■Feature：

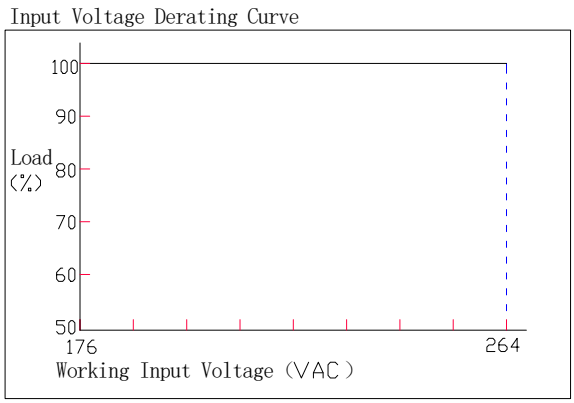
- AC Input: 176~264Vac, 200~370Vdc/47Hz~63Hz
- Designed according with safety standard
- Protection: Overload/Short/Over voltage
- LED indicator, output voltage adjusted
- All capacitor used high working temperature 105℃ & long life time type
- Battery low protections
- Power down protection,uninterrupted working while AC input or off

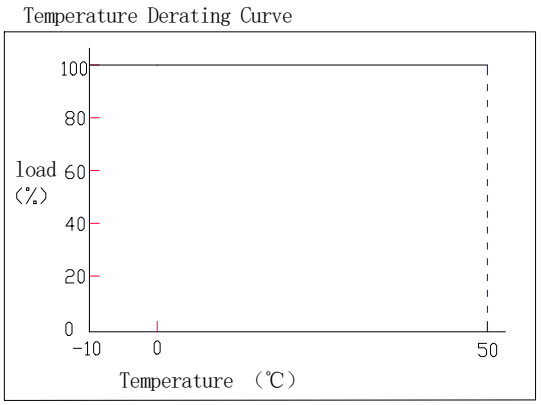
■Specifications

Mode (1)		AFCH-240D12+13.8B	
Output	Output Voltage	V1	BAT
		12V	13.8V
	Rated Current	20A	0.5A(0.4~0.6A)
	Rated	2.0~20A	0~0.5A
	Rated Output Power	247W	
	Ripple & Noise	<180 mV	
	DC adjustment range	11.76-13.2V	
	Setting Voltage	12.0-12.36V	
	Output Voltage	±3.0%	
	Setup time	≤1.5S (230Vac input, Full load)	
	Setup time	≥20mS(230Vac input, Full load)	
	Output Inrush	<5.0%	
	Dynamic	10%-100%Load:10%Vp-p 10%-50%Load: 5%Vp-p 50%-100%Load: 5%Vp-p	
Input	Input Voltage range	176Vac~264Vac	
	Rated Input Voltage	200Vac~240Vac/47Hz~63Hz	
	Start-up Voltage	176Vac	
	Efficient (Type)	85%	
	Standby power	/	
	Input Current(Max)	<4A	
	Start-up Inrush Current	<60A@230Vac Cold start	
Protection	Power down protection	uninterrupted working while AC input on or off	
	Battery low	BAT:9.5±0.5v	
	Over Power Protection	105%-180%, auto recovery	
	Over Voltage Protection	V1： 105%-180%, auto recovery	
	Over Current Protection	V1： 105%-180%, auto recovery	
	Short Protection	V1： , auto recovery	
Working Environment	Working	-10℃~50℃； 20%~90%RH No condensing	
	Store TEMP/Humidity	-25℃~85℃； 10%~95%RH No condensing	
	Vibration	10 ~ 500Hz, 2G 10min./1cycle, period for60min. each along X,Y, Z axes	
	Shock	20G/11mS pulse ,3 times at each X,Y,Z axes	
	Altitude	3000m	
Safety&EMC	Safety Standard	GB4943/EN60950 ■Reference ☐Certification	
	Leakage current	I/P-O/P≤0.25mA I/P-PG≤3.5mA	
	With Stand Voltage	I/P-O/P:3KVac/10mA I/P-PG:1.5KVac/10mA O/P-PG:500Vdc/10mA 1min	
	Isolated Resistance	I/P-O/P: 100M ohms I/P-PG: 100M ohms O/P-PG: 100M ohms	
	Harmaonic current	EN61000-3-2,-3	
	EMI	EN55022 Class B; FCC PRAT15 B	
	EMS	EN61000-4-2,3,4,5,6,8,11，Class A equipment	
Others	Dimension	215mm×115mm×49mm	
	Connector	9.525-9P block terminal	

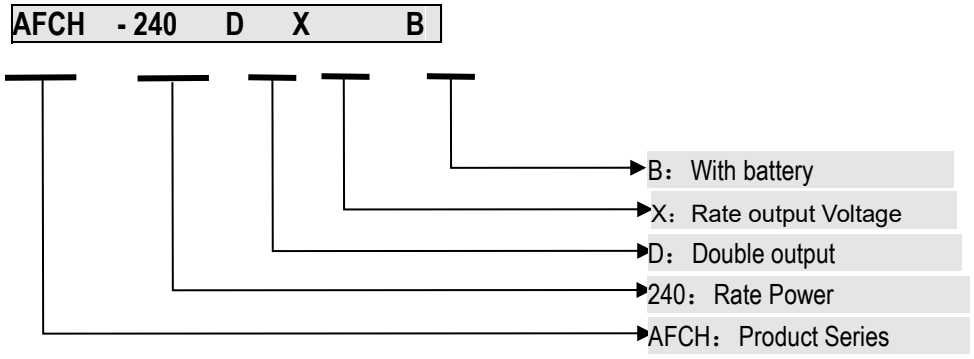
	Cooling Model	Free air cooling
Reliability	MTBF	200,000Hrs AT 25℃, MIL-217 Method 2 Components Stress Method
Note	1. All parameters are measured at 230Vac input, rated load and 25℃ of ambient temperature after 15min working, if not specially mentioned. 2. Ripple & Noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with 0.1uF and 10uF parallel capacitor. 3. Please refer to the detailed Derating Curve、 Dimension and Mechanical.	

■ Derating Curve：



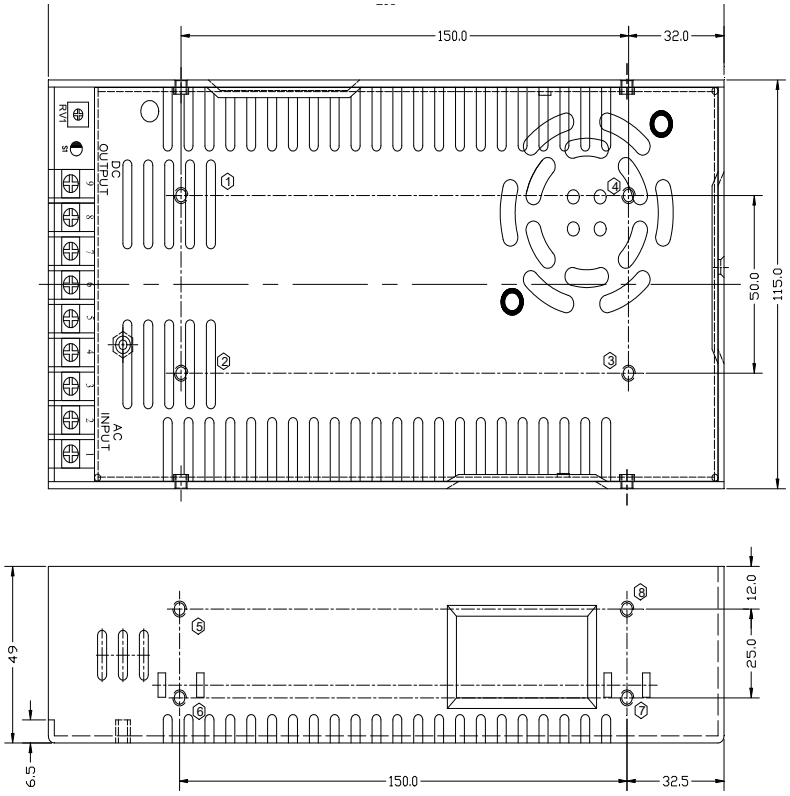


■ Model:

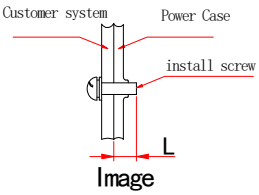


■ Demension：

Unit: mm / Contour tolerance ±1.0



Fix side	method	fix hole	Screw#	Lmax	Torque(max)
Bottom	screwing	①—④	M4	4mm	8.0Kgf.cm (max)
Face	screwing	①—④ transfor	M4	4mm	10Kgf.cm (max)
Side	screwing	⑤—⑫	M4	4mm	8.0Kgf.cm (max)



Note: The length of the screw into the case should not exceed the "L"

	Assignment		Terminal
CON1	1	N	9.525-9Pin
	2	L	
	3	⏚	
	4	BAT+	
	5	BAT-	
	6-7	GND	
	8-9	12V	

■ Product installation and instruction：

1. Refer to the mechanical to select the appropriate installation. If necessary， the diameter of the kelly wire is no less than AWG #1.
2. Make the electrical connection is correct, to avoid damage to the SPS or equipment : Input & Output, Ac & DC, Positive & negative, Input Voltage Range.
3. Do not touch circuit board to avoid electric shock when SPS is working. Do not touch to avoid heat in three minutes after working. Do not touch the soldering side.
4. Let it work at ventilated conditions to improve reliability. Do not make it ON/OFF too quickly . Any condition is out of the rated range, please contact FAE for suggestion.
5. If the SPS works abnormally, do not open to repair except professional, contact FAE for support.

■ Packaging, transportation, storage：

1. **Package**:Unless customer's special demand, Product name, model, manufacturer logo in the box; Date of production can be traced back.
2. **Transport:** Product packaging is suitable for road, railway, air shipping and sea shipping, etc. Be to civilized handling, waterproof, anti-fall, and to avoid severe impact.
3. **Storage**: Do not disassemble or take off the packing box when the product is not in use. Keep 20cm away from ground, and 50cm away from Wall, heat source and air inlet. The storage temperature and relative humidity shall be in accordance with the specifications， and Avoid strong mechanical vibration, shock and strong magnetic field. If the storage period is more than two years, it should be tested again before use.

■ Reference standard：

1. **GB4943/EN60950/ EN62368：** Safety of Information Technology Equipment.
2. **GB2324：** Basic environmental testing procedures for electric and electronic products.
3. **EN55022/EN55032/EN55024：** Information technology equipment – Radio disturbance characteristics - Limits and methods of measurement
4. **IEC61000-4：** Electromagnetic compatibility (EMC) test and measurement techniques.
5. **IEC 61000-6-1 :** Standard and measurement of electromagnetic immunity for residential, commercial and light industrial environments.
6. **IEC 61000-6-2 ：** Standard and measurement of electromagnetic immunity for products used in industrial environment.
7. **GB17625.1-2022：** The limits for the harmonic current from low-voltage electrical and electronic equipment (equipment input current≤16A per phase).
8. **GB/T 17626：** Electromagnetic compatibility testing and measurement techniques.
9. **GB/T14714：** General specification for switching power supply of micro computer system equipment.
10. **GB/T9254.1-2021:** Radio disturbance limits and methods of measurement for information technology equipment.
11. DONGGUAN PYW ELECTRONICS TECH. CO.,LTD. Enterprise standard.

■ Statement

Class A statement

Warning

In a residential environment, running this device may cause radio interference.