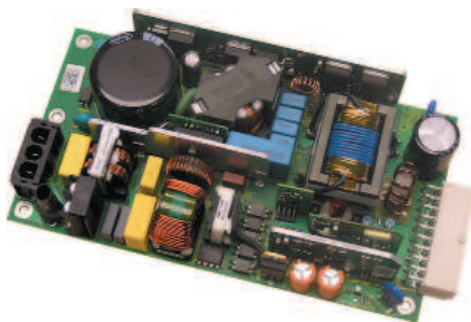


EFE300M & 400M



300W to 400W Medical Power Supplies

- ◆ Medical Safety Certifications (BF Rated)
- ◆ Fully Featured - including ORing Diode
- ◆ Universal Input (90 - 264VAC)
- ◆ Peak Loading (10s)
- ◆ Suitable for 1U applications

RoHS

Key Market Segments & Applications

Medical
Instrumentation
Network servers and routers

Features and Benefits

Feature	Benefit
◆ Full Digital Control	◆ Improved product performance
◆ High Efficiency	◆ Less heat dissipated in system
◆ Low Profile	◆ Fits in 1U enclosures
◆ Reinforced Isolation (4kVAC input to output)	◆ Reduces end system design and cost

Specifications

ITEMS		EFE300M	EFE400M
Input Voltage range	-	90 - 264VAC, 120 - 350VDC	
Input Frequency	-	45 - 63Hz, 440Hz with reduced PFC	
Inrush Current	A	<40A at 25C and 230VAC input, Cold Start	
Power Factor Harmonics	-	EN61000-3-2 Compliant (0.97 typical)	
Voltage Setting	-	Setting: -5% to +10% (Chosen at time of ordering), Accuracy: +/-1% at 50% Load	
Total Regulation	-	< 4% with 90 - 264VAC input change and 0-100% load change	
Ripple & Noise	mV	< 1.5% peak-peak	
Efficiency	-	90% typical. EFE400M: 1W 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 (Typ)	ms	>16ms at 90VAC input, 75% load	
Leakage Current (max)	µA	123µA 120VAC 60Hz, 257µA 240VAC 60Hz, <300µA 264VAC 63Hz (Type Test results)	
Fan Supply	-	12V 1A (Available if no fan option selected)	
Standby Voltage	-	5V 2A or 12V 1A (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 supply is good. ORing FET - Allows redundant connection of supplies	
Operating Temperature (2)	-	0 to +70°C. Derate linearly to 50% load from 50°C to 70°C	
Storage Temperature	-	-40 to +85°C	
Humidity (non condensing)	-	5 - 95% RH	
Cooling	-	Forced air, 2m/s from input to output (approximately 10CFM)	
Isolation	-	Input to Ground 2.3kVDC, Input to Output 4kVAC, Output to Ground 1500VAC	
Vibration (non operating)	-	2G, 10-500Hz (sweep & endurance at resonance) in all 3 planes. MIL-STD-810E, Method 51.4, Pro I, Cat 1, 9	
Shock	-	30G per IEC68-2-27, MIL-STD-810E/F, Method 516.5, Pro I, IV, VI	
Safety Agency Approvals	-	IEC/UL/EN/CSA22.2 60601-1, IEC/EN 61010-1, IEC/UL/EN/CSA22.2 No 60950-1, CE for LVD	
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 or enclosed)	g	350g or 600g	450g or 700g
Size (Open frame style) (1)	in	3 x 6 x 1.34"	3.5 x 6.5 x 1.34"
Warranty	yrs	Three Years	

(1) Including underside component leads

(2) -20°C cold start

Product Code	Part Description	Style	Output Voltage (V)	Output Current (A)	Average Output Power (W)	Peak Output Current (A)(3)	Peak Output Power (W)(3)
U5Y0031	EFE300M12-5-ECMDL-YT	With Fan	12	25.0	300	33.30	400
U5Y0020	EFE300M12-5-HNMDL-YT	Open Frame	12	25.0	300	33.30	400
U6Y007P	EFE400M-12-5-ECMDL-YT	With Fan	12	33.3	400	44.17	475
U6Y001H	EFE400M-12-5-HNMDL-YT	Open Frame	12	33.3	400	44.17	475
U5Y0064	EFE300M24-5-ECMDL-YT	With Fan	24	12.5	300	16.70	400
U5Y0053	EFE300M24-5-HNMDL-YT	Open Frame	24	12.5	300	16.70	400
U6Y008Q	EFE400M-24-5-ECMDL-YT	With Fan	24	16.67	400	20.80	475
U6Y002J	EFE400M-24-5-HNMDL-YT	Open Frame	24	16.67	400	20.80	475
U5Y0166	EFE300M-48-5-ECMDL-YT	With Fan	48	6.25	300	8.33	350
U5Y0201	EFE300M-48-5-HNMDL-YT	Open Frame	48	6.25	300	8.33	350
U6Y009R	EFE400M-48-5-ECMDL-YT	With Fan	48	8.33	400	10.40	475
U6Y003K	EFE400M-48-5-HNMDL-YT	Open Frame	48	8.33	400	10.40	475

Options Additional options available. Reference detailed product data sheet on downloadable files section of web page.

Part Description Suffix	Standby "5" or "12"	U Chassis	Cover	Internal Fan	Enable or Inhibit "E" or "T"
-5-ECMDL-YT	5V 2A	Y	Y	Y	Inhibit
-5-HNMDL-YT	5V 2A	N	N	N	Inhibit

300M

PIN	CONNECTION	PIN	CONNECTION
1	EARTH	1	V STANDBY
2	NOT CONNECTED	2	REMOTE ON/OFF?
3	LIVE	3	V CH1
4	NOT CONNECTED	4	V CH1
5	NEUTRAL	5	V CH1
6	V CH1	6	V CH1
7	V CH1	7	V CH1
8	V CH1	8	V CH1
9	POWER GOOD	9	RNC
10	V STANDBY	10	V CH1

CONNECTOR	HOUSING	CRIMP PIN
J1	(D-50-80S)	08-52-0113
J2	(D-50-218S)	44476-3112

MATING PARTS (MOLEX OR EQUIVALENT)
NOTE: J1 IS MODEL P/N V-C

400M

PIN	CONNECTION	PIN	CONNECTION
1	+12V FAN	11	+V CH1
2	0V CH1	12	+V CH1
3	0V CH1	13	+V CH1
4	0V CH1	14	+V CH1
5	0V CH1	15	+V CH1
6	0V CH1	16	+V CH1
7	0V CH1	17	+V CH1
8	0V CH1	18	+V CH1
9	POWER GOOD	19	REMOTE ON/OFF
10	0V STANDBY	20	+V STANDBY

CONNECTOR	HOUSING	CRIMP PIN
J1 (Molex kk)	D9-50-80S1	08-52-0113
J1 (Molex sabre)	44441-2003	43375-0001
J2	B9-01-2250	44476-3112

NOTE: J1 IS MODEL P/N V-C

Notes:

- A 4 OFF HOLES Ø3.5mm CLEARANCE FOR M3 FIXINGS.
- B 8 OFF FIXING HOLES FOR M3, MAXIMUM PENETRATION 4.5mm, MAXIMUM TORQUE 0.9nm.
- ALL TOLERANCES +/-0.5mm.

Notes:

- A 5 OFF HOLES Ø3.5mm CLEARANCE FOR M3 FIXINGS.
- B 8 OFF FIXING HOLES FOR M3, MAXIMUM PENETRATION 4.5mm, MAXIMUM TORQUE 0.9nm.
- ALL TOLERANCES +/-0.5mm.

Vega Series	450 to 900W up to 10 outputs
CSS	40 to 500W Single Output
NV Series	175 to 900W 1U Power Supply 1-8 Outputs

For Additional Information, please visit
us.tdk-lambda.com/lp/products/efe-series.htm