

## Product Specification

Switching Power Adaptor Desktop  
Style

## DPUE120-SPAZ SERIES

Universal 120 Watt



### Key Product Features

- Medical & ITE safety approvals
- 2 MOOP input to output isolation
- Suitable for medical equipment up to class BF
- Leakage current  $\leq 250\mu\text{A}$
- $\leq 0.5\text{W}$  standby power
- 12V to 48V outputs, up to 120W
- Up to 2,000m operating altitude
- 3 types of AC inlet



IP20 Class I & II (V)

### Model Options

Model	Voltage	Current	Power	Ripple & Noise	Voltage	Line & Load	Efficiency	Start Up Delay
DPUE120-120YYYSPA1/SPA2/SPA3	12.0V	0.01~8.33A	100W	200mVpk-pk	$\pm 5\%$	Line: $\pm 1\%$ Load: $\pm 5\%$	87.00%	$\leq 3\text{s}$
DPUE120-135YYYSPA1/SPA2/SPA3	13.5V	0.01~7.40A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-138YYYSPA1/SPA2/SPA3	13.8V	0.01~7.25A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-150YYYSPA1/SPA2/SPA3	15.0V	0.01~6.66A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-160YYYSPA1/SPA2/SPA3	16.0V	0.01~6.25A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-170YYYSPA1/SPA2/SPA3	17.0V	0.01~5.88A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-180YYYSPA1/SPA2/SPA3	18.0V	0.01~5.55A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-190YYYSPA1/SPA2/SPA3	19.0V	0.01~5.26A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-200YYYSPA1/SPA2/SPA3	20.0V	0.01~5.00A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-220YYYSPA1/SPA2/SPA3	22.0V	0.01~4.54A	100W	200mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-240YYYSPA1/SPA2/SPA3	24.0V	0.01~5.00A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-260YYYSPA1/SPA2/SPA3	26.0V	0.01~4.62A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-280YYYSPA1/SPA2/SPA3	28.0V	0.01~4.28A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-295YYYSPA1/SPA2/SPA3	29.5V	0.01~4.06A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-300YYYSPA1/SPA2/SPA3	30.0V	0.01~4.00A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-330YYYSPA1/SPA2/SPA3	33.0V	0.01~3.63A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-360YYYSPA1/SPA2/SPA3	36.0V	0.01~3.33A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$
DPUE120-480YYYSPA1/SPA2/SPA3	48.0V	0.01~2.50A	100W	300mVpk-pk	$\pm 5\%$		87.00%	$\leq 3\text{s}$

Output Current:  
010: 0.1A A01: 0.01A  
999: 9.99A B02: 11.02A

**DPUE120-XXX YYY SPAX**

AC Inlet Options:

1: C8 2: C6 3: C14

## Product Specification

### Input

Input Voltage	90 to 246 VAC
Frequency	47 to 63Hz
Input Current	2.0A at 90VAC
Inrush Current	40Amax at 115VAC cold start
Touch Leakage Current (max)	Class I $\leq 250\mu\text{A}$ & Class II $\leq 250\mu\text{A}$ at 264VAC

### Environment

Operating Temperature	0°C to 40°C
Storage Temperature	-20°C to 80°C
Operating Humidity	10% to 90% RH, non-condensing
Storage Humidity	5% to 90% RH
Operating Altitude	2,000m
MTBF	>100,000hrs MIL-HDBK-217 at 25 degrees C

### Protection

Overload	120-280% rated output power, auto recovery
Over Voltage	120-200% rated output voltage input to reset
Short Circuit	Trip and restart (hiccup mode)

### Safety Approvals

Safety Agency / Mark	Medical	
CB	IEC60601-1	IEC60950-1
UL	ANSI/AAMI ES60601-1 / CAN/CSA C.22.2 NO. 60601-1	---
TUV	EN60601-1	EN60950-1
CCC	---	GB4943.1 (For Class I only)

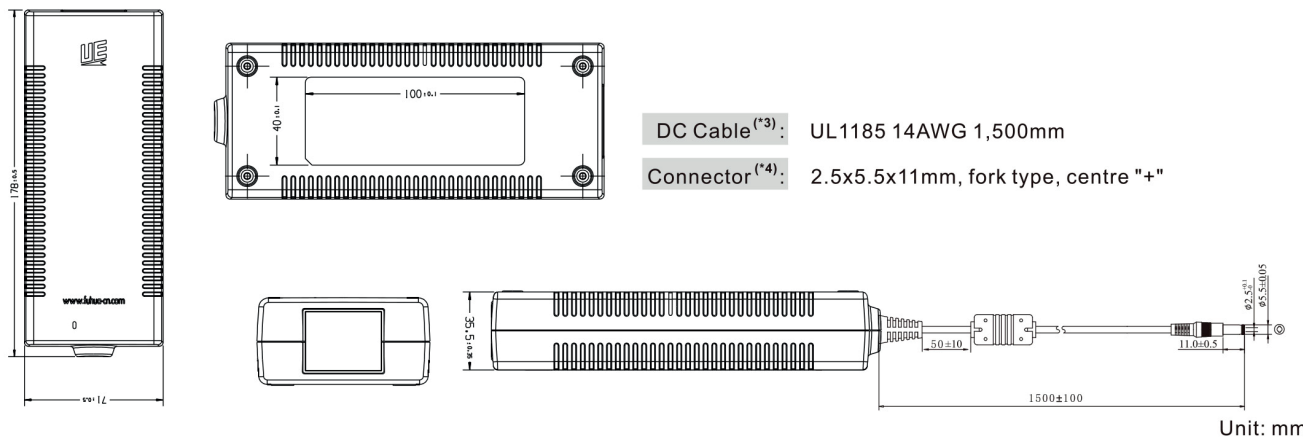
### Others

Dielectric Withstand Voltage	2,121VDC for Class I / 5,656VDC for Class II input to output
Insulation Resistance	10M Ohms, 500VDC input to output

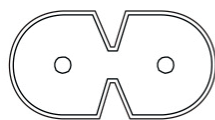
EMC		
Emissions	Medical	ITE
Conducted	IEC/EN 60601-1-2, CISPR 11	EN55022, CISPR 22
Radiated	IEC/EN 60601-1-2, CISPR 11	EN55022, CISPR 22
Harmonic Currents	EN61000-3-2, CLASS A	EN61000-3-2, CLASS A
Voltage Flicker	EN61000-3-3	EN61000-3-3
Immunity	IEC/EN 60601-1-2	EN55024, CISPR 24
ESD	EN61000-4-2	±15kV AIR, ±8kV contact
Radiated Immunity	EN61000-4-3	10V/m, 3V/m 80MHz -2.7GMHz
EFT/Burst	EN61000-4-4	±2kV on AC port, ±1kV on signal ports
Surge	EN61000-4-5	±1kV line to line (diff mode)
Conducted Immunity	EN61000-4-6	3Vrms, 6Vrms (0.15MHz-80MHz)
Magnetic Field	EN61000-4-8	30A/m
Dips & Interruptions	EN61000-4-11	0%, 70%, 0% of UT

Mechanical Specifications	
Dimensions	172.5(L)x71(W)x35.5(H)mm
Weight	600g
Isolation	4,000VAC Input to Output / 1,500VAC Input to Ground (Class I version only)

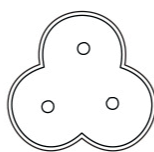
## Outline Drawing



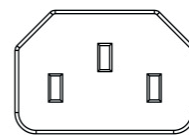
## AC Inlet Options



**C8 (SPA1) (\*5)**



**C6 (SPA2)**



**C14 (SPA3)**

**NOTES:**

(\*1,3,4) Other options are available, please contact our sales representative for details.

(\*2) Measured at output connector with 20Mhz bandwidth and 0.1uF ceramic in parallel with 10uF electrolytic capacitors.

(\*5) Polarized C8 is available

(^A) Power supplies are not medical equipment (applied parts), medical product manufacturers shall take responsibility for further evaluation of class B/BF/CF compliance of their end product.