

IP22 CLASS I & II (VII)

**Product Features**

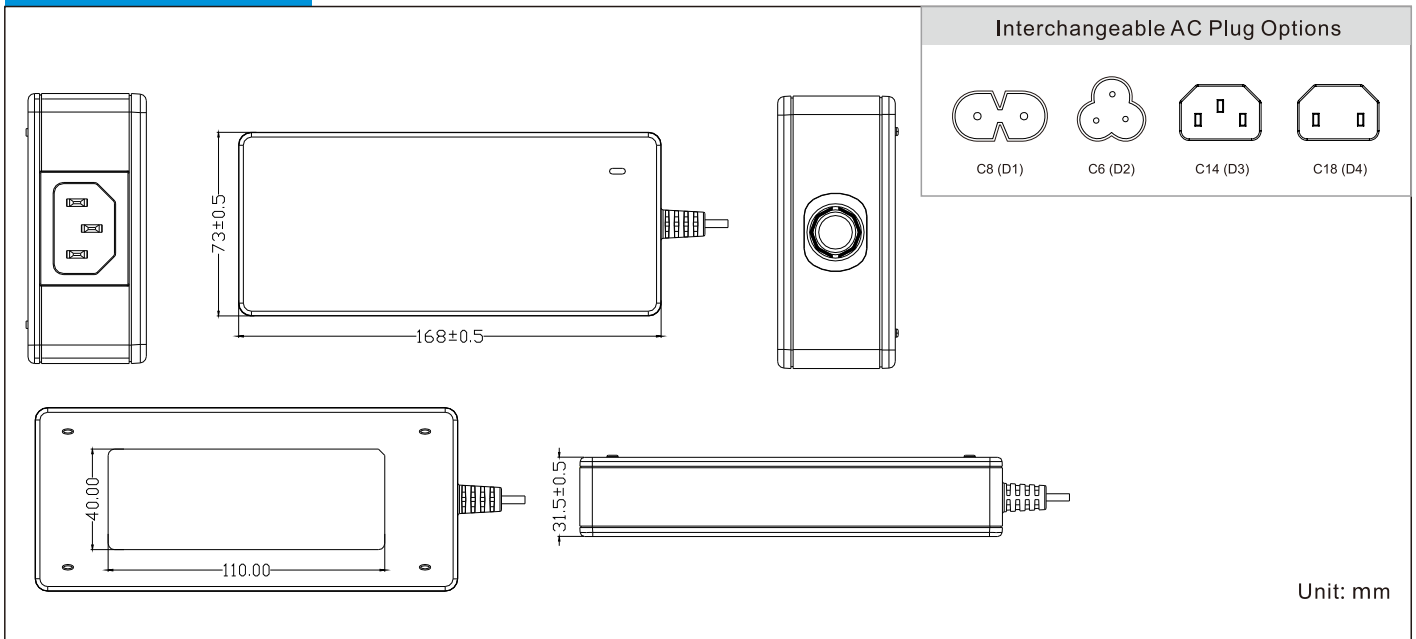
- Medical & I.T.E. safety approvals
- 2 MOPP input to output isolation
- Touch current  $\leq 100\mu\text{A}$
- Energy efficiency Level VII
- $\leq 0.15\text{W}$  standby power
- 11V-54V outputs, up to 240W
- Up to 5,000m operating altitude
- 4 types of AC inlet
- GaN technology



**Models & Ratings**

Model Number	Voltage <sup>(*)</sup>	Current	Rated Power	Ripple & Noise <sub>(max)(*)</sub> <sup>(2)</sup>	Voltage Tolerance	Line & Load Regulation	Efficiency	Start Up Delay
UES240DZ-XXXYYYYSPA	11.0-12.0	0.01-18.00	216.0W	150mVpk-pk	$\pm 5\%$	Line: $\pm 1\%$ Load: $\pm 5\%$	92.0%	$\leq 3\text{s}$
	12.1-13.0	0.01-16.60	215.0W	150mVpk-pk	$\pm 5\%$		92.0%	$\leq 3\text{s}$
	13.1-14.0	0.01-15.40	215.0W	150mVpk-pk	$\pm 5\%$		92.0%	$\leq 3\text{s}$
	14.1-15.0	0.01-14.40	216.0W	150mVpk-pk	$\pm 5\%$		92.0%	$\leq 3\text{s}$
	18.0-19.0	0.01-12.60	239.4W	150mVpk-pk	$\pm 5\%$		92.0%	$\leq 3\text{s}$
	19.1-20.0	0.01-12.00	240.0W	150mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	20.1-21.0	0.01-11.43	240.0W	150mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	21.1-22.0	0.01-10.90	239.8W	150mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	22.1-23.0	0.01-10.40	239.2W	150mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	23.1-24.0	0.01-10.00	240.0W	150mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	24.1-25.0	0.01-9.60	240.0W	150mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	25.1-26.0	0.01-9.23	240.0W	150mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	36.0-37.0	0.01-6.48	240.0W	200mVpk-pk	$\pm 5\%$		93.0%	$\leq 3\text{s}$
	37.1-38.0	0.01-6.31	239.8W	200mVpk-pk	$\pm 5\%$		93.5%	$\leq 3\text{s}$
	38.1-39.0	0.01-6.15	239.8W	200mVpk-pk	$\pm 5\%$		93.5%	$\leq 3\text{s}$
	39.1-40.0	0.01-6.00	240.0W	200mVpk-pk	$\pm 5\%$		93.5%	$\leq 3\text{s}$
	47.1-48.0	0.01-5.00	240.0W	250mVpk-pk	$\pm 5\%$		93.5%	$\leq 3\text{s}$
	48.1-49.0	0.01-4.89	236.6W	250mVpk-pk	$\pm 5\%$		94.0%	$\leq 3\text{s}$
	49.1-50.0	0.01-4.80	240.0W	250mVpk-pk	$\pm 5\%$		94.0%	$\leq 3\text{s}$
	50.1-51.0	0.01-4.70	239.7W	250mVpk-pk	$\pm 5\%$		94.0%	$\leq 3\text{s}$
51.1-52.0	0.01-4.60	239.2W	250mVpk-pk	$\pm 5\%$	94.0%	$\leq 3\text{s}$		
52.1-53.0	0.01-4.53	240.0W	250mVpk-pk	$\pm 5\%$	94.0%	$\leq 3\text{s}$		
53.1-54.0	0.01-4.44	240.0W	250mVpk-pk	$\pm 5\%$	94.0%	$\leq 3\text{s}$		

**Mechanical Details**



**Notes**

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

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

**Input**

Input Voltage Range	80-264VAC(80-90VAC refer to derating curve)
Frequency Range	47-63Hz
Input Current	3.5A max at 100VAC
Inrush Current	120A max at 240VAC cold start
Touch Leakage Current <sup>(max)</sup>	≤100μA at 264VAC

**Environmental**

Operating Temperature	-30°C to 70°C(40°C to 70°C fer to derating curve )
Storage Temperature	-40°C to 80°C
Operating Humidity	5% to 90% RH, non-condensing
Storage Humidity	5% to 95% RH
Operating Altitude	5,000m

**General**

Dimensions	168.0(L) 73.0(W) 31.5(H)mm
Power supply power density	0.621W/cm <sup>3</sup>
Weight	650g
MTBF	>50,000hrs MIL-HDBK-217 at 25°C

**Protection**

Overload	120-180% rated output power, auto recovery
Over Voltage	120-150% rated output voltage input to reset
Short Circuit	Trip and restart (hiccup mode)

**Safety Approvals**

Safety Agency / Mark	Medical
CB	IEC60601-1/IEC60601-1-11
UL	ANSI/AAMI ES60601-1/60601-1-11 CAN/CSA-C22.2 NO. 60601-1
TUV-Mark	EN60601-1/EN60601-1-11
CE	-

**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 D	EN61000-3-2, Class D
Voltage Flicker	EN61000-3-3	EN61000-3-3
Immunity	IEC/EN60601-1-2	EN55035, CISPR 35
ESD	IEC61000-4-2	±15KV air, ±8KV contact
Radiated Immunity	IEC61000-4-3	10V/m ,3V/m 80MHz - 2.7GMHz
EFT/Burst	IEC61000-4-4	±2KV on AC port, ±1KV on signal ports
Surge	IEC61000-4-5	±1KV line to line, ±2KV/Line-Earth
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	4000VDC input to output
Insulation Resistance	100M Ohms, 500VDC input to output

**Derating Curve**
