



Medical



### FEATURES AND BENEFITS

Meets UL/EN/IEC60601-1-2, 4<sup>th</sup> edition for EMC\*

Approved to EN/IEC/UL60601-1, 3<sup>rd</sup> edition

2 MOPP input-output isolation

Meets DoE Efficiency Level VI Requirements

- No load input power
- Average Efficiency

Up to 30W of AC-DC Power

Universal Input 90-264Vac Input Range

- Desktop and Wall-Plug versions

Meets EN55011/CISPR11, FCC Part 15.109 Class B Conducted & Radiated Emissions, with >6db margin

E-cap life of >8 years

>1,000,000 hours MTBF

IP22 Rated Enclosure

3 Year Warranty

\*Consult Factory for Table 9 compliance information.

### MODEL SELECTION

| Model Number | Volts | Output Current | Output Power | Ripple & Noise <sup>1</sup> | Line Regulation | Load Regulation | Overvoltage Trip Range | Output Connector                                              | Input Configuration                                |
|--------------|-------|----------------|--------------|-----------------------------|-----------------|-----------------|------------------------|---------------------------------------------------------------|----------------------------------------------------|
| ME30A0503F01 | 5.0V  | 4.00A          | 20W          | 75mV pk-pk                  | ±1%             | ±5%             | 5.75V - 7.75V          | 2.5 x 5.5 x 9.5mm<br>Straight Barrel Type,<br>center positive | Class I<br>Desktop,<br>IEC60320 C14<br>Receptacle  |
| ME30A0903F01 | 9.0V  | 3.00A          | 27W          | 90mV pk-pk                  | ±1%             | ±5%             | 11.7V - 16.2V          |                                                               |                                                    |
| ME30A1203F01 | 12.0V | 2.50A          | 30W          | 120mV pk-pk                 | ±1%             | ±5%             | 14.4V - 16.8V          |                                                               |                                                    |
| ME30A1503F01 | 15.0V | 2.00A          | 30W          | 150mV pk-pk                 | ±1%             | ±5%             | 18.0V - 21.0V          |                                                               |                                                    |
| ME30A1803F01 | 18.0V | 1.67A          | 30W          | 180mV pk-pk                 | ±1%             | ±5%             | 21.6V - 25.2V          |                                                               |                                                    |
| ME30A2403F01 | 24.0V | 1.33A          | 30W          | 240mV pk-pk                 | ±1%             | ±5%             | 28.8V - 33.6V          |                                                               |                                                    |
| ME30A4803F01 | 48.0V | 0.63A          | 30W          | 480mV pk-pk                 | ±1%             | ±5%             | 55.0V - 60.0V          |                                                               |                                                    |
| ME30A0503N01 | 5.0V  | 4.00A          | 20W          | 75mV pk-pk                  | ±1%             | ±5%             | 5.75V - 7.75V          | 2.5 x 5.5 x 9.5mm<br>Straight Barrel Type,<br>center positive | Class II<br>Desktop,<br>IEC60320 C8<br>Receptacle  |
| ME30A0903N01 | 9.0V  | 3.00A          | 27W          | 90mV pk-pk                  | ±1%             | ±5%             | 11.7V - 16.2V          |                                                               |                                                    |
| ME30A1203N01 | 12.0V | 2.50A          | 30W          | 120mV pk-pk                 | ±1%             | ±5%             | 14.4V - 16.8V          |                                                               |                                                    |
| ME30A1503N01 | 15.0V | 2.00A          | 30W          | 150mV pk-pk                 | ±1%             | ±5%             | 18.0V - 21.0V          |                                                               |                                                    |
| ME30A1803N01 | 18.0V | 1.67A          | 30W          | 180mV pk-pk                 | ±1%             | ±5%             | 21.6V - 25.2V          |                                                               |                                                    |
| ME30A2403N01 | 24.0V | 1.33A          | 30W          | 240mV pk-pk                 | ±1%             | ±5%             | 28.8V - 33.6V          |                                                               |                                                    |
| ME30A4803N01 | 48.0V | 0.63A          | 30W          | 480mV pk-pk                 | ±1%             | ±5%             | 55.0V - 60.0V          |                                                               |                                                    |
| ME30A0503Q01 | 5.0V  | 4.00A          | 20W          | 75mV pk-pk                  | ±1%             | ±5%             | 5.75V - 7.75V          | 2.5 x 5.5 x 9.5mm<br>Straight Barrel Type,<br>center positive | Class II<br>Desktop,<br>IEC60320 C18<br>Receptacle |
| ME30A0903Q01 | 9.0V  | 3.00A          | 27W          | 90mV pk-pk                  | ±1%             | ±5%             | 11.7V - 16.2V          |                                                               |                                                    |
| ME30A1203Q01 | 12.0V | 2.50A          | 30W          | 120mV pk-pk                 | ±1%             | ±5%             | 14.4V - 16.8V          |                                                               |                                                    |
| ME30A1503Q01 | 15.0V | 2.00A          | 30W          | 150mV pk-pk                 | ±1%             | ±5%             | 18.0V - 21.0V          |                                                               |                                                    |
| ME30A1803Q01 | 18.0V | 1.67A          | 30W          | 180mV pk-pk                 | ±1%             | ±5%             | 21.6V - 25.2V          |                                                               |                                                    |
| ME30A2403Q01 | 24.0V | 1.33A          | 30W          | 240mV pk-pk                 | ±1%             | ±5%             | 28.8V - 33.6V          |                                                               |                                                    |
| ME30A4803Q01 | 48.0V | 0.63A          | 30W          | 480mV pk-pk                 | ±1%             | ±5%             | 55.0V - 60.0V          |                                                               |                                                    |



### MODEL SELECTION

| Model Number | Volts | Output Current | Output Power | Ripple & Noise <sup>1</sup> | Line Regulation | Load Regulation | Oversoltage Trip Range | Output Connector                                              | Input Configuration                                                                           |
|--------------|-------|----------------|--------------|-----------------------------|-----------------|-----------------|------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| ME30A0503B01 | 5.0V  | 4.00A          | 20W          | 75mV pk-pk                  | ±1%             | ±5%             | 5.75V - 7.75V          | 2.5 x 5.5 x 9.5mm<br>Straight Barrel Type,<br>center positive | Class II Wall-Plug,<br>Interchangeable<br>Blades (North American Blade included) <sup>2</sup> |
| ME30A0903B01 | 9.0V  | 3.00A          | 27W          | 90mV pk-pk                  | ±1%             | ±5%             | 11.7V - 16.2V          |                                                               |                                                                                               |
| ME30A1203B01 | 12.0V | 2.50A          | 30W          | 120mV pk-pk                 | ±1%             | ±5%             | 14.4V - 16.8V          |                                                               |                                                                                               |
| ME30A1503B01 | 15.0V | 2.00A          | 30W          | 150mV pk-pk                 | ±1%             | ±5%             | 18.0V - 21.0V          |                                                               |                                                                                               |
| ME30A1803B01 | 18.0V | 1.67A          | 30W          | 180mV pk-pk                 | ±1%             | ±5%             | 21.6V - 25.2V          |                                                               |                                                                                               |
| ME30A2403B01 | 24.0V | 1.33A          | 30W          | 240mV pk-pk                 | ±1%             | ±5%             | 28.8V - 33.6V          |                                                               |                                                                                               |
| ME30A4803B01 | 48.0V | 0.63A          | 30W          | 480mV pk-pk                 | ±1%             | ±5%             | 55.0V - 60.0V          | 2.5 x 5.5 x 9.5mm<br>Straight Barrel Type,<br>center positive | Class II Wall-Plug, Fixed<br>North American Blades <sup>3</sup>                               |
| ME30A0503C01 | 5.0V  | 4.00A          | 20W          | 75mV pk-pk                  | ±1%             | ±5%             | 5.75V - 7.75V          |                                                               |                                                                                               |
| ME30A0903C01 | 9.0V  | 3.00A          | 27W          | 90mV pk-pk                  | ±1%             | ±5%             | 11.7V - 16.2V          |                                                               |                                                                                               |
| ME30A1203C01 | 12.0V | 2.50A          | 30W          | 120mV pk-pk                 | ±1%             | ±5%             | 14.4V - 16.8V          |                                                               |                                                                                               |
| ME30A1503C01 | 15.0V | 2.00A          | 30W          | 150mV pk-pk                 | ±1%             | ±5%             | 18.0V - 21.0V          |                                                               |                                                                                               |
| ME30A1803C01 | 18.0V | 1.67A          | 30W          | 180mV pk-pk                 | ±1%             | ±5%             | 21.6V - 25.2V          |                                                               |                                                                                               |
| ME30A2403C01 | 24.0V | 1.33A          | 30W          | 240mV pk-pk                 | ±1%             | ±5%             | 28.8V - 33.6V          |                                                               |                                                                                               |
| ME30A4803C01 | 48.0V | 0.63A          | 30W          | 480mV pk-pk                 | ±1%             | ±5%             | 55.0V - 60.0V          |                                                               |                                                                                               |

- Notes:** 1. Measured at the output connector, with noise probe directly across output and load terminated with 0.1μF ceramic and 10μF low ESR capacitors. For 5V and 6V models, values listed are typical, 100mV pk-pk maximum with 0.1μF ceramic and 47μF low ESR capacitors used at measurement point.  
2. Order blade kit KT-1027K for other blades (EU, UK, Australia)  
3. For EU fixed blades, replace "C" in the model number with "M", for UK blades, replace "C" with "G", for Australia blades, replace "C" with "H".  
4. All specifications are typical at nominal input, full load, at 25°C ambient unless noted.  
5. For Input Class I models: For AC GND connected to output common (-), insert a "B" in the part number where the "A" is located (ME30B1203F01).

### INPUT

|                                         |                                                                          |
|-----------------------------------------|--------------------------------------------------------------------------|
| AC Input                                | 100-240Vac, ±10%, 47-63Hz, 1Ø                                            |
| Input Current                           | 115Vac: 1.2A, 230Vac: 0.6A                                               |
| Inrush Current                          | 264Vac, cold start: will not exceed 40A                                  |
| Input Fuses                             | F1, F2: 2.0A, 250Vac fuses (line & neutral lines) provided on all models |
| Earth Leakage Current (Input to Ground) | <500μA@264Vac, 60Hz, NC<br><1mA@264Vac, 60Hz, SFC                        |
| Efficiency                              | >87%, typical                                                            |
| No Load Input Power                     | <0.1W per DoE Efficiency Level VI Requirements                           |

**Notes:** All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

### OUTPUT

|                                           |                                                                                                                                                                                   |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Turn On Time                              | Less than 700mS @115Vac, full load                                                                                                                                                |
| Hold-Up Time                              | 20mS min., at full Load, 100Vac input                                                                                                                                             |
| Patient Leakage Current (Output to Earth) | <100μA@264Vac, 60Hz, NC<br><500μA@264Vac, 60Hz, SFC                                                                                                                               |
| Output Power                              | 20 to 30W continuous – See models chart for specific voltage model ratings                                                                                                        |
| Output Voltage                            | See models chart on pg 1                                                                                                                                                          |
| Ripple and Noise                          | See models chart on pg 1                                                                                                                                                          |
| Transient Response                        | 500μs response time for return to within 0.5% of final value for any 50% load step over the range of 5% to 100% of rated load, Δi/Δt < 0.2A/μs. Max. voltage deviation is +/-3.5% |
| Regulation                                | See models chart on pg 1                                                                                                                                                          |

**Notes:** All specifications are typical at nominal input, full load, at 25°C ambient unless noted.



### PROTECTION

|                            |                                                                |
|----------------------------|----------------------------------------------------------------|
| Overtemperature Protection | Will shutdown upon an overtemperature condition, auto-recovery |
| Overload Protection        | 130 to 180% of rating, Hiccup Mode                             |
| Short Circuit Protection   | Hiccup Mode, auto recovery                                     |
| Overvoltage Protection     | Hiccup mode, see models chart for trip ranges                  |
| Drop Test                  | 1.4m from table top to wooden platform, 6 faces                |

**Notes:** All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

### RELIABILITY

|            |                                                                                                                                           |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| MTBF       | >1,000,000 hours, full load, 110 & 220Vac input, 25°C amb., per Telcordia 332 Issue 6                                                     |
| E-cap Life | >8 year life based on calculations at 115Vac/60Hz & 230Vac/50Hz, ambient 25°C at 24 hrs per day, 365 days/year, 6 power up cycles per day |

**Notes:** All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

### ISOLATION SPECIFICATIONS

|           |                                                                       |
|-----------|-----------------------------------------------------------------------|
| Isolation | Input-Output: 2 MOPP<br>Input-Ground: 1 MOPP<br>Output-Ground: 1 MOPP |
|-----------|-----------------------------------------------------------------------|

**Notes:** All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

### ENVIRONMENT

|                       |                                                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating Temperature | -20°C to +70°C. See curve for derating                                                                                                                                                                                                                                   |
| Storage Temperature   | -40°C to +85°C                                                                                                                                                                                                                                                           |
| Altitude              | Operating: to 5000m.<br>Non-operating: -500 to 40,000 ft.                                                                                                                                                                                                                |
| Relative Humidity     | 5% to 95%, non-condensing                                                                                                                                                                                                                                                |
| Vibration             | Operating: 0.003g/Hz, 1.5grms overall, 3 axes, 10 min/axis, 1-500Hz.<br>Non-Oper.: random waveform, 3 minutes per axis, 3 axes and Sine waveform, Vib. frequency/acceleration: 10-500Hz/1g, sweep rate of 1 octave / minutes, Vibration time of 10 sweeps / axes, 3 axes |
| Dimensions            | See outline drawings                                                                                                                                                                                                                                                     |
| Weight                | 250g                                                                                                                                                                                                                                                                     |

**Notes:** All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

### SAFETY

|                  |                                                                                                                                                                                                     |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety Standards | EN/IEC/UL60601-1-1, 3rd edition                                                                                                                                                                     |
| Shock            | Operating: Half-sine, 20gpk, 10mS, 3 axes, 6 shocks total<br>Non-Operating: Half-sine waveform, impact acceleration of 100G, Pulse duration of 6 mS, Number of shocks: 3 for each of the three axis |

**Notes:** All specifications are typical at nominal input, full load, at 25°C ambient unless noted.

### EMI/EMC COMPLIANCE

|                                                             |                                                                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conducted Emissions                                         | EN55011/CISPR11 Class B, FCC Part 15.107, Class B: >6db margin typ, at 115 and 230Vac                                                                                                                                                                                                                    |
| Radiated Emissions                                          | EN55022/CISPR11 Class B, FCC Part 15.109, Class B: >3db margin typ, at 115 and 230Vac                                                                                                                                                                                                                    |
| Common Mode Noise                                           | High Frequency (100kHz-20MHz): <40mA pk-pk                                                                                                                                                                                                                                                               |
| Electro-Static Discharge (ESD) Immunity on Power ports      | EN55024/IEC61000-4-2, Level 4: +/- 8kV contact, +/- 15kV air, Criteria A IEC60601-1-2, 4 <sup>th</sup> Edition, Table 4                                                                                                                                                                                  |
| Radiated RF EM Fields Susceptibility                        | EN55022/EN61000-4-3, 10V/m, 80MHz-2.7GHz, 80% AM at 1kHz IEC60601-1-2, 4 <sup>th</sup> Edition, Table 4                                                                                                                                                                                                  |
| Electrical Fast Transients (EFT)/Bursts                     | EN55024/IEC61000-4-4, Level 4, +/- 4kV, 100Khz rep rate, 40A, Criteria A IEC60601-1-2, 4 <sup>th</sup> Edition, Table 5                                                                                                                                                                                  |
| Surges, Line to Line (Diff Mode) and Line to GND (CMN Mode) | EN55024/IEC61000-4-5, Level 4, +/-2kV DM, +/-4kV CM, Criteria A Surpasses IEC60601-1-2, 4 <sup>th</sup> Edition requirements                                                                                                                                                                             |
| Conducted Disturbances induced by RF Fields                 | EN55022/IEC61000-4-6, 3.6V/m – Level 4, 0.15 to 80Mhz; and 12V/m in ISM and amateur radio bands between 0.15Mhz and 80Mhz, 80% AM at 1KHz IEC60601-1-2, 4 <sup>th</sup> Edition, Table 5                                                                                                                 |
| Rated Power frequency magnetic fields                       | EN55024/IEC1000-4-8, Level 4: 30A/m, 50/60 Hz IEC60601-1-2, 4 <sup>th</sup> Edition, Table 4                                                                                                                                                                                                             |
| Voltage Interruptions, Dips, Sags & Surges                  | EN55024/IEC61000-4-11: --100% dip for 10 mS, at 0, 45, 90, 135, 180, 225, 270 and 315 degrees, 100% dip for 20mS, 0 deg., Criteria A --100% dip for 5000mS (250/300 cycles), Criteria B -- 60% dip for 100mS, Criteria B -- 30% dip for 500mS, Criteria A IEC60601-1-2, 4 <sup>th</sup> Edition, Table 5 |
| Harmonic Current Emissions                                  | EN55011/EN61000-3-2, Class A                                                                                                                                                                                                                                                                             |
| Flicker Test                                                | EN61000-3-3                                                                                                                                                                                                                                                                                              |

All specifications are typical at nominal input, full load, at 25°C ambient unless noted. Consult factory for information regarding testing for or usage under special environments.

**Notes:** Performance criteria are based are defined as following:

- A – Normal performance during and after the test
- B – Temporary degradation, self-recoverable
- C – Temporary degradation, operator intervention required to recover the operation
- D – Permanent damage



### DERATING CHART

Output power is derated above 40°C as follows, for operation over the entire AC input range (90-264Vac).



### MECHANICAL DRAWING



Notes : 1. All dimensions in mm.

2. Interchangeable blade models come with North American blade fitted. For other blades (EU, UK, Aust.) order blade kit KT1027K.



### CONNECTOR INFORMATION

Standard models include a 2.5 x 5.5 x 9.5mm straight barrel type connector (Ault #3), center positive. Other standard options are listed below. The "03" in the standard model number is replaced by the applicable digits below:

| Connector No. | Description                                                                   |                                                                                     | Connector No. | Description                                                                          |                                                                                       |
|---------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 02            | 2.1 x 5.5 x 9.5 mm straight barrel plug - Center Positive                     |    | 44            | 2.1 x 5.5 x 9.5 mm straight barrel plug, locking - Center Positive                   |    |
| 03            | 2.5 x 5.5 x 9.5 mm straight barrel plug - Center Positive (Standard models)   |    | 45            | 2.5 x 5.5 x 9.5 mm straight barrel plug, locking - Center Positive                   |    |
| 12            | 5 pin DIN-180 male connector (Pins 3, 5 = (+), pins 1, 2, 4 = (-))            |    | 48            | 3 pin Snap n Lock, Kycon Kpp-3P or equivalent (Pin 1 = (+), pin 2 = (-))             |    |
| 22            | 6 pin DIN male connector (Pins 1, 2 = (+), pins 4, 5 = (-))                   |    | 49            | 4 pin Snap n Lock, Kycon Kpp-4P or equivalent (Pins 1, 3 = (+), pins 2, 4 = (-))     |    |
| 23            | 8 pin DIN male connector (Pins 3, 7 = (+), pins 1, 4, 6, 8 = (-), shell = FG) |   | 51            | 6 pin Minifit - Molex 39-01-2060 or equivalent (Pins 1, 4 = (+), pins 3, 6 = (-))    |   |
| 32            | 9 pin "D" type, female (Pins 8 = (+), pins 5 = (-), all others = NC)          |  | 65            | Stripped and Tinned Leads                                                            |  |
| 33            | 2.5 x 5.5 x 12.5 mm straight barrel plug - Center positive                    |  | 70            | 2.1 x 5.5 x 11 mm right angle barrel plug (high retention) - Center Positive         |  |
| 40            | 2.1 x 5.5 x 9.5 mm right angle barrel plug (high retention) - Center positive |  | 71            | 2.5 x 5.5 x 11 mm right angle barrel plug (high retention) - Center Positive         |  |
| 41            | 2.5 x 5.5 x 9.5 mm right angle barrel plug (high retention) - Center positive |  | 72            | 2.1 x 5.5 x 9.5 mm straight barrel plug (high retention, no spark) - Center Positive |  |
| 42            | 2.1 x 5.5 x 11 mm straight barrel plug (high retention) Center positive       |  | 73            | 2.5 x 5.5 x 9.5 mm straight barrel plug (high retention, no spark) - Center Positive |  |
| 43            | 2.5 x 5.5 x 11 mm straight barrel plug (high retention) - Center positive     |  | 74            | EIAJ#5 style connector - Central Positive                                            |  |
| 99            | Micro USB                                                                     |  |               |                                                                                      |                                                                                       |