

# POWER

# LCC600

## 600 Watts Conduction Cooling

### Data Sheet

**Total Power:** 600 W  
**# of Outputs:** Single  
**Outputs:** 12, 28, 36, 48 Vdc

### SPECIAL FEATURES

- 600 W full power at elevated temperatures
- Wide operating temperature range (-40 °C to 85 °C baseplate)
- Adjustable output
- Remote output On/Off
- AC\_OK; DC\_OK signals
- 5 V standby voltage
- Active current share
- Conduction-cooled/fanless
- I<sup>2</sup>C / PMBus
- Medical and ITE Safety<sup>3</sup>
- Suited for BF-type applications
- Active power factor correction
- Optional IP65 variant
- Optional 277 Vac input variant

### COMPLIANCE

- EMI Class B
- EN61000 Immunity

### SAFETY

- UL + CSA:** 60950-1 2<sup>nd</sup> Ed. ANSI ES60601-1<sup>3</sup> UL 8750<sup>5</sup> CSA-C22.2 No. 250.13<sup>5</sup>
- TÜV:** 60950-1 2<sup>nd</sup> Ed. 60601-1 3<sup>rd</sup> Ed.<sup>3</sup> EN 61347-1; -2-13<sup>5</sup>
- CB Scheme:** IEC 60950-1 IEC 60601-1 IEC 61347-1; -2-13<sup>5</sup>
- China** CCC
- CE Mark**



### Electrical Specifications

Input													
Input range	U Suffix: 90 - 264 Vac (Safety rating: 100 - 240 Vac) 127 - 374 Vdc <sup>4</sup> H Suffix: 180 - 305 Vac (Safety rating: 200 - 277 Vac) 254 - 420 Vdc <sup>4</sup>												
Frequency	47 - 63 / 440 Hz (Safety rating: 50/60 Hz)												
Input fusing	Internal fuse on both L and N lines (12.5 A - U suffix; 7 A - H suffix)												
EMI/RFI	FCC Class B, CISPR22/EN55022 Class B												
MIL-STD-461F EMI <sup>1</sup>	Compliance to CE101, 102; CS101, 114, 115, 116 (with external filter <sup>1</sup> )												
Inrush current	≤ 25 A peak												
Power factor	0.99 typical												
Harmonics	Meets EN61000-3-2 Class A and Class C <sup>2</sup>												
Input current	< 10 Arms @ 100 Vac												
Hold up time	20 ms min for Main Output (230 Vac) @ 100% Load												
Efficiency	93.3% typical @ 230 Vac; 100% Load; 28 Vdc												
Leakage current <sup>3</sup>	U Suffix: 115 µA typical (< 200 µA max per ANSI/ES60601-1 264 Vac split-phase / 60 Hz) 387 µA typical (< 500 µA max per IEC60601-1; 264 Vac / 50Hz) H Suffix: 0.2 mA typical (< 3.5 mA max per ITE 60950-1 Standard)												
Isolation voltage	<table border="1"> <thead> <tr> <th></th> <th>U Suffix</th> <th>H Suffix</th> </tr> </thead> <tbody> <tr> <td>PRI-SEC:</td> <td>4,000 Vac (2X MOPP)</td> <td>3,000 Vac</td> </tr> <tr> <td>PRI-Chassis:</td> <td>1,500 Vac (1X MOPP)</td> <td>2,000 Vac</td> </tr> <tr> <td>SEC-Chassis:</td> <td>1,500 Vac (1X MOPP)</td> <td>1,500 Vac</td> </tr> </tbody> </table>		U Suffix	H Suffix	PRI-SEC:	4,000 Vac (2X MOPP)	3,000 Vac	PRI-Chassis:	1,500 Vac (1X MOPP)	2,000 Vac	SEC-Chassis:	1,500 Vac (1X MOPP)	1,500 Vac
	U Suffix	H Suffix											
PRI-SEC:	4,000 Vac (2X MOPP)	3,000 Vac											
PRI-Chassis:	1,500 Vac (1X MOPP)	2,000 Vac											
SEC-Chassis:	1,500 Vac (1X MOPP)	1,500 Vac											

<sup>1</sup>Artesyn Filter PN: 700-014447-0000 (Zhongguang PN: ZGLPG-10-02M).

<sup>2</sup>Meets Class C ≥ 50% load.

<sup>3</sup>U suffix have both ITE and Medical Safeties. H suffix carries ITE approval only.

<sup>4</sup>DC input rating not part of product's Safety approval.

<sup>5</sup>LED Lighting approvals apply to all 48 V output variants.

## Electrical Specifications

Output		
Output rating	See Ordering Information table	
Standby output	5.0 Vdc @ 1.5 A Max	
Set point	± 0.5%	Factory set point
Total regulation	Main Output: ± 2.0% 5 Vsb: ± 5%	Combined Line / Load / Temperature
Rated load	600 W maximum	600 W from -40 °C to 85 °C Baseplate Temp. Derate output to 28 W @ 95 °C Baseplate Temp
Minimum load	0 A	For both Main and 5 Vsb Outputs
Output voltage adjust range	See Ordering Information table	Max power limited to 600 W
Output noise	Main Output: 1.0% max p-p 5 Vsb: 60 mV max p-p	Measured with 0.1 µF Ceramic and 10 µF Tantalum Cap, 20 MHz BW
Remote sense	Compensation up to 500 mV	Pin 10: +Vout_RS / Pin4: -Vout_RS
Overcurrent protection	105 - 130% of full load current	Default is Shutdown mode with Auto-retry every 2-4 sec. Output latches after 20 sec of continuous OCP fault presence. Restart after latch possible through AC recycle, Inhibit toggle or through PMBus.
Overvoltage protection	125 - 145% Vo, nom Main Output 125 - 130% 5 Vsb	Latching / AC Recycle or Inhibit toggle required for PSU restart
Overtemperature protection	> 95 °C Baseplate temperature	Output Shutdown / Auto-recovery
AC_OK	Open Collector; 0.8 Vdc max / 10 mA	Active low when AC is present
DC_OK	Open Collector; 0.8 Vdc max / 10 mA	Active low when Main Output is within regulation
Remote inhibit	Contact Closure	Pin 19: Open/Float = ON; Close/Ground = OFF
# Units in parallel operation	Qualified up to 5 units in parallel. Consult factory if more than 5 are required.	Pin 5: IShare pin for main output only.
Output dimming	0-10 Vdc external voltage; 0-100 kOhm external resistance	Consult with <a href="mailto:productsupport.ep@artesy.com">productsupport.ep@artesy.com</a>

## Environmental Specifications

Operating temperature range	-40 °C to +85 °C Baseplate temperature
Storage temperature	-40 °C to +85 °C
Humidity	10% to 95%
Altitude	16,402 ft (Operating) / 50,000 ft (Non-Operating)
Shock	MIL-STD-810F 516.5 Procedure I, VI
Vibration	MIL-STD-810F 514.5 Cat. 4, 10
Ingress protection	IP65 (for suffix "-4P")
MTBF (calculated)	>2M Hrs, 25 °C per SR-332 Issue 3
Electromagnetic immunity	Designed to meet EN61000-4-3, -4, -5, -8, -11 (Level 3); EN61000-4-2 (Level 4); EN60601-1-2 and EN55024
	For H suffix, Level 4 for EN61000-4-5