

# MEGA Electronics Inc.

## AC/DC Power Supplies



### Power Supplies & Cords

- Wall Adapters with Interchangeable Plug Option to 40W
- Desk Top to 300W
- Open Frame with PFC to 800W
- DIN Rails to 960W
- Medical Approvals 4th Edition

**MEGA Electronics Inc.**  
4B Jules Lane  
New Brunswick, NJ 08901  
tel 732.249.2656 fax 732.249.7442  
[www.megaelectronics.com](http://www.megaelectronics.com)  
sales@megaelectronics.com

## Power Cords



### Powercords and Related Components

Quality service and quality products. Produced in ISO9000 facilities, our UL listed and internationally approved powercords and related components all conform to the highest standards.

Upon your next requirement, please keep MEGA in mind.

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## DC/DC Converters



### DC/DC-AC/DC Converters

- Rated up to 100 Watts
- UL, cUL Recognized, CE Approved
- Isolations to 10kV for Medical Applications
- ROHS Compliant
- Short Lead Times
- High MTBF Rates
- Continuous Short Circuit Protected
- Website with Product Locator

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# Power Supplies

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Powering Your Products

# Wall Plug In

Up to 60Watts

Interchangeable plugs packaged for global shipping

Fixed plugs for country specific shipping

Regulated output w/ low ripple & noise

Medical approvals UL60601-1 4<sup>th</sup> edition, 2XMOOP



# Desktop Power Supplies

Up to 300Watts

Energy Efficiency Level VI

Optional inlet configurations and switches

Approved for Global Shipping

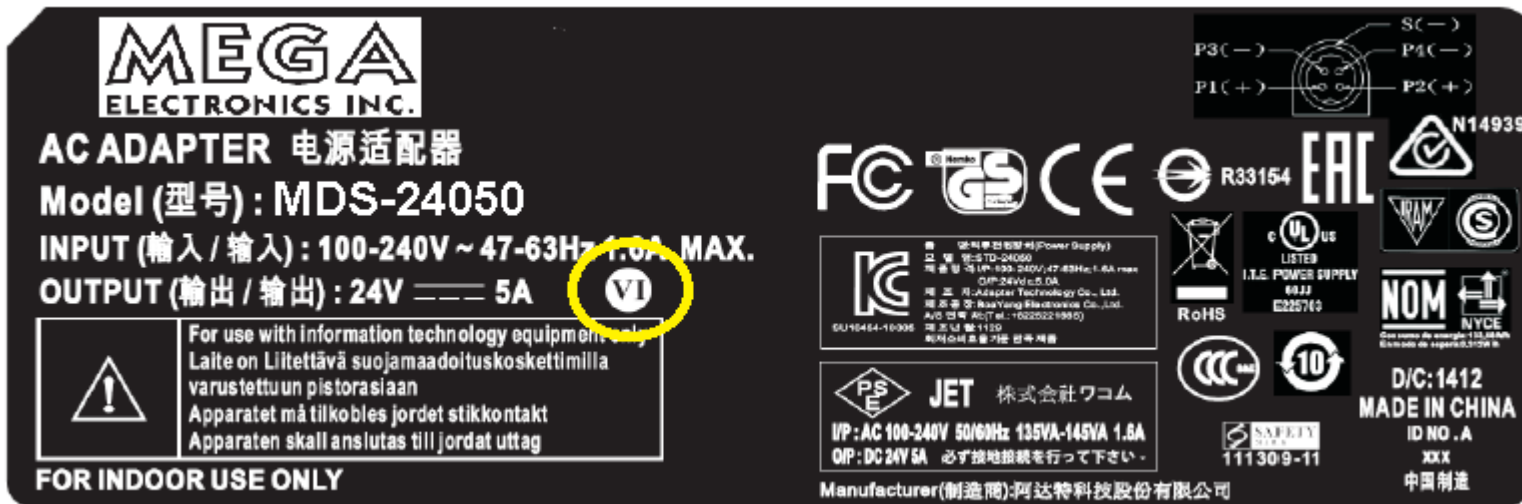
Medical approvals UL60601-1 4th Edition



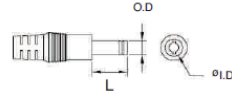
# Multiple Approvals

MEGA has all major approval marks and supplies meet the mandatory Energy Efficiency Level VI requirements, while some medical power supplies are granted a waiver from the requirement.

Additional approval agencies markings may be optional if not already in place.



## Appendix: Plug List of Output Cable



An infinite numbers of DC connectors are possible without impacting approvals.

Code	Plug Type	Specification	Outline / Drawing
00	Strip & Tined	NC	
01	Barrel Type	L x 5,5 x 2,1	
02		L x 5,5 x 2,5	
03		L x 4,75 x 1,7	
04		L x 4,0 x 1,7	
05		L x 3,5 x 1,35	
06		L x 2,35 x 0,7	
07		L x 6,3 x 3,0	
08		L x 6,5 x 1,4	
11	Barrel Type Right Angle	L x 5,5 x 2,1	
12		L x 5,5 x 2,5	
13		L x 4,75 x 1,7	
14		L x 4,0 x 1,7	
15		L x 3,5 x 1,35	
16		L x 2,35 x 0,7	
17		L x 6,3 x 3,0	
18		L x 6,5 x 1,4	
21	Din (male)	3Pin	
22		4Pin	
23		5Pin(180)	
24		5Pin(240)	
25		6Pin	
26		7Pin	
27		8Pin	



Barrels will be center positive unless specified otherwise

Code	Plug Type	Specification	Outline / Drawing
31	Mini-Din (male)	3Pin	
32		4Pin	
33		5Pin	
34		6Pin	
35		7Pin	
36		8Pin	
41	Power-Mini Din (male)	3Pin (Molding)	
42		4Pin (Molding)	
45		3Pin (Assembly/Lock Type)	
46		4Pin (Assembly/Lock Type)	
61	Interchangeable Connector	2Pin	
62		2Pin	
63		3Pin	
71	Switchcraft Locking Type	A:5,5, B:2,5 C:0,375 (9,52mm)	
72		A:5,5, B:2,5 C:0,475 (12,06mm)	
73		A:5,5, B:2,1 C:0,375 (9,52mm)	
74		A:5,5, B:2,1 C:0,475 (12,06mm)	
81	DC Jack with Screw	A:5,5, B:2,1, C:7,5	
82		A:5,5, B:2,1, C:10,1	
91	Cigarette Lighter		

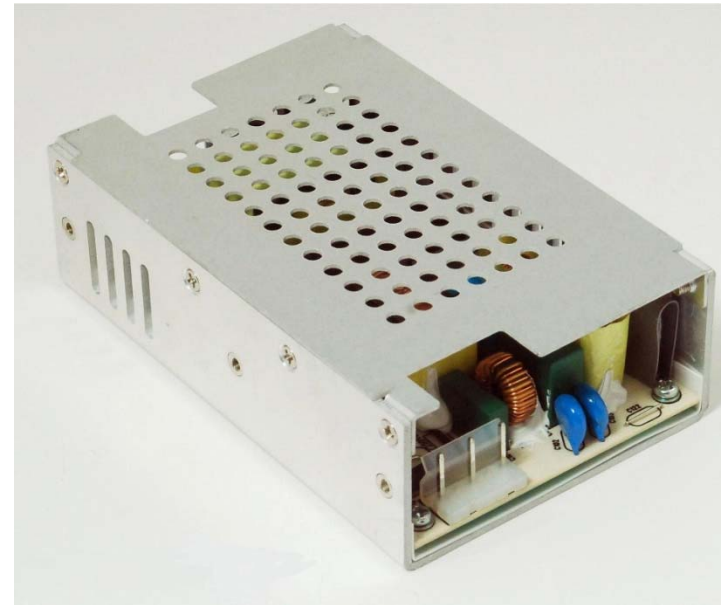
# Open Frame

Up to 800W (strength 100+ watts)

Low power consumptions

High Efficiency, PFC

w/&w/o fans



# What to ask

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Case type? Wall plug in, desk top, open frame, DIN rail

What Input Voltage rating do you need? Typical power supply is marked 100 to 240V in, but working voltages are 90 to 264Vin. Some LED applications require higher input voltages. In most cases this question is not needed.

Output Voltage rating?

What are the Watts or Amps of output required?

Output connector? Most common is OD5.5mm x ID2.1mm x Length 9.5mm barrel, but the options are almost infinite.

Linear or switching power supply? Linear supplies are heavy and inefficient, but make very little “noise”. Linear supplies are an old technology and are dying.



## Applications

Amplifiers

ATM

Audio equipment

Audio systems

Audio Visual Products for classrooms

Commercial Projectors

Election Machines

Food Processing

Lab Equipment

Medical Carts

Medical laptops

Rowing machines

Scanners

Security Systems

Slot Machines

Television service

Test and Measurement

Typewriters for the blind

Vending machines

# Power Cord Products



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We offer the complete package for all global destinations. Cord set production begins with the drawing of 8mm copper rods down to sizes as small as 0.05mm and includes all aspects of production from extrusion to molding of plugs and connectors all in house.

Plugs are available for all global destinations with all necessary national approvals.

Low volume production runs are possible to meet customer specs with special cables and colors.

[www.megaelectronics.com](http://www.megaelectronics.com)

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# North American NEMA Standards

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Standard Three Pin styles up to 30A/250V

- For use with all three-conductor cordages
- Also available in two conductor versions



Hospital Grades up to 20A/250V

- For use with all three-conductor cordages
- Solid pins, soldered contacts
- Optional Heavy Duty plug tooled



Fully molded twist locks

- Three and four conductor models



# International Three Conductor Plug Standards

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<b>Country</b>	<b>Maximum AMP/V</b>	<b>Standard</b>
Continental Europe "Schuko"	16/250	CEE(7)VII
United Kingdom (Singapore/G Mark)	13/250	BS 1363
Italy	16/250	CEI 23-16
Switzerland	10/250	1011-S24507
Denmark	10/250	107/10
Australia/New Zealand	15/250	AS 3112
Argentina	20/250	IRAM 2073:1982
China	15/250	GB 2099.1-1996
Brazil	20/250	NBR14136
South Africa/India	16/250	SABS164/1980-IS1293 BIS
Israel	16/250	S1 32/1971
Japan	15/125	JIS 8303
South Korea	16/250	K 60884-1 & KSC8305: 97
Taiwan	10/250	CNS10917
Thailand	16/250	TIS 166-2549

# Plug Types

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Cont'l Europe  
"Schuko" 16A



Euro Plug 2.5A



United Kingdom  
(Singapore Spring Mark  
G-Mark for Gulf States)



Italy



Switzerland



Denmark



# Plug Types

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Australia



Argentina



China



Brazil



South Africa/India  
Separate approvals



Israel



# Plug Types

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Japan



South Korea

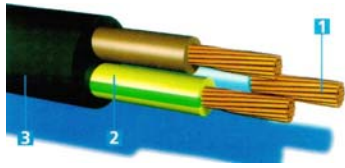


Taiwan



Thailand





# Cordage Types

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There are five major types of cable possible:

UL/CSA (North America)

Harmonized (Europe)

Australian (Australia/New Zealand)

Japanese (Japan)

Chinese (China)

It is not permissible to ship products with cordage not approved for the country of destination, i.e. products cannot be shipped to Europe with UL/CSA cordage.

The Australian standard mirrors the European standard with minor flammability differences.



# EN60320 Molded Connectors

European / UL ratings

C7  
2.5A/250V  
10A/125V



C5  
2.5A/250V  
10A/125V



C17  
10A/250V  
15A/250V



C13  
10A/250V  
15A/250V



C15  
10A/250V  
15A/250V



C19  
16A/250V  
20A/250V



120C max.

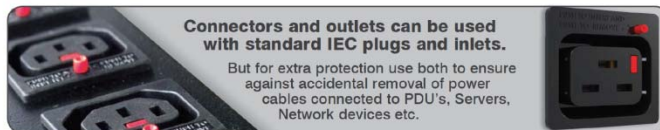


See catalog page 18

# Locking Cords and Outlets

Guards against accidental disconnection of Computers, PDU's, Servers and most Network Devices.

**Unique patented lockable female C13 & C19 IEC connectors and outlets**



Cords with locking C13 and C19 connectors mate to any manufacturers' inlets. The C13 is available as hand assembled. C13 and C19 panel mounting locking outlets also possible.

Perfect for any application where shock or vibration can cause the connection to loosen or when the continuous flow of power is critical.

# Coil Cords

**MEGA Electronics specializes in making coiled power and data cords, particularly Power Cords for the medical industry. Cords can come in a variety of colors, lengths and with or without terminated ends.**

**For a complete description of the manufacturing process read more on the MEGA website**

**<https://www.megaelectronics.com/spiralcords/>**



# Networking Cables and Harnesses

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MEGA can supply wire harnesses with molded connectors, over molded ferrites and various housings and terminals. Our strength is in PVC harnesses, data cables and AC and DC power applications



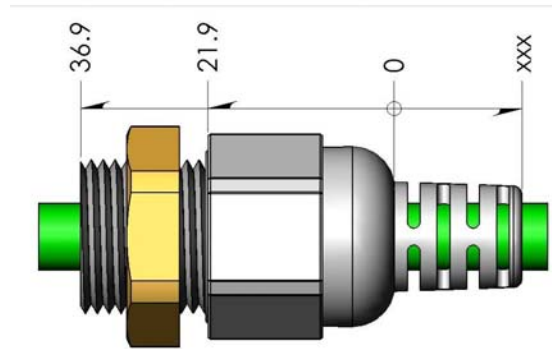
# Optional components



Branches allow multiple devices to be run from a single power source. We currently offer two and three way branches.



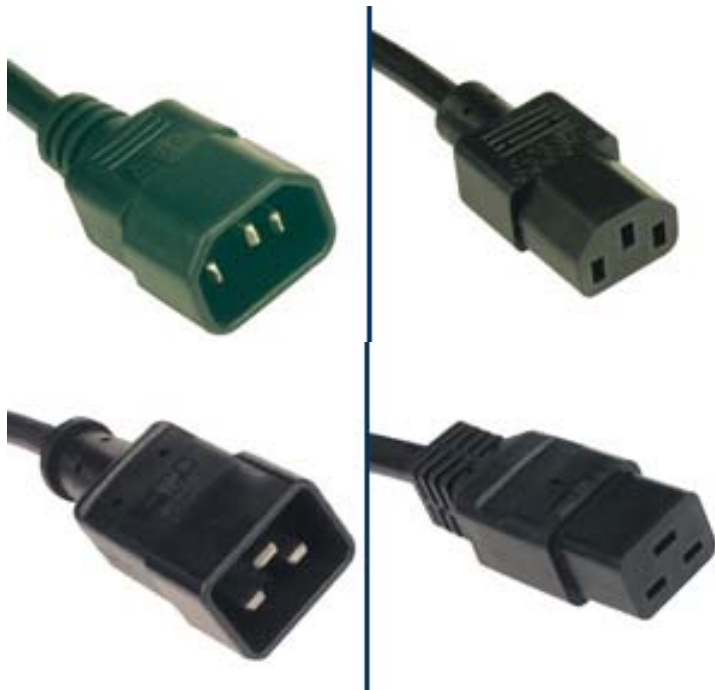
Fully molded threaded strain reliefs are available from our stock tooling or custom made.



# Universal Approved Jumper Cords

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Jumper cords allow the transfer of power from one device to a second. Considered wiring harnesses, a single jumper cord can carry both the North American and European approvals making it universally approved. Please note that SJT3x17AWG must be used with H05VVF3G1.0mm cable.



C14/C13

Rated: 15A(UL)10A(Europe)/250V

See catalog page 17

C20/C19

Rated: 20A(UL)16A(Europe)/250V

# AC Inlets and Outlets

C14

Rated 10A-  
15A/250V



C20

Rated: 16A-  
20A/250V



C13

Rated: 10A-  
15A/250V



C19

Rated: 16A-  
20A/125V-250V



See catalog page 28-29

# What to ask

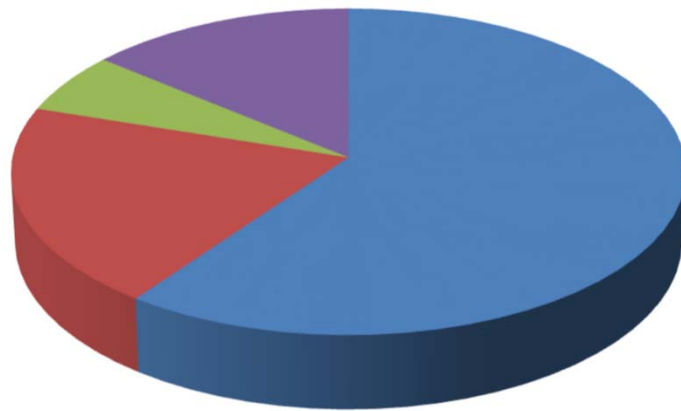
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- What plug is required?
  - How many amps and volts? (i.e. 10A/125V, 10A/250V, etc.)
  - How many conductors? (Most common 2 or 3)
- What cordage is required?
  - What size, temperature rating, color, conductor colors?
- Is a connector required?
  - If yes, which type? (i.e. C7, C13, C19)
  - If no, what end preparations are required:  
ROJ(Remove outer jacket) + Strip (conductors), tinning, terminals?
- What length is required?
- Optional extras: special packaging, bagging, blister pack, labeling, etc.

Note: The completed cord set will be rated only as high as the lowest rated components



## Power cord use by country



- North America
- Continental Europe
- United Kingdom
- All others

### Applications

- Audiophile power cords
- Cable Boxes
- Central Vacuum Systems
- CNC Milling Equipment
- Commerical & Residential Ovens
- Computers
- Computer Networking
- Drives/Data Storage
- Electrical Vehicles
- Exercise equipment
- Food processing
- Hospital Beds
- Ice machines
- Medical Devices
- Medical Instruments
- Photo Kiosk
- Pool Cleaning Equipment
- Power Tools
- Printers
- Professional Vacuum Cleaners
- Pumps
- Refrigeration/Cooling
- Scanners
- Surgical Lasers
- Test and Measurement Equipment
- Trade Shows – extension cords
- Vending Machines
- Video Equipment
- Water Coolers
- Whirlpool, Air Massage
- White Good Appliances



# DC/DC~AC/DC Converters

## DC/DC-AC/DC Converters

- Rated up to 255 Watts
- UL, cUL Recognized
- Isolations to 12kV for Medical Applications
- ROHS Compliant
- Short Lead Times
- High MTBF Rates
- Continuous Short Circuit Protected
- Switching Regulators
- SIP, DIP, SMD, DIN Rail and Chassis Mounting

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Powering Your Products

# DC/DC Converters

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SIP Packages from 0.25W to 6W  
Regulated and Unregulated, single and dual outputs  
Isolations up to 12kV

DIP Packages from 1W to 30W  
Input voltages up to 1200VDC for power utilities  
Wide input voltages  
Optional heat sinks and chassis mount bodies



SMD Packages from 0.25W to 3W  
Regulated and Unregulated, single and dual outputs

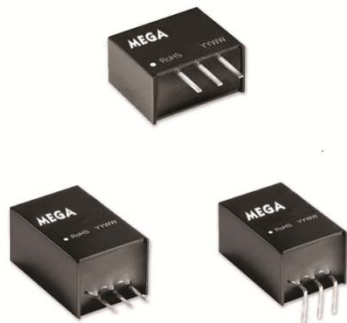
# DC/DC Converters

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PD series from 150W to 250W  
Chassis mounting  
Terminal block outputs

Board Level LED Drivers  
PWM and analog dimming



Non Isolated Switching Regulators  
Wide input  
Super high efficiency  
Replaces LM78 series

# AC/DC Converters

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From 1W to 60W  
Through hole, DIN Rail and chassis mount

From 1W to 5W  
Low Cost encapsulated  
Extremely small



# Optional Features

- Continuous short-circuit protection
- Low ripple and noise operation (2mV p-p)
- Remote On/off
- 2:1 and 4:1 input ranges
- Input under voltage shutdown
- I/O Isolation up to 12kVDC
- MTBF in excess of 3.5 million hours (Almost 400 years)
- Efficiencies up to 96%
- Extended DC input voltages

# What to ask

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What Input Voltage rating do you need? (DC input voltage can be a fixed voltage +/-10%, or a wide input. Common wide input voltages are 9-18V, 18-36V, 36-72V, 9-36V, 18-72V. AC input voltages are over a wider range typical 85VAC to 264VA and are also rated for a high DC input typically 120VDC to 370VDC )

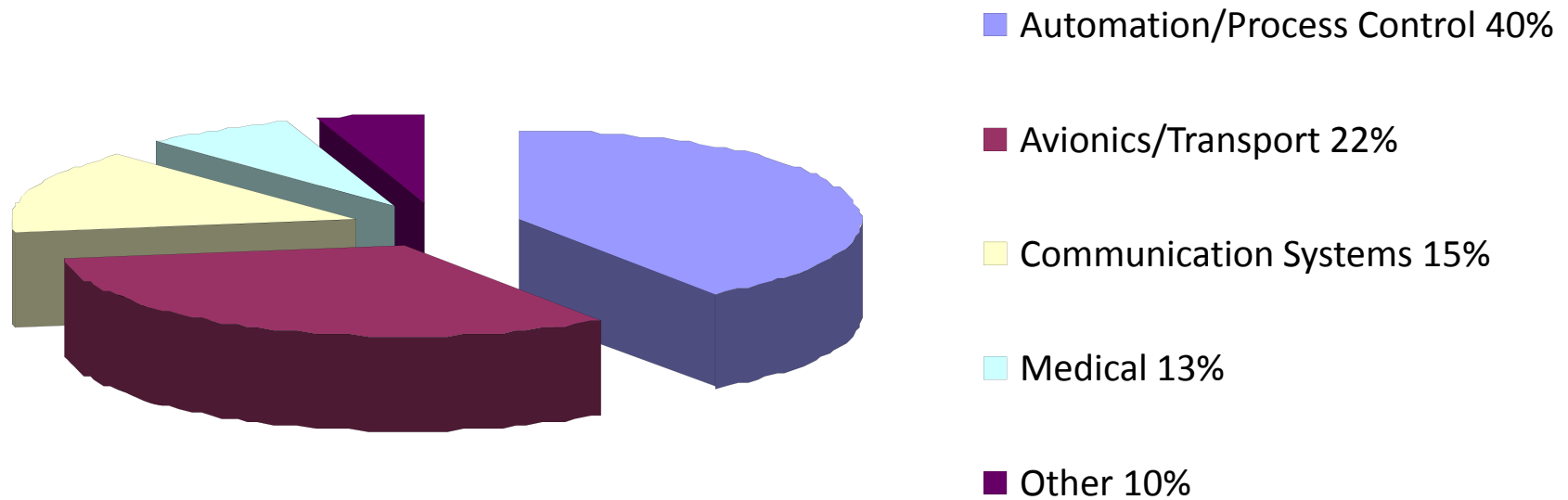
Output Voltage rating? (Can be a single output voltage, dual output voltage and triple output voltage)

What are the Watts or Amps of output required? Wattage of the converter is total output voltage x amperage.

What Isolation rating is needed? Typical is 1.5kV, medical 5kV+.

Case type: SIP, DIP, SMD or Chassis Mount

# Customer Base



Major Customers: Emerson, Eaton, Moeller, Johnson & Johnson, Honeywell, GE,



# Sales Highlights

- Power supplies: Medical 60601-1-2 4<sup>th</sup> edition, interchangeable plug kits, desktops to 300W. Higher wattage open frame
- Power cords: Every global destination, one stop shopping, low production runs and specials, locking C13/C19, colors, lengths, etc. Hospital Grades
- DC/DC converters: High MTBF rates, short lead times, 5,000 parts to chose from.