



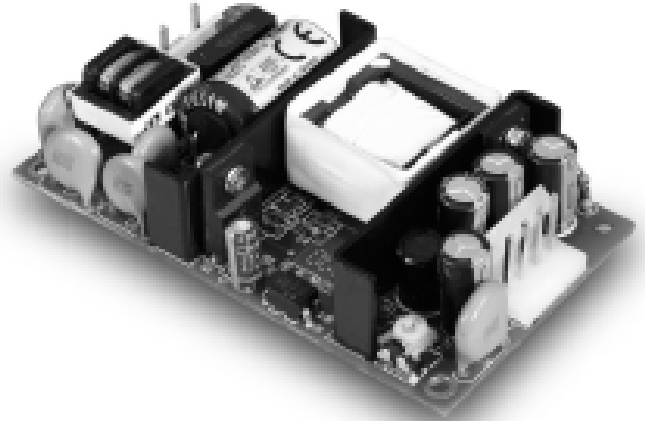
# CFM20 SERIES

## 20 WATT OPEN FRAME AC-DC MODULES



### Features

- \* Universal Input Range 85-264Vac
- \* Efficiency to 81%
- \* Industry Standard Pin Out
- \* Meets EN55022 Class B
- \* Continuous Short Circuit Protection
- \* PCB Mountable Type is available



MODEL	OUTPUT VOLTAGE	MAX. LOAD	MIN. LOAD	RIPPLE & NOISE NOTE 1	VOLTAGE ACCURACY NOTE 2	LINE REGULATION NOTE 3	LOAD REGULATION NOTE 4	% EFF. (Typ.) NOTE 5
CFM2001S	5V	4400mA	0A	1%	±1%	±0.5%	±1%	72%
CFM2002S	12V	1800mA	0A	1%	±1%	±0.5%	±1%	79%
CFM2003S	15V	1400mA	0A	1%	±1%	±0.5%	±1%	80%
CFM2005S	24V	920mA	0A	1%	±1%	±0.5%	±1%	81%
CFM2007S	3.3V	4400mA	0A	50mV	±1%	±0.5%	±1%	66%
CFM2009S	9V	2450mA	0A	1%	±1%	±0.5%	±1%	76%

## Specifications

### INPUT SPECIFICATIONS:

Voltage ..... 85~264Vac  
 Frequency ..... 47 to 63Hz  
 Inrush Current ..... 40A max. @230Vac  
 Conducted EMI ..... CISPR/FCC Class B  
 Leakage Current ..... 3.5mA max.

### OUTPUT SPECIFICATIONS:

Holdup Time ..... 16ms typ. @115Vac  
 Short Circuit Protection ..... Hiccup Mode (Auto Recovery)  
 Over Voltage Protection ..... TVS Component to Clamp  
 Temperature Coefficient .....  $\pm 0.05\%/^{\circ}\text{C}$

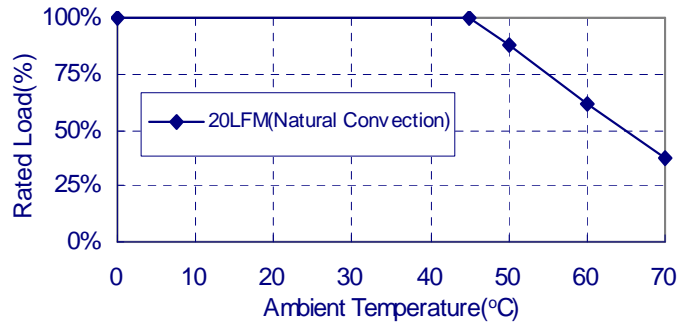
### GENERAL SPECIFICATIONS:

Isolation ..... Input to output = 4,242VDC  
 Operating Temperature ..... 0 ~ 70°C (see Derating Curve)  
 Storage Temperature ..... -20~85°C  
 Humidity ..... 93% RH max. Non condensing  
 Cooling ..... Natural Convection  
 Switching Frequency ..... 67KHz Typical  
 MTBF ..... MIL-HDBK-217F, GB, 25°C/115VAC 300K hrs min.  
 Altitude ..... 2000m  
 Dimensions ..... 3.501x2.000x0.906Inches (88.92x50.80x23.00mm)  
 (CFM200XS-P) 3.501x2.000x1.000Inches (88.92x50.80x25.40mm)  
 Weight ..... 100g(0.22 Pounds)

### SAFETY AND EMC:

Emission and Immunity ..... EN55022 Class B  
 EN61000-6-3, EN61000-3-2,  
 EN61000-3-3  
 EN55024, EN61204-3, EN61000-6-1  
 Safety ..... IEC60950-1, EN60950-1, UL60950-1

## CFM20S Series Derating Curve

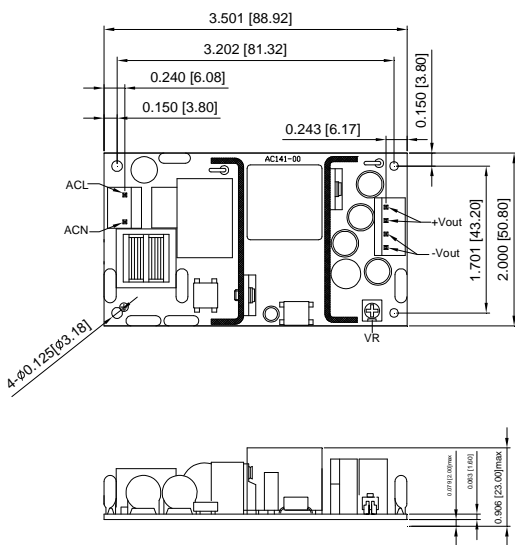


### NOTE:

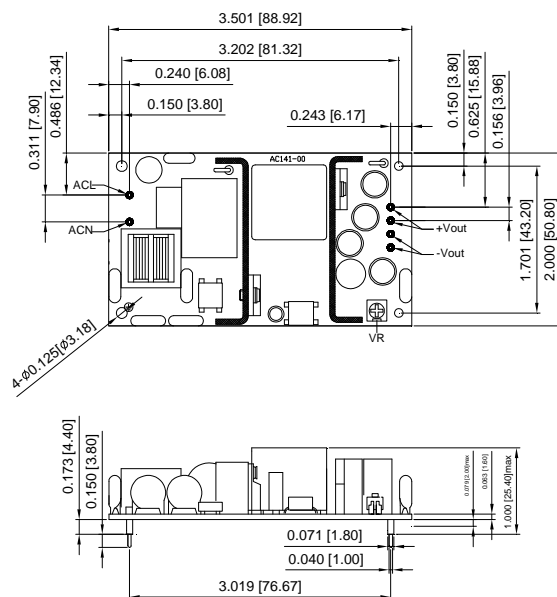
1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
2. Voltage accuracy is set at 100% rated load and 25°C Ta.
3. Line regulation is measured from High Line to Low Line with full load.
4. Load regulation is measured from full to 10% load.
5. Typical efficiency at 230VAC and full load at 25°C.
6. Standard input and output connectors wafer with LONG CHU P3060 series and mate with MOLEX housing 5195 series or equivalent.
7. Model "CFM200XS-P": Connectors with pcb mountable type.

## CFM20 Series

All Dimensions are in inches(mm)  
 Tolerance:Inches:X.XXX±0.02  
 Millimeters:X.XX±0.5



## CFM20XS-P Series



Typical at 25°C, nominal line and 75% load, unless otherwise Specified