

## Product Specification

Switching Power Adaptor Desktop Style

## Key Product Features

- Medical & ITE safety approvals
- 2 MOPP input to output isolation
- Suitable for medical equipment up to class BF
- Leakage current  $\leq 100\mu\text{A}$  (class II)
- $\leq 0.3$  standby power
- 9V to 24V outputs, up to 48W
- Up to 3,048m operating altitude
- 3 types of AC inlet

## DPUE48-SPAZ SERIES

### Universal 48 Watt



## Model Options

Model	Voltage	Current	Power	Ripple & Noise	Voltage Tolerant	Line & Load Regulation	Efficiency	Start Up Delay
UE48-XXXXXX SPA1/SPA2/SPA3	9.0~12.0V	0.01~4.02A	48W	200mV <sub>k</sub> -pk	±5%	Line: ±1% Load: ±5%	88.62%	≤3s
	12.1~13.0V	0.01~3.70A	48W	200mV <sub>k</sub> -pk	±5%		88.61%	≤3s
	13.1~14.0V	0.01~3.43A	48W	200mV <sub>k</sub> -pk	±5%		88.60%	≤3s
	14.1~15.0V	0.01~3.20A	48W	200mV <sub>k</sub> -pk	±5%		88.59%	≤3s
	15.1~16.0V	0.01~3.00A	48W	200mV <sub>k</sub> -pk	±5%		88.59%	≤3s
	16.1~17.0V	0.01~2.83A	48W	200mV <sub>k</sub> -pk	±5%		88.61%	≤3s
	17.1~18.0V	0.01~2.67A	48W	200mV <sub>k</sub> -pk	±5%		88.60%	≤3s
	18.1~19.0V	0.01~2.53A	48W	200mV <sub>k</sub> -pk	±5%		88.60%	≤3s
	19.1~20.0V	0.01~2.40A	48W	200mV <sub>k</sub> -pk	±5%		88.59%	≤3s
	20.1~21.0V	0.01~2.29A	48W	200mV <sub>k</sub> -pk	±5%		88.61%	≤3s
	21.1~22.0V	0.01~2.19A	48W	200mV <sub>k</sub> -pk	±5%		88.62%	≤3s
	22.1~23.0V	0.01~2.09A	48W	200mV <sub>k</sub> -pk	±5%		88.60%	≤3s
	23.1~24.0V	0.01~2.01A	48W	200mV <sub>k</sub> -pk	±5%		88.62%	≤3s

## Product Specifications

### Input

Input Voltage	90 to 246 VAC
Frequency	47 to 63Hz
Input Current	1.1A at 90VAC
Inrush Current	50max at 240VAC cold start
Touch Leakage Current (max)	Class I $\leq 250\mu\text{A}$ & Class II $\leq 100\mu\text{A}$ at 264VAC

### Environment

Operating Temperature	0 to 40°C
Storage Temperature	-20 to 60°C
Operating Humidity	10% to 90% RH, non-condensing
Storage Humidity	5% to 90% RH
Operating Altitude	3,048m

### 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	ITE
CB	IEC60601-1	IEC60950-1
UL	ANSI/AAMI/ES60601-1 / CAN/CSA C22.2 NO. 60601-1	---
TUV	EN60601-1	EN60950-1
CCC	---	GB4943.1 (For Class I only)
PSE	---	J60950-1 (For UE48-120300SPA I only)

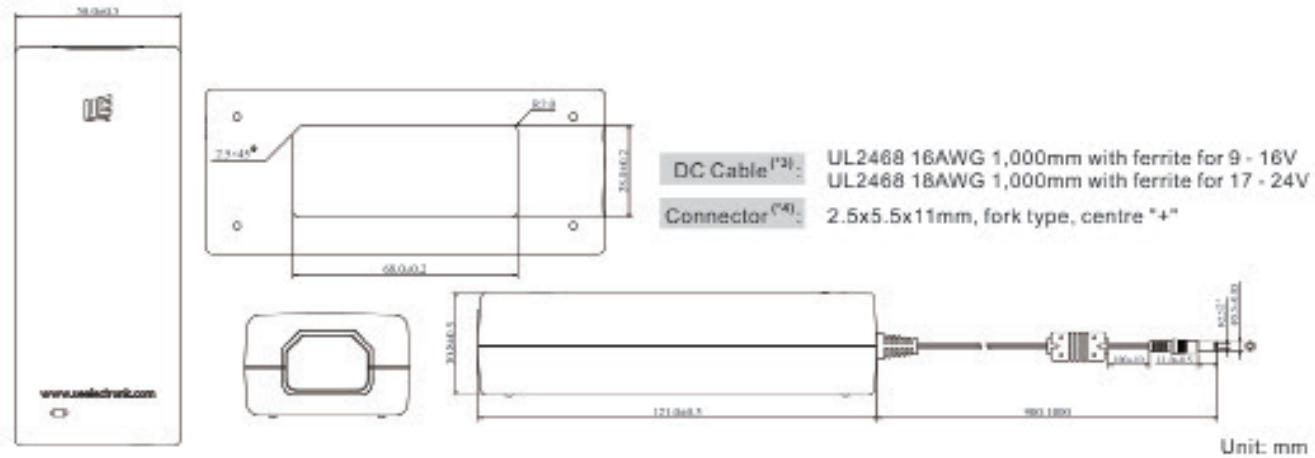
### Others

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

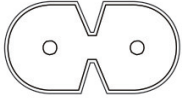
EMC		
Emissions	Medical	ITE
Conducted	IEC/EN 60601-1-2, CISPR 11	EN55022, CISPR 22
Radiated	IEC/EN 60601-1-2, CISPR 11	EN55022, CISPR 22
Harmonic Currents	EN61000-3-2, Class A	EN61000-3-2, Class A
Voltage Flicker	EN61000-3-3	EN61000-3-3
Immunity	IEC/EN 60601-1-2	EN55024, CISPR 24
ESD	EN61000-4-2	±15kV air, ±8kV contact
Radiated Immunity	EN61000-4-3	10V/m, 3V 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 Specification	
Dimensions	212(L)x50(W)x30,8(H)mm
Weight	260g
MTBF	>100,000hrs MIL-HDBK-217 at 25°C
Isolation	4,000VAC Input to Output / 1,500VAC Input to Ground (Class I version only)

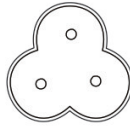
### Outline Drawing



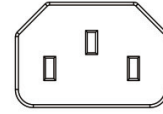
## AC Inlet Options



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

(^) 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.