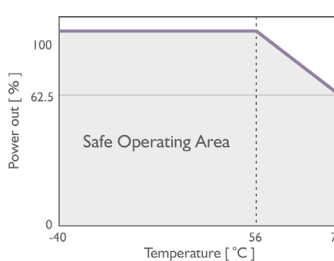


MPS-1-035-5DC, MPS-1-054-12DC & MPS-1-060-24DC

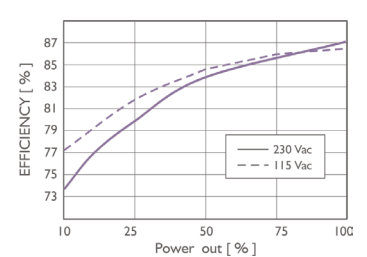
Typical Current Limited Curve



Derating Curve

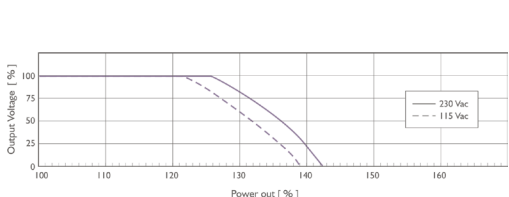


Typical Efficiency Curve

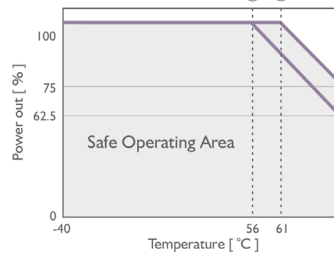


MPS-1-060-5DC, MPS-1-072-12DC & MPS-1-100-24DC

Typical Current Limited Curve



Derating Curve



Typical Efficiency Curve

