

ME60 Family

60W Single Output External Power Medical Grade







FEATURES AND BENEFITS

Meets UL/EN/IEC60601-1-2, 4Th Edition For EMC*

Approved To En/IEC/UL60601-1, 3rd Edition With Isolation Levels Which Satisfy The 2 MOPP Requirements

Meets DoE Efficiency Level VI Requirements No Load Input Power Average Efficiency

Up To 60W Of AC-DC Power

Universal Input 90-264Vac Input Range

Desktop Style Package

Meets EN55011/CISPR11, FCC Part 15.109 Class B Conducted & Radiated Emissions, With 6db Margin

E-Cap Life Of >7 Years

3 Year Warranty

IP22 Rated Enclosure











| | | | • | | | | | | |
|-----------------|-------|-------------------|-----------------|--------------------------------|--------------------|--------------------|---|----------------------------------|--|
| Model Number | Volts | Output Current | Output Power | Ripple & Noise ¹ | Line Regulation | Load Regulation | Output Connector | Output Cable | Input Configuration |
| ME60A0551F01 | 5.0V | 7.00A | 35W | 75mV pk-pk | ±1% | ±5% | | 1150mm, | |
| ME60A0903F01 | 9.0V | 6.00A | 56W | 90mV pk-pk | ±1% | ±5% | | | |
| ME60A1203F01 | 12.0V | 5.00A | 60W | 120mV pk-pk | ±1% | ±5% | Type2 | #18AWG | Class I Desktop, |
| ME60A1503F01 | 15.0V | 4.00A | 60W | 150mV pk-pk | ±1% | ±5% | 2.5 x 5.5 x 9.5mm | 9V:1150mm 18AWG | IEC60320 C14 Receptacle |
| ME60A1803F01 | 18.0V | 3.30A | 60W | 180mV pk-pk | ±1% | ±5% | Straight Barrel Type, center | All others: 1500mm, | |
| ME60A2403F01 | 24.0V | 2.70A | 60W | 240mV pk-pk | ±1% | ±5% | positive | #18AWG | |
| ME60A4803F01 | 48.0V | 1.35A | 60W | 480mV pk-pk | ±1% | ±5% | | | |
| ME60A0551N01 | 5.0V | 7.00A | 35W | 75mV pk-pk | ±1% | ±5% | Type2 #18AWG 2.5 x 5.5 x 9V:1150mi 9.5mm 18AWG Straight Barrel All others Type, center 1500mm, | | Omm VG IEC60320 C8 Receptacle nm, |
| ME60A0903N01 | 9.0V | 6.00A | 56W | 90mV pk-pk | ±1% | ±5% | | 1150mm, | |
| ME60A1203N01 | 12.0V | 5.00A | 60W | 120mV pk-pk | ±1% | ±5% | | | |
| ME60A1503N01 | 15.0V | 4.00A | 60W | 150mV pk-pk | ±1% | ±5% | | 9V:1150mm 18AWG | |
| ME60A1803N01 | 18.0V | 3.30A | 60W | 180mV pk-pk | ±1% | ±5% | | All others: 1500mm, #18AWG | |
| ME60A2403N01 | 24.0V | 2.70A | 60W | 240mV pk-pk | ±1% | ±5% | | | |
| ME60A4803N01 | 48.0V | 1.35A | 60W | 480mV pk-pk | ±1% | ±5% | | | |
| ME60A0551Q01 | 5.0V | 7.00A | 35W | 75mV pk-pk | ±1% | ±5% | | | |
| ME60A0903Q01 | 9.0V | 6.00A | 56W | 90mV pk-pk | ±1% | ±5% | 6 pin Molex | 1150mm, | Class II Desktop, IEC60320 C18 Receptacle m, |
| ME60A1203Q01 | 12.0V | 5.00A | 60W | 120mV pk-pk | ±1% | ±5% | Type2 #18AWG 2.5 x 5.5 x 9V:1150mm 9.5mm 18AWG Straight Barrel All others: Type, center positive #18AWG | | |
| ME60A1503Q01 | 15.0V | 4.00A | 60W | 150mV pk-pk | ±1% | ±5% | | | |
| ME60A1803Q01 | 18.0V | 3.30A | 60W | 180mV pk-pk | ±1% | ±5% | | All others: 1500mm. | |
| ME60A2403Q01 | 24.0V | 2.70A | 60W | 240mV pk-pk | ±1% | ±5% | | | |
| ME60A4803Q01 | 48.0V | 1.35A | 60W | 480mV pk-pk | ±1% | ±5% | | | |



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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 models, values listed are typical, 100mV pk-pk maximum
- 2. Molex p/n 39-01-2060 or equivalent. See outline drawing for pinout information
- 3. For Input Class I models: For AC GND connected to output common (-), insert a "B" in the part number where the "A" is located (TE60B1203F01)
- 4. All specifications are typical at nominal input, full load, at 25°C ambient unless noted

INPUT

| AC Input | 100-240Vac, ±10%, 47-63Hz, 1Ø | | |
|-----------------------|--|--|--|
| Input Current | 100Vac: 1.5A, 240Vac: 0.7A | | |
| Inrush Current | 264Vac, cold start: will not exceed 40A | | |
| Input Fuses | F1, F2: 2A, 250Vac fuses (line & neutral lines) provided on all models | | |
| Earth Leakage Current | <500µA@264Vac, 60Hz, NC <1mA@264Vac, 60Hz, SFC | | |
| Efficiency | >88%, typical | | |
| Common Mode Noise | High Frequency (100kHz-20MHz): <40mA pk-pk | | |
| No Load Input Power | <0.210W (meets DoE Efficiency Level VI Requirements) | | |

ENVIRONMENT

| Operating Temperature | -20°C to +70°C. See curve for derating |
|------------------------|---|
| operating reinperature | 3 |
| Relative Humidity | 5% to 95%, non-condensing |
| Weight | 400g |
| Dimensions | W: 2.67" x L: 4.25" x H: 1.29" W: 67.9mm x L: 108mm x H: 32.7mm |
| Altitude | Operating: to 5000m. Non-operating: -500 to 40,000 ft. |
| Storage Temperature | -40°C to +85°C |
| Vibration | Operating: 0.003g/Hz, 1.5grms overall, 3 axes, 10 min/axis, 1-500Hz. 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 |
| Shock | Operating: Half-sine, 20gpk, 10mS, 3 axes, 6 shocks total Non-Operating: Half-sine waveform, impact acceleration of 100G, Pulse duration of 6 mS, Number of shocks: 3 for each of the three axis |

OUTPUT

| Output Voltage | See models chart on pg 1 | | |
|------------------|--|--|--|
| Output Power | 60W continuous – See models chart for specific voltage model ratings | | |
| Turn On Time | Less than 1 sec @115Vac, full load | | |
| Hold-up Time | 20mS min., at full Load, 100Vac input | | |
| Ripple and Noise | See models chart on pg 1 | | |

EMI/EMC COMPLIANCE

| | EC60601-1-2/EN55011/CISPR11 Class B, FCC Part 15, Class B, 6db margin typ., at 115 and 230Vac |
|--|---|
| Radiated Emissions | IEC60601-1-2/EN55011/CISPR11 Class B, FCC Part 15, Class B, 6db margin typ., at 115 and 230Vac |
| Electro-Static Discharge (ESD) Immunity on Power ports | EN55024/IEC61000-4-2, Level 4: +/- 8kV contact, +/- 15kV air, Criteria A IEC60601-1-2, 4th Edition, Table 4 |
| Flicker Test | EN61000-3-3 |

SAFETY

| Safety Standards | EN/IEC/UL60601-1, 3rd edition |
|------------------|---|
| Drop Test | 1.4m from table top to wooden platform, 4 faces |

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.

RELIABILITY

| | >250,000 hours, full load, 110 & 220Vac |
|--|---|
| | input, 25°C amb., per Telcordia 332 Issue 6 |



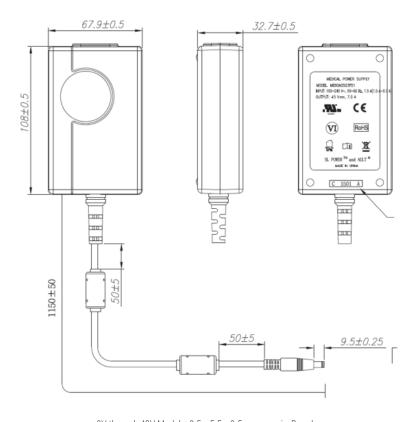
PROTECTION

| Overvoltage Protection | 130 to 150% of output voltage (max. 60V on 48V model), hiccup mode | | |
|----------------------------|--|--|--|
| Short Circuit Protection | Hiccup Mode, auto recovery | | |
| Overtemperature Protection | Will shutdown upon an overtemperature condition, auto-recovery | | |
| Overload Protection | 130 to 180% of rating, Hiccup Mode | | |

ISOLATION

| | Input-Output: 2 MOPP |
|-----------|-----------------------|
| Isolation | Input-Ground: 1 MOPP |
| | Output-Ground: 1 MOPP |

MECHANICAL DRAWINGS

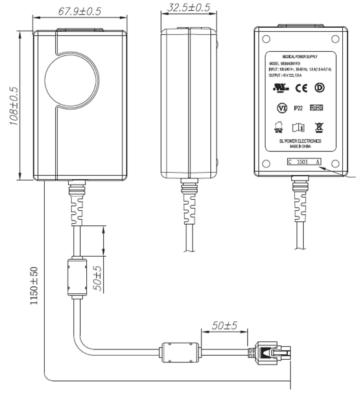


9V through 48V Models: $2.5 \times 5.5 \times 9.5$ mmor equiv. Barrel Connector, center positive²

See Note 3:

Notes:

- All dimensions in mm.
- Other options are available.
- 3. Cable length on 12V through 48V models is 1500mm, nominal.
- 4. The unit should not be covered or enclosed to protect against excessive case temperature rise.



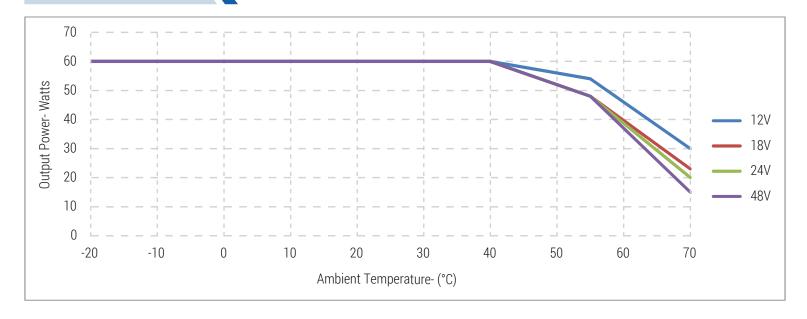
5V Models: Output Connector: 6 pin Molex 39-01-2060 or equiv. Pins 1, 4 = (+), pins 3, 6 = (-), pins 2, $5 = NC^2$

| L | EADWIRE HO | 2 | |
|------|------------|-------|----------|
| PIN# | FUNCTION | COLOR | De State |
| 1 | +V | RED | |
| 2 | NC | | |
| 3 | COMMON | BLACK | |
| 4 | +V | WHITE | |
| 5 | NC | 1 | |
| 6 | COMMON | GREEN | پ ور م |
| | BRAID | FG4 | 3 |

Note: Pins 4,5,6 are located closest to the locking tab



DERATING CHART



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CONNECTOR INFORMATION

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

These are the most common standard connectors. SL Power has the capability to incorporate any non-standard output connector. All output connectors are limited by wattage range and application type. The SL Power applications team is available to provide professional support and can be contacted here: info@slpower.com.

Disclaimer: The information and specifications contained herein are believed to be correct at the time of publication. However, SL Power accepts no responsibility for consequences arising from reproduction errors or inaccuracies. Specifications are subject to change without notice.