



CFM260S SERIES 260 WATT OPEN FRAME AC-DC MODULES

Features

- Universal Input Range 85~264Vac
- 220W with Natural Convection
- 260W with Fan-Cooled
- 2"x 4" Compact Size @CFM260SXXX
- No Load Input Power Consumption<0.2W
- High Efficiency up to 93.5% Typical
- 12V Fan Output
- Continuous Short Circuit Protection
- Over Temperature Protection
- Operating Altitude 5000m
- Meets EN55032 (Class B)
- IEC/EN/UL 62368-1 Approval
- Meets Class I



MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT CURRENT				VOLTAGE ACCURACY	RIPPLE & NOISE	VOLTAGE ADJ. RANGE	LINE REGULATION	LOAD REGULATION	%EFF. (Typ)
		NOTE1									
		With Fan	Without Fan								
	Cover	Base	Open	NOTE2	NOTE3	NOTE4	NOTE5				
CFM260S120	12 V	21.67 A	18.34 A	15.84 A	11.67 A	±1%	1%	11.4~12.6 V	±0.5%	±1%	92%
CFM260S240	24 V	10.83 A	9.17 A	7.92 A	5.83 A	±1%	1%	22.8~25.2 V	±0.5%	±1%	93.5%
CFM260S360	36 V	7.22 A	6.11 A	5.28 A	3.89 A	±1%	1%	34.2~37.8 V	±0.5%	±1%	93%
CFM260S480	48 V	5.42 A	4.58 A	3.96 A	2.92 A	±1%	1%	45.6~50.4 V	±0.5%	±1%	93.5%
Fan Output Voltage											
All	+12V	0.3A (NOTE 6)				---	---	---	---	---	---

Note:

1. Forced Air Convection with Fan. (Open Frame with 19CFM, Base & Case with 10 CFM)
2. Voltage Accuracy is Set at 60% Rated Load.
3. Add a 0.1uF Ceramic Capacitor and a 10uF E.L. Capacitor to Output for Ripple & Noise Measuring @20MHz BW.
4. Line Regulation is Measured from High Line to Low Line with Rated Load.
5. Load Regulation is Measured from Full to 10% Rated.
6. Fan Output can only Operate Normal when the main Output is above 1A.

PART NUMBER

Series	Number of Outputs	Nominal Output Voltage	Type
CFM260	O	XXX	Y (Option)
CFM260	S : Single	120 : 12VDC 240 : 24VDC 360 : 36VDC 480 : 48VDC	None : Open Frame B : With Base C : With Cover

Part Number Example:

- CFM260S120: Open Frame, 260W, Single 12Vdc Output
- CFM260S120B: With Base, 260W, Single 12Vdc Output
- CFM260S120C: With Case, 260W, Single 12Vdc Output



CFM260S Series

TECHNICAL SPECIFICATIONS

(All specifications are typical at nominal input, full load at 25°C unless otherwise noted.)

ABSOLUTE MAXIMUM RATINGS

PARAMETER	NOTES and CONDITIONS	Device	Min.	Typ.	Max.	Units
Input Voltage	Safety approvals only to the AC input	All	85		264	V _{ac}
Operating Temperature	See Derating Curve	All	-30		80	°C
Storage Temperature		All	-40		85	°C
Operating Altitude	IEC/EN/UL 62368-1 Meets EN 60335-1	All			5000	m

INPUT CHARACTERISTICS

PARAMETER	NOTES and CONDITIONS	Device	Min.	Typ.	Max.	Units
Operating Voltage Range		All	100		240	V _{ac}
Input Frequency Range		All	47		63	Hz
Maximum Input Current	100% Load, V _{in} =100V _{ac}	All			3.5	A
Leakage Current		All			3.5	mA
Inrush Current	V _{in} =240V _{ac} , Cold start at 25°C	All			150	A

OUTPUT CHARACTERISTICS

PARAMETER	NOTES and CONDITIONS	Device	Min.	Typ.	Max.	Units
Output Voltage Set Point	V _{in} =Nominal V _{in} , I _o =I _o max., ambient temperature=25°C	CFM260S120	11.88	12	12.12	V _{dc}
		CFM260S240	23.76	24	24.24	
		CFM260S360	35.64	36	36.36	
		CFM260S480	47.52	48	48.48	
Operating Output Current Range	See Derating Curve	CFM260S120			21.67	A
		CFM260S240			10.83	
		CFM260S360			7.22	
		CFM260S480			5.42	
Holdup Time	V _{in} =115V _{ac}	All		16		ms
Output Voltage Regulation						
Load Regulation	10% Load to full load	All			±1.0	%
Line Regulation	V _{in} =High line to low line	All			±0.5	%
Over Voltage Protection	Latch off (AC recycle to reset)	CFM260S120			16	V _{dc}
		CFM260S240			35	
		CFM260S360			50	
		CFM260S480			63	
Over Current Protection	Hiccup mode (Auto recovery)	All	120		190	%
Short Circuit Protection	Hiccup mode (Auto recovery)	All				
Output Ripple and Noise	1. Add a 0.1uF ceramic capacitor and a 10uF aluminum electrolytic capacitor to output 2. Oscilloscope is 20MHz band width 3. Ambient temperature=25°C	CFM260S120			120	mV
		CFM260S240			240	
		CFM260S360			360	
		CFM260S480			480	
Load Capacitance	1. Input voltage is 115V _{ac} and 230V _{ac} 2. Output is max. load 3. Ambient temperature=25°C	CFM260S120			22000	uF
		CFM260S240			10880	
		CFM260S360			7220	
		CFM260S480			3960	
Efficiency	1. Input voltage is 230V _{ac} 2. Output is rated load 3. Ambient temperature=25°C	CFM260S120		92		%
		CFM260S240		93.5		
		CFM260S360		93		
		CFM260S480		93.5		



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ISOLATION CHARACTERISTICS

PARAMETER	NOTES and CONDITIONS	Device	Min.	Typ.	Max.	Units
Input to Output	1 minute	All			3000	V _{ac}
Isolation Resistance	Input to output	All	100			MΩ

FEATURE CHARACTERISTICS

PARAMETER	NOTES and CONDITIONS	Device	Min.	Typ.	Max.	Units
Switching Frequency		All		100		kHz
Output Voltage Adjustment		All	-5		+5	%

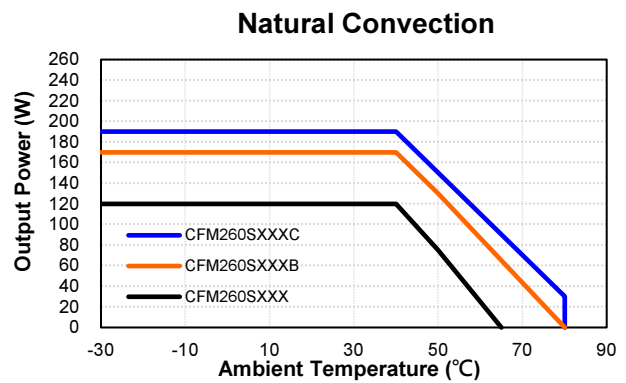
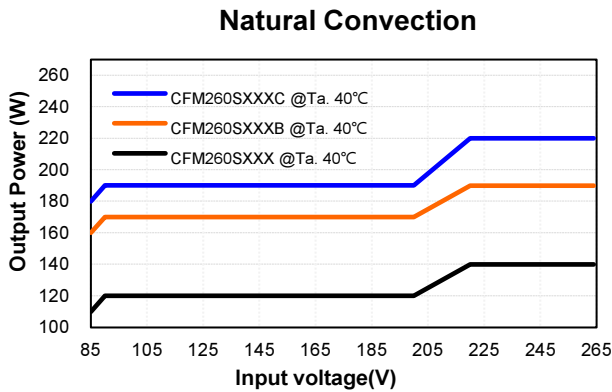
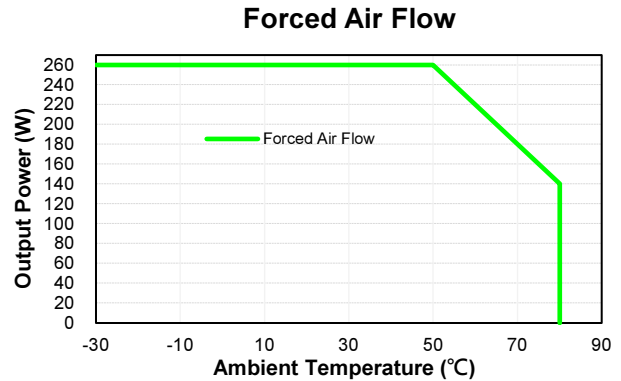
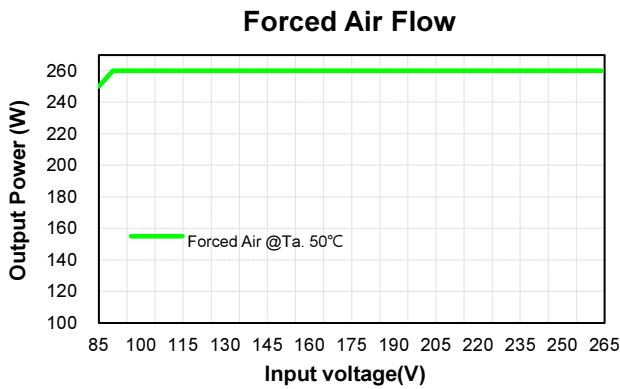
GENERAL SPECIFICATIONS

PARAMETER	NOTES and CONDITIONS	Device	Min.	Typ.	Max.	Units
MTBF	I _o =100%; T _a =25°C per MIL-HDBK-217F	All	270			k hours
Humidity	Non-condensing	All			93	% RH
Shock	Meets MIL-STD-810F Table 516.5, Table 516.5-I 10ms, each axis 3 times(±X · ±Y · ±Z axis)	All		75		g
Vibration	Meets MIL-STD-810F Table 514.5C-VIII, 15~2000Hz, X · Y · Z axis, 1 hour (each axis),. Total 3 hrs.	All		4		g
Weight	Open Frame versions	All		245		grams
	Baseplate versions			280		
	Covered versions			332		
Dimensions	Open Frame	All	4.000x2.000x1.441 Inches (101.60x50.8x36.60mm)			
	B (with Base)	All	4.598x2.000x1.520 Inches (116.80x50.8x38.60mm)			
	C (with Cover)	All	4.598x2.520x1.594 Inches (116.80x64.00x40.50mm)			
Safety	Class I, IEC/EN/UL62368-1					
EMC Emission	EN55032 Class B, 47 CFR FCC Part 15 Subpart B, Oct.2014 EN61000-3-2:2014, EN61000-3-3:2013, EN61000-6-3:2012, EN61000-6-4:2011, EN61204-3:2000					Class B
Conducted Disturbance	EN55032, EN61204-3:2000, EN61000-6-3:2012, EN61000-6-4:2011, Class B, 47 CFR FCC Part 15 Subpart B					Class B
Radiated Disturbance	EN55032, EN61204-3:2000, EN61000-6-3:2012, EN61000-6-4:2011, Class B, 47 CFR FCC Part 15 Subpart B					Class B
Harmonic Current Emissions	EN61000-3-2:2014					
Voltage Fluctuations & Flicker	EN61000-3-3:2013					
EMC Immunity	EN55035, EN61204-3:2000, EN61000-6-1:2019, EN61000-6-2:2019					
Electrostatic Discharge (ESD)	IEC 61000-4-2:2008, Air Discharge: ±8kV, Contact Discharge: ±4kV					Criterion A
Radio-Frequency, Continuous Radiated Disturbance	IEC 61000-4-3:2010					Criterion A
Electrical Fast Transient (EFT)	IEC61000-4-4:2012, ±1kV, ±2kV					Criterion A
Surge	IEC61000-4-5:2014, L-N: ±0.5kV, ±1kV, L-E(Ground): ±0.5kV, ±1kV, ±2kV					Criterion A
Conducted Disturbances, Induced by RF Fields	IEC 61000-4-6:2013					Criterion A
Power Frequency Magnetic Field	IEC 61000-4-8:2009					Criterion A
Voltage Dips	IEC 61000-4-11:2004, Dip: 30% Reduction, Dip >95% Reduction					Criterion A
Voltage Interruptions	IEC 61000-4-11:2004, >95% Reduction					Criterion B
Application Note Link	CFM260S Series App Notes					

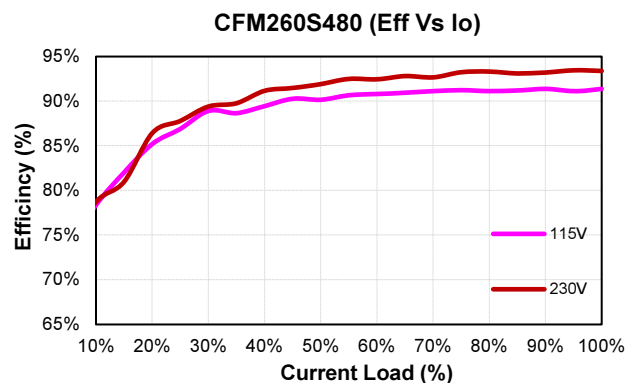
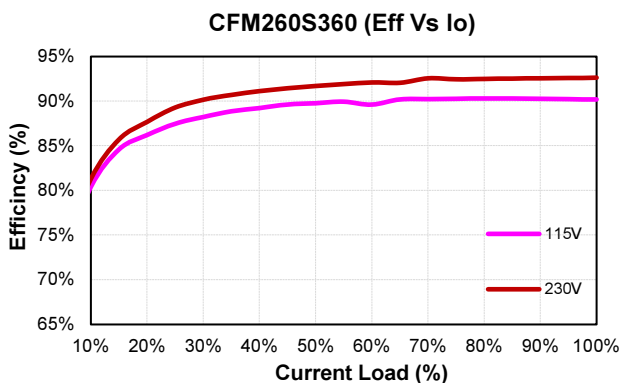
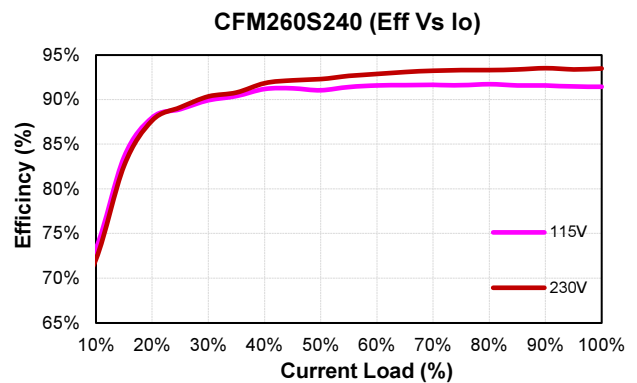
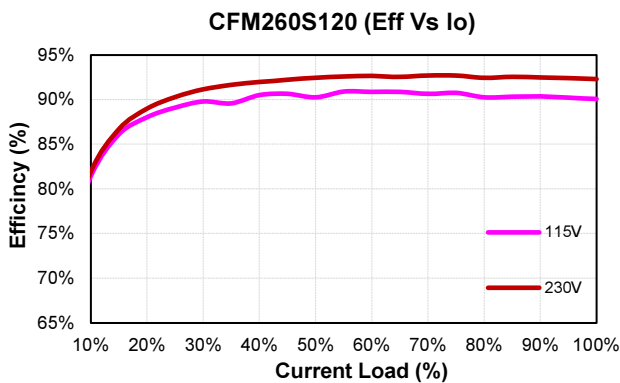


CHARACTERISTIC CURVE

Power Derating Curve



Performance Data

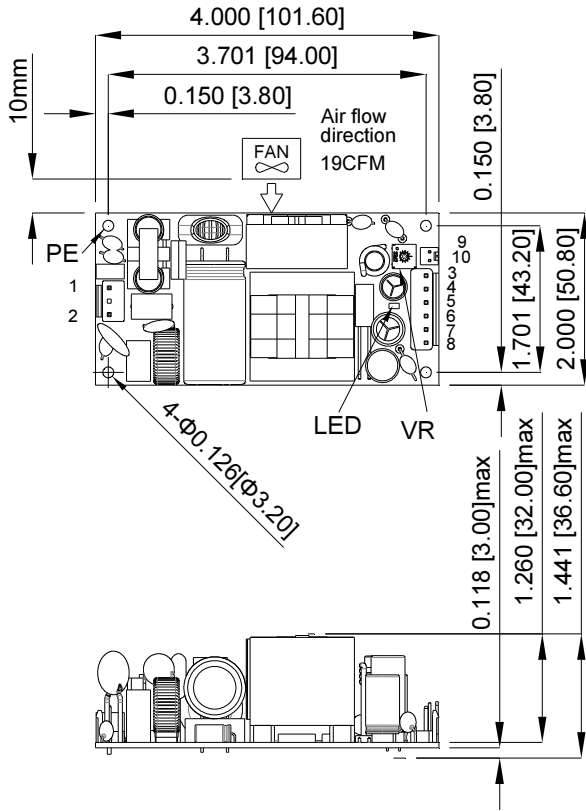




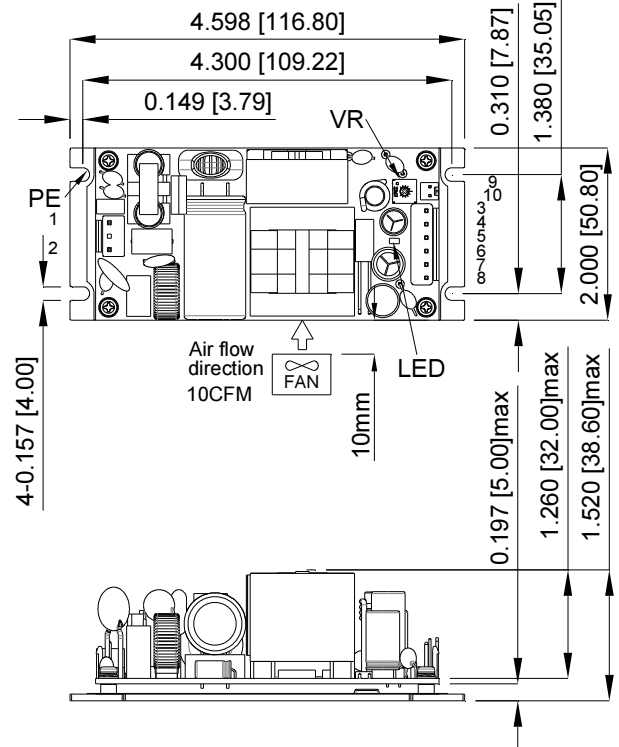
CFM260S Series

MECHANICAL SPECIFICATION

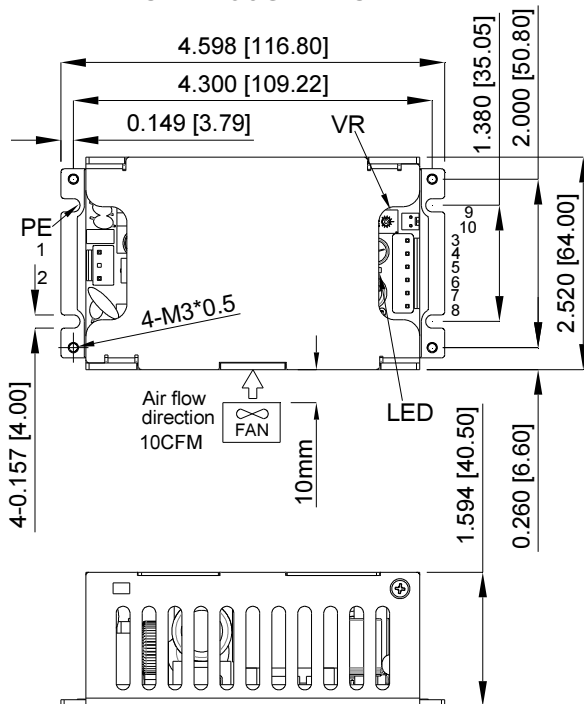
CFM260SXXX



CFM260SXXXB

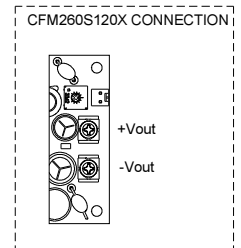
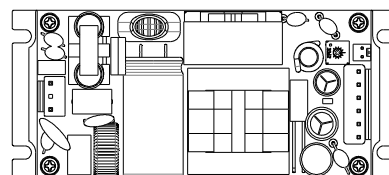


CFM260SXXXC



PIN CONNECTION					
Pin	Function	Pin	Function	Pin	Function
1	ACL	5	+Vout	9	+Fan Output
2	ACN	6	-Vout	10	-Fan Output
3	+Vout	7	-Vout		
4	+Vout	8	-Vout		

All Dimensions In Inches[mm]
 Tolerance Inches: x.xxx = ± 0.02
 Millimeters: x.xx = ± 0.5



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