

CFM21M SERIES

20 WATT SINGLE OUTPUT AC-DC MODULES



Features

- * Universal Input Range 90~264VAC
- * Class II
- * Miniature Size Low Profile 0.8"
- * Industry-Standard Pin Out
- * Efficiency to 86%
- * Option for On-Board, Connector, Screw Terminal or Encapsulated type
- * Continuous Short Circuit Protection
- * Over Voltage Protection
- * No Load Input Power < 0.1W
- * Leakage Current < 100uA
- * UL60601-1/IEC60601-1/EN60601-1 Ed.3.1 Medical Safety Approved
- * 2 MOPP
- * Peak Load 130% (note 8)
- * Meet UL62368/IEC62368/EN62368
- * Meet UL60335-1/IEC60335-1/EN60335-1



MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE & NOISE NOTE 1	VOLTAGE ACCURACY NOTE 2	LINE REGULATION NOTE 3	LOAD REGULATION NOTE 4	OUTPUT RATED POWER	% EFF.
CFM21M050	5.0 V	4.0 A	50 mV	±1%	±0.5%	±1.0%	20.0 W	81%
CFM21M090	9.0 V	2.3 A	90 mV	±1%	±0.5%	±1.0%	20.7 W	83%
CFM21M120	12 V	1.7 A	100 mV	±1%	±0.5%	±1.0%	20.4 W	85%
CFM21M150	15 V	1.4 A	100 mV	±1%	±0.5%	±1.0%	21.0 W	85%
CFM21M240	24 V	0.9 A	100 mV	±1%	±0.5%	±1.0%	21.6 W	86%

Specifications

CFM21M Series De-rating Curve

INPUT SPECIFICATIONS:

Voltage	90~264Vac
Frequency	47 to 63Hz
Input Current	0.3 to 0.5A
Inrush Current	Cold Start@25°C 40A max. @230Vac
Leakage Current	70uA Typical - 100uA max.

OUTPUT SPECIFICATIONS:

Isolation	Input to Output = 4000VAC
Hold-up Time	10ms typ. @115Vac
Short Circuit Protection	Continuous
Over Voltage Protection (TVS)	110%-140% of Nominal Output Voltage

GENERAL SPECIFICATIONS:

Efficiency	See Table
Switching Frequency	65KHz typ.
Operating Temperature	-25 ~ 70°C (with De-Rating)
Storage Temperature	-40~85°C
Cooling	Natural Convection
Humidity	93% RH max. Non Condensing
Operating Altitude.....	5000m
MTBF	MIL-HDBK-217F, GB 500Khrs min.
Dimensions	2.38x1.60x0.80inches (60.5x40.6x20.4mm)
	-T: 3.00x1.60x0.77inches (76.2x40.6x19.5mm)
	-E: 2.53x1.74x0.80Inches (64.2x44.2x20.4mm)
	-S: 3.00x1.60x0.77Inches (76.2x40.6x19.5mm)
Weight	55g, 60g (-T, -S), 110g(-E)

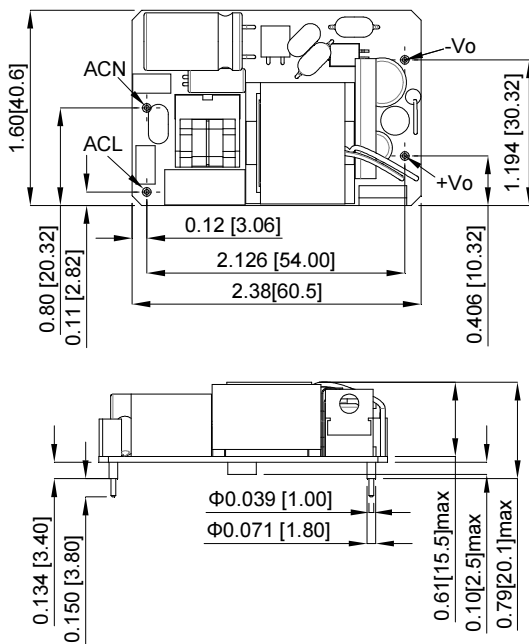
SAFETY AND EMISSION:

Emissions and Immunity (Ed. 4.0)	EN55011 Class B, EN61000-3-2(3) EN60601-1-2 2015, IEC 61000-4-2(3/4/5/6/8/11)
Safety Approved (Ed.3.1)	IEC60601-1 ANSI/AAMI ES 60601-1:2005/A1:2012&C1:2009/2012&2010/2012 CAN/CSA-C22.2 NO. 60601-1:14, EN 60601-1: 2006+A11:2011+A1:2013, IEC 60601-1:2005+A1:2012

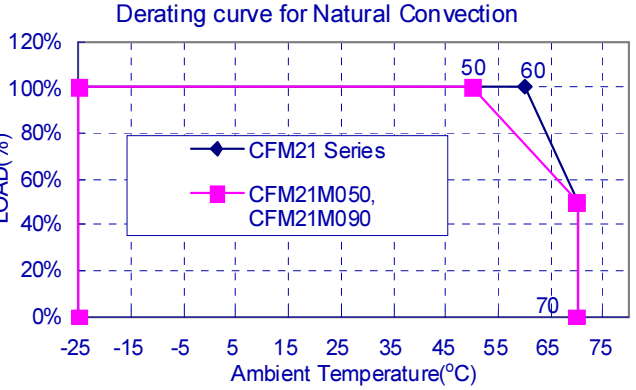
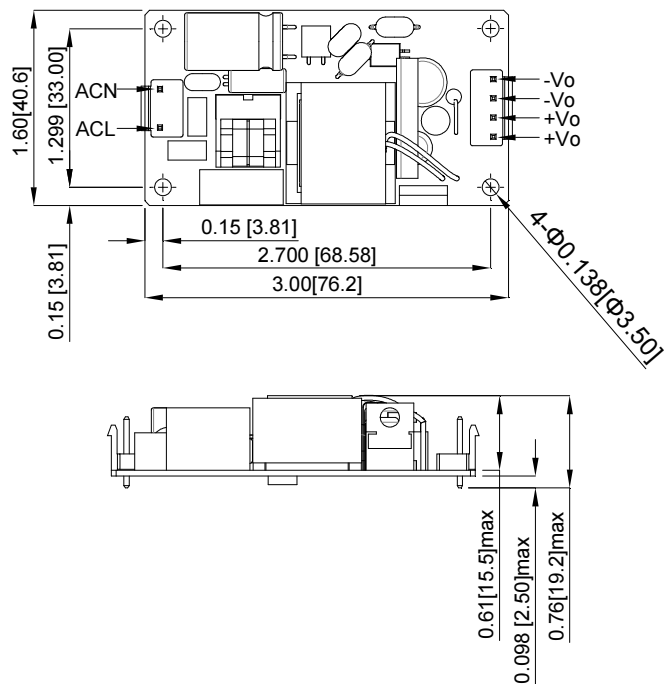
Mechanical Specification

Annotations: For all models, height does not exceed 34mm max.

CFM21MXXX



CFM21MXXX-T

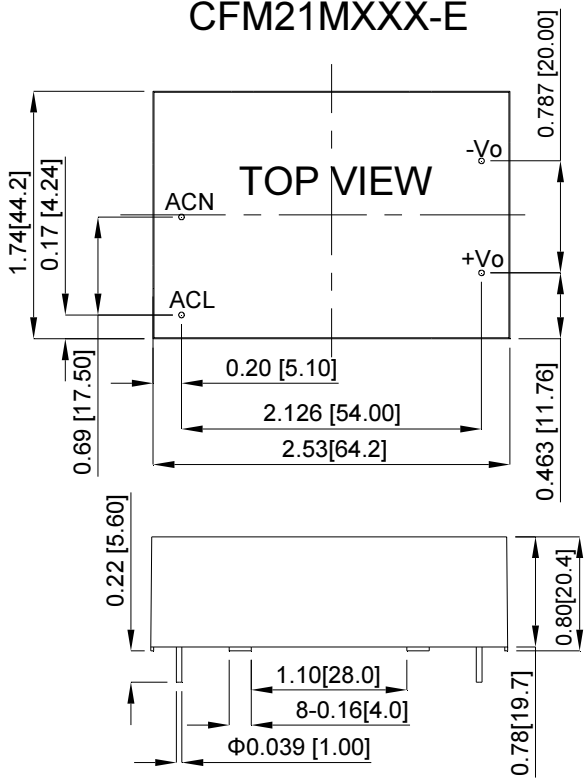


NOTE:

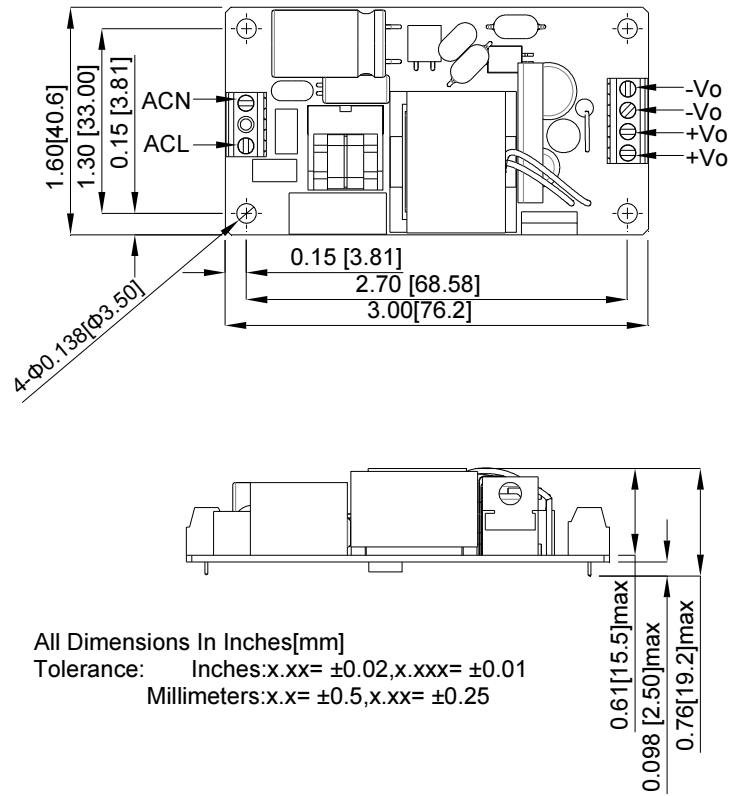
1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for ripple&noise measuring @20MHz BW.
2. Voltage accuracy is set of 100% rated load.
3. Line regulation is measured from high line to low line with full load.
4. Load regulation is measured from 10% to 100% full load.
5. T Version Connection: JST B3P-VH / B4P-VH or equivalent.
6. S Version Connection: DECA MB332-381A or equivalent.
7. Typical efficiency at 230VAC and 100% load at 25°C.
8. Peak load 130% lasting < 10 seconds with a maximum duty cycle of 10% at nominal Line.

Mechanical Specification

CFM21MXXX-E



CFM21MXXX-S



All Dimensions In Inches[mm]
 Tolerance: Inches:x.xx= ±0.02,x.xxx= ±0.01
 Millimeters:x.x= ±0.5,x.xx= ±0.25

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