

RHINO DC to DC Converters PSP Series

Overview

Both 25W and 60W DC-DC converters are available in the Rhino PSP DIN rail series. Wide input ranges of 9.5 to 18VDC and 18 to 75VDC allow these models to operate from all popular DC supply voltage systems. With tightly regulated output voltage these DC-DC converters provide a reliable power source for sensitive loads in industrial process controls, factory automation and other equipment exposed to a critical industrial environment. They can be used to isolate a specific load from the 24 volt bus voltage, and offer easy installation with snap-on DIN rail mounting and detachable screw terminal blocks.

Features

- Ultra-wide input voltage range
- Output voltage adjustable
- Overload and short circuit protection
- Low ripple and noise
- I/O-isolation 1500 VDC
- Compact, slim plastic case
- Reliable snap-on 35mm DIN rail mount
- Wall-mount bracket included
- 3-year warranty



PSP 25 Watt DC-DC Converters



PSP 60 Watt DC-DC Converters

DC-DC Converters								
Part Number	Price	Drawing Link	Input Voltage Range	Input Current Max. @ Vin, [Iout = 0% / 100%]	Output Voltage [Adjustable]	Output Current Max	Output Power	Weight [lbs]
PSP24-DC12-1	\$:006[z:	PDF	9.5 - 18.0 VDC	80mA / 2.5 A @ 12VDC	24VDC	1A	25W	0.31
PSP05-DC24-5	\$:006[x:	PDF		80mA / 1.3 A @ 24VDC 60mA / 0.7 A @ 48VDC	5VDC	5A		0.31
PSP12-DC24-2	\$:06[y:	PDF			12VDC	2A		0.31
PSP24-DC24-1	\$:006[]:	PDF			24VDC	1A		0.31
PSP12-DC24-5	\$:010d[:	PDF	18.0 - 75.0 VDC	31mA / 2.9 A @ 24VDC 19mA / 1.4 A @ 48VDC	12VDC	5A	60W	0.59
PSP24-DC24-2	\$010d_:	PDF		45mA / 3.1 A @ 24VDC 25mA / 1.54 A @ 48VDC	24VDC	2.5 A		0.59

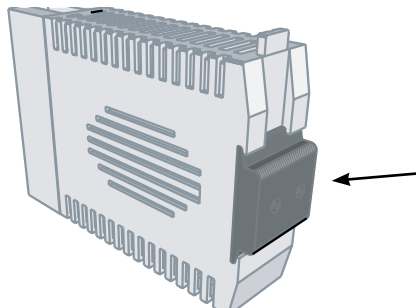
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General Specifications	
Startup Voltage / Undervoltage Shut-down	17.2 VDC / 15.7 VDC [PSP24-DC12-1: 8.4 VDC / 7.6 VDC]
Efficiency (Typical)	86%
Output Voltage Adjustable Range	5VDC model: 5.0 - 5.25 VDC 12VDC models: 12.0 - 15.0 VDC 24VDC models: 24.0 - 28.0 VDC
Overvoltage Protection, Trigger Point	5VDC model: <6.5 V 12VDC models: <24V 24VDC models: <42V
Output Voltage Regulation*	0.5% max
Ripple/Noise (20MHz bandwidth)	<50mV [pk-pk]
Temperature: Operating Storage (non-operating) Derating	-25 to 70°C max [-13 to 158°F max] -25 to 85°C max, [-13 to 185°F max] 1.5%/K above 50°C [122°F] for 25W models, 2%/K above 40°C [104°F] for 60W models
Humidity (Non-condensing)	95 % relative humidity max.
Temperature Coefficient	0.02%/K
Switching Frequency	55 – 180kHz depending on load [frequency modulation]
Isolation Voltage (1 min.) – Input/Output	1500VDC
Safety Standards	IEC 60950-1, EN 60950-1 [output SELV], UL 60950-1, EN 60204, CSA 22.2 60950-1-07, EN50178, UL 508
Electromagnetic Compatibility (EMC)	Emissions: EN 61000-6-3; Immunity: EN 61000-6-2
Parallel Operation	No parallel operation
Safety Class	Degree of protection class 1
Environmental Air	No corrosive gases permitted
Enclosure Rating	IP 20 [IEC 60529]
Enclosure Material	Plastic FR2010-110C [UL 94V-0 rated]
Mounting	DIN rails per EN 50022-35x15/7.5 [snap-on with self-locking spring]; bracket for wall/chassis mount included
Mounting Orientation	Vertical only
Wiring	12-24 AWG [3.16-0.21 mm ²]
Connections	Screw type plug-in connector [standard], Recommended tightening torque 0.5-0.7 Nm [4.5-6.2 in-lb]
Short Circuit Protection	Current limited at 110% typical
MTBF (IEC 61709 @ 25°C)	>2.5 million hours
Agency Approvals**	UL/cUL 508 listed, File No. E197592; CSA File 229285; CE; Reach; RoHS

* Input variation Vin min to Vin max and load variation 0 to 100%

**To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.automationdirect.com

Note: All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.



The unit can be mounted on a chassis or wall using the included mounting bracket.

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Part Numbers:
[PSP24-DC12-1](#)
[PSP05-DC24-5](#)
[PSP12-DC24-2](#)
[PSP24-DC24-1](#)

Input		Output	
1	Ground	1	+Vout
2	-Vin	2	-Vout
3	+Vin		



Part Numbers:
[PSP12-DC24-5](#)
[PSP24-DC24-2](#)

Input		Output	
1	Ground	1	+Vout
2	-Vin	2	-Vout
3	+Vin	NC	No Connect

