

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.

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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 _{pk}	40 g _{pk}
Altitude	-500 to 10,000 ft	-500 to 40,000 ft
Vibration (C)	1.5 g _{rms} 0.0032 g ² /Hz	5 g _{rms} 0.026 g ² /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
MOLEX		
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 [0.0mm]

