



IP22 Class I &amp; II (VI)

**Product Features**

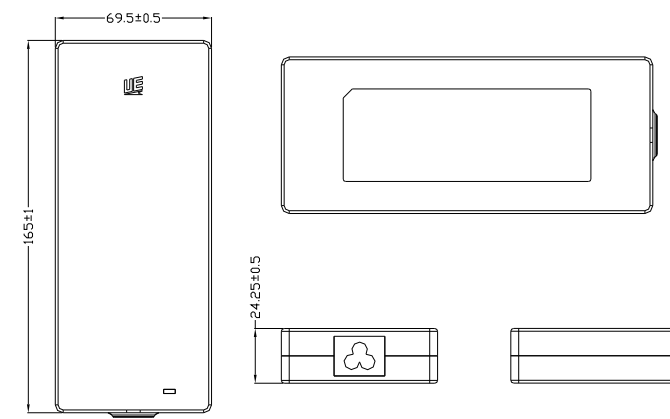
- Medical & ITE safety meet
- 2 MOPP input to output isolation
- DOE Efficiency Level VI
- PF>0.95@230Vac full load
- Leakage current < 100µA
- ≤ 0.15W standby power when the output voltage less than 1  
≤ 0.21W standby power when the output voltage greater than 20Vdc
- Up to 5,000m operating altitude
- Meet 2KV(DM)/4KV(CM) surge immunity IEC61000-4-5


**Models & Ratings**


Model Number	Voltage <sup>(*)</sup>	Current	Rated Power	Ripple & Noise (max) <sup>(*)</sup> (2)	Voltage Tolerance	Line & Load Regulation	Efficiency	Start Up Delay
UES180D"Z"-XXXXYYSPA	11.0-12.0	0.01-12.5	150W	150mVpk-pk	±5%	Line: ±1% Load: ±5%	92.0%	≤3s
	12.1-13.0	0.01-11.5	150W	150mVpk-pk	±5%		92.0%	≤3s
	13.1-14.0	0.01-10.7	150W	150mVpk-pk	±5%		92.0%	≤3s
	14.1-15.0	0.01-10.0	150W	150mVpk-pk	±5%		92.0%	≤3s
	17.1-18.0	0.01-10.0	180W	180mVpk-pk	±5%		93.0%	≤3s
	18.1-19.0	0.01-9.47	180W	190mVpk-pk	±5%		93.0%	≤3s
	19.1-20.0	0.01-9.00	180W	200mVpk-pk	±5%		93.0%	≤3s
	20.1-21.0	0.01-8.57	180W	210mVpk-pk	±5%		93.0%	≤3s
	21.1-22.0	0.01-8.18	180W	220mVpk-pk	±5%		93.0%	≤3s
	22.1-23.0	0.01-7.82	180W	230mVpk-pk	±5%		93.0%	≤3s
	23.1-24.0	0.01-7.50	180W	240mVpk-pk	±5%		93.0%	≤3s
	24.1-25.0	0.01-7.20	180W	250mVpk-pk	±5%		93.0%	≤3s
	25.1-26.0	0.01-6.92	180W	260mVpk-pk	±5%		93.0%	≤3s
	26.1-27.0	0.01-6.66	180W	270mVpk-pk	±5%		93.0%	≤3s
	35.1-36.0	0.01-5.00	180W	300mVpk-pk	±5%		94.0%	≤3s
	36.1-37.0	0.01-4.86	180W	300mVpk-pk	±5%		94.0%	≤3s
	37.1-38.0	0.01-4.73	180W	300mVpk-pk	±5%		94.0%	≤3s
	38.1-39.0	0.01-4.61	180W	300mVpk-pk	±5%		94.0%	≤3s
	39.1-40.0	0.01-4.50	180W	300mVpk-pk	±5%		94.0%	≤3s
	47.1-48.0	0.01-3.75	180W	400mVpk-pk	±5%		94.0%	≤3s
	48.1-49.0	0.01-3.67	180W	400mVpk-pk	±5%		94.0%	≤3s
	49.1-50.0	0.01-3.60	180W	400mVpk-pk	±5%		94.0%	≤3s
	50.1-51.0	0.01-3.52	180W	400mVpk-pk	±5%		94.0%	≤3s
	51.1-52.0	0.01-3.46	180W	400mVpk-pk	±5%		94.0%	≤3s
	52.1-53.0	0.01-3.39	180W	400mVpk-pk	±5%		94.0%	≤3s
53.1-54.0	0.01-3.33	180W	400mVpk-pk	±5%	94.0%	≤3s		

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


**Mechanical Details**



**Interchangeable AC Plug Options**




C8(D1)<sup>(\*)</sup>



C6(D2)

DC Cable<sup>(\*)</sup>:  
 UL 1185 14AWG\*2C 1200mm with ferrite for 11- 27V  
 UL 1185 16AWG\*2C 1200mm with ferrite for 36- 56V

Connector<sup>(\*)</sup>:  
 4PIN, 31\*10mm, 1&4"+, 2&3&SHELL"-



Unit: mm

**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.
- (\*3) Polarized C8 is available.

**Input**

Input Voltage Range	80-264VAC
Frequency Range	47-63Hz
Input Current	3.0A at 80VAC
Inrush Current	120A max at 240VAC cold start
Touch Leakage Current <sup>(max)</sup>	< 100µA at 264VAC

**Environmental**

Operating Temperature	-10°C to 40°C
Storage Temperature	-20°C to 60°C
Operating Humidity	10% to 90% RH, non-condensing
Storage Humidity	5% to 90% RH
Operating Altitude	5,000m

**General**

Dimensions	165(L)x69.5(W)x24.25(H)mm
Weight	800g
MTBF	>100,000hrs MIL-HK8K-217 at 25°C
Isolation	5,656VDC Input to Output

**Protection**

Overload	120-170% 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(Meet)	ITE(Meet)
CB	IEC60601-1 / IEC60601-1-11	IEC62368-1
UL	ANSI/AAMI ES60601-1 / 60601-1-11 CAN/CSA-C22.2 NO. 60601-1	UL62368
TüV SUD/Mark	EN60601-1 EN60601-1-11	-
TüV SUD/GS	-	EN62368-1
CE	-	EN62368

**EMC**

Emissions	Medical	ITE
Conducted	IEC/EN 60601-1-2, CISPR 11	EN55032, CISPR 32
Radiated	IEC/EN 60601-1-2, CISPR 11	EN55032, CISPR 32
Harmonic Currents	EN61000-3-2, Class C	EN61000-3-2, Class C
Voltage Flicker	EN61000-3-3	EN61000-3-3
Immunity	IEC/EN 60601-1-2	EN55035, CISPR 35
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	±2KV line to line (diff mode)
Conducted Immunity	EN61000-4-6	3Vrms, 6Vrms (0.15MHz-80MHz)
Magnetic Field	EN61000-4-8	30 A/m
Dips & Interruptions	EN61000-4-11	0%, 70%, 0% of UT

**Others**

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