

## 300W Convection / 400W Fan Cooled Medical Power Supplies

### Features

- ◆ Medical & ITE Safety Certifications (BF Rated)
- ◆ 94% Efficient
- ◆ 0.5W Standby Power
- ◆ Meets ERP/Eco-Design (2009/125/EC)
- ◆ Meets Climate Savers Gold Level
- ◆ 450W Peak Loading (10s)
- ◆ High Power Density (7" x 4" x 1.6")
- ◆ Suitable for 1U applications
- ◆ Five Year Warranty



### Key Market Segments & Applications



### Specifications

Model		CFE400M
Input Voltage range	VAC	85 - 264VAC
Input Frequency	Hz	47 - 63Hz, 440Hz with reduced PFC
Inrush Current	A	<25A at 25°C and 230VAC input, Cold Start
Power Factor Harmonics	-	EN61000-3-2 Compliant. Class A (Class C >100W output power)
Voltage Setting Accuracy	%	±1% at 50% Load
Regulation	%	Line: 0.25%; Load: 1%; Thermal Coefficient: 0.02%/°C
Ripple & Noise	mV	1% peak-peak
Efficiency (230VAC, 80% load)	%	Up to 94% (48V & 24V), up to 91% (12V), 0.5W power draw in standby mode
Overcurrent Protection	-	Automatic recovery upon overload removal
Overvoltage Protection	V	Cycle AC line to reset
Overtemperature Protection	-	Yes
Hold Up Time (minimum)	ms	13ms minimum at full load
Leakage Current (max)	µA	140µA 120VAC 60Hz, 280µA 240VAC 60Hz, <300µA 240VAC 63Hz (Type Test results)
Fan Supply	-	12V 0.25A (Not available if the top fan option is selected)
Standby Voltage	-	5V 80mA or 5V 2A (chosen at time of ordering)
Remote Sense	-	None
Signals & Features	-	Remote on/off - Inhibit or Enable operation (chosen at time of ordering) Power Good - High indicates DC output & AC input is good. ORing FET - (Option)
Operating Temperature <sup>(1)</sup>	°C	Convection cooled: 0 to +60°C. Derate linearly to 50% load from 40°C to 60°C Forced air cooled: 0 to +70°C. Derate linearly to 50% load from 50°C to 70°C
Storage Temperature	°C	-40 to +70°C
Humidity (non condensing)	%RH	5 - 95%RH
Cooling	-	Convection, internal fan or external 1.5m/s forced air, approx. 12 CFM (see oper. temp.)
Isolation	-	Input to Output 4kVAC (Reinforced) <sup>(3)</sup> (2 x MOPPs (3rd edition 60601)), Input to Ground 1500VAC, Output to Ground 1500VAC
Vibration (non operating)	-	2G, 10-500Hz in all 3 planes. MIL-STD-810E, Method 514.4, Pro I, Cat 1, 9
Shock	-	30G per IEC68-2-27, MIL-STD-810E/F, Method 516.5, Pro I, IV, VI
Safety Agency Certifications <sup>(2)</sup>	-	UL/CSA/IEC/EN 60601-1, ANSI/AAMI ES60601-1, IEC/EN 61010-1, IEC/UL/EN/CSA 60950-1, CE Mark
Immunity	-	EN61000-4-2, -3, -4, -5, -6, -8, -11, -12, -14
Conducted Emissions and Flicker	-	EN55011, EN55022 Class B (per CISPR.11/22), EN61000-3-3
Radiated Emissions	-	EN55011, EN55022 Class B (per CISPR.11/22)
Weight (open frame)	kg	U Channel: 0.71kg, Top fan: 0.86kg
Size	in	U channel: 7 x 3.94 x 1.6, With cover: 7 x 3.94 x 2, Top Fan: 7 x 3.94 x 2.8
Warranty	yrs	Five Years

(1) -20°C cold start

(2) Designed to meet IEC/EN 61010-1 Edition 2

(3) Type tested to 4kVAC (equivalent to 5.7kVDC). Production tested to 4.3 kVDC.

## Model Selector (Standard Models\*)

Product Code	Part Description	Style	Output Voltage	Current (Convection)	Current (Forced Air or Fan)	Peak Output Current <sup>(2)</sup>
U7Y0010	CFE400M-12-5H-N1-UML-NT	U Chassis	12V	25A	33.3A	37.5A
U7Y0043	CFE400M-12-5H-TF-CML-NT	Cover & Top Fan	12V	-	33.3A	37.5A
U7Y0269	CFE400M-24-5H-N1-UML-NT	U Chassis	24V	12.5A	16.67A	18.75A
U7Y028C	CFE400M-24-5H-TF-CML-NT	Cover & Top Fan	24V	-	16.67A	18.75A
U7Y027B	CFE400M-48-5H-N1-UML-NT	U Chassis	48V	6.25A	8.33A	9.375A
U7Y029D	CFE400M-48-5H-TF-CML-NT	Cover & Top Fan	48V	-	8.33A	9.375A

Notes:

(\*) Additional variants available, see Option Selection below.

(2) For up to 10s without exceeding Average Output Power rating (300W convection, 400W with forced air or fan)

## Option Selection

Output	Adjustment Range
12	10.8 - 14.4V
24	21.6 - 28.8V
48	43.2 - 50V

\*Adjustable by potentiometer

NN = None  
5C = 5V 80mA  
5H = 5V 2A

N = None  
E = Enable  
T = Inhibit

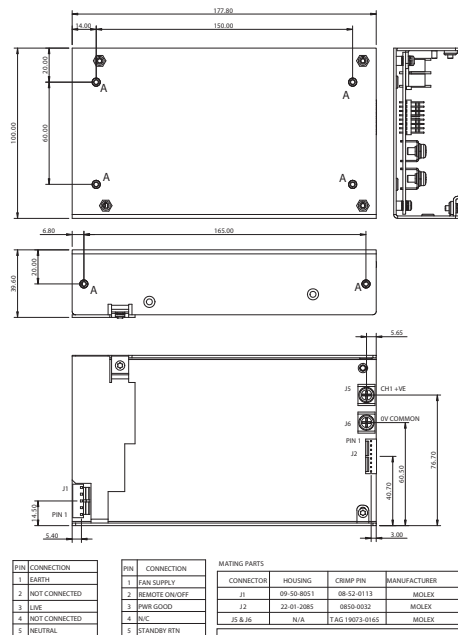
CFE400M	Output V	-	Standby Voltage	-	Fan & Cover Option	ORing FET	Remote On/Off
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NN-U = No fan, no fan supply, no cover  
NN-C = No fan, no fan supply, cover

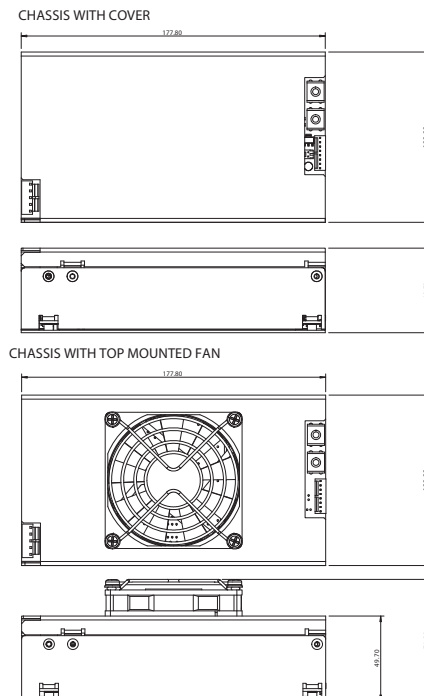
N1-U = 12V fan supply, no cover  
N1-C = 12V fan supply, cover  
TF-C = Top fan & cover

ML-Y = FET fitted  
ML-N = No FET fitted

## Outline Drawing



NOTE:  
A 6 OFF FIXING HOLES FOR M3, MAXIMUM PENETRATION 4.0mm,  
MAXIMUM TORQUE 0.9nm.  
ALL TOLERANCES +/-0.5mm.



## Other TDK-Lambda Products

EFE Series	300 to 400W 1U single output power supply
CSS Series	65 to 500W 1U single output power supply
NV Series	175 to 900W 1U power supply 1-8 outputs

For Additional Information, please visit  
[us.tdk-lambda.com/lp/products/cfe-series.htm](http://us.tdk-lambda.com/lp/products/cfe-series.htm)

