

# GECA20

## 20 Watt Series



**Commercial Wide-Range Input**

**2 Year Warranty**

- Wide-Range AC Input 90-264 VAC
- Low Height Footprint - 3.5" x 2" x 0.85"
- Conducted EMI Exceeds FCC Class B and CISPR 22 Class B
- Single Output Models in Four Popular Voltages
- Approved to UL60950-1: 2003, CSA-22.2 No. 60950-1-03, IEC and EN60950-1
- CB Report Available
- RoHS Compliant
- CE Marked to LVD



**CONDOR**

### Specifications

Unless otherwise noted, all parameters are nominal values measured at 120 VAC @25°C and 0-95% relative humidity, non-condensing. For limits at unusual operating conditions, consult factory.

**AC Input**

90-264 VAC, 47-63 Hz single phase.

**Input Current**

Maximum input current at 120 VAC, 60 Hz with full load: 0.5 A.

**Hold-Up Time**

10 ms minimum from loss of AC input at 20 W load, nominal line (120 VAC).

**Output Power**

Normal continuous output power is 20 W, 25 W peak for 60 s.

**Overload Protection**

Fully protected against short circuit and output overload. Short circuit protection is cycling type power limit. Factory set to begin power limiting at approximately 27 W.

**Overvoltage Protection**

Built in with firing point set per grid at top of next page. OVP firing shuts down the converter.

**Efficiency**

72 to 80% depending upon model.

**Turn-on Time**

Less than 1 s at 120 VAC, 25°C (inversely proportionate to input voltage and thermistor temperature).

**Input Protection**

Internal AC fuse provided on all units. Designed to blow only if a catastrophic failure occurs in the unit. Fuse does not blow on overload or short circuit.

**Inrush Current**

Inrush is limited by internal thermistor. The inrush at 240 VAC, averaged over the first AC half-cycle under cold start conditions will not exceed 37A.

**Temperature Coefficient**

0.03%/°C typical on all outputs.

**Temperature Range**

Designed for 0 to 45°C operation at full rated output power; derate output current and total output power by 2.5% per °C above 45°C.

**Output Noise**

0.5% RMS, 1% Pk-Pk, 20 MHz bandwidth, differential mode. Measured with scope probe directly across output terminals of the power supply with load terminated with 0.1µF capacitor.

**Transient Response**

Main Output - 500 µs typical response time for return to within 0.5% of final value for a 50% load step within the regulation limits of minimum and maximum load,  $\Delta i/\Delta t < 0.2 \text{ A}/\mu\text{s}$ . Maximum voltage deviation is 3.5%. Start-up overshoot less than 5% under nominal conditions; less than 2% under all conditions at shutdown.

**Switching Frequency**

70 kHz +/-10 kHz.

**Voltage Adjustment**

See table for individual model features. Adjustable voltage outputs are preset at factory. Outputs are capable of a minimum of +/- 5% change from nominal setting.

**EMI/EMC Compliance**

All models include built-in EMI filtering to meet the following emissions requirements:

**EMI SPECIFICATIONS**

Conducted Emissions  
Static Discharge  
RF Field Susceptibility  
Fast Transients/Bursts  
Surge Susceptibility

**COMPLIANCE LEVEL**

EN55022 Class B; FCC Class B  
EN61000-4-2, Level 3  
EN61000-4-3, Level 3  
EN61000-4-4, Level 3  
EN61000-4-5, Level 3

**Safety Approvals**

SL Power Electronics, Corp. declares under our sole responsibility that all GECA models are in conformity with the applicable requirements of EN60950 following the provisions of the Low Voltage Directive 73/23/EEC.

All GECA models are approved to UL60950-1: 2003, CSA-22.2 No. 60950-1-03, IEC and EN60950-1

**MTBF**

120kHrs.

# GECA20

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### Commercial Wide-Range Input

Commercial Model	Output (V)	Current	Line Regulation	Load Regulation	OVP Set Point	Ripple & Noise(P-P)
GECA20-5G	5.1 V	4.0 A	+/-0.5%	+/-3%	7.0±1.0 V	1%
GECA20-12G	12 V	1.67 A	+/-0.5%	+/-3%	16.8±2.4 V	1%
GECA20-15G	15 V	1.34 A	+/-0.5%	+/-3%	21.0±3.0 V	1%
GECA20-24G	24 V	0.84 A	+/-0.5%	+/-3%	33.6±4.8 V	1%

### Environmental Specifications

ENVIRONMENT	OPERATING	NON-OPERATING
Temperature (A)	0 to 45°C	-40 to +85°C
Humidity (A)	20 to 90% RH	10 to 95% RH
Shock (B)	20 g <sub>pk</sub>	40 g <sub>pk</sub>
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g <sub>rms</sub> 0.0032 g <sup>2</sup> /Hz	5 g <sub>rms</sub> 0.026 g <sup>2</sup> /Hz

A. Units should be allowed to warm up/operate under non-condensing conditions before application of power.

B. Shock testing—half-sinusoidal, 10 ± 3 ms duration, ± direction, 3 orthogonal axes, total 6 shocks.

C. Random vibration—10 to 2000Hz, 6dB/octave roll-off from 350 to 2000Hz, 3 orthogonal axes. Tested for 10 min./axis operating and 1 hr./axis non-operating.

### GECA20 Series Mechanical Specifications

**CON 1:**  
MOLEX P/N 26-60-4030, w/center PIN Removed  
0.156 [3.96 mm] CTR Header

**CON 2:**  
MOLEX P/N 26-60-4040, 0.156 [3.96 mm] CTR Header

#### Input J1

PIN 1)	AC Line
PIN 3)	AC Neutral

#### Output J2

	Single Output
PIN 1)	+ Output
PIN 2)	+ Output
PIN 3)	Common
PIN 4)	Common

Mating Connector	Housing P/N	Contacts P/N
<b>MOLEX</b>		
Input	09-50-3031	08-52-0072
Output	09-50-3041	08-52-0072
Note: 5A maximum recommended current per Connector PIN		

#### Weight

0.5 lbs Max [0.23 kg Max.]

#### Tolerance

X.XX=0.030  
X.XXX=0.010 [0. mm]

