

Switching Power Supply Type SPDC 240W Compact DIN Rail Mounting

CARLO GAVAZZI



- Universal AC, DC input range (85Vac~264Vac, 127Vdc~375Vdc)
- Built-in active PFC>0.95
- Efficiency up to 94%
- Output protections: OVP/OLP/SCP/OTP
- Operating ambient temp -25°C ~ 70°C (-13° to 158°F)
- Built-in DC OK relay contact
- Ultra-slim, 45mm width

Product Description

The SPDC Series Switching power supplies are specially designed to be used in all automation application where the installation is on a DIN rail and compact dimensions and high performance are a must. SPDC power supplies feature the same power of Carlo Gavazzi SPD series supplies which are double in size.

The greater compactness is achieved thanks to the limited energy loss and the

consequent high efficiency. this specific SPDC 240W compact is available with 24Vdc output only. SPDCs can be connected in parallel with another identical unit to achieve double power.

A switch is provided on the front panel to select this configuration.

It also supports the redundant operation 1+1 or n+1 providing they are employed together with redundant module/s.

Ordering Key

SPDC 24 240 1

Model _____
Output voltage _____
Output power _____
Single phase input _____

Approvals



Output Performance

MODEL NO.	Output Voltage (VDC)	Voltage Trim Range (VDC)		Output power (w)	Max. output current (A)	Typical efficiency
SPDC242401	24	24	28	240	10	94%

Output Data All specifications are at nominal values, full load, 25°C (77°F) unless otherwise noted

Voltage accuracy	±3.0%
Line regulation	±0.5%
Load regulation	±1.0%
Temp. Coefficient	±0.03%/°C
Ripple & noise	
0° ~ 70°C (32° ~ 158°F)	≤240mV
0° ~ -25°C (32° ~ -13°F)	≤480mV
Hold up Time	≥20mS
	(230Vac input, Full load)

Set-up Time	
230Vac input voltage	<3s
Overshoot and Undershoot	<5.0%
Minimum load	0%
Power boost	≤110% 5s
	≥ 110% ≤ 150% 3s Max
Parallel operation	
(Selectable by front switch)	2 identical units



Input Data All specifications are at nominal values, full load, 25°C (77°F) unless otherwise noted

Rated input voltage	85Vac~264Vac 127Vdc~375Vdc	Power Factor (typical)	100Vac 230Vac	0.99 0.95
Voltage range	85Vac~264Vac	Leakage Current	Input—output Input—PG	<0.25mA <3.5mA
AC Current (max.)				
100Vac	<3.0 A			
230Vac	<1.5A			
Frequency range	47Hz-63Hz			
Inrush Current (Typical, cold start)				
100Vac	20A			
230Vac	40A			

Control and Protections

Over voltage 24V	From 29 to 33V	Over temperature protection (detected on heatsink, shut down, auto-recovery)	+105°C ±5° (+212°F ±9°)
Short Circuit protection	Hiccup mode		
Over Load protection			
100%~120%	Constant current limiting 5s		
120%~150%	Constant current limiting 3s		
>150%	Hiccup mode, auto recovery		

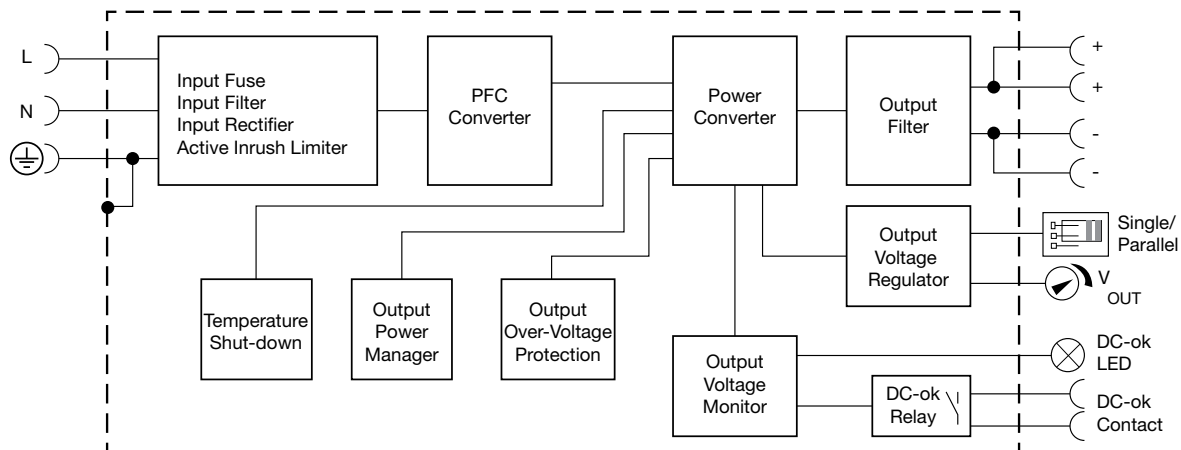
General Data All specifications are at nominal values, full load, 25°C (77°F) unless otherwise noted

Operating temperature	-25°C~70°C, (-13°F~158°F)	Case material	Metal, Stainless steel
Derating from 60° to 70°C (140° to 158°F)	See derating diagram	Dimensions HxDxW	124x119x45mm (4.88" x 4.7" x 1.77")
Humidity	5%~95%RH No condensing	Weight	780g (1.72lb)
Storage Temperature	-40°C~85°C (-40°F~185°F)	Packing	
Protection degree	IP20	Single package	850g (1.87lb), 150 x 57 x 147mm (5.91" x 2.24" x 5.79").
Cooling method	Free air convection	Carton	24 units, 21kg (46.3lb)
MTBF (MIL-HDBK-217F)	> 300,000Hrs (25°C, Full load)		

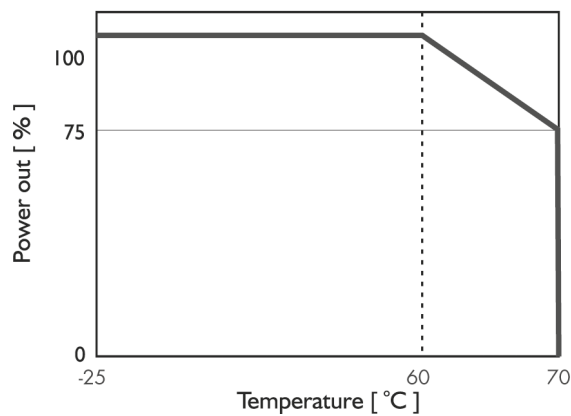
Approvals and EMC

Insulation Voltage		EMC Emission	EN55022, EN55024, FCC PART 15 Class B
Primary-Secondary:	3.0kVac; ≤10mA.	Harmonic Current	EN61000-3-2, CLASS A.
Primary-PG:	2.5kVac; ≤10mA.	EMC Immunity	EN61000-4-2, 3, 4, 5, 6, 8, 11; heavy industry level
Secondary-PG:	0.5kVac ≤20mA.		
Isulation Resistance	≥100M ohms		
Safety Standards	EN60950-1		
Withstand Voltage			
Primary-Secondary:	3.0kVac; ≤10mA.		
Primary-PG:	2.5kVac; ≤10mA.		
Secondary-PG:	0.5kVac ≤20mA.		

Block Diagram



Derating Diagram



Installation

Ventilation and cooling

Free air convection.
 25mm of free space on
 each side is recommended

Terminals cable


0.2mm² to 5mm² (AWG24
 to AWG10) Stranded or
 solid 8mm recommended
 stripping

Max. torque for terminal

Input terminal
 Output terminal

1.0Nm
 0.6Nm

Pin Assignment and Front Controls

PIN NO.	Designation	Description
1		Ground this terminal to minimize high frequency emissions
2	N	Input terminals (neutral conductor, no polarity with DC input)
3	L	Input terminals (phase conductor, no polarity with DC input)
4	DC OK	DC ON relay contact
5	DC OK	DC ON relay contact
6, 7	V+	Positive output terminal
8, 9	V-	Negative output terminal
	Vout Adj.	Trimmer-potentiometer for Vout adjustment
	DC status	LED indication of power supply output status
	Parallel	Switch for single or parallel operation

Mechanical Drawing dimensions are expressed mm (Inches)

