Switching Power Supply
Type SPD 240W 3 phases
DIN rail mounting

- **Universal AC 3 phases input full range**
- **Installation on DIN rail 7.5 or 15mm**
- **PFC as standard**
- **High efficiency up to 90%**
- **Power ready output**
- **Parallel connection feature**
- **Compact dimensions**
- **UL, cUL listed and TUV/CE**

Product Description

The Switching power supplies SPD series are specially designed to be used in all automation application where the installation is on a DIN rail and compact dimensions and performance are a must.

Ordering Key

SP D 24 240 3

Model
Mounting (D = Din rail)
Output voltage
Output power
Input Type

Input type: 3 = three phase
(or single phase 400/500VAC[3])

Approvals

Output performances

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (min.)	EFF. (typ.)
Single Output Models						
SPD24	3ø 340~575 VAC	240 WATTS	+ 24 VDC	10 mA	85%	90%
SPD48	3ø 340~575 VAC	240 WATTS	+ 48 VDC	5 mA	89%	91%

[1] When powered with three phases input; with biphase input value is in the brackets.
[2] When S/P switch is set to parallel, it is not possible to trim output voltage.

Output data

Line regulation	± 1%
Load regulation	
Single mode	± 1%
Paralle mode	± 5%
Minimum load	0
Turn on time (full resistive load)	
Vi nom, Io nom	1000ms
Vi nom, Io nom	
12v model with 7000µF **CAP**	1500ms
Transient recovery time	2ms
Ripple and noise	100mVpp
Output voltage accuracy	± 1%
Temperature coefficient	± 0.03%/°C

Hold up time	20ms
Voltage fall time (I_0nom)	150ms max
Rated continuous loading	
24V Model	10A @ 24VDC/8.2A @ 28.5VDC
48V Model	5A @ 48VDC/4.2A @ 56VDC
Reverse voltage	
24V Model	35VDC
48V Model	63VDC
Capacitor load	
Vi nom Io nom 24V model	7000µF
Voltage rise time	
Vi nom Io nom	150ms
Vi nom, Io nom	
12v model with 7000µF **CAP**	500ms

CARLO GAVAZZI

Input data

Rated input voltage	400 - 500VAC
Voltage range	
AC	340 - 575VAC
DC	480 - 820VDC
Rated input current	
(Vi : 115VAC, Io nom) **Typ.**	0.65A
Max.	0.85A
Inrush current	
Vi nom, Io nom	20A

Power dissipation	
24V Model	30W
48V Model	24W
Frequency range	47- 63Hz
Leakage current	
Input-Output	0.25mA
Input-FG	3.5mA

Controls and Protections

Input fuse	2A/600VAC internal/Phase
Output short circuit	Hiccup mode
Power ready output	
(only 24V model) **On threshold**	≥17.6 -19.4VDC
Elettrical isolation	500VDC
Contact rating at 60vdc	0.3A

[1] Fuse not replaceable by user

Over voltage protection	**VDC**	
	Min.	**Max.**
24V Model	30	33
48V Model	60	68
Internal surge voltage protection (IEC 61000-4-5)	Varistor	

General data (@ nominal line, full load, 25°C)

Ambient temperature	-40°C to 71°C
Derating (>61°C to +71°C)	2.5%/°C
Ambient humidity	20 ~ 90%RH
Storage	-25°C to +85°C
Protection degree	IP20
Cooling	Free air convection
Pollution degree	2

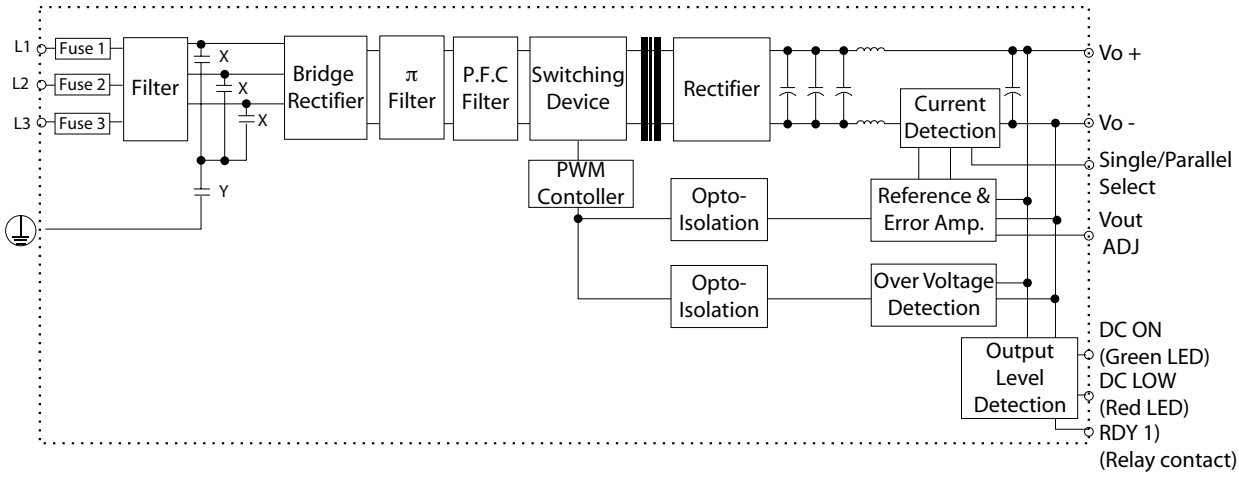
MTBF (Bellcore issue 6 @ 40°C, GB)	
24V Model	488000 Hours
48V Model	519000 Hours
Case material	Metal
Dimensions LxWxD mm(inch)	124(4.88) x 89(3.5) x 118.8(4.68)
Weight	1100g

Norms and Standards

Vibration resistance	meet IEC 60068-2-6 (Mounting by rail: 10-500Hz, 2G, along X, Y, Z each Axis, 60 min for each Axis)
Shock resistance	meet IEC 60068-2-27 (15G, 11ms, 3 Axis, 6 faces, 3 times for each face)
UL / cUL	UL508 listed, UL60950-1, Recognized, ISA 12.12.01 (Class 1, Division 2, Groups A, B, C and D)
TUV	EN 60950-1, CB scheme EN 61558-1, EN 61558-2-17 (meet EN 60204)

CCC	GB4943, GB9254, GB17625.1
CE	EN 61000-6-3, EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 55024, EN 61000-4-2 Level 4, EN 61000-4-3 Level 3, EN 61000-4-4 Level 4, EN 61000-4-5 L-Level 3, L/N-FG Level 4, EN 61000-4-6 Level 3, EN 61000-4-8 Level 4, EN 61000-4-11, ENV 50204 Level 2, EN 61204-3

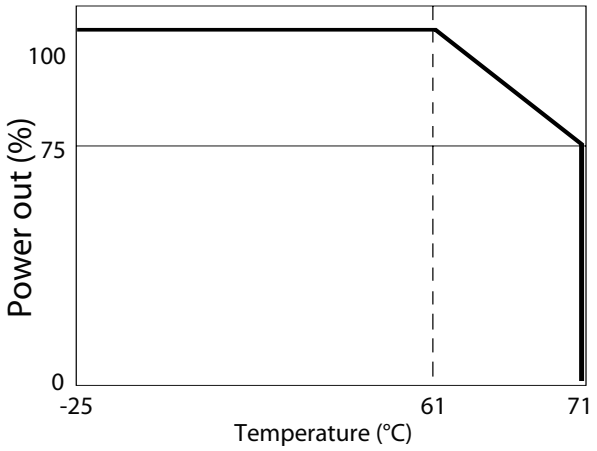
Block diagrams



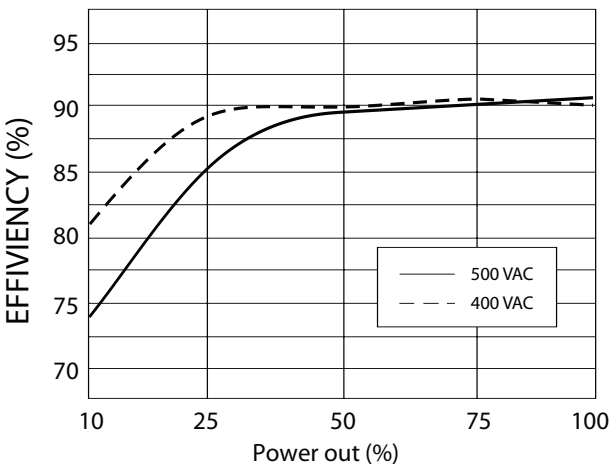
Pin Assignement and Front Controls

Pin No.	Designation	Description
1, 2	**V-**	Negative output terminal
3, 4	**V+**	Positive output terminal
5	**L3**	Input terminals
6	**L2**	Input terminals
7	**L1**	Input terminals
8	⏚	Ground this terminal to minimize high-frequency emissions
9	**RDY**	A normal open relay contact for DC ON level control
10	**RDY**	(Never connect except 24V model)
	DC ON	Operation indicator LED
	DC LO	DC LOW voltage indicator LED
	Vout ADj	Trimmer-potentiometer for Vout adjustment
	S/P	Single / Parallel select switch

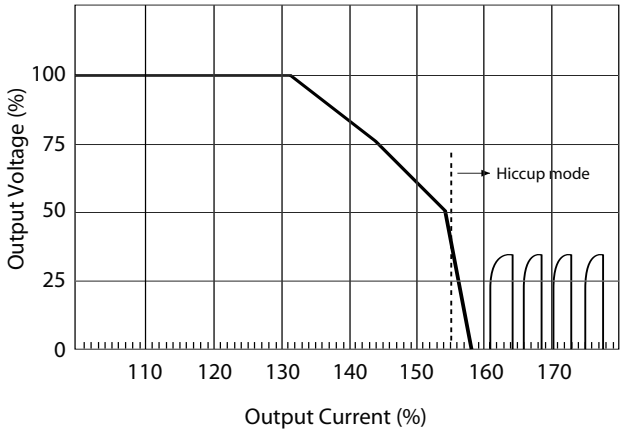
Derating Diagram

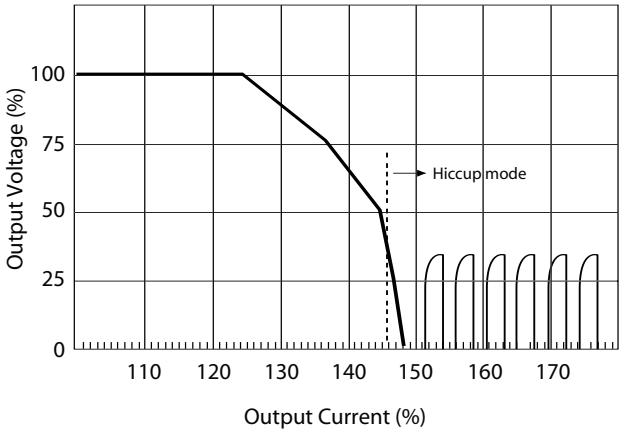


Typ. Efficiency Curve

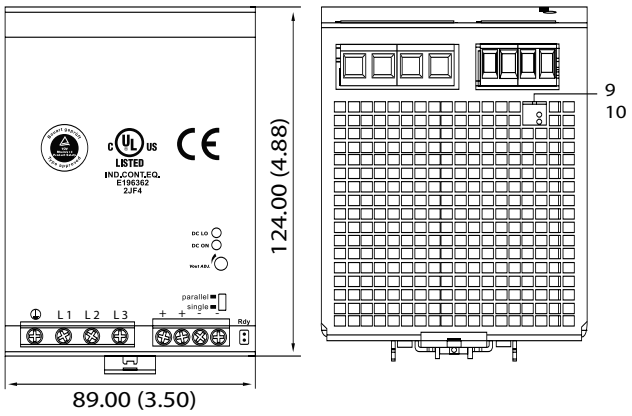


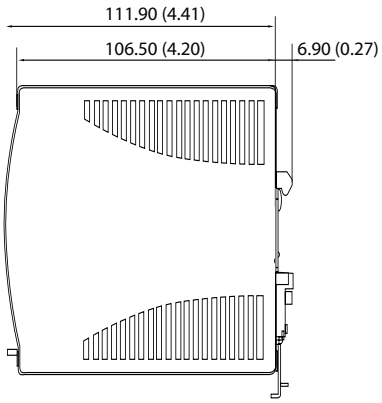
Typ. Current Limited Curve





Mechanical Drawings mm/inches





Installation

Ventilation and cooling	Normal convection All sides 25mm free space for cooling is recommended
Screw connections	10-24AWG flexible or solid cable 8mm stripping recommend
Max. torque for screws terminals	
Input terminals	1.008Nm (9.0lb-in)
Output terminals	0.616Nm (5.5lb-in)