



# CFM40/60S SERIES

## 40/60 WATT OPEN FRAME AC-DC MODULES



### FEATURES

- \* Universal Input Range 90~264VAC
- \* 2"x 4" Size
- \* Industry Standard Pin Out
- \* Efficiency to 87%
- \* Meets EN55022 Class B and CISPR/FCC Class B,
- \* Continuous Short Circuit Protection



#### CFM40 SERIES

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	% EFF. (TYP.)
CFM40S033	3.3 V	6 A	50mV	±1%	±0.5%	±1%	70%
CFM40S050	5 V	6 A	1%	±1%	±0.5%	±1%	76%
CFM40S090	9 V	4.45 A	1%	±1%	±0.5%	±1%	84%
CFM40S120	12 V	3.34 A	1%	±1%	±0.5%	±1%	85%
CFM40S150	15 V	2.67 A	1%	±1%	±0.5%	±1%	85%
CFM40S240	24 V	1.67 A	1%	±1%	±0.5%	±1%	85%
CFM40S300	30 V	1.33 A	1%	±1%	±0.5%	±1%	86%
CFM40S360	36 V	1.11 A	1%	±1%	±0.5%	±1%	87%
CFM40S480	48 V	0.834 A	1%	±1%	±0.5%	±1%	87%

#### CFM60 SERIES

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE	VOLTAGE ACCURACY	LINE REGULATION	LOAD REGULATION	% EFF. (TYP.)
CFM60S033	3.3 V	8 A	50mV	±1%	±0.5%	±1%	72%
CFM60S050	5 V	8 A	1%	±1%	±0.5%	±1%	77%
CFM60S090	9 V	6.67 A	1%	±1%	±0.5%	±1%	84%
CFM60S120	12 V	5 A	1%	±1%	±0.5%	±1%	85%
CFM60S150	15 V	4 A	1%	±1%	±0.5%	±1%	86%
CFM60S240	24 V	2.5 A	1%	±1%	±0.5%	±1%	86%
CFM60S300	30 V	2 A	1%	±1%	±0.5%	±1%	86%
CFM60S360	36 V	1.67 A	1%	±1%	±0.5%	±1%	88%
CFM60S480	48 V	1.25 A	1%	±1%	±0.5%	±1%	88%

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# Specifications

# CFM40/60S Series Derating Curve

## INPUT SPECIFICATIONS:

Voltage ..... 90~264Vac  
 Frequency ..... 47 to 63Hz

Inrush Current ..... Cold Start@25 °C ..... 50A max. @240Vac  
 Leakage Current ..... 1mA Typical

## OUTPUT SPECIFICATIONS:

Holdup Time ..... 8ms typ. @115Vac  
 Short Circuit Protection ..... Hiccup Mode (Auto Recover)  
 Over Voltage Protection ..... TVS Component to Clamp  
 Temperature Coefficient ..... ±0.05%/°C

## GENERAL SPECIFICATIONS:

Isolation ..... Input to Output = 4,242VDC

Operating Temperature ..... 0 ~ 70 (see Derating Curve) °C  
 Storage Temperature ..... -20~85 °C

Humidity ..... 93% RH max. Non-Condensing  
 Cooling ..... Natural Convection  
 Switching Frequency ..... 66KHz Typical  
 MTBF ..... MIL-HDBK-217F, GB, 25°C/115VAC ... 200Khrs min.  
 Altitude ..... 2000m

### Dimensions:

CFM40/60 Open Frame ..... 4.000x2.000x1.200Inches (101.60x50.80x30.48mm)  
 CFM40/60 Covered ..... 4.606x2.441x1.5750Inches (117.00x62.00x40.00mm)  
 Weight ..... CFM40/60: 170g/175g (0.38/0.39 Pounds)  
 CFM40/60 Covered: 210g/215g (0.46/0.47 Pounds)

## SAFETY AND EMC:

Emission and Immunity ..... EN55022 Class B, FCC Part 15 Class B  
 EN61000-6-3, EN61000-3-2, EN61000-3-3 EN55024, EN61204-3,  
 EN61000-6-1

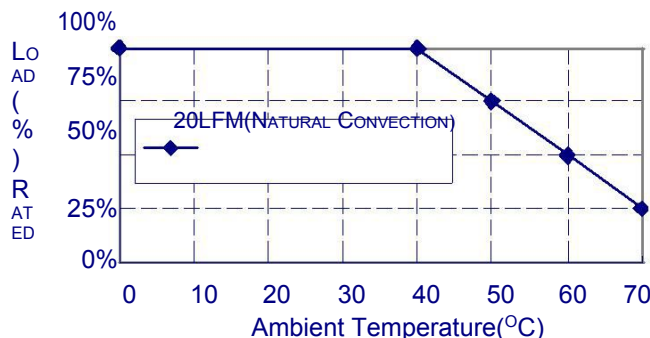
Safety ..... IEC60950-1, EN60950-1, UL60950-1

## NOTE:

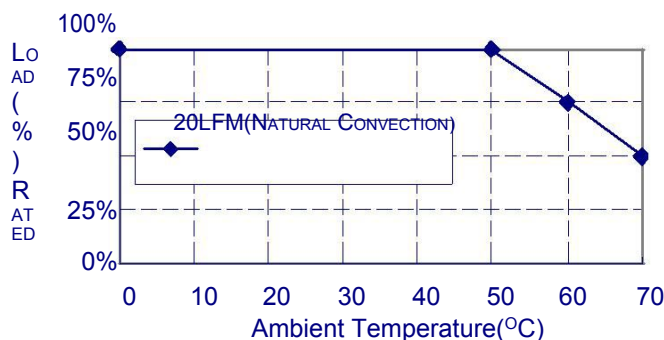
1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for Ripple & Noise measuring @20MHz BW.
2. Line regulation is measured from high line to low line with full load.
3. Load regulation is measured from full to 10% load.
4. Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal.
5. Output connector mates with Molex housing 09-50-3041 and Molex 2878 series crimp terminal.
6. Safety approvals do not apply to the covered versions, only to the open-frame versions.

## Open Frame versions:

CFM40S050, 40S090, 60S033, 60S050, 60S090

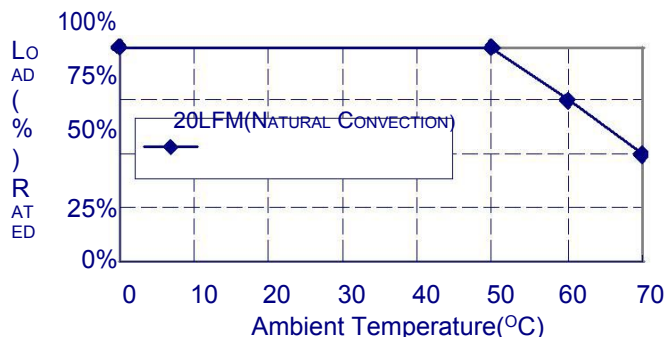


CFM40S120, 40S150, 40S240, 40S300, 40S360, 40S480  
 CFM60S120, 60S150, 60S240, 60S300, 60S360, 60S480

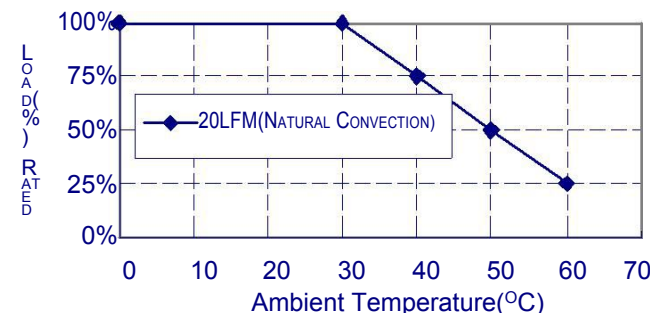


## Covered versions: CFM40/60XXX-CA

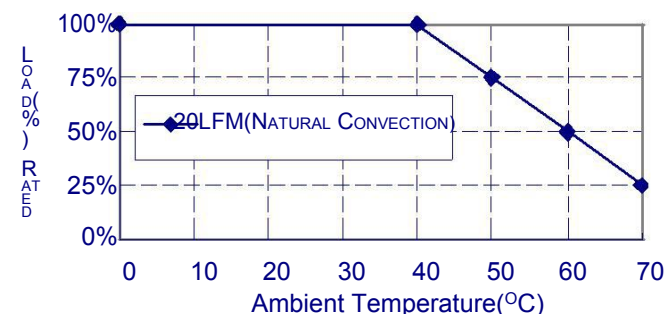
CFM40S120, 40S150, 40S240, 40S300, 40S360, 40S480



CFM40S033, CFM40S050, CFM60S033, CFM60S050



CFM40S090, 60S090, 60S120, 60S150, 60S240, 60S300  
 CFM60S360, 60S480

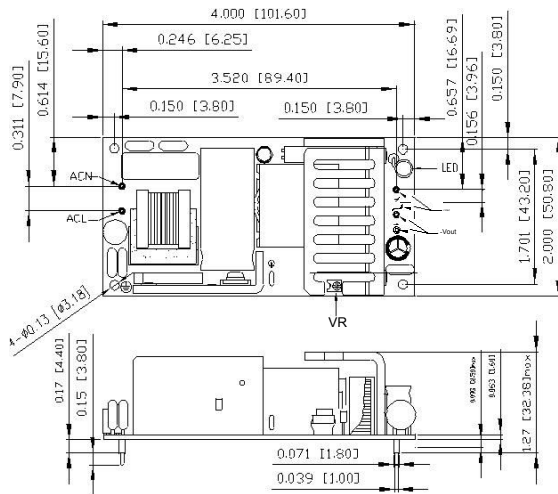




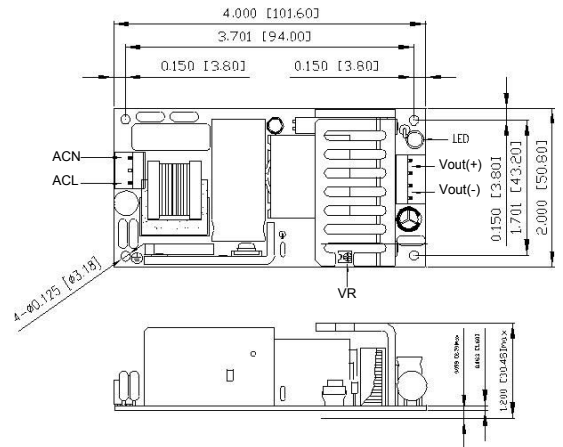
# CFM40/60S Series

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

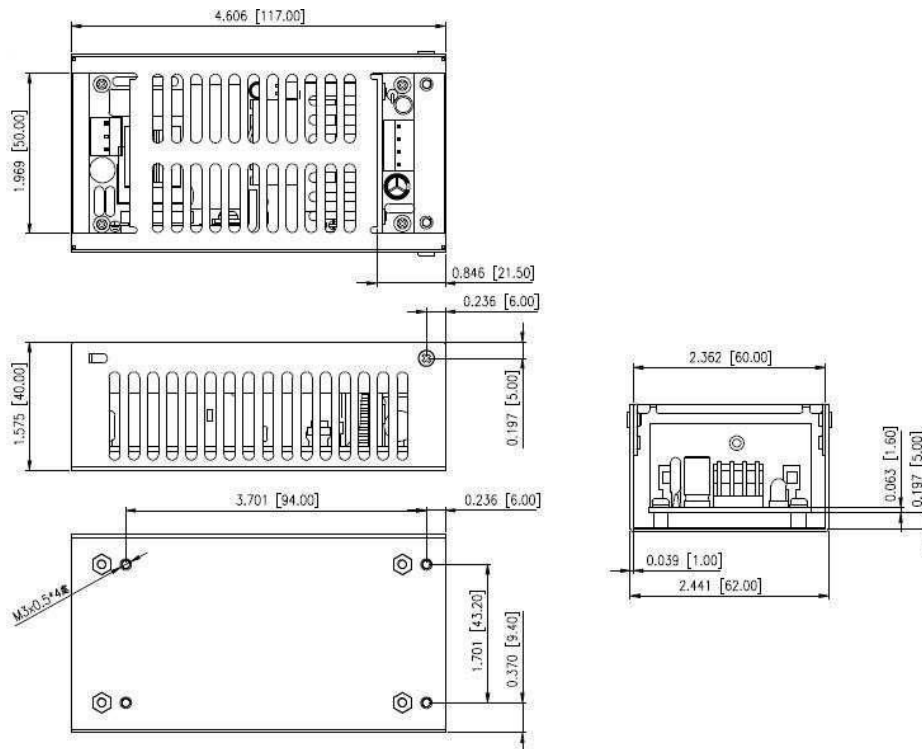
**CFM40SXXX-P/CFM60SXXX-P**  
 (Input and Output connector with PIN)



**CFM40SXXX/CFM60SXXX**



**CFM40SXXX/CFM60SXXX-CA**



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