



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 Selection Chart

Part Number	Price	Nominal Output Voltage	Output Current	Output Power	Nominal Input Frequency	Housing Material	Drawing Link
Single-Phase							
PSA-12-75	\$25.50	12VDC	6.25 A	75W	50/60 Hz	Plastic	PDF
PSA-12-120	\$32.00		10A	120W		Aluminum	PDF
PSA-12-240	\$59.00		20A	240W			PDF
PSA-24-75	\$25.50	24VDC	3.125 A	75W		Plastic	PDF
PSA-24-120	\$29.50		5A	120W		Aluminum	PDF
PSA-24-240	\$59.00		10A	240W			PDF
PSA-24-480	\$118.00		20A	480W			PDF
PSA-48-120	\$32.00	48VDC	2.5 A	120W			PDF
PSA-48-240	\$59.00		5A	240W			PDF
PSA-48-480	\$118.00		10A	480W			PDF



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PSA Series Specifications

Switching Power Supplies PSA Series 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	

Switching Power Supplies PSA Series 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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PSA Series Specifications

(continued)

Switching Power Supplies PSA Series General Specifications (continued)											
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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Switching Power Supplies PSA Series 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