

FCM400 Series



- Integral Low Noise Fan
- 400 W Output Power
- 600 W Peak Rating 500 ms
- Screw Terminals
- Class B Conducted Emissions
- 5 V Standby Rail
- 80 V – 275 VAC Input Operation
- IT & Medical Safety Approvals
- Remote On/Off & Power Fail Signal as Standard

The FCM400 AC-DC power supply provides upto 400 W continuous and 600 W peak output power for up to 0.5 seconds.

Packaged in a compact 6" (152 mm) x 4" (102 mm) x 1.9" (49 mm) and certified to IEC60950, IEC6238 & IEC60601 family safety approvals, the FCM400 can be easily integrated into a wide range of both industrial and medical applications. A low noise fan allows quiet operation at full power from -10 °C to 50 °C and 50% power at +70 °C.

The unit comprises of a main output with voltages from 12-48 VDC and a peripheral output providing a 5 VDC standby supply which can be utilised with the signals and control features of the unit to provide detection of loss of AC input and remote on/off control.

Models and Ratings

Output Power		Output Voltage V1	Output Current V1		Standby Supply V2	Model Number
P nom	P peak ⁽¹⁾		I nom	I peak ⁽¹⁾		
400 W	600 W	12.0 VDC	33.3 A	50 A	5.0 V/0.5 A	FCM400PS12
400 W	600 W	15.0 VDC	26.6 A	40 A	5.0 V/0.5 A	FCM400PS15
400 W	600 W	24.0 VDC	16.6 A	25 A	5.0 V/0.5 A	FCM400PS24
400 W	600 W	28.0 VDC	14.2 A	21.4 A	5.0 V/0.5 A	FCM400PS28
400 W	600 W	36.0 VDC	11.1 A	16.7 A	5.0 V/0.5 A	FCM400PS36
400 W	600 W	48.0 VDC	8.3 A	12.5 A	5.0 V/0.5 A	FCM400PS48

Notes:

1. Peak duration is 500 ms max, average power must not exceed 400 W.

Input Characteristics

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage - Operating	80	115/230	275	VAC	Derate output power <90 VAC. See fig 1. Power fail signal cannot be used <90 VAC.
Input Frequency	47	50/60	63	Hz	
Power Factor		>0.9			EN61000-3-2 class A compliant
Input Current - No Load		0.11/0.15		A	115/230 VAC
Input Current - Full Load		4.1/2.1		A	115/230 VAC
Inrush Current			60	A	230 VAC, 25°C
Earth Leakage Current		100/165	260	µA	115 VAC 60 Hz/230 VAC 50 Hz (Typ), 264 VAC/60 Hz (Max.)
Input Protection	F10 A/250 V internal fuse in both line and neutral				

Output Characteristics

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage - V1	12		48	VDC	See Models and Ratings table
Initial Set Accuracy			±0.5 ^(v1) , ±5 ^(v2)	%	50% load, 115/230 VAC
Output Voltage Adjustment	±10			%	V1 only via potentiometer. See mech. details (page 11).
Minimum Load	0			A	
Start Up Delay		1		s	230 VAC full load (see fig.2)
Hold Up Time	20	35		ms	90 VAC full load (see fig.3)
Drift			±0.2	%	After 20 min warm up
Line Regulation			±0.5	%	90-264 VAC
Load Regulation			±1 ^(v1) , ±5 ^(v2)	%	0-100% load.
Transient Response - V1			4	%	Recovery within 1% in less than 500 µs for a 50-75% and 75-50% load step
Over/Undershoot - V1			5	%	
Ripple & Noise		0.5	1 ^(v1) , 2 ^(v2)	% pk-pk	20 MHz bandwidth (see fig.4 & 5)
Overvoltage Protection	115		140	%	Vnom DC. Output 1 only, recycle input to reset
Overload Protection	150		165	% I nom	Output 1 only, auto reset (see fig.6)
Short Circuit Protection					Continuous (see fig. 6)
Temperature Coefficient			0.05	%/°C	
Overtemperature Protection				°C	Auto recovery - temperature of main transformer