

AFC20 Series

20 W AC/DC Power Module

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- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Regulated Output and Low Ripple and Noise
- Isolation Class II
- High Efficiency up to 85%
- CE, UL Approval
- 2-Years Product Warranty



Electrical specifications

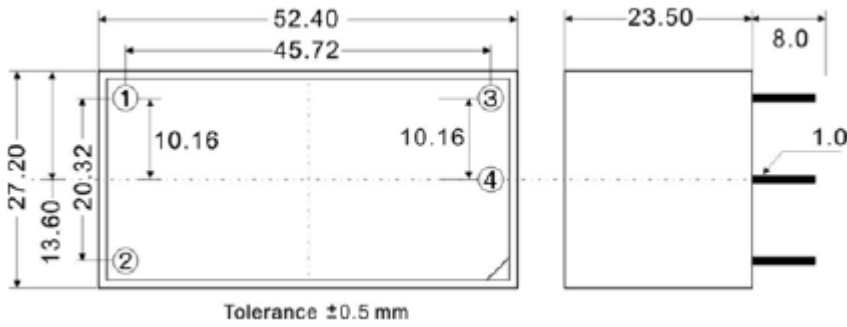
Model No.	AFC20-3.3S	AFC20-5S	AFC20-12S	AFC20-15S	AFC20-24S
Max Output Wattage (W)	11.88W	18W	20W	20W	20W
Input	Voltage				
	90-264 VAC				
	Frequency (Hz)				
	47-440 Hz				
	Current (Full load)				
385 mA max. (115 VAC) / 250 mA max. (230 VAC)					
Inrush Current (<2ms, Cold start)					
20 A max. (115 VAC) / 40 A max. (230 VAC)					
Leakage Current					
0.75 mA max.					
Output	Voltage (V.DC.)				
	3.3V	5V	12V	15V	24V
	Voltage Accuracy				
	±2%				
	Current (mA) max				
	3600	3600	1660	1330	833
	Line Regulation (LL-HL) (typ.)				
	±0.5%				
	Load Regulation (5-100%) (typ.)				
	±1%				
	Minimum Load				
	0%	0%	2%	0%	0%
	Maximum Capacitive Load (230V)				
4500uF	3500uF	1800uF	1500uF	1200uF	
Ripple max (Vp-p)					
75mV	75mV	100mV	100mV	100mV	
Noise max (Vp-p)					
100mV					
Efficiency					
74%	78%	83%	85%	86%	
Hold-up Time					
12 ms (115VAC) / 56ms (230VAC)					
Switching Frequency					
100 ~ 130 kHz					
Protection	Over Power Protection				
	Hiccup technique, auto-recovery				
	Over Voltage Protection				
Zener diode clamp					
Short Circuit Protection					
Hiccup mode, indefinite (automatic recovery)					
Isolation	Input-Output (V.AC)				
3000V					
Environment	Operating Temperature				
	-40°C...+70°C (with derating)				
	Storage Temperature				
	-40°C...+85°C				
	Temperature Coefficient				
±0.02%/°C					
Humidity					
95% RH					
MTBF					
>250,000 h @ 25°C (MIL-HDBK-217F)					
Physical	Dimension (L x W x H)				
	2.06 x 1.07 x 0.93 Inches (52.4 x 27.2 x 23.5 mm) Tolerance ±0.5 mm				
	Case Material				
	Plastic resin with Fiberglass (flammability to UL 94V-0)				
Weight					
59 g					
Cooling Method					
Free air convection					
Genera	Vibration				
	10-55 Hz 0.5 mm width/ 1 minute cycle				
Shock					
20 G (3 directions each 3 times.)					
Safety	Agency Approvals				
UL/cUL, CE					
EMC	EMI (Conducted & Radiated Emission)				
	EN 55022 class B				
EMS (Noise Immunity)					
EN 55024					

All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.
Note :1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

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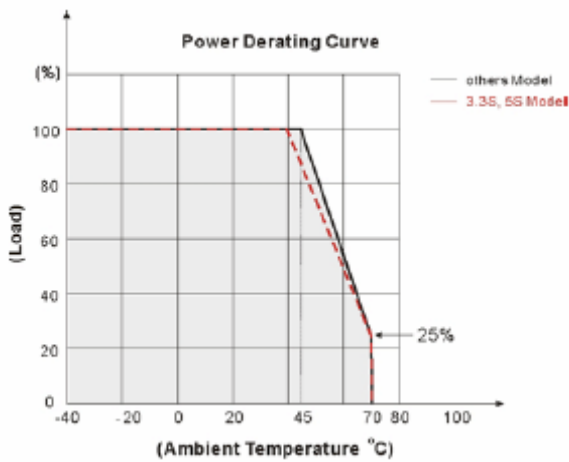
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MECHANICAL DIMENSIONS (Top View)



Pin no:	Single
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

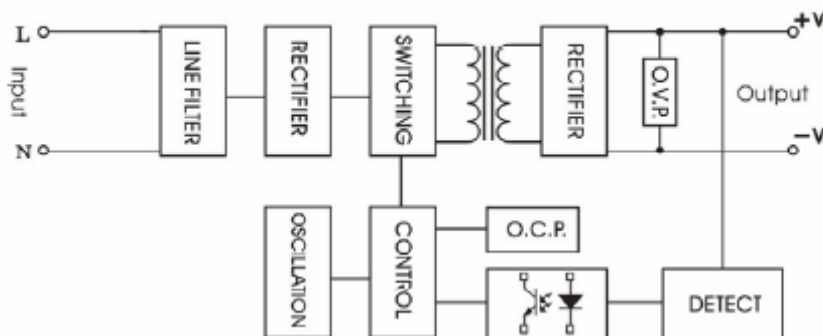
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Block Diagram

Single Output



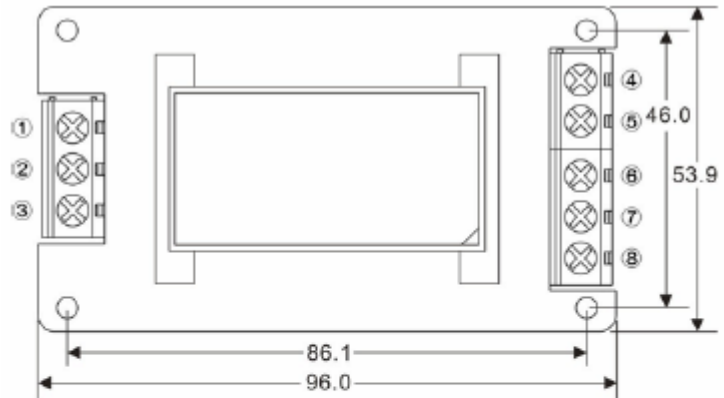
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Screw terminals

AFC20-A2

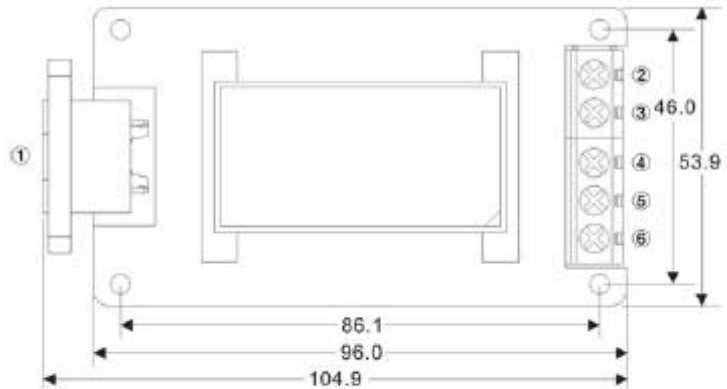


Pin no:	Single
1	NO CONN
2	AC IN (N)
3	AC IN (L)
4	NO CONN
5	+DC OUT
6	-DC OUT
7	NO CONN
8	NO CONN



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AFC20-A3



Pin no:	Single
1	AC IN
2	NO CONN
3	+DC OUT
4	-DC OUT
5	NO CONN
6	NO CONN



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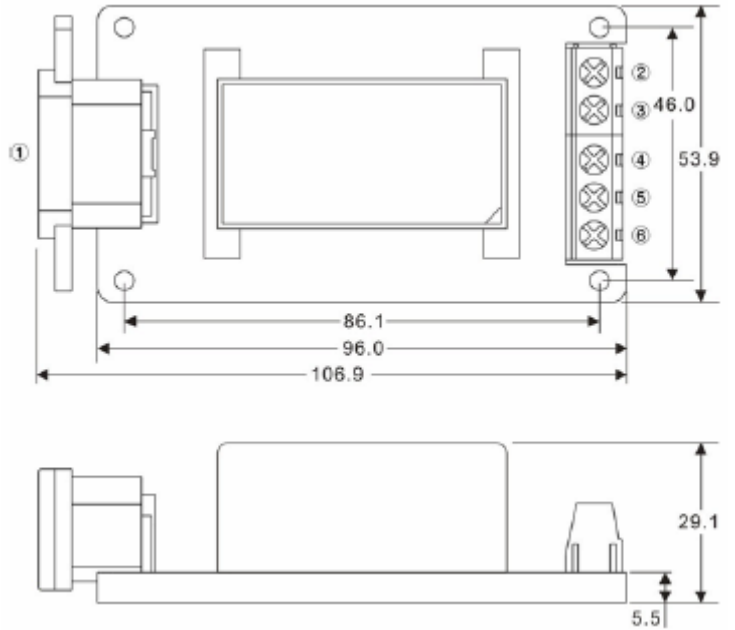
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AFC20-A4



Pin no:	Single
1	AC IN
2	NO CONN
3	+DC OUT
4	-DC OUT
5	NO CONN
6	NO CONN

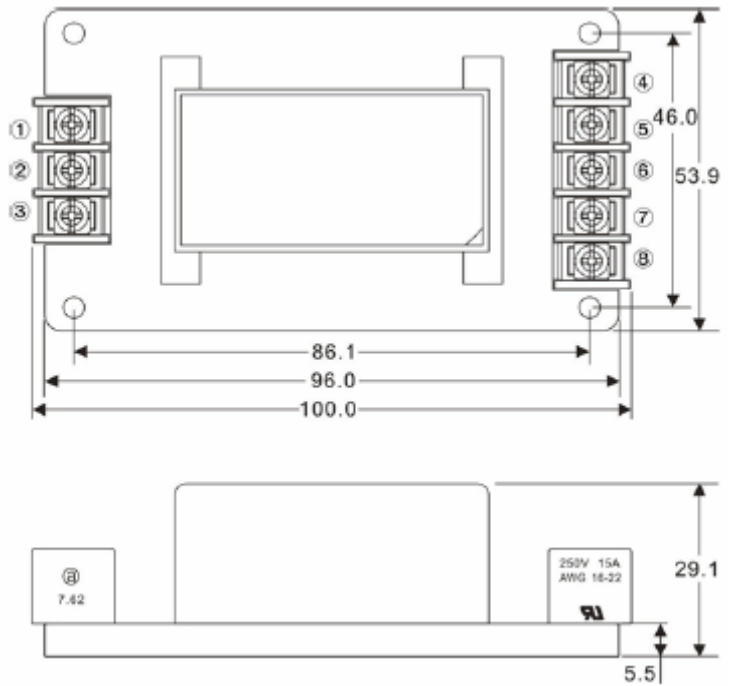


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Pin no:	Single
1	NO CONN
2	AC IN (N)
3	AC IN (L)
4	NO CONN
5	+DC OUT
6	-DC OUT
7	NO CONN
8	NO CONN



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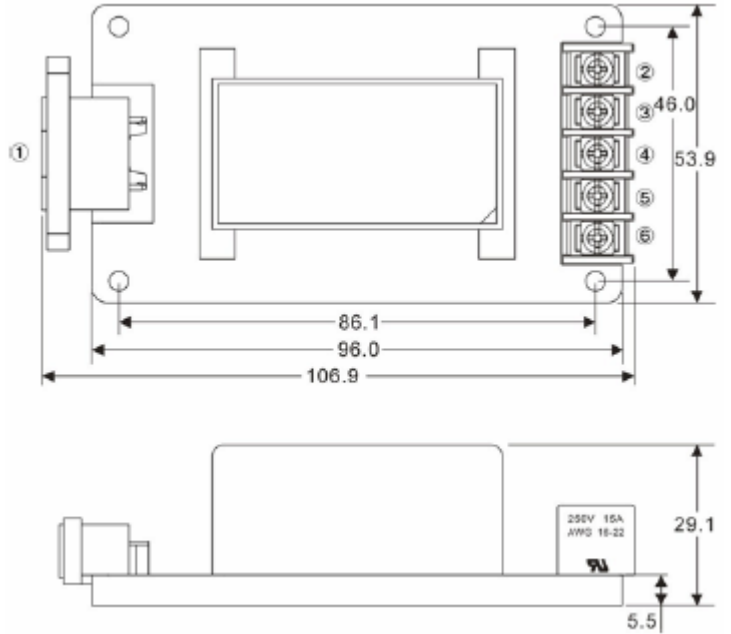
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AFC20-A6



Pin no:	Single
1	AC IN
2	NO CONN
3	+DC OUT
4	-DC OUT
5	NO CONN
6	NO CONN



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AFC20-A7



Pin no:	Single
1	AC IN
2	NO CONN
3	+DC OUT
4	-DC OUT
5	NO CONN
6	NO CONN

