








Switching power supplies

Single phase switching power supplies

Types	5 / 10 / 18W				30 / 60W			90 / 100W		
										
Dimensions HxWxD (mm)	90 x 22.5 x 114				90 x 40.5 x 114			90 x 54 x 114		
Output specifications										
Voltage	5 VDC	12 VDC	15 VDC	24 VDC	12 VDC	24 VDC	48 VDC	12 VDC	24 VDC	48 VDC
Current SPD 5 W	1 A	420 mA	340 mA	210 mA						
Current SPD 10 W	2 A	840 mA	670 mA	420 mA						
Current SPD 18 W	3 A	1.5 A	1.2 A	750 mA						
Current SPD 30 W					2.5 A	1.25 A	625 mA			
Current SPD 60 W					5 A	2.5 A	1.25 A			
Current SPD 90 W									3.8 A	
Current SPD 100 W								8.4 A	4.2 A	2.1 A
Line regulation		±1%				±0.5%			±1%	
Load regulation		±2%				±0.5%			±1%	
Efficiency	75%	77%	77%	77%	86%	89%	89%		85%	
Input specifications										
Voltage range	Multi voltage: 90 to 265 VAC or 120 to 370 VDC				Multi voltage: 85 to 264 VAC or 90 to 375 VDC			Multi voltage: 90 to 264 VAC or 120 to 375 VDC		
Frequency range	47 to 63 Hz				47 to 63 Hz			47 to 63 Hz		
General specifications										
Ambient temperature	-40°C to +71°C				-40°C to +71°C			-35°C to +71°C		
Storage	-40°C to +85°C				-40°C to +85°C			-40°C to +85°C		
Derating (>60°C)	3 % /°C				2.5 % /°C			2.5 % /°C		
Approvals / Marks	cULus - TÜV - CE - Class I DIV2				cULus - TÜV - CE - Class I DIV2			cULus - TÜV - CE - Class I DIV2		
Installation	DIN Rail				DIN Rail			DIN Rail		
Connection	Screw terminals / Spring terminals (B)				Screw terminals / Spring terminals (B)			Screw terminals / Spring terminals (B)		
Main features										
	Adjustable output voltage. Internal noise filter. Short circuit protection. Overload protection (110-135%)				Adjustable output voltage. Internal noise filter. Short circuit protection. Overload protection (110-135 %). Output "Power ready" signal VDC (only model 24 VDC).			Adjustable output voltage. Internal noise filter. Short circuit protection. Overload protection (102-108%), PFC. Overvoltage protection (102-106%). Output "Power ready" signal VDC.		
LED indicator for "power on"	Yes				Yes			Yes		
LED indicator for DC "too low"	Yes				No - SPD24 with transistor output			Yes with relay output		
References										
5 VDC										
Screw terminals	SPD05051 / SPD05101 SPD05181									
Spring terminals	SPD05051B / SPD05101B SPD05181B									
12 VDC										
Screw terminals	SPD12051 / SPD12101 SPD12181				SPD12301 / SPD12601			SPD121001		
Spring terminals	SPD12051B / SPD12101B SPD12181B				SPD12301B / SPD12601B					
24 VDC										
Screw terminals	SPD24051 / SPD24101 SPD24181				SPD24301 / SPD24601			SPD24901L / SPD241001L		
Spring terminals	SPD24051B / SPD24101B SPD24181B				SPD24301B / SPD24601B					
48 VDC										
Screw terminals					SPD48301 / SPD48601			SPD481001		
Spring terminals					SPD48301B / SPD48601B					





Switching power supplies

Single phase switching power supplies




Types	120W / 120W(N)			240W		300W		480W	
									
Dimensions HxWxD (mm)	124.5 x 64 x 123.6			124.5 x 83.5 x 123.6		124.5 x 83.5 x 123.6		124.5 x 175.5 x 123.6	
Output specifications									
Voltage	12 VDC	24 VDC	48 VDC	24 VDC	48 VDC	24 VDC	48 VDC	24 VDC	48 VDC
Current	10 A	5 A	2.5 A	10 A	5 A	12.5 A	6.25 A	20 A	10 A
Line regulation		±0.5%	±0.5%		±0.5%		±0.5%		±0.5%
Load regulation		±1%	±1%		±1%		±1%		±1%
Efficiency	84%	86%	86%	89%	90%	89%	90%	89%	90%
Input specifications									
Voltage range	Autoselect: 90 to 132 VAC, 180 to 264 VAC, 120 to 375 VDC			Autoselect: 90 to 132 VAC, 180 to 264 VAC, 120 to 375 VDC		Autoselect: 90 to 132 VAC, 180 to 264 VAC, 120 to 375 VDC		Autoselect: 90 to 132 VAC, 186 to 264 VAC, 120 to 370 VDC	
Frequency range	47 to 63 Hz			47 to 63 Hz		47 to 63 Hz		47 to 63 Hz	
PFC	0.7			0.75		0.75		0.99	
General specifications									
Ambient temperature	-35°C to +71°C			-40°C to +71°C		-30°C to +71°C		-40°C to +71°C	
Storage	-40°C to +85°C			-40°C to +85°C		-40°C to +85°C		-40°C to +85°C	
Derating (>60°C)	2.5 % /°C			2.5 % /°C		2.5 % /°C		2.5 % /°C > 56°C	
Approvals / Marks	cULus - TÜV - CE - Class DIV2			cULus - TÜV - CE - Class DIV2		cULus - TÜV - CE - Class DIV2		cULus - TÜV - CE - Class DIV2	
Installation	DIN Rail			DIN Rail		DIN Rail		DIN Rail	
Connection	Screw terminals / Spring terminals (B)			Screw terminals / Spring terminals (B)		Screw terminals / Spring terminals (B)		Screw terminals / Spring terminals (B)	
Main features									
	Adjustable output voltage. Internal noise filter. Short circuit protection. Overload protection (110-145%). Parallel connection up to 3 supplies and PFC function on (N) model only			Adjustable output voltage. Internal noise filter. Short circuit protection. Overload protection (110-145%). Parallel connection up to 3 supplies standard. PFC function integrated.		Parallel function, PFC and Output ready		Adjustable output voltage. Internal noise filter. Short circuit protection. Overload protection (120-140%). Parallel connection up to 3 supplies standard. PFC function integrated.	
LED indicator for "power on"	Yes			Yes		Yes, 24 V with output ready		Yes	
LED indicator for DC "too low"	Yes - with relay output (SPD24 only)			Yes - with relay output (SPD24 only)		Yes		Yes - with relay output (SPD24 only)	
References									
12 VDC									
Screw terminals	SPD121201 SPD121201N								
Detach. screw terminals	SPD121201B SPD121201BN								
24 VDC									
Screw terminals	SPD241201 SPD241201N			SPD242401		SPD243001		SPD244801	
Detach. screw terminals	SPD241201B SPD241201BN			SPD242401B		SPD243001B		SPD244801B	
48 VDC									
Screw terminals	SPD481201 SPD481201N			SPD482401		SPD483001		SPD484801	
Detach. screw terminals	SPD481201B SPD481201BN			SPD482401B		SPD483001B		SPD484801B	

Switching power supplies

Three phase switching power supplies





Types	SPD 120W 3-ph		SPD 240W 3-ph		SPD 480W 3-ph		SPD 960W 3-ph	
								
Dimensions HxWxD (mm)	124 x 74.3 x 118.8		124 x 89.0 x 118.8		124 x 150 x 118.8		126.2 x 275.8 x 118.8	
Output specifications								
Voltage	12 VDC	24 VDC	24 VDC	48 VDC	24 VDC	48 VDC	24 VDC	48 VDC
Current	10 A	5 A	10 A	5 A	20 A	10 A	40 A	20 A
Line regulation	±1%		±1%		±1%		±1%	
Load regulation	±1%		±1%		±1%		±1%	
Efficiency	87%	89%	90%	91%	90%	91%	92%	93%
Input specifications								
Voltage range	340 to 575 VAC 480 to 820 VDC		340 to 575 VAC 480 to 820 VDC		340 to 575 VAC 480 to 820 VDC		340 to 575 VAC 480 to 820 VDC	
Frequency range	47 to 63 Hz		47 to 63 Hz		47 to 63 Hz		47 to 63 Hz	
PFC	0.55		0.55		0.65		0.80	
General specifications								
Ambient temperature	-40°C to +71°C		-25°C to +71°C		-30°C to +71°C		-40°C to +71°C	
Storage	-40°C to +85°C		-25°C to +85°C		-40°C to +85°C		-40°C to +85°C	
Derating	2.5 % /°C > 61°C		2.5 % /°C > 61°C		2.5 % /°C > 61°C		3.5 % /°C > 61°C	
Approvals / Marks	cULus - TÜV - CE		cULus - TÜV - CE		cULus - TÜV - CE		cULus - TÜV - CE	
Installation	DIN Rail		DIN Rail		DIN Rail		DIN Rail	
Connection	Screw terminals		Screw terminals		Screw terminals / Detach conn.		Screw terminals	
Main features								
	Can be used as Bi or Three phase, Parallel function and PFC		Can be used as Bi or Three phase, Parallel function and PFC		Can be used as Bi or Three phase, Parallel function and PFC		Can be used as Bi or Three phase. Active parallel function and PFC	
LED indicator for "power on"	Yes, 24 V with output ready		Yes, 24 V with output ready		Yes, 24 V with output ready		Yes, 24 V with output ready	
LED indicator for DC "too low"	Yes		Yes		Yes		Yes	
References								
12 VDC								
Screw terminals	SPD121203							
24 VDC								
Screw terminals	SPD241203	SPD242403	SPD244803 SPD244803B	SPD249603 SPD249603L (without parallel function and output ready)				
48 VDC								
Screw terminals	SPD482403		SPD484803 SPD484803B		SPD489603			

Switching power supplies, redundant modules

	Bi-phase switching power supplies			Redundant modules	
Types	100W			SPD Redundant Module	SPM Redundant Module
					
Dimensions HxWxD (mm)	90 x 54 x 114			90 x 54 x 114	91 x 35 x 56
Output specifications					
Voltage	12 VDC	24 VDC	48 VDC	24 VDC	24 VDC
Current	8.4 A	4.2 A	2.1 A	20 A	10 A
Line regulation	±1%				
Load regulation	±1%				
Efficiency	86%	87%	89%		
Input specifications					
Voltage range	340 to 575 VAC, 480 to 820 VAC			21 to 28VDC	21 to 48 VDC
Frequency range	47 to 63Hz				
PFC	0.55				
General specifications					
Ambient temperature	-40°C to +71°C			-40°C to +71°C	
Storage	-40°C to +85°C			-40°C to +85°C	
Derating (>60°C)	2.5% /°C				
Approvals / Marks	cULus - TÜV - CE - Class I DIV2			cULus - TÜV - CE	
Installation	DIN Rail			DIN Rail	DIN Rail
Connection	Screw terminals			Screw terminals	Screw terminals
Main features					
	Parallel function, PFC and Output ready			2 Relay outputs for remote monitoring	
LED indicator for "power on"	Yes - with relay output (SPD24 only)			Yes - with relay output (SPD24 only)	
LED indicator for DC "too low"	Yes				
References					
12 VDC					
Screw terminals	SPD121002				
24 VDC					
Screw terminals	SPD241002	SPD24RM20		SPM2RM2410	
48 VDC					
Screw terminals	SPD481002				

Switching power supplies

Low profile DIN rail mounting

Types	SPM 1	SPM 3	SPM 4	SPM 5
				
Dimensions HxWxD (mm)	91 x 18 x 55.5	91 x 52 x 55.5	91 x 71 x 55.5	91 x 90 x 55.5
Output specifications				
Voltage	5 VDC, 12 VDC, 15 VDC, 24 VDC	5 VDC, 12 VDC, 15 VDC, 24 VDC	5 VDC, 12 VDC, 15 VDC, 24 VDC	5 VDC, 12 VDC, 15 VDC, 24 VDC, 24 VDC (S ver.)
Current	1.5 A - 0.83 A 0.67 A - 0.42 A	3.0 A - 2.1 A 2.0 A - 1.3 A	7.0 A - 4.5 A 4.0 A - 2.5 A	12 A - 6 A - 5 A 4.2 A - 3.8 A
Line regulation	±1%	±1%	±1%	±1%
Load regulation	±1%	±1%	±1%	±1%
Input specifications				
Voltage range	Autoselec.. 90 to 264 VAC, 120 to 370 VDC	Autoselec.. 90 to 264 VAC, 120 to 370 VDC	Autoselec.: 90 to 264 VAC, 120 to 370 VDC	Autoselec.: 90 to 264 VAC, 120 to 370 VDC
Frequency range	47 to 63Hz	47 to 63Hz	47 to 63Hz	47 to 63Hz
General specifications				
Ambient temperature	-25°C to +71°C	-25°C to +71°C	-25°C to +71°C	-25°C to +71°C
Storage	-25°C to +85°C	-25°C to +85°C	-25°C to +85°C	-25°C to +85°C
Derating (>60°C)	2.5 % /°C	2.5 % /°C	2.5 % /°C	2.5 % /°C
Approvals / Marks	cULus - TÜV - CE - Class1 DIV2	cULus - TÜV - CE - Class1 DIV2	cULus - TÜV - CE - Class1 DIV2	cULus - TÜV - CE - Class1 DIV2
Installation	DIN Rail	DIN Rail	DIN Rail	DIN Rail
Connection	Screw terminals	Screw terminals	Screw terminals	Screw terminals
Main features				
		Adjustable output voltage	Adjustable output voltage	Adjustable output voltage
LED indicator for "power on"	Yes	Yes	Yes	Yes
LED indicator for DC "too low"	Yes	Yes	Yes	Yes
References				
5 VDC	SPM1-051	SPM3-051	SPM4-051	SPM5-051
12 VDC	SPM1-121	SPM3-121	SPM4-121	SPM5-121
15 VDC	SPM1-151	SPM3-151	SPM4-151	SPM5-151
24 VDC	SPM1-241	SPM3-241	SPM4-241	SPM5-241
24 VDC (class 2 UL)				SPM5-241S

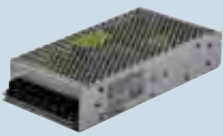

Switching power supplies

Enclosed switching power supplies

Types	SPPC 25 W	SPPC 35 W	SPPC 50 W	SPPC 75 W
				
Dimensions HxWxD (mm)	79 x 51 x 28.8	101.6 x 63.5 x 33	99 x 82 x 35	129 x 98 x 38
Output specifications				
Voltage	5V, 12V, 24V	5V, 12V, 24V	5V, 12V, 15V, 24V, 48V	5V, 12V, 24V, 48V
Current	5A, 2.1A, 1.1A	6A, 3A, 1.5A	8A, 4.2A, 3.4A, 2.2A, 1.12A	12A, 6A, 3.2A, 1.62A
Line regulation	±0.5%	±0.5%	±0.5%	±0.5%
Load regulation	±2.0%, ±1.0%, ±1.0%	±1.0%	±1.0%	±2.0%
Efficiency (typ)	115VAC 230VAC	76%, 80%; 84% 78%, 82%, 85%	79%, 83%, 86% 80%, 84%, 87%	79%, 84%, 87%, 88% 80%, 85%, 88%, 89%
Input specifications				
Voltage range	90 ~ 264VAC 127 ~ 370VDC	90 ~ 264VAC 127 ~ 370VDC	90VAC~264VAC 27~370VDC	90VAC~264VAC 127~370VDC
Frequency range	47-63Hz	47-63Hz	47Hz~63Hz	47Hz~63Hz
General specifications				
Ambient temperature	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Storage	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C;
Derating (>50°C)	2% /°C	2% /°C	1.5% /°C	1.5% /°C
Cooling	Free air convection	Free air convection	Free air convection	Free air convection
Approvals / Marks	UL60950-1 2 nd Ed, IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	UL60950-1 2 nd Ed, IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006
Installation	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Main features				
Mounting	Horizontal and Vertical (DIN rail mounting accessories available)	Horizontal and Vertical (DIN rail mounting accessories available)	Horizontal and Vertical (DIN rail mounting accessories available)	Horizontal and Vertical (DIN rail mounting accessories available)
References				
5 VDC	SPPC 525 1	SPPC 535 1	SPPC 550 1	SPPC 575 1
12 VDC	SPPC 1225 1	SPPC 1235 1	SPPC 1250 1	SPPC 1275 1
15 VDC			SPPC 1550 1	
24 VDC	SPPC 2425 1	SPPC 2435 1	SPPC 2450 1	SPPC 2475 1
48 VDC			SPPC 4850 1	SPPC 4875 1

Switching power supplies

Enclosed switching power supplies

Types	SPPC 150 W					SPPC 150 W (PFC) Power Factor Correction				
										
Dimensions HxWxD (mm)	199 x 98 x 38					194 x 99 x 50				
Output specifications										
Voltage	5 VDC	12 VDC	15 VDC	24 VDC	48 VDC	5 VDC	12 VDC	15 VDC	24 VDC	48 VDC
Current	26 A	12.5 A	10 A	6.5 A	3.3A	30 A	12.5 A	10 A	6.3 A	3.2 A
Line regulation	± 0.5%					± 0.5%				
Load regulation	±1%					±1%				
Efficiency (typ)	up to 85%					up to 87%				
Built-in active PFC						PFC > 0.98 @ 115 VAC ; PFC > 0.95 @ 230 VAC				
Input specifications										
Voltage input range	88 - 132 VAC 176 - 264 VAC 124 - 186 VDC 248 - 370 VDC					88 - 264 VAC 124 - 370 VDC				
Frequency range	47- 63 Hz					47- 63 Hz				
General specifications										
Ambient temperature	-25°C to +70°C					-25°C to +70°C				
Storage	-40°C to +85°C					-30°C to +85°C				
Output short circuit	Long-term, Auto recovery					Long-term, Auto recovery				
Derating (>50°C)	2.5% / °C					2.5% / °C				
Approvals / Marks	CE - cURus - RoHS					CE - cURus - RoHS - CB				
Installation	Screw terminal					Screw terminal				
Main features										
Mounting	Horizontal and Vertical (DIN rail mounting accessories available)					Horizontal and Vertical (DIN rail mounting accessories available)				
References										
5 VDC	SPPC-5150 1					SPPC-5150 1F				
12 VDC	SPPC-12150 1					SPPC-12150 1F				
15 VDC	SPPC-15150 1					SPPC-15150 1F				
24 VDC	SPPC-24150 1					SPPC-24150 1F				
48 VDC	SPPC-48150 1					SPPC-48150 1F				

Switching power supplies

Compact enclosed switching power supplies

Types	SPPC 200 W	SPPC 240 W	SPPC 320 W
			
Dimensions HxWxD (mm)	199 x 99 x 50	199 x 99 x 50	199 x 99 x 50
Output specifications			
Voltage	5V, 12V, 24V, 48V	12V, 24V	5V, 12V, 24V, 48V
Current	40A, 16.7A, 8.4A, 4.2A	20A, 10A	55A, 25A, 13A, 6.7A
Line regulation	±0.5%	±0.5%	±0.5%
Load regulation	±1.0%	±1.0%	±1.0%
Efficiency (typ)	79%, 84%, 86%, 87.5%	84%, 86%	79%, 84.5%, 87%, 87.5%
Built-in active PFC	(115VAC): PF>0.98 (230VAC): PF>0.96	(115VAC): PF>0.98 (230VAC): PF>0.96	(115VAC): PF>0.98 (230VAC): PF>0.96
Input specifications			
Voltage range	85 ~ 264VAC 120 ~ 370VDC	85~ 264VAC 120 ~ 370VDC	85~ 264VAC 120 ~ 370VDC
Frequency range	47-63Hz	47-63Hz	47-63Hz
General specifications			
Ambient temperature	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Storage	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Derating (>50°C)	2% /°C	2% /°C	2% /°C
Cooling	Forced air (built-in DC fan controlled by load and internal temperature)	Forced air (built-in DC fan controlled by load and internal temperature)	Forced air (built-in DC fan controlled by load and internal temperature)
Approvals / Marks	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006
Installation	Screw terminal	Screw terminal	Screw terminal
Main features			
Mounting	Horizontal and Vertical (DIN rail mounting accessories available)	Horizontal and Vertical (DIN rail mounting accessories available)	Horizontal and Vertical (DIN rail mounting accessories available)
References			
5 VDC	SPPC 5200 1FC		SPPC 5320 1FC
12 VDC	SPPC 12200 1FC	SPPC 12240 1FC	SPPC 12320 1FC
15 VDC			
24 VDC	SPPC 24200 1FC	SPPC 24240 1FC	SPPC 24320 1FC
48 VDC	SPPC 48200 1FC		SPPC 48320 1FC

Switching power supplies

Compact enclosed switching power supplies

Types	SPPC 480 W	SPPC 600 W	SPPC 800 W
			
Dimensions HxWxD (mm)	218 x 116.5 x 41	218 x 116.5 x 41	226 x 116.5 x 41
Output specifications			
Voltage	12V, 24V, 36V, 48V	12V, 24V, 36V, 48V	24V, 48V
Current	34A, 22A, 14A, 11A	(100~127VAC): 34A, 22A, 14A, 11A (128~264VAC): 42A, 26.5A, 17.5A, 13.6A	(100~127VAC): 27A, 14A (128~264VAC): 33A, 16.5A
Line regulation	±0.5%, ±0.5%, ±0.5%, ±0.2%	±0.5%	±0.5%
Load regulation	±1.0%	±1.0%	±1.0%
Efficiency (typ)	88%, 89%, 90%, 90%	88%, 89%, 90%, 90%	88%, 89%
Built-in active PFC	(115VAC): PF>0.98 (230VAC): PF>0.96	(115VAC): PF>0.98 (230VAC): PF>0.96	(115VAC): PF>0.98 (230VAC): PF>0.96
Input specifications			
Voltage range	90~264VAC 127~370VAC	90~264VAC 127~370VAC	90~264VAC 127~370VAC
Frequency range	47-63Hz	47-63Hz	47-63Hz
General specifications			
Ambient temperature	-30°C to +70°C	-30°C to +70°C	-30°C to +70°C
Storage	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Derating (>50°C)	2% /°C	2% /°C	2% /°C
Cooling	Forced air (built-in DC fan controlled by load and internal temperature)	Forced air (built-in DC fan controlled by load and internal temperature)	Forced air (built-in DC fan controlled by load and internal temperature)
Approvals / Marks	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006
Installation	Screw terminal	Screw terminal	Screw terminal
Main features			
Mounting	Horizontal and Vertical (DIN rail mounting accessories available)	Horizontal and Vertical (DIN rail mounting accessories available)	Horizontal and Vertical (DIN rail mounting accessories available)
References			
12 VDC	SPPC 12480 1FC	SPPC 12600 1FC	
24 VDC	SPPC 24480 1FC	SPPC 24600 1FC	SPPC 24800 1FC
36 VDC	SPPC 36480 1FC	SPPC 36600 1FC	
48 VDC	SPPC 48480 1FC	SPPC 48600 1FC	SPPC 48800 1FC