

## **Excellent Integrated System Limited**

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[Artesyn Embedded Technologies](#)  
[LPQ352-C](#)

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# POWER

## LPQ350 Series

350 Watts

### Data Sheet

**Total Power: 350 Watts**  
**Input Voltage: 85-264 Vac**  
**120 - 300 Vdc**  
**# of Outputs: Quad**



### SPECIAL FEATURES

- Active power factor correction
- IEC EN61000-3-2 compliance
- Remote sense on 1st and 4th output
- Power fail and remote inhibit
- Single wire current sharing
- Built-in EMI filter
- Adjustable floating 4th output
- 2 Supervisory output 5 V and 12 V
- Overvoltage protection
- Overload protection
- Thermal overload protection
- DC power good
- 135 khz switching frequency
- Cover -C
- Optional with fan cover -CF
- Optional end-mounted fan -CEF

### SAFETY

■ VDE	60950
	21310-3336-0001
■ UL	60950
■ CSA	CSA 22.2-234 Level 5
	LR109492C
■ NEMKO	EN 60950/EMKO-TUE
	P97102061 (74-sec) 203
■ BABT	EN60950/BS7002 607019
■ CB	Certificate and report
	4048, 4049
■ CE	Mark (LVD)

### Electrical Specifications

Input	
Input range	85-264 VAC; 120-300 VDC
Frequency	47-440 Hz
Inrush current	38 A max, cold start @ 25 °C
Efficiency	75% typical at full load
EMI filter	FCC Class B conducted and radiated CISPR 22 Class B conducted and radiated EN55022 Class B conducted and radiated VDE 0878 PT3 Class B conducted and radiated
Power factor	0.99 typical
Safety ground leakage current	0.5 mA @ 50/60 Hz, 264 VAC input
Output	
Maximum power	With cover: 350 W with 30 CFM forced air, (-C) (-CF) (-CEF)
Adjustment range	± 5% min. on main: 3.3-24 V on output 4
Supervisory output	5 V @ 500 mA regulated, 12 @ 150 mA x2
Hold-up time	20 ms @ 350 W load, 115 VAC nominal line
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110-145% above peak rating
Overvoltage protection	5 V output: 5.7 - 6.7 VDC

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### Logic Control

Power fail	TTL logic signal goes high 50 - 150 msec after 5 V output. It goes low at least 4 msec before loss of regulation
Remote on/off	Requires an external contact (N.O or N.C) to inhibit outputs
DC-OK	TTL logic goes high 50 - 150 msec after 5 V output. It goes low when there is loss of regulation
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected

### Environmental Specifications

Operating temperature	0° to 50 °C ambient; derate each output at 2.5% per degree from 50° to 70 °C
Storage temperature	-40 °C to +85 °C
Temperature coefficient	± 0.4% per °C
Electromagnetic susceptibility	Designed to meet IEC 801, -2, -3, -4, -5, -6, Level 3
Humidity	Operating; non-condensing 5% to 95%
Vibration	Three orthogonal axes, sweep at 1 oct/min, 5 min. dwell at four major resonances 0.7 G peak 5Hz to 500Hz, operational
MTBF demonstrated	> 550,000 hours at full load and 25 °C ambient conditions

### Ordering Information

Model Number	Output Voltage	Minimum Load	Maximum Load	Peak Load <sup>1</sup>	Regulation <sup>2</sup>	Ripple P/P(PARD) <sup>3</sup>
LPQ352-C	+5 V	5 A	50 A	60 A	±2%	50 mV
	+12 V	0 A	12 A	14 A	±3%	120 mV
	-12 V	0 A	6 A	8 A	±3%	120 mV
	3.3 - 24 V	*1 A	6 A	8 A	±3%	240 mV <sub>1</sub> max.
LPQ353-C	+5 V	5 A	50 A	60 A	±2%	50 mV
	+15 V	0 A	12 A	14 A	±3%	150 mV
	-15 V	0 A	6 A	8 A	±3%	150 mV
	3.3 - 24 V	*1 A	6 A	8 A	±3%	240 mV <sub>1</sub> max.

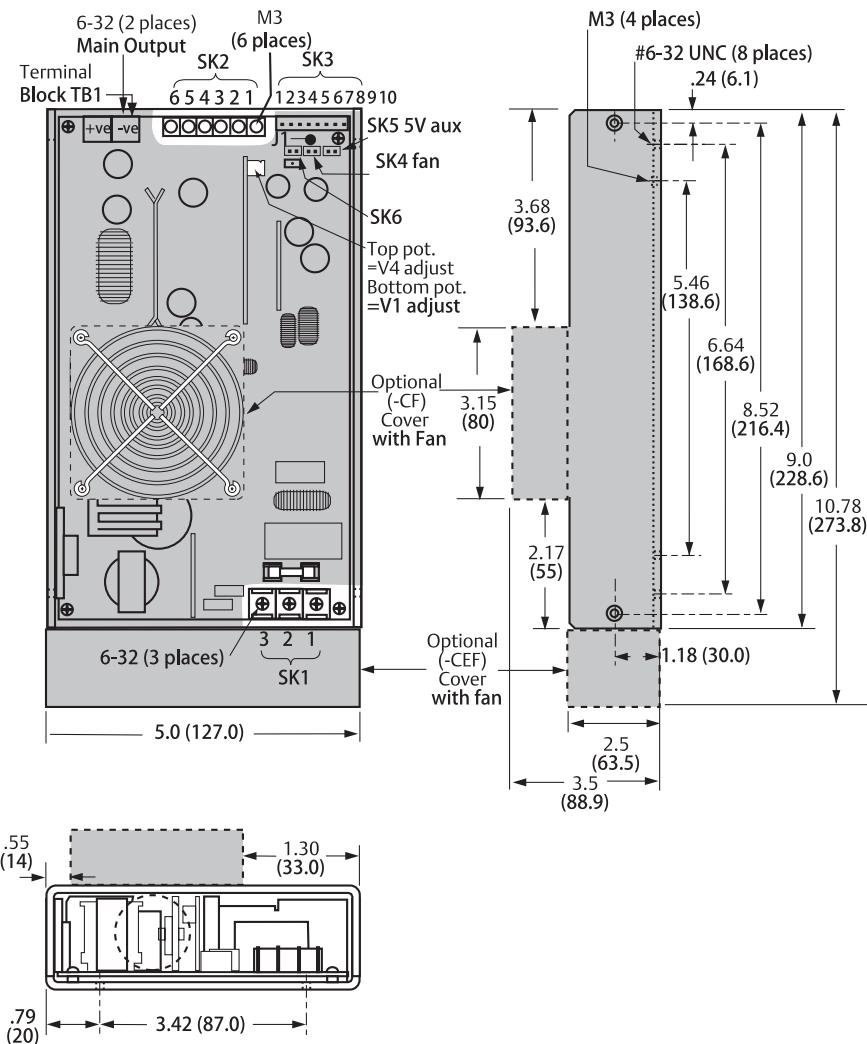
1. Peak current lasting < 30 seconds with a maximum 10% duty cycle.
2. At 25 °C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20 MHz bandwidth and 10 µF in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. 4th output 3.3 - 24 V factory set at 5 V.
5. \* Minimum load required when the output is set below 5 volts.
6. If optional CF or CEF fans are not used, 30CFM forced air cooling needs to be provided and is required through the length of the power supply. Not convection rated.
7. Remote inhibit resets OVP latch

Note: -CF suffix added to the model number indicates cover with fan,

-CEF suffix added to model number indicates end-mounted fan chassis.

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**Mechanical Drawing**



Notes:

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance  $\pm .02"$ .
3. Specifications are at factory settings
4. To enable normally closed Remote Inhibit, cut Jumper J1.
5. Mounting maximum insertion depth is 0.12".
6. Warranty: 2 year
7. Weight: 4 lb./1.8kg.

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**Pin Assignments**

<b>SK1</b>	PIN 1	Neutral
	PIN 2	Line
	PIN 3	Ground
<b>SK2</b>	PIN 1	+ 12/15V
	PIN 2	Common
	PIN 3	Common
	PIN 4	- 12/15 V
	PIN 5	3.3-25 V RET Float
	PIN 6	3.3-25 V Float
<b>SK3</b>	PIN 1	+ Sense V 4
	PIN 2	- Sense V 4
	PIN 3	+Sense V 1
	PIN 4	-Sense V 1
	PIN 5	POK
	PIN 6	C.Share
	PIN 7	DC-OK
	PIN 8	Inhibit (N.O.)
	PIN 9	Inhibit (N.C.)
	PIN 10	COM
<b>SK4</b>	PIN 1	+ Fan 1 (12V@150mA)
	PIN 2	- Common
<b>SK5</b>	PIN 1	+ 5V aux (5V@100mA)
	PIN 2	- Common
<b>SK6</b>	PIN 1	+ Fan 2 (12V@150mA)
	PIN 2	- Common

**Mating Connectors**

<b>SK3</b>	Molex: 51191-1000 PINS: 50802-9101
<b>SK4</b>	Molex: 22-01-3027 PINS: 08-50-0114
<b>SK5</b>	Molex: 22-01-3027 PINS: 08-50-0114
<b>SK6</b>	Molex: 22-01-3027 PINS: 08-50-0114

Astec Connector Kit #70-841-011, includes all of the above.

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