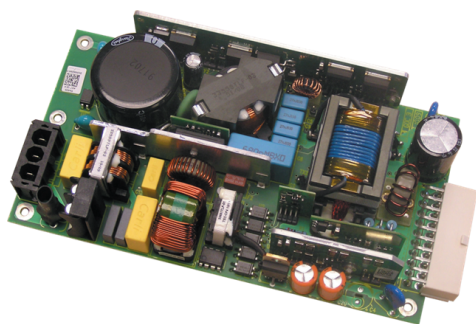


EFE300M & 400M



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 (4) | - | 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 | 405g or 635g | TBD |
| 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

EFE300M & 400M

Model Selector

| 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 |

(3) For up to 10s without exceeding Average Output Power rating

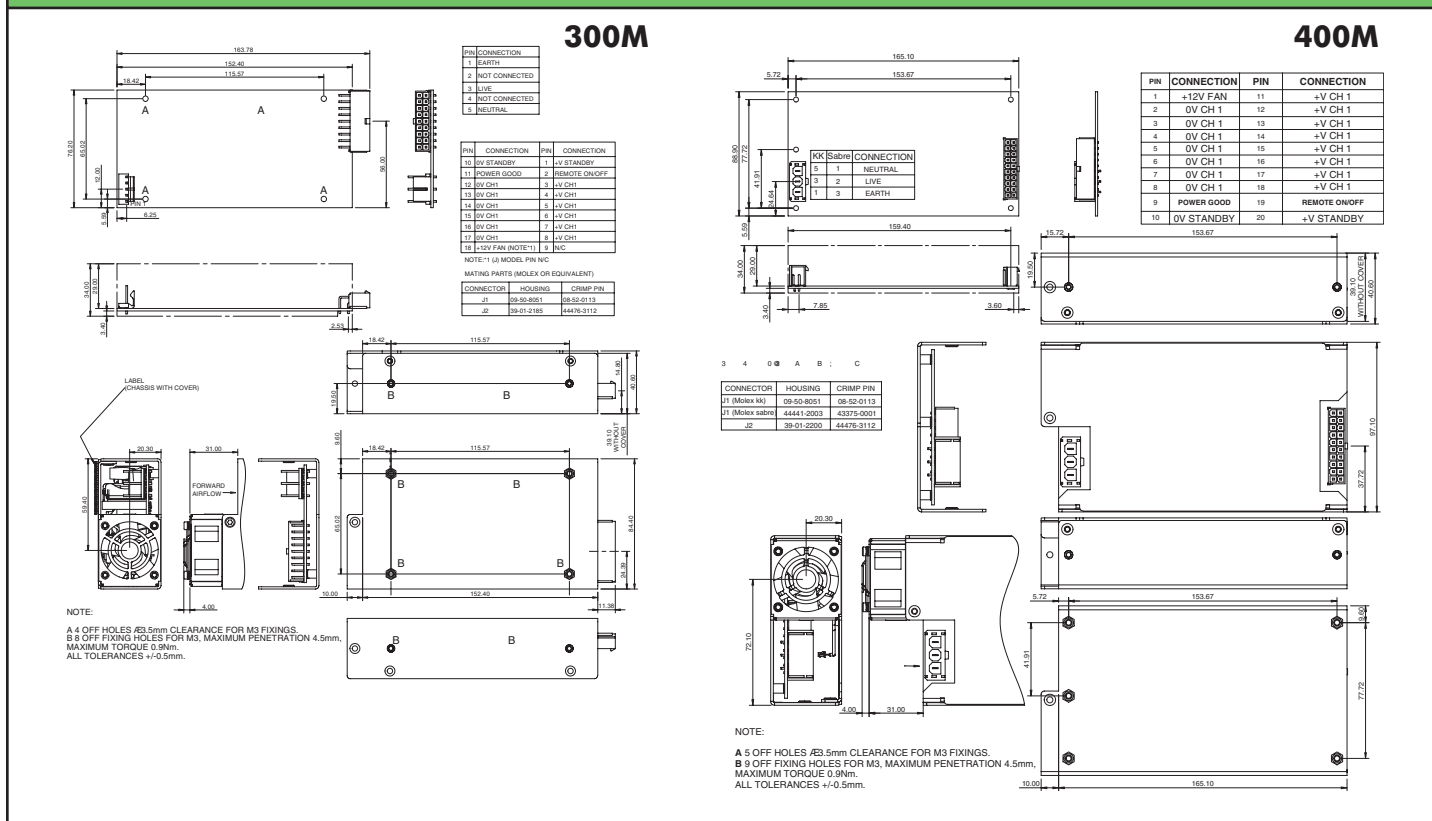
(4) Safety Agency certification for models highlighted in green are pending

Options

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

| Part Description Suffix | Standby "5" or "12" | L Bracket | 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 |

Outline Drawing



Other Medical Products

| | |
|------------|---|
| EFE300-400 | 300 to 400W 1U Single Output Power Supply |
| CSS | 40 to 500W Single Output |
| NV Series | 175 to 900W 1U Power Supply 1-6 Outputs |

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