

IP22 Class I & II (VI)

Product Features

- Meets medical & I.T.E. safety
- 2 MOPP input to output isolation
- Touch current $\leq 100\mu\text{A}$
- Earth Leakage current $\leq 5\text{mA}$
- Energy efficiency level VI
- ≤ 0.075 Watts Standby Power
- 9.1V-54V outputs, up to 48W
- 5,000m Operating Altitude



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Models & Parameters

Model Number	Voltage ^(*) (V)	Current (A)	Rated Power	Ripple & Noise (max)	Voltage Tolerance	Line & Load Regulation	Efficiency (Average)	Start Up Delay
	9.1-10.0	0.01-4.50	45.00W	120mVpk-pk	±5%		88.7%	≤3s
	10.1-11.0	0.01-4.36	47.96W	120mVpk-pk	±5%		89.0%	≤3s
	11.1-12.0	0.01-4.00	48.00W	120mVpk-pk	±5%		89.0%	≤3s
	12.1-13.0	0.01-3.69	47.97W	120mVpk-pk	±5%		89.0%	≤3s
	13.1-14.0	0.01-3.42	47.88W	120mVpk-pk	±5%		89.0%	≤3s
	14.1-15.0	0.01-3.20	48.00W	120mVpk-pk	±5%		89.0%	≤3s
	15.1-16.0	0.01-3.00	48.00W	120mVpk-pk	±5%		89.0%	≤3s
	16.1-17.0	0.01-2.82	47.94W	120mVpk-pk	±5%		89.0%	≤3s
	17.1-18.0	0.01-2.66	47.88W	120mVpk-pk	±5%		89.0%	≤3s
	18.1-19.0	0.01-2.52	47.88W	120mVpk-pk	±5%		89.0%	≤3s
	19.1-20.0	0.01-2.40	48.00W	120mVpk-pk	±5%		89.0%	≤3s
	20.1-21.0	0.01-2.28	47.88W	150mVpk-pk	±5%		89.0%	≤3s
	21.1-22.0	0.01-2.18	47.96W	150mVpk-pk	±5%		89.0%	≤3s
	22.1-23.0	0.01-2.08	47.84W	150mVpk-pk	±5%		89.0%	≤3s
	23.1-24.0	0.01-2.00	48.00W	150mVpk-pk	±5%		89.0%	≤3s
	24.1-25.0	0.01-1.92	48.00W	150mVpk-pk	±5%		89.0%	≤3s
	25.1-26.0	0.01-1.84	47.84W	150mVpk-pk	±5%		89.0%	≤3s
	26.1-27.0	0.01-1.77	47.79W	150mVpk-pk	±5%		89.0%	≤3s
	27.1-28.0	0.01-1.71	47.88W	150mVpk-pk	±5%		89.0%	≤3s
	28.1-29.0	0.01-1.65	47.85W	150mVpk-pk	±5%		89.0%	≤3s
	29.1-30.0	0.01-1.60	48.00W	150mVpk-pk	±5%		89.0%	≤3s
	30.1-31.0	0.01-1.54	47.74W	300mVpk-pk	±5%		89.0%	≤3s
UES48-XXXYYSPAZ	31.1-32.0	0.01-1.50	48.00W	300mVpk-pk	±5%	Line: ±1%	89.0%	≤3s
	32.1-33.0	0.01-1.45	47.85W	300mVpk-pk	±5%	Load: ±5%	89.0%	≤3s
	33.1-34.0	0.01-1.41	47.94W	300mVpk-pk	±5%		89.0%	≤3s
	34.1-35.0	0.01-1.37	47.95W	300mVpk-pk	±5%		89.0%	≤3s
	35.1-36.0	0.01-1.33	47.88W	300mVpk-pk	±5%		89.0%	≤3s
	36.1-37.0	0.01-1.29	47.73W	300mVpk-pk	±5%		89.0%	≤3s
	37.1-38.0	0.01-1.26	47.88W	300mVpk-pk	±5%		89.0%	≤3s
	38.1-39.0	0.01-1.23	47.97W	300mVpk-pk	±5%		89.0%	≤3s
	39.1-40.0	0.01-1.20	48.00W	300mVpk-pk	±5%		89.0%	≤3s
	40.1-41.0	0.01-1.17	47.97W	300mVpk-pk	±5%		89.0%	≤3s
	41.1-42.0	0.01-1.14	47.88W	300mVpk-pk	±5%		89.0%	≤3s
	42.1-43.0	0.01-1.11	47.73W	300mVpk-pk	±5%		89.0%	≤3s
	43.1-44.0	0.01-1.09	47.96W	300mVpk-pk	±5%		89.0%	≤3s
	44.1-45.0	0.01-1.06	47.70W	300mVpk-pk	±5%		89.0%	≤3s
	45.1-46.0	0.01-1.04	47.84W	300mVpk-pk	±5%		89.0%	≤3s
	46.1-47.0	0.01-1.02	47.94W	300mVpk-pk	±5%		89.0%	≤3s
	47.1-48.0	0.01-1.00	48.00W	300mVpk-pk	±5%		89.0%	≤3s
	48.1-49.0	0.01-0.97	47.53W	300mVpk-pk	±5%		89.0%	≤3s
	49.1-50.0	0.01-0.96	48.00W	300mVpk-pk	±5%		89.0%	≤3s
	50.1-51.0	0.01-0.94	47.94W	300mVpk-pk	±5%		89.0%	≤3s
	51.1-52.0	0.01-0.92	47.84W	300mVpk-pk	±5%		89.0%	≤3s
	52.1-53.0	0.01-0.90	47.70W	300mVpk-pk	±5%		89.0%	≤3s
	53.1-54.0	0.01-0.88	47.52W	300mVpk-pk	±5%		89.0%	≤3s

Model encoding: replace "Z" with "1" for C8 (Class II), "2" for C6 (Class I), "3" for C14 (Class I) AC inlets

Notes

(*) Other options are available, please contact our sales representative for details.

Input

Input Voltage Range	90-264VAC (Class I); 80-264VAC (Class II)
Frequency Range	47-63Hz
Input Current	1.1A at 80/90VAC
Inrush Current	70A max at 240VAC cold start
Touch Leakage Current ^(max)	Class I & Class II ≤ 100µA at 264VAC

Environmental

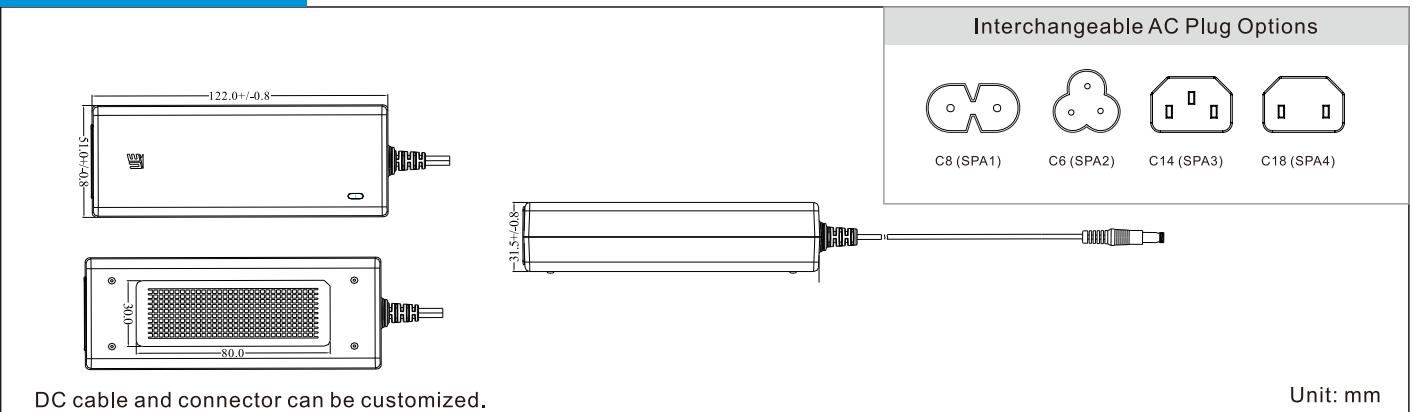
Operating Temperature	-10°C to 40°C
Storage Temperature	-20°C to 70°C
Operating Humidity	10% to 90% RH
Storage Humidity	5% to 90% RH
Operating Altitude	5,000m

General

Dimensions	122(L) 51(W) 31.5(H)mm
Weight	240g
MTBF	>190,000hrs MIL-HDBK-217 at 25°C

Protection

Overload	120-180% rated output power, auto recovery
Over Voltage	120-180% rated output voltage, auto recovery
Short Circuit	Trip and restart (hiccup mode)

Mechanical Details


DC cable and connector can be customized.

Unit: mm

Interchangeable AC Plug Options

- C8 (SPA1)
- C6 (SPA2)
- C14 (SPA3)
- C18 (SPA4)

Safety Approvals

Safety Agency / Mark	Medical	ITE
CB	IEC60601-1, IEC60601-1-11 (Class II)	IEC60950-1 IEC62368-1
UL	ANSI/AAMI ES60601-1 CAN/CSA C22.2 NO. 60601-1	UL60950-1 UL62368-1
TüV Rheinland/Mark	EN60601-1, EN60601-1-11 (Class II)	-
TüV Rheinland/GS	-	EN60950-1 EN62368-1
CCC	-	GB4943.1
CE	-	EN62368
PSE	-	J60950
RCM	-	AS/NZS 60950.1:2015
KC	-	K60950-1
FCC	-	FCC PART 15

EMC

Emission	Medical	ITE
Conduction	IEC/EN60601-1-2, CISPR 11	EN55032, CISPR 32
Radiation	IEC/EN60601-1-2, CISPR 11	EN55032, CISPR 32
Harmonic Currents	EN61000-3-2, Class A	EN61000-3-2, Class A
Voltage Flicker	EN61000-3-3	EN61000-3-3
Immunity	Medical	ITE
ESD	IEC61000-4-2 ±15KV air, ±8KV contact	EN55024, CISPR 24
Radiated Immunity	IEC61000-4-3 10V/m, 3V/m 80MHz - 2.7GHz	
EFT/Burst	IEC61000-4-4 ±2KV on AC port, ±1KV on signal ports	
Surge	IEC61000-4-5 ±4KV line to line (different mode)	
Conducted Immunity	IEC61000-4-6 3Vrms, 6Vrms (0.15MHz-80MHz)	
Magnetic Field	IEC61000-4-8 30 A/m	
Dips & Interruptions	IEC61000-4-11 0%, 70%, 0% of UT	

Others

Dielectric Withstand Voltage	5,656VDC input to output
Insulation Resistance	10M Ohms, 500VDC input to output