

HWU18A series



Switching Mode Power Supplies for Medical and ITE and Home appliances

The HWU18 series AC/DC switch mode power supply provides 18 watts of continuous output power. It is a high-quality, high-efficiency, low-cost model that enhances your competitiveness. Meet the use of small equipment in various fields. Whether it is medical equipment, information network equipment, home appliances, small instruments, desk lighting, monitoring equipment, it can be used.

With the interchangeable AC-plug design, only one power supply can meet the power supply specifications of any country, and there is no need to purchase multiple connectors, resulting in excessive inventory.

CERTIFICATE



- ⌘ EN 55032:2015+AC: 2016, CISPR 32: 2015+COR1:2016: Class B
- ⌘ AS/NZS CISPR 32:2015: Class B
- ⌘ EN 61000-3-2:2014 and IEC 61000-3-2:2014
- ⌘ EN 61000-3-3:2013 and IEC 61000-3-3: 2013
- ⌘ EN 55035: 2017 and CISPR 35: 2016
- ⌘ EN 61000-4-2: 2009 and IEC 61000-4-2: 2008
- ⌘ EN 61000-4-3: 2006+A1: 2008 +A2: 2010 and IEC 61000-4-3: 2006+A1: 2007+A2: 2010
- ⌘ EN 61000-4-4: 2012 and IEC 61000-4-4:2012
- ⌘ EN 61000-4-5: 2014+A1:2017 and IEC 61000-4-5: 2014+A1:2017
- ⌘ EN 61000-4-6: 2014+AC: 2015 and IEC 61000-4-6:2013
- ⌘ EN 61000-4-8: 2010 and IEC 61000-4-8: 2009
- ⌘ EN 61000-4-11: 2004+A1:2017 and IEC 61000-4-11: 2004+A1:2017
- ⌘ FCC 47 CFR Part 18 SUBPART C
- ⌘ ANSI C63.4:2014
- ⌘ FCC/OET MP-5: 1986
- ⌘ FCC CFR Title 47 Part 15 Subpart B: Section 15.107 and 15.109
- ⌘ ANSI C63.4-2014
- ⌘ EN 55032:2015+ AC:2016, CISPR 32:2015+COR1:2016: Class B
- ⌘ AS/NZS CISPR 32:2015: Class B
- ⌘ EN 60601-1-2:2015, IEC 60601-1-2:2014
- ⌘ VCCI-CISPR 32:2016 Class B
- ⌘ CSA C22.2 NO. 60601-1:14, 3rd Ed
- ⌘ AS/NZS3112
- ⌘ UL/EN/IEC-62368
- ⌘ EN50075
- ⌘ BS1361-1 and BS1363-3
- ⌘ Energy Verified: NRCAN, DoE VI, CoC V5 tier 2, CEC, Quebec, Ontario, GEMS, ERP
- ⌘ EN 61558 LVD, CB Report



FEATURES

- Wall mount type
- Easy to change country AC plug
- Single Output
- Wide Operating Voltage to meet all countries(85 to 275VAC,47 to 63Hz)
- Insulation Safety level conforms to 2MOPP
- Waterproof design, up to IP42 level
- High ESD immunity
- Suitable for professional healthcare facility
- Multiple safety certification
- Can be used in an environment of 5000m above sea level
- 3 years warranty

APPLICATION

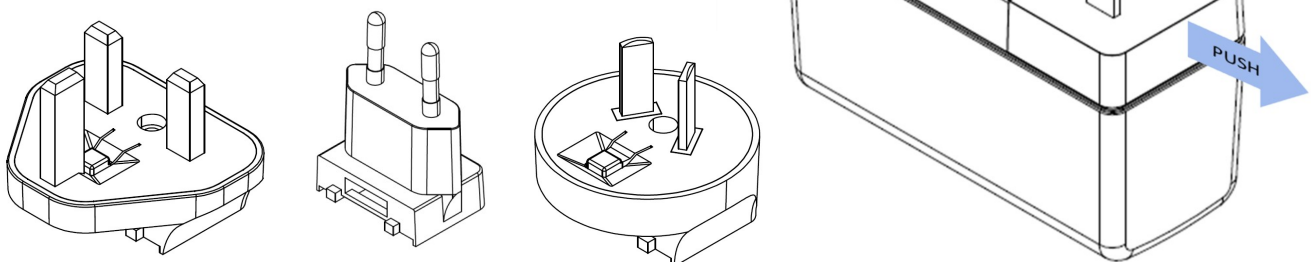
- Small Medical Equipment, Sphygmomanometer, Blood oxygen machine
- Temperature monitor, Controller
- DVR, Speaker, Desk lighting, CCD, DC Fan, Printer, Wi-Fi Hub,

STRUTURAL DESCRIPTION

The shell of this product is made of PC945 plastic materials. The temperature resistance has reached 130 degrees C, and the fire rating has reached 94V0, which has quite excellent mechanical strength.

At the input end, we adopt a double-fuse design, and the creepage is as high as 9.1mm or more. Give users absolute security.

In order to meet the needs of all countries in the world, this product has a very simple design, you can easily replace the AC-plug you are using, if you need to replace the plug, press this button and push the plug outward to replace the plug of other countries (Please refer to the following drawing)



ELECTRICAL CHARACTERISTICS

Characteristic	Condition / Description	Symbol	Type	Min.	Typ.	Max.	Unit
Certified input voltage range	Safety Approval & Specification in label	Vis	-	100		240	VAC
Input Operate Voltage Range	Detail to see Fig.1 (Derate linearly from 100% load at 90VAC to 80% load at 80VAC)	Vin	-	80		275	VAC
Input Frequency	Sine wave	Fi	-	47		63	Hz
Output Power Range	See Rating Chart	Po	-			18	W
Low Line Input Current	Full Load, Vin=100VAC	If-lw	-		0.42		A
High Line Input Current	Full Load, Vin=240VAC	If-hi	-		0.18		A
Low Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=100VAC	Iirl	-			38	A
High Line Input Inrush Current	Full Load, 25°C, Cool start, Vin=240VAC	Iirh	-			85	A
Efficiency	Full Load, Vin=230VAC, Detail to see Rating Chart	η	-	85		87.5	%
Line Regulation	Adjust Vin Range= 100~240VAC	Δ Vi	-			1	%
Load Regulation		Δ Vo	-			5	%
Over Load Protection	Recovers automatically after fault condition is removed	OLP	-	110		150	%
Time of Transient Response	Switch between full load and half load, Vin=110VAC	ttr	-			4	ms
Hold-Up Time	Full Load, Vin=100VAC (See Rating Chart)	th	-	8			ms
Start-Up Time	Full Load, Vin=100VAC	ts	-			2	s
Temperature Coefficient	All Condition	Tc	-			± 0.04	%/°C
Dielectric Withstanding Voltage	Primary to Secondary, Limit Current < 10mA	Vdw	-			4000	VAC
Power Consumption	No Load, Vin=240VAC	Pn	-		65	74	mW
Power Density		Pd	-			2.82	W/in ³

ENVIRONMENTAL

Characteristic	Condition / Description	Symbol	Type	Min.	Typ.	Max.	Unit
Operating Temperature	Detail to see Fig.2 (Derate linearly from 100% load at 40°C to 50% load at 70°C)	To	B	-30	40	70	°C
			C	-20	40	70	°C
			D, E, G	-10	40	70	°C
Storage Temperature	10~95%RH	Ts	-	-40		85	VAC
Operating Humidity	non-Condensing	Ho	-	0		95%	RH
Storage Humidity	All Condition	Hs	-	0		95%	RH
Operating Altitude (Elevation)	All Condition	EL	-			5000	M
Ingress Protection Rating	International Protection Marking, IEC 60529	IP	-			IP56	CLASS
Vibration	10 ~ 500Hz, 10min./1cycle, 60min. each along X, Y, Z axes	VBR	-			5	G
Mean Time Between Failure	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	MTBF	-	200			kHr

ELECTROMAGNETIC COMPATIBILITY

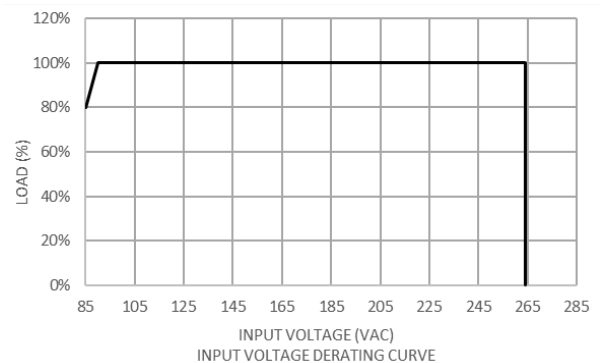
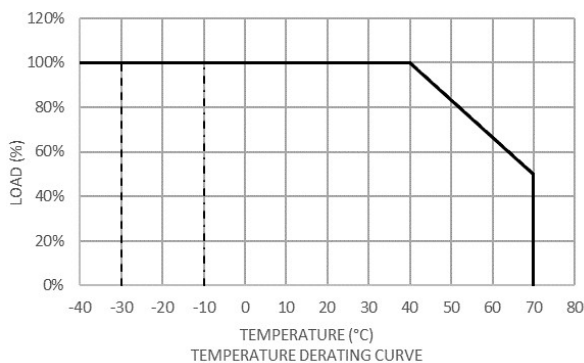
Characteristic	Condition / Description	Symbol	Type	Min.	Typ.	Max.	Unit
Conducted Emission	EN55011, CISPR-32, FCC, VCCI	CE	-	B			CLASS
Radiated Emission	EN55011, CISPR-32, FCC, VCCI	RE	-	B			CLASS
Harmonic distortion	Harmonic distortion, Class A and D	THD	-	A		D	CLASS
Line flicker	All Condition	FLK	-			95%	RH
Electro Static Discharge (ESD)	Air Discharge, IEC61000-4-2	Vesa	-			15	kV
Electro Static Discharge (ESD)	Contact Discharge, IEC61000-4-2	Vesc	-			8	kV
Surge Voltage	Line to Neutral (EN61000-4-5)	Vs	-			1	kV
Radiated immunity	EN61000-4-3	RI	-			10	V/m
Fast transient/burst	EN61000-4-4	VTB	-			± 2	kV
Conducted immunity	EN61000-4-6	CI	-			10	Vrms
Magnetic field immunity	EN61000-4-8	MI	-			30	A/m
Voltage dip immunity	EN61000-4-11,30% reduction	VDI₃₀	-			500	ms
	EN61000-4-11,95% reduction	VDI₉₀	-			10	ms

RETING CHARACTERISTICS

Model No.	Output Voltage	Max. Output Current	Max. Output Power	Ripple & Noise	Total Reg.	Hold-Up Time	No Load Consumption	Typ. Eff.	Adjustable Output Volt.		Protection	Remark
									min.	max.		
	(VDC)	(A)	(W)	(mVp-p)	(%)	(ms)	(mW)	%	(VDC)	(VDC)		
HWU18A-030N	3.3	3.03	10	50	± 5	12	74	78	3.3	4.9	Hiccup	Preliminary
HWU18A-050N	5.0	2.60	13	50	± 5	12	74	80	5.0	6.0	Hiccup	Preliminary
HWU18A-060N	6.0	2.50	15	60	± 5	11	74	80	6.0	8.0	Hiccup	Preliminary
HWU18A-090N	9.0	2.00	18	90	± 5	10	74	80	8.0	11.0	Hiccup	Preliminary
HWU18A-120N	12.0	1.50	18	120	± 5	10	74	87	11.0	13.0	Hiccup	cUL,CE
HWU18A-150N	15.0	1.20	18	150	± 5	10	74	87	13.0	16.0	Hiccup	Preliminary
HWU18A-180N	18.0	1.00	18	180	± 5	10	74	88	16.0	21.0	Hiccup	Preliminary
HWU18A-240N	24.0	0.75	18	240	± 5	10	74	89	21.0	27.0	Hiccup	Preliminary
HWU18A-300N	30.0	0.60	18	300	± 5	10	74	90	27.0	33.0	Hiccup	Preliminary
HWU18A-360N	36.0	0.50	18	360	± 5	10	74	90	33.0	40.0	Hiccup	Preliminary
HWU18A-480N	48.0	0.38	18	480	± 5	10	74	90	40.0	55.0	Hiccup	Preliminary

SPECIFICATION NOTE :

1. Output can provide up to peak load when the power supply starts up. Continuous staying in more than rated load is not allowed
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
4. Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load.
5. The ripple is measured from peak to peak with a bandwidth-limit of 20MHz (Measured at the output connector with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor).
6. Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated



MECHANICAL DIMENSIONS

1. The following dimension drawings are in mm
2. Selected output connectors and wire, please refer to appendix.
3. Please choose the output cable carefully, because the output cable will change the efficiency of the product.

