Switching Power Supply
Type SPD 480W 3 phases
DIN rail mounting

- **Universal AC 3 phases input full range**
- **Can also be used as single phase 480VAC**
- **Installation on DIN rail 7.5 or 15mm**
- **PFC as standard**
- **High efficiency up to 91%**
- **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 24 480 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	480 WATTS	+ 24 VDC	20 A	88%	90%
SPD48	3ø 340~575 VAC	480 WATTS	+ 48 VDC	10 A	89%	91%

Output data

Line regulation	± 1%
Load regulation	
Single mode	± 1%
Parallel mode	± 5%
Minimum load	0
Turn on time (full resistive load)	
Vi nom, Io nom	1000ms
Vi nom, Io nom with 7000µF **CAP**	1500ms
Transient recovery time	2ms
Ripple and noise	100mVpp
Output voltage accuracy	± 1%
Temperature coefficient	± 0.03%/°C
Hold up timeVi	20ms
Voltage fall time (I_0**nom**)	150ms max
Rated continuous loading	
24V Model	20A @ 24VDC/16.8A @ 28.5VDC
48V Model	10A @ 48VDC/8.5A @ 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 with 7000µF **CAP**	500ms

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Input data

Rated input voltage	400 - 500VAC
Voltage range	
AC	340 - 575VAC
DC	480 - 820VDC
Rated input current	
(Vi : 400VAC, Io nom) **Typ.**	1.1A
Max.	1.4A
Inrush current	
Vi= 115VAC	20A

Power dissipation	
24V Model	58W
48V Model	55W
Frequency range	47- 63Hz
Leakage current	
Input-Output	0.25mA
Input-FG	3.5mA

Controls and Protections

Overload	110-135%
Input fuse	T3.15A/500VAC internal phase
Output short circuit	
Continuos	Fold forward
Discontinuos	Delay 3S shut-down. After 30S auto restart
Power ready output	
(only 24V model) **On threshold**	≥17.6 -19.4VDC

[1] Fuse not replaceable by user

Elettrical isolation	500VDC	
Contact rating at 60vdc	0.3A	
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	-30°C to 71°C
Derating (>61°C to +71°C)	2.5%/°C
Ambient humidity	20 ~ 90%RH
Storage	-40°C to +85°C
Protection degree	IP20
Cooling	Free air convection
Pollution degree	2

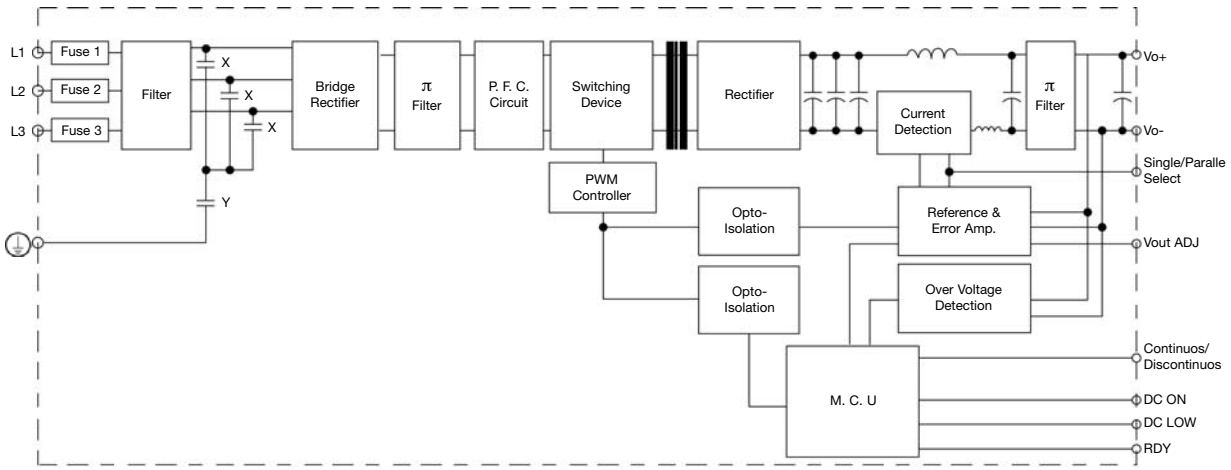
MTBF (Bellcore issue 6 @ 40°C, GB)	
24V Model	411000 Hours
48V Model	423000 Hours
Case material	Metal
Dimensions LxWxD mm(inch)	124(4.88) x 150(5.91) x 118.8(4.68)
Weight	1720g

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

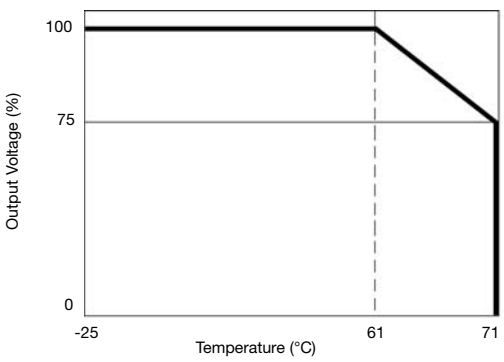
Block diagrams



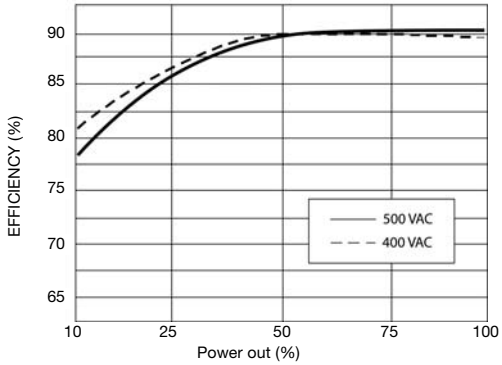
Pin Assignement and Front Controls

Pin No.	Designation	Description
1, 2	**V-**	Negative output teminal
3, 4	**V+**	Positive output terminal
5	**L3**	Input terminals
6	**L2**	Input terminals
7	**L1**	Input terminals
8	⏚	Input terminal (neutral conductor, no polarity at DC input)
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
	C/D	Continuos / Discontinuos

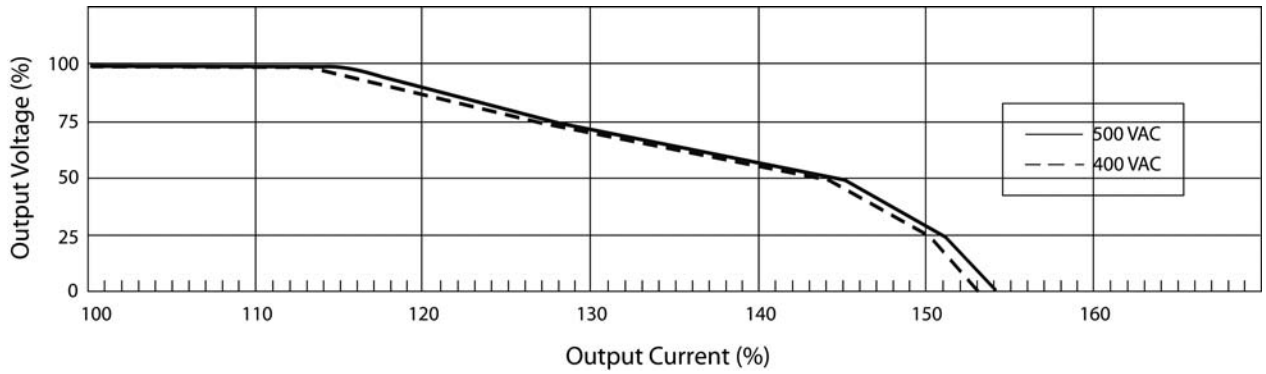
Derating Diagram



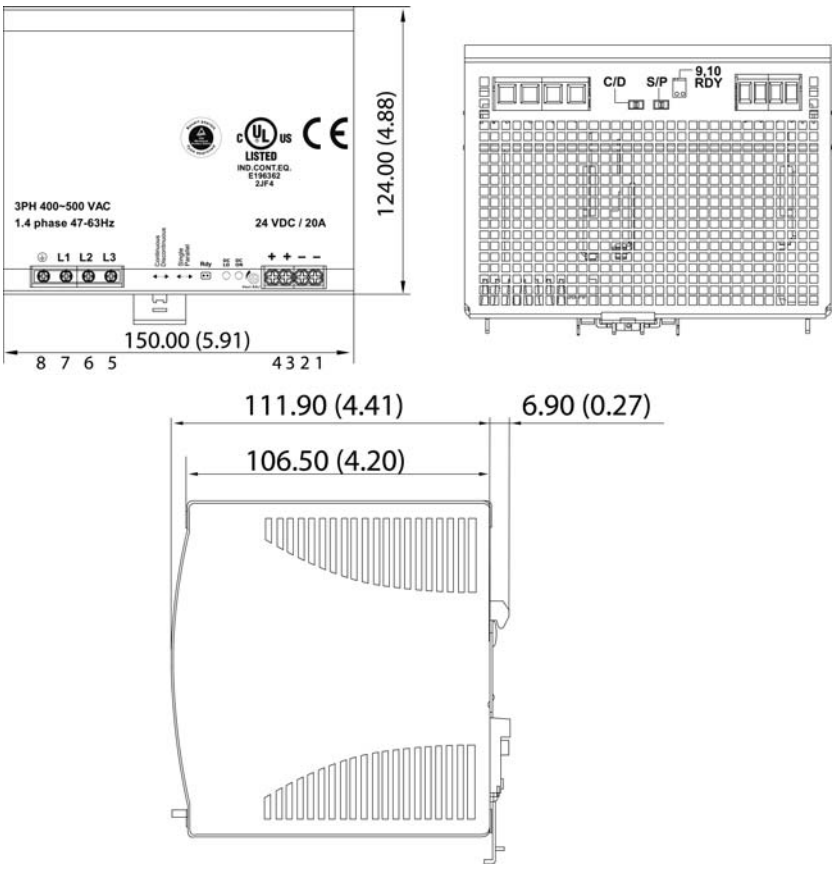
Typ. Efficiency Curve



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)