



Switching Power Supplies

PSA Series

Overview

AutomationDirect's AchieVe PSA series of switching power supplies are designed with essential features needed for industrial applications without compromising quality and reliability at a lower cost. These models can operate in constant current mode making them suitable for inductive and capacitive loads.

Features

- Universal AC input voltage range
- Built-in constant current circuit for reactive loads
- Quick installation by 35mm DIN rail mounting
- Adjustable output voltage via potentiometer
- 2-year warranty



PSA-24-75



PSA-24-240

Switching Power Supplies PSA Series

Part Number	Price	Nominal Output Voltage	Output Current	Output Power	Nominal Input Frequency	Housing Material	Drawing Link
Single-Phase							
PSA-12-75	\$;-5, z:	12VDC	6.25 A	75W	50/60 Hz	Plastic	PDF
PSA-12-120	\$;-5, j:		10A	120W		Aluminum	PDF
PSA-12-240	\$;-5, j:		20A	240W			PDF
PSA-24-75	\$;-5, _:	24VDC	3.125 A	75W		Plastic	PDF
PSA-24-120	\$;-5, #::		5A	120W		Aluminum	PDF
PSA-24-240	\$;-5, t:		10A	240W			PDF
PSA-24-480	\$;-05, u:		20A	480W			PDF
PSA-48-120	\$;-5, v:	48VDC	2.5 A	120W			PDF
PSA-48-240	\$;-5, x:		5A	240W			PDF
PSA-48-480	\$;-05, y:		10A	480W			PDF



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PSA Series Specifications

Input Specifications							
Part Number	Nominal Input Voltage	Input Voltage Range	Input Frequency Range	Max. Input Current	Max. Inrush Current (cold start)	Efficiency	Circuit Breaker (Min.)
<u>PSA-12-75</u>	100/240 VAC	85-264 VAC 120-375 VDC	47-63 Hz	1.4 A @ 115VAC 0.9 A @ 230VAC	50A @ 230VAC	87.5% @ 230VAC	20A B Curve
<u>PSA-12-120</u>		90-264 VAC		2.1 A @ 115VAC 1.3 A @ 230VAC	35A @ 230VAC	88% @ 115VAC 86% @ 230VAC	
<u>PSA-12-240</u>				2.5 A @ 115VAC 1.3 A @ 230VAC	40A @ 230VAC	88% @ 115VAC 86.5% @ 230VAC	
<u>PSA-24-75</u>				85-264 VAC 120-375 VDC	1.4 A @ 115VAC 0.9 A @ 230VAC	50A @ 230VAC	
<u>PSA-24-120</u>		90-264 VAC		2.1 A @ 115VAC 1.3 A @ 230VAC	35A @ 230VAC	88% @ 115VAC 88.5% @ 230VAC	
<u>PSA-24-240</u>				2.5 A @ 115VAC 1.3 A @ 230VAC	40A @ 230VAC	88% @ 115VAC 90% @ 230VAC	
<u>PSA-24-480</u>				4.7 A @ 115VAC 2.4 A @ 230VAC	40A @ 230VAC	91.5% @ 115VAC 93% @ 230VAC	
<u>PSA-48-120</u>				2.1 A @ 115VAC 1.3 A @ 230VAC	35A @ 230VAC	88% @ 115VAC 9.5% @ 230VAC	
<u>PSA-48-240</u>				2.5 A @ 115VAC 1.3 A @ 230VAC	40A @ 230VAC	91.5% @ 115VAC 90.5% @ 230VAC	
<u>PSA-48-480</u>				4.7 A @ 115 VAC 2.4 A @ 230VAC	40A @ 230VAC	91.5% @ 115VAC 93.5% @ 230VAC	

Output Specifications								
Part Number	Factory Set Point Tolerance	Output Voltage Range	Rise Time @ 100% Load	Start-up Time @ 100% Load	Hold Up Time @ 100% Load	MTBF		
<u>PSA-12-75</u>	12VDC ± 2%	10.8-13.2 VDC	30ms @ nominal input	1200ms @ 115VAC 1000ms @ 230VAC	16ms @ 115VAC 60ms @ 230VAC	> 700,000 h		
<u>PSA-12-120</u>	12VDC ± 1%		30ms @ 115/230 VAC	500ms @ 115/230 VAC	10ms @ 115VAC 16ms @ 230VAC			
<u>PSA-12-240</u>	12VDC ± 1%				20ms @ 115/230 VAC			
<u>PSA-24-75</u>	24VDC ± 2%	21.6-26.4 VDC	30ms @ nominal input	1200ms @ 115VAC 1000ms @ 230VAC	16ms @ 115VAC 60ms @ 230VAC			
<u>PSA-24-120</u>	24VDC ± 1%		30ms @ 115/230 VAC	500ms @ 115/23 VAC	10ms @ 115VAC 16ms @ 230VAC			
<u>PSA-24-240</u>	24VDC ± 1%				20ms @ 115/230 VAC			
<u>PSA-24-480</u>	24VDC ± 1%	24-28 VDC			25ms @ 115/230 VAC			
<u>PSA-48-120</u>	48VDC ± 1%	43.2-52.8 VDC			10ms @ 115VAC 16ms @ 230VAC			
<u>PSA-48-240</u>	48VDC ± 1%				20ms @ 115/230 VAC			
<u>PSA-48-480</u>	48VDC ± 1%	48-55 VDC		800ms @ 230VAC	25ms @ 115/230 VAC			

Specifications continued on the following page.



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Specifications PSA Series

General Specifications											
Part Number		PSA-12-75	PSA-12-120	PSA-12-240	PSA-24-75	PSA-24-120	PSA-24-240	PSA-24-480	PSA-48-120	PSA-48-240	PSA-48-480
Temperature	Operating	-20 to 70°C [-4 to 158°F]	-30 to 70°C [-22 to 158°F]		-20 to 70°C [-4 to 158°F]	-30 to 70°C [-22 to 158°F]					
	Storage	-40 to 85°C [-40 to 185°F]									
Humidity Non-Condensing		5 to 95% RH	20 to 90% RH		5 to 95% RH	20 to 90% RH					
Line Regulation @ 100% Load		< .05% @ 85-264 VAC	± 0.5% @ 115/230 VAC		< .05% @ 85-264 VAC	±0.5% @ 115/230 VAC					
Load Regulation @ 0-100% Load		<1%	±1%		<1%	± 0.5 %					
Start-up With Capacitive Loads (maximum)		5,000 µF	8,000 µF		5,000 µF	8,000 µF			3,000 µF		
Short Circuit Protection		Hiccup Mode, Non-Latching (Auto-Recovery when the fault is removed)									
Leakage Current		< 1mA @ 240VAC	0.5 mA @ 240VAC	0.75 mA @ 240VAC	< 1mA @ 240VAC	0.5 mA @ 240VAC	0.75 mA @ 240VAC	1.5 mA @ 240VAC	0.5 mA @ 240VAC	0.75 mA @ 240VAC	1.5 mA @ 240VAC
Overload Protection		Yes									
No Power Load Consumption		–	0.15 W @ 115/230 VAC		–	0.15 W @ 115/230 VAC	0.21 W @ 115/230 VAC	0.75 W @ 115/230 VAC	0.21 W @ 115/230 VAC	0.3 W @ 115/230 VAC	0.75 W @ 115/230 VAC
Overvoltage Latch Mode		<18V SELV	17.4 SELV		< 33.6 V SELV			< 34V SELV	<64.8 V SELV		< 68V SELV
Status Indicators		LED (green): DC OK									
Ripple		<120 mVpp @ -10 to 70°C	<120 mVpp @ 0 to 70°C		<120 mVpp @ -10 to 70°C	<150 mVpp @ 0 to 70°C			<200 mVpp @ 0 to 70°C		
		< 360 mVpp @ -10 to 30°C	< 360 mVpp @ -30 to 0°C		< 360 mVpp @ -10 to 30°C	< 450 mVpp @ -30 to 0°C			< 600 mVpp @ -30 to 0°C		
Vibration		IEC 60068-2-6									
Shock		IEC 60068-2-27									
Protection Rating		IP20									
Mounting		35mm DIN rail									
Connection		Screw terminals (see additional data on following page)									
Weight kg [lb]		0.22 [0.49]	0.45 [99.20]	0.62 [1.136]	0.22 [0.49]	0.45 [99.20]	0.62 [1.136]	0.87 [1.91]	0.45 [99.20]	0.62 [1.136]	0.87 [1.91]
Agency Approval		CE, cULus File: E197592, cURus File: E131881									



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Additional Data			
Part Number	Solid Wire Size		
	Input	Output	ADC Ferrule Part Number
<u>PSA-12-75</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.8 - 3.3 mm ² [22 - 12 AWG] 0.4 N•m [3.5 lb•in]	20AWG V30AE000038 18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-12-120</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.34 - 4 mm ² [22 - 12 AWG] 0.4 N•m [3.5 lb•in]	18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-12-240</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-24-75</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.8 - 3.3 mm ² [20 - 12 AWG] 0.4 N•m [3.5 lb•in]	20AWG V30AE000038 18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-24-120</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.34 - 4 mm ² [22 - 12 AWG] 0.4 N•m [3.5 lb•in]	18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-24-240</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-24-480</u>	2.1 - 3.3 mm ² [14 - 12 AWG] 0.51 N•m [4.5 lb•in]	2.1 - 3.3 mm ² [14 - 12 AWG] 0.51 N•m [4.5 lb•in]	14AWG V30AE000052 12AWG V30AE000055
<u>PSA-48-120</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.34 - 4 mm ² / 22 - 12 AWG 0.4 N•m [3.5 lb•in]	18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-48-240</u>	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	0.8 - 3.3 mm ² [18 - 12 AWG] 0.4 N•m [3.5 lb•in]	18AWG V30AE000041 16AWG V30AE000048 14AWG V30AE000052 12AWG V30AE000055
<u>PSA-48-480</u>	2.1 - 3.3 mm ² [14 - 12 AWG] 0.51 N•m [4.5 lb•in]	2.1 - 3.3 mm ² [14 - 12 AWG] 0.51 N•m [4.5 lb•in]	14AWG V30AE000052 12AWG V30AE000055