

Healthcare **POWER** Supplies





Bio Life Sciences
Dental
Imaging
Laboratory
Medical



Healthcare Sub-Segments

At Artesyn, our engineers have been designing and developing power supply products for the healthcare industry, including Imaging, Analytical Laboratory, Clinical & Molecular Diagnostics, Dental, Ophthalmic and Surgical/Medical environments for over 40 years.



Bio Life Sciences

- Immunoassay Systems
- In-Vitro Diagnostics
- Microbiology
- Centrifuges
- Clinical Chemistry
- Osmometers
- PCRs



Dental

- Gamma Imaging Systems
- CAD/CAM Systems
- Oral Care Equipment
- Digital Radiography
- X-Ray Machines



Imaging

- Ultrasound Scanners
- Computed Tomography (CT) Scan
- Positron Emission Tomography (PET)
- Magnetic Resonance Imaging (MRI)
- Nuclear Medicine
- X-Ray Machines



Laboratory

- Chemical Analysis Equipment
- Mass Analyzers
- Lab Automation
- Sterilization
- Electron Microscopes



Medical

Ophthalmic Equipment

- Surgical Systems
- Ophthalmoscopes

Surgical/Medical Devices

- Surgical Equipment
- Patient Monitoring
- Patient Therapy

Healthcare equipment manufacturers trust Artesyn's commitment to the best quality, efficiency and reliability that can be achieved. With approved medical safeties, Artesyn's power supply products can help to pave the way for advancements in a variety of healthcare applications by optimizing or eliminating process steps which accelerate time to market and lower R&D costs.



Medical Imaging



Surgical Devices



Medical Devices



Dental Equipment



- Ultrasound Scanners
- MRI, CT, PET
- X-Ray



- Robotics
- Electro Surgery
- Laser Surgery



- Patient Therapy
- Patient Monitoring
- Patient Transport



- Oral Care Systems
- CAD/CAM Systems
- Digital Radiography

Standard Products

AC-DC and DC-DC Power Conversion Solutions

AC-DC Power Supplies



External Power Adapters*

- 10 - 40 W
- Single output
- 2- or 3-pin ac input receptacle
- Built-in EMI filtering



High Power*

- 1000 - 24,000 W
- 1 - 24 outputs
- 0 - 300 Vdc 2xMOPP
- 0 - 800 Vdc 2xMOOP
- 3 phase available
- Intelligent control



Low Power*

- 25 - 650 W
- 1 - 4 outputs
- Standard form factors: 2x4; 3x5; 4x5 inch
- Industry leading power density and convection ratings



Micro Medium Power*

- Up to 1800 W peak
- 12 outputs
- Fully configurable
- High power density



Bulk Power*

- 300, 600, 1000, 1500, 3000 W
- Single output
- Low cost
- Optional 5.0 V standby



Fanless – Conduction Cooled*

- 250 - 600 W
- Conduction mounting for sealed box/ no airflow application
- IP64/IP65 ingress protection
- -40 to 85 °C operating baseplate temperature



Medium Power*

- 400 - 1500 W
- 1 - 21 outputs
- Feature-rich configurable power system
- Intelligent control

DC-DC Converters



Low Power Industrial Converters

- 5 - 20 W product offering
- Industry form factors
- Wide selection of input and output voltages



* Note: Many of these products are IEC 60950-1 safety certified and applicable to in-vitro diagnostic applications.

Standard AC-DC Power Supplies

IEC 60601-1 Safety Certified

Product Series	Descriptions	Output Power Watts		Outputs	Available Output Voltages	Dimensions	Protection Class	EMI Class
		Free Air	Forced Air					
iHP	Configurable & intelligent	-	24000	8	12 V, 24 V, 48 V, 80 V, 125 V, 250 V	5.22" x 19.00" x 27.90"	I	B
✓ DA10-M	External adapter (wall mount)	10	10	1	5 V	2.36" x 1.10" x 2.40"	II	B
NPS20-M	Open-frame	25	40	1	5 V, 12 V, 15 V, 24 V, 48 V	2.00" x 4.00" x 1.00"	I, II	B, A
DP40-M	External adapter	40	40	1	9 V, 12 V, 15 V, 18 V, 24 V, 48 V	4.88" x 2.40" x 1.55"	I	B
LPS40-M	Open-frame (opt. enclosure)	40	55	1	5 V, 12 V, 15 V, 24 V	5.00" x 3.00" x 1.20"	I	A
LPT40-M	Open-frame (opt. enclosure)	40	55	3	5 V, 12 V, -12 V, 15 V, -15 V, 24 V	5.00" x 3.00" x 1.20"	I	A
NPS40-M	Open-frame (opt. enclosure)	45	60	1	5 V, 12 V, 15 V, 24 V, 48 V	4.00" x 2.00" x 1.00"	I, II	B, A
NPT40-M	Open-frame (opt. enclosure)	45	55	3	5 V, 12 V, -12 V	4.00" x 2.00" x 1.00"	I, II	B
NPS60-M	Open-frame	60	60	1	5 V, 12 V, 24 V	2.00" x 4.00" x 1.00"	I, II	B, A
LPS60-M	Open-frame (opt. enclosure)	60	80	1	12 V, 15 V, 24 V	5.00" x 3.00" x 1.65"	I	A
LPT60-M	Open-frame (opt. enclosure)	60	80	3	5 V, 12 V, -12 V, 15 V, -15 V	5.00" x 3.00" x 1.65"	I	A
NLP65 Medical	Open-frame	65	75	1	12 V, 15 V, 24 V	5.00" x 3.00" x 1.30"	I	A
NLP65 Medical (Dual)	Open-frame	65	75	2	5 V, 12 V, 24 V	5.00" x 3.00" x 1.30"	I	A
NLP65 Medical (Triple)	Open-frame	65	75	3	5 V, 12 V, -12 V, 15 V, -15 V	5.00" x 3.00" x 1.30"	I	A
LPT100-M	Open-frame (opt. enclosure)	80	130	3	3.3 V, 5 V, 12 V, -12 V, 15 V, -15 V, 24 V	4.00" x 2.00" x 1.28"	I	B
LPS100-M	Compact Open-frame (opt. enclosure)	100	150	1	5 V, 12 V, 15 V, 24 V, 48 V	4.00" x 2.00" x 1.29"	I	B
LPQ200-M	Open-frame	100	200	4	3.3 V, 5 V, 12 V, -12 V, 24 V	5.00" x 3.00" x 1.42"	I	B
LPS170-M	U-channel (optional cover)	110	175	1	3.3 V, 5 V, 12 V, 15 V, 24 V, 48 V	4.25" x 8.50" x 1.50"	I	B
LPS200-M	Compact open-frame (opt. enclosure)	125	250	1	5 V, 12 V, 15 V, 24 V, 48 V	5.00" x 3.00" x 1.29"	I	B
TLP150 Medical	Open-frame (opt. enclosure)	150	150	1	12 V, 24 V	5.00" x 3.00" x 1.25"	I	B
✓ CPS250-M	Open-frame	155	250	1	12 V, 24 V, 48 V	2" x 4" x 1.3"	I, II	B
NLP250 Medical	U-channel (opt. cover)	175	250	1	12 V, 24 V	7.00" x 4.00" x 1.50"	I	B
✓ LPS360-M	Open-frame (opt. enclosure)	200	360	1	12 V, 15 V, 24 V, 48 V	3.00" x 5.00" x 1.57"	I, II	B
LCC250	Convection/Conduction mounting	250	250	1	12 V, 24 V, 48 V	4.00" x 7.00" x 1.10"	I	B
✓ LCM300	Bulk front end	300	300	1	12 V, 15 V, 24 V, 36 V, 48 V	1.61" x 4.00" x 7.00"	I	B
✓ CNS650-MU	Open-frame	400	650	1	12 V, 24 V, 48 V	4" x 6" 1.5"	I, II	B
✓ μMP04	Configurable	400	600	1 - 12	0.9-60 V/4-40 A	10.11" x 3.50" x 1.57"	I	B
✓ LCC600	Conduction Cooled	600	600	1	12 V, 24 V, 28 V, 36 V, 48 V	4.00" x 9.00" x 1.57"	I	B
✓ LCM600	Bulk front end	600	600	1	12 V, 15 V, 24 V, 36 V, 48 V	4.50" x 7.50" x 2.40"	I	B
iMP4	Configurable & intelligent	750	1100	1 - 21	2 - 60 V/2 - 150 A	10.00" x 5.00" x 2.50"	I	B
✓ LCM1000	Bulk front end	1000	1000	1	12 V, 15 V, 24 V, 36 V, 48 V	2.50" x 5.20" x 10.00"	I	B
iMP8	Configurable & intelligent	1000	1200	1 - 21	2 - 60 V/2 - 150 A	10.00" x 7.00" x 2.50"	I	B
✓ μMP10	Configurable	1000	1200	1 - 12	0.9 - 60 V/4 - 40 A	10.11" x 5.00" x 1.57"	I	B
✓ μMP16	Configurable	1000	1800	1 - 12	0.9 - 60 V/4 - 40 A	10.11" x 5.00" x 1.57"	I	B
iMP1	Configurable & intelligent	1200	1500	1 - 21	2 - 60 V/2 - 150 A	11.00" x 8.00" x 2.50"	I	B
✓ LCM1500	Bulk front end	1500	1500	1	12 V, 15 V, 24 V, 36 V, 48 V	2.50" x 5.20" x 10.00"	I	B
iVS1, iVS6	Configurable & intelligent	1500	3210	1 - 24	2 - 60 V/2 - 150 A	11.00" x 5.00" x 5.00"	I	B
iVS3, iVS8	Configurable & intelligent	1800	4920	1 - 24	2 - 60 V/2 - 150 A	11.00" x 8.00" x 5.00"	I	B
✓ LCM3000	Bulk front end	3000	3000	1	12 V, 18 V, 24 V, 36 V, 48 V, 72 V	2.5" x 7.0" x 10.9"	I	B

Notes:

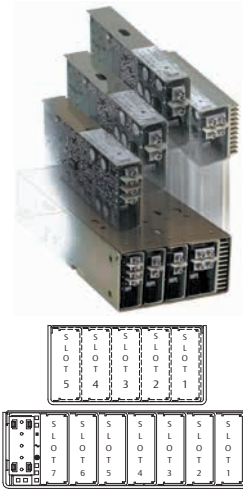
- (1) All products comply with the international standard IEC 60601-1 for medical devices, defined as Medical Electrical Equipment and Systems.
- (2) Individual product approvals are stated in the publicly published product data sheets and technical reference notes at www.Artesyn.com/power
- (3) (✓) Models tested according to the medical standard IEC 60601-1-2 4th Edition. All other models are designed to comply with IEC 60601-1-2 4th Edition.

Configurable Power Supplies

Designed for Maximum Flexibility

Artesyn's μ MP, iMP™, iVS™ and iHP series are configurable standard AC-DC power supplies that can provide limitless combinations across 1 to 24 separate outputs with voltage ranges from 2 V to 60 V and power from 400 watts to 24,000 watts. Specifically, the iMP, iVS and iHP provide easy monitoring and control of the power supply via I²C communication. These standard platforms allow designers to customize their requirements and simulate performance quickly.

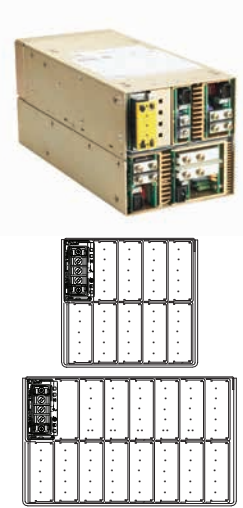
Intelligent MP Series



Module Code	1	2	3	4		
Module Type	Single	Single	Single	Dual		Triple
Max output power	210 W	360 W	750 W	144 W		36 W
Max output current	35 A	60 A	150 A	10 A		2 A
Output voltages available*	2-60 V	2-60 V	2-60 V	6-15, 24-28; 6-15, 6-15; 6-15, 2-6; 2-6, 2-6; 24-28, 24-28; 24-28; 2-6		8-15, 8-15, 2-6; 8-15, 8-15, 8-15; 8-15, 8-15, 18-28; 8-15, 18-28, 2-6
Standard voltage increments	25	25	25	16		18
Remote sense	Yes	Yes	Yes	Yes	Yes	No
Remote margin	Yes	Yes	Yes	No	No	No
V-Program – I ² C control	Yes	Yes	Yes	Yes	Yes	No
Active current share	Yes	Yes	Yes	Yes	No	No
Module inhibit – I ² C control	Yes	Yes	Yes	Yes	Yes	Yes
Module inhibit – analog	Yes	Yes	Yes	Yes	No	No
Overvoltage/overcurrent protection	Yes	Yes	Yes	Yes	Yes	Yes
Minimum load required	No	No	No	No	No	No
Slots occupied in any iMP case	1	2	3	1		1

* Programmable

Intelligent VS Series



Module Code	1	2	3	5	4		
Module Type	Single	Single	Single	Single	Dual		Triple
Max output power	210 W	360 W	750 W	1500 W	144 W		36 W
Max output current	35 A	60 A	150 A	140 A	10 A		2 A
Output voltages available*	2-60 V	2-60 V	2-60 V	6-60 V	6-15, 24-28; 6-15; 6-15; 6-15; 2-6; 2-6, 2-6; 24-28, 24-28; 24-28; 2-6		8-15, 8-15, 2-6; 8-15, 8-15, 8-15; 8-15, 8-15, 18-28; 8-15, 18-28, 2-6
Standard voltage increments	25	25	25	18	16		18
Remote sense	Yes	Yes	Yes	Yes	Yes	Yes	No
Remote margin*	Yes	Yes	Yes	Yes	No	No	No
V-Program – I ² C control*	Yes	Yes	Yes	Yes	Yes	Yes	No
Active current share	Yes	Yes	Yes	Yes	Yes	No	No
Module Inhibit – I ² C control*	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Module Inhibit – Analog	Yes	Yes	Yes	Yes	No	No	No
Overvoltage/overcurrent protection*	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Minimum load required	No	No	No	No	No	No	No
Slots occupied in any iVS case	1	2	3	4	1		1

* Note: Contact Factory for extended range down to 6V

Micro MP Series



Output Module Line-up		
Output Range (Vdc)	Max Output (Amps)	Max Power (Watts)
0.9 - 3.6	40	144
3.2 - 6.0	36	180
6.0 - 15.0	25	240
12.0 - 30.0	13	240
28.0 - 54.0	7	96
5.0 - 28.0	4	96

Configurable Power Supplies

Designed for Maximum Flexibility

Intelligent High Power Systems - Up to 24,000 Watts



OUTPUT – General Spec

Parameter	SL	SQ	ST	SW	S8	S1	S2	SA
MODULE CODE	SL	SQ	ST	SW	S8	S1	S2	SA
# Outputs	1	1	1	1	1	1	1	1
Nominal O/P Voltage (V)	12	24	32	48	80	125	250	200
O/P Voltage Range (V)	0.6-14.4	1.2-28.8	1.6-38.4	2.4-57.6	4.0-96.0	6.25-150.0	12.5-300.0	10-240
Max Power (W)	2400	2880	2880	3000	3000	3000	3000	3000
O/P Current Range (A)	0-200	0-120	0-90	0-62.5	0-37.5	0-24	0-12	0-15
Power Density W/cu-in	32.5	39.0	39.0	40.6	40.6	40.6	40.6	39



OUTPUT – Module in Constant Voltage Mode

Voltage Source									
MODULE CODE	SL	SQ	ST	SW	S8	S1	S2	SA	
Nominal Output (V)	12	24	32	48	80	125	250	200	
Setting Range (V)	0.6-14.4	1.2-28.8	1.6-38.4	2.4-57.6	4.0-96	6.25-150	12.5-300	10-240	
RMS Ripple (mV)	24	48	64	96	160	250	500	500	
P-P Ripple (mV)	60	120	160	240	400	625	1250	1250	
*Line Regulation (mV)	12	24	32	48	80	125	250	200	
*Load Regulation (mV)	24	48	64	96	160	250	500	400	
Pgm Resolution (mV)	TBA	1	1.3	2	8	6	21	21	
Meas Resolution	TBA	1	1.3	2	8	6	21	21	
*Pgm Accuracy (V)	Digital: 0.1% of Nominal Output Voltage / Analog: 1.0% of Nominal Output Voltage								
*Meas Accuracy (mV)	0.2% of Set Output + 0.2% of Nominal Output Voltage								
*Drift (Temp Stability)	±0.05% of Vout rated over 8 hours, constant line and load								
Temp Coefficient – Module Level (PPM of Vnom / °C)	200								
Temp Coefficient – Rack Level	[Temp Coefficient (module level)] + [3000ppm of Vnom]								
Voltage Overshoot – Undershoot	+/- 5% of Vnom								
**Transient Response Time	Recovery time of 1mS								

OUTPUT – Module in Constant Current Mode

Current Source									
MODULE CODE	SL	SQ	ST	SW	S8	S1	S2	SA	
Nominal Output (V)	12	24	32	48	80	125	250	200	
Setting Range (A)	0.0-200	0.0-120	0.0-90	0.0-62.5	0.0-37.5	0.0-24	0.0-12	0.0-15	
RMS Ripple (mA)	200	120	90	62.5	37.5	24	12	40	
*Line Regulation (mA)	200	120	90	125	93.75	48	24	50	
*Load Regulation (mA)	800	480	375	250	150	96	48	56	
Pgm Resolution (mA)	79.2	26.4	7.2	13.2	10	5.2	2.6	2.6	
Meas Resolution (mA)	79.2	26.4	7.2	13.2	10	5.2	2.6	2.6	
*Pgm Accuracy (A)	Digital: 0.7% of Rated Output Max / Analog: 1.3% of Rated Output Max (1% to 100% O/P Current adjustability)								
*Meas Accuracy	0.7% + 0.7% of Rated Output Max								
*Drift (Temp Stability)	±0.05% of Iout-max over 8 hours, constant line and load								
Temp Coefficient – Module Level (PPM of Iout-max / °C)	300	300	300	200	200	200	200	200	
Temp Coefficient – Rack Level	[Temp Coefficient (module level)] + [4500ppm of Iout-max]								
Current Overshoot – Undershoot	+/- 5% of Iout-max								
**Transient Response Time	Recovery time of 35mS								
Current Sense Method	Internal Shunt								

Standard DC-DC Power Supplies

Medical Safety to UL / CSA / IEC / EN 60601-1 3rd Edition



	Input Voltage	Output 1 Voltage	Output 2 Voltage	Package L x W x H (mm)	I/O Isolation	Efficiency	Model Number
5 W	Enclosed						
	9-18 V	5 V @ 1 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	75%	ASA01A12-M
	18-36 V	5 V @ 1 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	77%	ASA01A24-M
	36-75 V	5 V @ 1 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	77%	ASA01A48-M
6 W	Enclosed						
	9-18 V	12 V @ 0.5 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	78%	ASA01B12-M
	9-18 V	12 V @ 0.25 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	78%	ASA01BB12-M
	9-18 V	15 V @ 0.2 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	78%	ASA01CC12-M
	18-36 V	12 V @ 0.5 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	80%	ASA01B24-M
	18-36 V	12 V @ 0.25 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	80%	ASA01BB24-M
	18-36 V	15 V @ 0.2 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	80%	ASA01CC24-M
	36-75 V	12 V @ 0.5 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	80%	ASA01B48-M
	36-75 V	12 V @ 0.25 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	80%	ASA01BB48-M
	36-75 V	15 V @ 0.2 A		1.25" x 0.8" x 0.41" (31.8 x 20.3 x 10.5)	4200 VACrms	80%	ASA01CC48-M
8 W	9-18 V	5 V @ 1.6 A		2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	76%	AEE01A12-M
	10 W						
	9-18 V	12 V @ 0.835 A		2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	80%	AEE00B12-M
	9-18 V	12 V @ 0.417 A	-12 V @ 0.417 A	2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	80%	AEE00BB12-M
	9-18 V	15 V @ 0.333 A	-15 V @ 0.333 A	2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	81%	AEE00CC12-M
	18-36 V	5 V @ 2 A		2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	77%	AEE02A24-M
	18-36 V	12 V @ 0.835 A		2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	81%	AEE00B24-M
	18-36 V	12 V @ 0.417 A	-12 V @ 0.417 A	2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	81%	AEE00BB24-M
	18-36 V	15 V @ 0.333 A	-15 V @ 0.333 A	2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	82%	AEE00CC24-M
	36-75 V	5 V @ 2 A		2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	77%	AEE02A48-M
	36-75 V	12 V @ 0.835 A		2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	81%	AEE00B48-M
	36-75 V	12 V @ 0.417 A	-12 V @ 0.417 A	2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	81%	AEE00BB48-M
	36-75 V	15 V @ 0.333 A	-15 V @ 0.333 A	2" x 1" x 0.4" (50.8 x 25.4 x 10.2)	4200 VACrms	82%	AEE00CC48-M



Standard DC-DC Power Supplies

Medical Safety to UL / CSA / IEC / EN
60601-1 3rd Edition



	Input Voltage	Output 1 Voltage	Output 2 Voltage	Package L x W x H (mm)	I/O Isolation	Efficiency	Model Number
15 W	9-18 V	5 V @ 3 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	85%	AEE03A12-M
	9-18 V	12 V @ 1.25 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE01B12-M
	9-18 V	15 V @ 1 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01C12-M
	9-18 V	24 V @ 0.625 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01H12-M
	9-18 V	12 V @ 0.625 A	-12 V @ 0.625 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01BB12-M
	9-18 V	15 V @ 0.5 A	-15 V @ 0.5 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE01CC12-M
	18-36 V	5 V @ 3 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	87%	AEE03A24-M
	18-36 V	12 V @ 1.25 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE01B24-M
	18-36 V	15 V @ 1 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01C24-M
	18-36 V	24 V @ 0.625 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	90%	AEE01H24-M
	18-36 V	12 V @ 0.625 A	-12 V @ 0.625 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	90%	AEE01BB24-M
	18-36 V	15 V @ 0.5 A	-15 V @ 0.5 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE01CC24-M
	36-75 V	5 V @ 3 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE03A48-M
	36-75 V	12 V @ 1.25 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01B48-M
	36-75 V	15 V @ 1 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	87%	AEE01C48-M
	36-75 V	24 V @ 0.625 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01H48-M
36-75 V	12 V @ 0.625 A	-12 V @ 0.625 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01BB48-M	
36-75 V	15 V @ 0.5 A	-15 V @ 0.5 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE01CC48-M	
20 W	9-18 V	5 V @ 4 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	85%	AEE04A12-M
	9-18 V	12 V @ 1.67 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02B12-M
	9-18 V	15 V @ 1.33 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE02C12-M
	9-18 V	24 V @ 0.84 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02H12-M
	9-18 V	12 V @ 0.84 A	-12 V @ 0.84 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02BB12-M
	9-18 V	15 V @ 0.67 A	-15 V @ 0.67 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02CC12-M
	18-36 V	5 V @ 4 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	87%	AEE04A24-M
	18-36 V	12 V @ 1.67 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02B24-M
	18-36 V	15 V @ 1.33 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE02C24-M
	18-36 V	24 V @ 0.84 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	90%	AEE02H24-M
	18-36 V	12 V @ 0.84 A	-12 V @ 0.84 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	90%	AEE02BB24-M
	18-36 V	15 V @ 0.67 A	-15 V @ 0.67 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02CC24-M
	36-75 V	5 V @ 4 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE04A48-M
	36-75 V	12 V @ 1.67 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02B48-M
	36-75 V	15 V @ 1.33 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE02C48-M
	36-75 V	24 V @ 0.84 A		2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE02H48-M
36-75 V	12 V @ 0.84 A	-12 V @ 0.84 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	88%	AEE02BB48-M	
36-75 V	15 V @ 0.67 A	-15 V @ 0.67 A	2" x 1" x 0.47" (50.8 x 25.4 x 12)	4200 VACrms	89%	AEE02CC48-M	



Is it worth the risk?

Are you at risk of product recall because of your power supply selection?

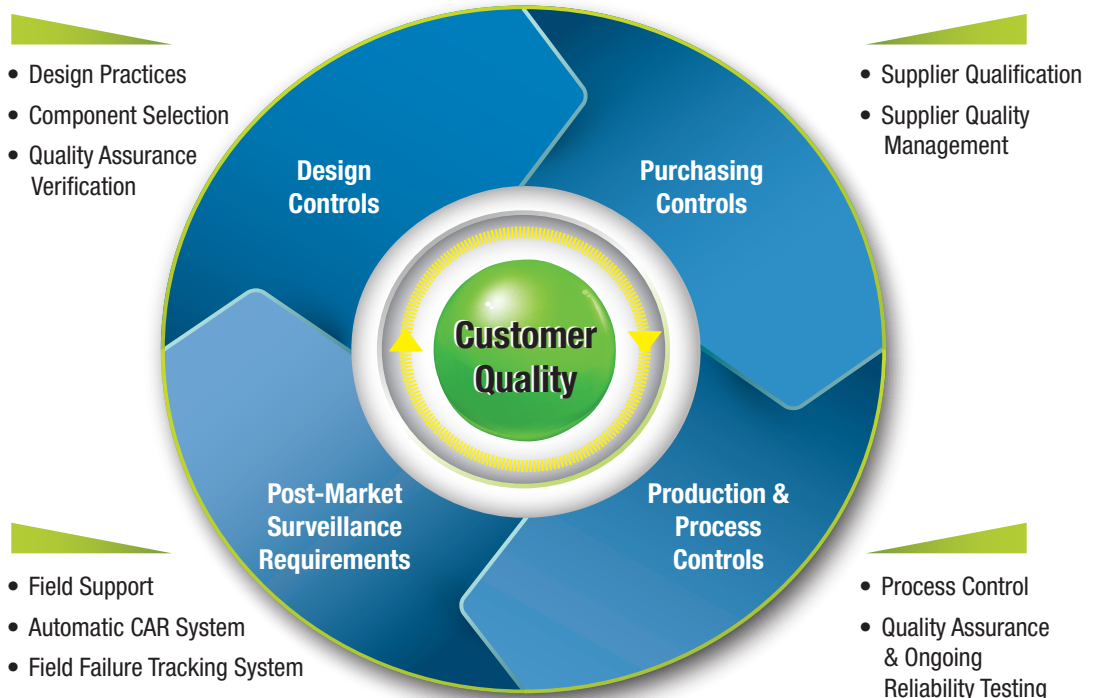
The FDA reports medical device recalls every year. A large part of the recalls were due to supplied components. Many of these incidents are related to power supplies.

The reasons more and more medical device manufacturers are selecting Artesyn Embedded Technologies as their trusted power supply partner include:

1. Experience in the medical industry and expertise in power supplies
2. Highly developed quality systems focused on the customer
3. Processes that are developed to conform to the requirements of international standards and Current Good Manufacturing Practices (cGMP)

Healthcare equipment manufacturers ensure that their healthcare devices are integrated with the power supply and other components that comply with the FDA's cGMP/Quality System Regulation (QSR). Though they retain this responsibility independently of their suppliers, Artesyn's focus on manufacturing its components to QSR and other applicable international standards, such as ISO 13485, helps facilitate manufacturers' compliance with QSR requirements.

Quality System Requirements



Power Supply Design Controls

For Greater Quality & Reliability

Reliability Models and Predictions

- A prediction of design reliability in terms of Mean Time Between Failures (MTBF) using Telecordia, Bellcore or MIL-HDBK-217F
- Not intended as a measure of expected field performance, but for design trade-off analysis and review of part stress derating performance

Failure Modes and Effect Analysis

- An analytical technique to identify and review failure modes, their causes, mechanisms and effects
- Provides a formal risk assessment to reduce field failures at the customer site

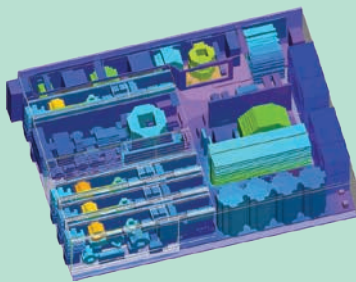
Component Selection

- Database warehouse of all component information
- Design engineers can only select components that are rigorously approved from suppliers that have undergone a strict qualification and auditing process

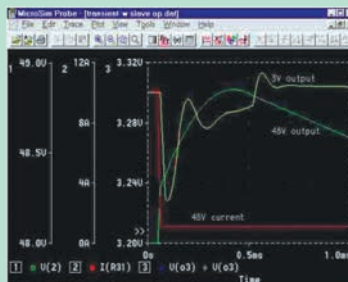
Derating Analysis

- Intended to reduce the failure rate of components Design for Manufacturability
- Design rules regarding manufacturability

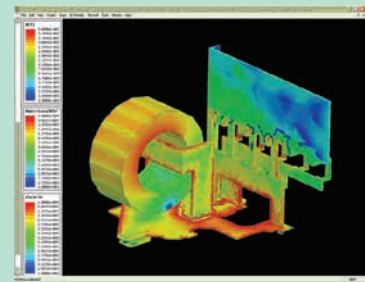
Simulation Analysis – Computer Aided Engineering Tools



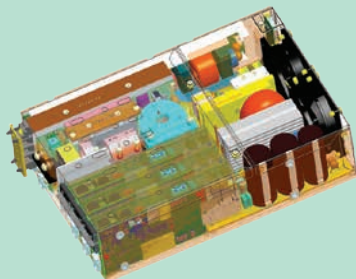
Thermal Simulation



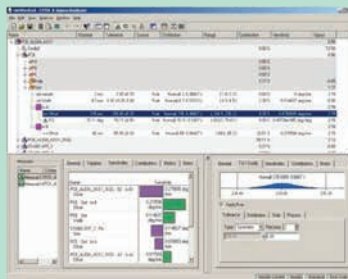
Circuit Simulation



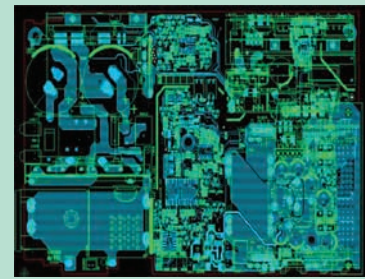
EMI Field Simulation



Detailed Mechanical Design



PCB Layout and Tracking



Structural Simulation

Powered By Artesyn



Laser Hair Removal

South Korea produces some of the world's most highly innovative beauty products and the country has a long history of technological advancements at affordable prices. A leading South Korean developer of specialized medical devices for skin, beauty, cosmetic and dental treatments based on laser technology has created an innovative new product for laser hair removal. Powered by the Artesyn iVS Series configurable high power unit, the new technologically advanced aesthetic solution is available at a price point that makes it accessible to more users. Having multiple configurable outputs, medical safety approvals and quick delivery, Artesyn's power supply quickly removed the need for any other solution.



Medical CT Scanner

A world renowned medical equipment provider required a versatile multi-output power supply for their next generation CT scanner. The customer needed a trusted supplier to bring a partnership approach to solving this challenge. Artesyn proposed the MicroMP (μ MP) configurable unit as it provides the reliability, increased capabilities and accuracy needed for this type of technology. The availability of the product and Artesyn's technical expertise and support allowed the customer to focus on innovating their own products and solutions. A custom option in this instance would have taken considerable time, cost more and provided limited on-going technical support. Artesyn's μ MP series configurable power supplies compare favorably on cost with non-configurable products while providing the high performance and flexibility required when building large complex medical equipment.



UV Light Therapy

UV light therapy or phototherapy uses controlled artificial ultraviolet light to help reduce symptoms and slow the progress of common skin conditions such as eczema, psoriasis and vitiligo (when patches of your skin lose their color). Ultraviolet light is an invisible part of natural sunlight. Light therapy machines produce carefully measured levels of ultraviolet light, much stronger than levels in sunlight. One of the world's leading makers of bedside treatment products is shining a light on Artesyn's LCM600 series by using it in its light therapy systems, taking advantage of the medical approvals of this 600W cost-effective AC-DC single output power supply to reduce their own healthcare certification process.



Patient Monitor

Critically ill patients often require specialized medical equipment such as ventilators and patient monitors. A leading manufacturer of intensive care unit (ICU) equipment is using Artesyn's LPS100-M series open frame AC-DC power supplies in its next generation patient monitor.

The unit is designed for the specific sensitivities of high-need patients and the LPS100-M series takes care of the monitor's needs with a 100 watt medically-approved single output power source in a compact footprint at a competitive price.



Dental Chair

A visit to the dentist can make some people anxious so these healthcare professionals often invest in making their working environment as welcoming as possible, while ensuring that clinical hygiene remains a priority. The comfort of the chair in which you sit while the dentist is working is important to the experience. A manufacturer of premium quality dental chairs was looking for a fanless power supply that could deliver at least 500 watts to its next-generation motorized models. The power supply needed to be fanless as the noise from fans is not only undesirable in this healthcare environment, but fans and ventilation slots required create an infection risk and make effective cleaning more difficult. The company selected Artesyn's LCC600 series conduction-cooled power supply as it meets those requirements and also has medical safety approval to the latest 4th edition of EN 60601-1-2-4. Artesyn's high quality power supplies also matched the customer's philosophy of creating superior products for dental professionals. As is often the case, Artesyn's outstanding local technical support gave the customer confidence in their product choice, so you can be confident in your seating when the dentist asks you to 'open wide'.

Terms and Conditions of Sale

The Artesyn Embedded Technologies company that accepts Buyer's order for Goods is herein referred to as the "Seller" and the person or entity purchasing goods or services ("Goods") and/or licensing software and/or firmware which are preloaded, or to be loaded into Goods ("Software") from Seller is referred to as the "Buyer." These Terms and Conditions, together with any price list or schedule, quotation, acknowledgment or invoice from Seller relevant to the sale of the Goods and licensing of Software and all documents incorporated by specific reference herein or therein constitute the complete and exclusive statement of the terms governing the sale of Goods and license of Software by Seller to Buyer. Seller's acceptance of Buyer's purchase order is expressly conditional on Buyer's assent to all of Seller's terms and conditions of sale, including terms and conditions that are different from or additional to the terms and conditions of Buyer's purchase order, and Seller expressly rejects any additional or conflicting terms specified in Buyer's purchase order or any other document provided by Buyer. Buyer's acceptance of the Goods and/or Software will manifest Buyer's assent to these Terms and Conditions. Seller reserves the right in its sole discretion to refuse orders. Notwithstanding anything to the contrary, in the event that the provisions of these Terms and Conditions conflict with the provisions of an effective agreement signed by a duly authorized representative of both parties ("Effective Agreement") that applies to the transaction(s) contemplated herein, the Effective Agreement shall control.

1. **PRICES:** Unless otherwise specified in writing by Seller, the price quoted or specified by Seller for the Goods and/or Software shall remain in effect for 30 days after the date of Seller's quotation or acknowledgment of Buyer's order for the Goods and/or Software, whichever occurs first, provided an unconditional authorization from Buyer for the shipment of the Goods and/or Software is received and accepted by Seller within such time period. If such authorization is not received by Seller within such 30 day period, Seller shall have the right to change the price and other terms applicable to the Goods and/or Software to Seller's standard price and terms for the Goods and/or Software at the time of shipment. All prices and licensee fees are exclusive of taxes, transportation and insurance, which are to be borne by Buyer.

2. **TAXES:** Any current or future tax or governmental charge (or increase in same) affecting Seller's costs of production, sale, or shipment, or which Seller is otherwise required to pay or collect in connection with the sale, purchase, delivery, storage, processing, use or consumption of Goods and/or Software, shall be for Buyer's account and shall be added to the price or billed to Buyer separately, at Seller's election.

3. **TERMS OF PAYMENT:** Unless otherwise specified by Seller, terms are net 30 days from date of Seller's invoice by bank wire transfer or automated clearing house in U.S. currency. Seller shall have the right, among other remedies, either to terminate this agreement and/or any other agreements between Seller and Buyer, or to suspend further performance under this and/or other agreements with Buyer in the event Buyer fails to make any payment when due, which other agreements Buyer and Seller hereby amend accordingly. Buyer shall be liable for all expenses, including attorneys' fees, relating to the collection of past due amounts. If any payment owed to Seller is not paid when due, it shall bear interest, at a rate to be determined by

Seller, which shall not exceed the maximum rate permitted by law, from the date on which it is due until it is paid. Any payment due to either party under this agreement shall be made in full without any set-off, restriction, condition deduction or withholding for or on account of any counterclaim. Should Buyer's financial responsibility become unsatisfactory to Seller, Seller may require Buyer to immediately pay in full all amounts due to Seller, and cash payments or security satisfactory to Seller may be required by Seller for future deliveries of the Goods and/or Software. If such cash payment or security is not provided, in addition to Seller's other rights and remedies, Seller may discontinue deliveries.

4. **SHIPMENT AND DELIVERY:** While Seller will use commercially reasonable efforts to maintain the delivery date(s) acknowledged or quoted by Seller, all shipping dates are approximate and not guaranteed. Seller reserves the right to make partial shipments. Seller, at its option, shall not be bound to tender delivery of any Goods and/or Software for which Buyer has not provided shipping instructions and other required information. If the shipment of the Goods and/or Software is postponed or delayed by Buyer for any reason, Buyer agrees to reimburse Seller for any and all storage costs and other additional expenses resulting therefrom. Risk of loss and legal title to the Goods shall transfer from Seller to Buyer upon delivery to and receipt by carrier at Seller's shipping point. As permitted by local law, as collateral security for the payment of the purchase price of the Goods, Buyer hereby grants to Seller a lien on and security interest in and to all of the right, title and interest of Buyer in, to and under the Goods, wherever located, and whether now existing or hereafter arising or acquired from time to time, and in all accessions thereto and replacements or modifications thereof, as well as all proceeds (including insurance proceeds) of the foregoing. The security interest granted under this provision constitutes a purchase money security interest under applicable law. Unless otherwise specified by Seller, all shipments are F.C.A. Seller's shipping point (Incoterms 2010). Any claims for shortages or damages suffered in transit are the responsibility of Buyer and shall be submitted by Buyer directly to the carrier. Shortages or damages must be identified and signed for at the time of delivery.

Buyer shall inspect Goods delivered to it by Seller immediately upon receipt, and, any course of dealing to the contrary notwithstanding, failure of Buyer to give Seller notice of any claim within 10 days after receipt of such Goods shall be an unqualified acceptance of such Goods.

5. **LIMITED WARRANTY:** Subject to the limitations of Section 6 and unless otherwise specified by Seller in writing, Seller warrants that the Goods manufactured by Seller will be free from defects in material and workmanship and substantially meet Seller's published specifications at the time of shipment under normal use and regular service and maintenance for (a) the period specified in Seller's then current product data sheets from the date of manufacture by Seller in the case of standard Embedded Power Goods, (b) 2 years from initial shipment in the case of standard Embedded Computing Goods, and (c) the period, if any, specified by Seller in writing in the case of custom Embedded Power Goods and custom Embedded Computing Goods. Services will be performed in a professional manner and in accordance with industry standards. Unless otherwise stated in writing in a separate Software license agreement or otherwise, Seller makes no warranty

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If within 30 days after Buyer's discovery of any warranty defects within the warranty period, Buyer notifies Seller thereof in writing, Seller shall, at its option and as Buyer's exclusive remedy, repair, correct or replace per its return policy, or refund the purchase price for, that portion of the Goods found by Seller to be defective. Failure by Buyer to give such written notice within the applicable time period shall be deemed an absolute and unconditional waiver of Buyer's claim for such defects. Advance written permission to return Goods must be obtained from Seller. Such Goods must be shipped transportation prepaid to Seller. Returns made without proper written permission will not be accepted by Seller. Seller reserves the right to inspect Goods prior to authorizing return. Goods repaired or replaced during the warranty period shall be covered by the foregoing warranties for the remainder of the original warranty period or 90 days from the date of shipment, whichever is longer.

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It is expressly understood that any technical advice furnished by Seller with respect to the use of the Goods and/or Software is given without charge, and Seller assumes no obligation or liability for the advice given, or results obtained, all such advice being given and accepted at Buyer's risk.

7. PATENTS AND COPYRIGHTS: Subject to the limitations of the second paragraph of Section 6, Seller warrants that the Goods sold, except as are made specifically for Buyer according to Buyer's specifications, do not infringe any valid U.S. patent or copyright in existence as of the date of shipment. This warranty is given upon the condition that Buyer promptly notifies Seller of any claim or suit involving Buyer in which such infringement is alleged and cooperates fully with Seller and permits Seller to control completely the defense, settlement or compromise of any such allegation of infringement. Seller's warranty as to utility patents only applies to infringement arising solely out of the inherent operation according to Seller's specifications and instructions of such Goods. In the event such Goods are held to infringe such a U.S. patent or copyright in such suit, and / or the use of such Goods is enjoined, or in the case of a compromise or settlement by Seller, Seller shall have the right, at its option and expense and as Buyer's sole and exclusive remedy for a violation of the warranty contained in this Section, to procure for Buyer the right to continue using such Goods, or replace them with non-infringing Goods, or modify same to become non-infringing, or grant Buyer a credit for the depreciated value of such Goods and accept return of them. In the event of the foregoing or, if in Seller's opinion, Seller receives a credible allegation of infringement, Seller may also, at its option, cancel or suspend this agreement as to future deliveries of such Goods, without liability.

8. EXCUSE OF PERFORMANCE: Seller shall not be liable for delays in performance or for non-performance due to acts of God; acts of Buyer; war; fire; flood; weather; sabotage; epidemics; strikes or labor disputes; civil disturbances or riots; governmental requests, restrictions, allocations, laws, regulations, orders or actions; unavailability of or delays in transportation; restrictions, allocations or disruption of suppliers or default of suppliers; or unforeseen circumstances or any events or causes beyond Seller's reasonable control. Deliveries or other performance may be suspended for an appropriate period of time or canceled by Seller upon notice to Buyer in the event of any of the foregoing, but the balance of the agreement shall otherwise remain unaffected as a result of the foregoing.

If Seller determines that its ability to supply the total demand for the Goods, or to obtain material used directly or indirectly in the manufacture of the Goods, is hindered, limited or made impracticable due to causes set forth in the preceding paragraph, Seller may allocate its available supply of the Goods or such material (without obligation to acquire other supplies of any such Goods or material) among its purchasers on such basis as Seller determines to be equitable without liability for any failure of performance which may result therefrom.

9. **RESCHEDULE/CANCELLATION:** Unless otherwise agreed in writing by Seller, orders under this agreement may not be rescheduled or canceled by Buyer for any reason.

10. **CHANGES:** Buyer may request changes or additions to the Goods and/or Software consistent with Seller's specifications and criteria. In the event such changes or additions are accepted by Seller, Seller may revise the price, license fees and dates of delivery.

Seller reserves the right to change designs and specifications for the Goods and/or Software without prior notice to Buyer, except with respect to Goods and/or Software being made to order for Buyer. Seller shall have no obligation to install or make such change in any Goods and/or Software manufactured prior to the date of such change.

11. **NUCLEAR/MEDICAL:** GOODS AND SOFTWARE SOLD HEREUNDER ARE NOT FOR USE IN CONNECTION WITH ANY NUCLEAR, MEDICAL, LIFE-SUPPORT, AIRCRAFT CONTROL, AND OTHER HIGH RISK APPLICATIONS WHERE GOODS OR SOFTWARE FAILURE COULD LEAD TO LOSS OF LIFE OR CATASTROPHIC PROPERTY DAMAGE. Buyer accepts Goods and Software with the foregoing understanding, agrees to communicate the same in writing to any subsequent purchasers or users and to defend, indemnify and hold harmless Seller from any claims, losses, suits, judgments and damages, including incidental and consequential damages, arising from such use, whether the cause of action be based in tort, contract or otherwise, including allegations that the Seller's liability is based on negligence or strict liability.

12. **ASSIGNMENT:** Buyer shall not assign its rights or delegate its duties hereunder or any interest herein without the prior written consent of Seller, and any such assignment, without such consent, shall be void.

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14. **TOOLING:** Tool, die, and pattern charges, if any, are in addition to the price of the Goods and are due and payable upon completion of the tooling. All such tools, dies and patterns shall be and remain the property of Seller. Charges for tools, dies, and patterns do not convey to Buyer, title, ownership interest in, or rights to possession or removal, or prevent their use by Seller for other purchasers, except as otherwise expressly provided by Seller and Buyer in writing with reference to this provision.

15. **INTELLECTUAL PROPERTY:** Seller's intellectual property, including without limitation, all patents, copyrights, trade secrets, trade-dress and any other intellectual property of any kind (including without limitation, that which exists in the underlying technology), furnished by or on behalf of Seller in connection with this agreement is the property of Seller and Seller retains all rights, including without limitation, exclusive rights of use, licensing, and sale. Possession of Goods, pre-production units, specifications, prints or drawings, or any other materials does not convey to Buyer any rights or license thereto.

16. **BUYER'S COMPLIANCE WITH LAWS:** In connection with the transactions contemplated by this agreement, Buyer is familiar with and shall fully comply with all applicable laws, regulations, rules and other requirements of the United States and of any applicable state, foreign and local governmental body in connection with the purchase, license, receipt, use, transfer and disposal of the Goods and/or Software.

17. **EXPORT/IMPORT:** Buyer agrees that all applicable import and export control laws, regulations, orders and requirements, including without limitation those of the United States and the European Union, and the jurisdictions in which the Seller and Buyer are established or from which Goods and/or Software may be supplied, will apply to their receipt and use. In no event shall Buyer use, transfer, release, import, export, Goods and/or Software in violation of such applicable laws, regulations, orders or requirements.

18. **GOVERNMENT CONTRACT CONDITIONS:** In the event Buyer supplies Goods or Software to the U.S. Government or to a prime contractor selling to the U.S. Government, the following Federal Acquisition Regulation (FAR) clauses are accepted by Seller and are made part of this agreement applicable to such supply: 52.222-21 Prohibition of Segregated Facilities; 52.222-26 Equal Opportunity; 52.222-35 Equal Opportunity For Special Disabled Veterans, Veterans of Vietnam Era, and Other Eligible Veterans; 52.222-36 Affirmative Action For Workers with Disabilities; and 52.219-8 Utilization of Small Business Concerns. No additional FAR or FAR Supplement clauses are accepted by Seller. In the event Buyer elects to sell Goods or Software to the U.S. Government or any national, state, provincial or local non-U.S. governmental entity or to a prime contractor selling to such entities, Buyer does so solely at its own option and risk, and agrees not to obligate Seller as a subcontractor or otherwise to the U.S. Government or other governmental entity except as described in this Section 18. Buyer remains solely and exclusively responsible for compliance with all statutes and regulations governing sales to the U.S. Government or any national, state, provincial or local non-U.S. governmental entity. Seller makes no representations, certifications or warranties whatsoever with respect to the ability of its Goods, Software, or prices to satisfy any such statutes and regulations.

19. **CONFIDENTIALITY:** All non-public, confidential or proprietary information of a party that (i) is marked as “confidential” or “proprietary” or (ii) is reasonably understood to be confidential or proprietary given the content of the information and the circumstances of disclosure (“Confidential Information”). Each party (as a “Receiving Party”) shall (a) hold all Confidential Information of the other party (as the “Disclosing Party”) in strict confidence; (b) not disclose Disclosing Party’s Confidential Information to any third party without express prior written approval from Disclosing Party; (c) disclose Disclosing Party’s Confidential Information only to such of its employees as actually require knowledge thereof in order to carry out their duties and are bound by confidentiality obligations at least as protective as the provisions contained in this agreement; and (d) use Disclosing Party’s Confidential Information only for the purpose of performing its obligations hereunder. Upon Disclosing Party’s request, Receiving Party shall promptly return all Confidential Information to Disclosing Party, as well as all documents and other materials incorporating any Disclosing Party Confidential Information. Disclosing Party shall be entitled to injunctive relief for any violation of this Section without the necessity of posting bond. This Section does not apply to information that is: (x) freely available in the public domain; (y) known to Receiving Party at the time of disclosure without any obligation of confidentiality; or (z) rightfully obtained by Receiving Party on a non-confidential basis from a third party. The obligations of this provision shall continue as to each piece of Confidential Information for a period of three (3) years following the date of disclosure of such Confidential Information, except as to Confidential Information that constitutes a trade secret under applicable law and is expressly identified as a trade secret in writing, in which case the foregoing obligations shall continue in perpetuity. In the event the parties have separately entered into a separate Non-Disclosure Agreement, the terms of such separate Non-Disclosure Agreement shall supersede this provision.

20. **GENERAL PROVISIONS:** These terms and conditions supersede all other communications, negotiations and prior oral or written statements regarding the subject matter of these terms and conditions. No change, modification, rescission, discharge, abandonment, or waiver of these terms and conditions shall be binding upon the Seller unless made in writing and signed on its behalf by a duly authorized representative of Seller. No conditions, usage of trade, course of dealing or performance, understanding or agreement purporting to modify, vary, explain, or supplement these terms and conditions shall be binding unless hereafter made in writing and signed by the party to be bound, and no modification or additional terms shall be applicable to this agreement by Seller’s receipt, acknowledgment, or acceptance of purchase orders, shipping instruction forms, or other documentation containing terms at variance with or in addition to those set forth herein. Any such modifications or additional terms are specifically

rejected and deemed a material alteration hereof. If this document shall be deemed an acceptance of a prior offer by Buyer, such acceptance is expressly conditional upon Buyer’s assent to any additional or different terms set forth herein. No waiver by either party with respect to any breach or default or of any right or remedy, and no course of dealing, shall be deemed to constitute a continuing waiver of any other breach or default or of any other right or remedy, unless such waiver be expressed in writing and signed by the party to be bound. All typographical or clerical errors made by Seller in any quotation, acknowledgment or publication are subject to correction. In the event that any provision or portion thereof contained in this agreement is held to be unenforceable, this agreement shall be construed without such provision or portion thereof. Provisions of this agreement which by their nature should apply beyond the termination of this agreement shall survive any such termination and will remain in full force and effect, including, but not limited to, Sections 6 (Limitation of Remedy and Liability), 11 (Nuclear/Medical), 12 (Assignment), 13 (Software), 14 (Tooling), 15 (Intellectual Property), 17 (Export/Import), 19 (Confidentiality), 20 and 21 (General Provisions).

(A) If Seller is a U.S. incorporated entity: This agreement shall be governed by the laws of the State of Delaware, U.S.A., without reference to its choice or conflict of laws principles. The parties agree to submit to the exclusive jurisdiction of the courts of the State of Delaware for all actions arising in connection herewith.

(B) If Seller is a European incorporated entity: This agreement shall be governed by the laws of England. Any dispute arising out of or in connection with this agreement that cannot be resolved through friendly consultation shall be referred to and finally resolved by arbitration in London, England before the London Court of International Arbitration in accordance with its arbitration rules. The arbitral award shall be final and binding on the parties.

(C) If Seller is an entity incorporated in the Asia Pacific region: This agreement shall be governed by the laws of the Hong Kong Special Administrative Region of the People’s Republic of China. Any dispute arising out of or in connection with this agreement that cannot be resolved through friendly consultation shall be referred to and finally resolved by arbitration in Hong Kong before the Hong Kong International Arbitration Centre in accordance with its arbitration rules. The arbitral award shall be final and binding on the parties.

(D) No action, regardless of form, arising out of transactions relating to this agreement, may be brought by either party more than two (2) years after the cause of action has accrued. The U.N. Convention on Contracts for the International Sales of Goods shall not apply to this agreement.

Revised October 23, 2017

Artesyn Embedded Technologies is a global leader in the design and manufacture of highly reliable power conversion solutions for a wide range of industries including communications, computing, consumer electronics, medical, aerospace and industrial automation.

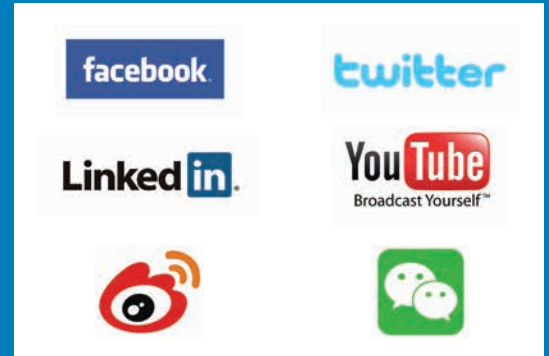
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Embracing the well-known Astec brand, Artesyn's extensive AC-DC standard product portfolio covers a power range of 3 watts to 24 kilowatts and a wide selection of form factors and packaging, with many models offering medical approval and built-in intelligence.

As an industry leader in distributed power applications, Artesyn produces an exceptionally wide range of DC-DC power conversion products.

For more than 40 years, customers have trusted Artesyn to help them accelerate time-to-market, reduce risk and shift development efforts to the deployment of new, value-add features and services.

Headquartered in Tempe, Arizona, Artesyn has over 15,000 employees worldwide across multiple engineering centers of excellence, four wholly-owned world-class manufacturing facilities, and global sales and support offices.



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Printed in China
Issue HC_AP1 03-25-2019