

preliminary

PFC130 SERIES

DESCRIPTION

The PFC130 series incorporates creative high efficiency circuitry, high power density (6.94 Watts/in²), and active Power Factor Correction (PFC).

FEATURES

- EN61000-3-2 class A & D compliant
- Power Factor 0.98 typical
- High Power Density in Industry 3"×5" Footprint
- Overvoltage and Thermal Protection
- Short Circuit Protection with auto-recovery
- Output Remote Sense on 3.3V
- Power Good/Power Failed Signal
- Up to Five DC Outputs
- All Outputs are Well Regulated



INPUT SPECIFICATIONS

Input Voltage: 90 to 264 VAC
 Input Frequency: 47 to 63 Hz
 Input Current: 1.7A (rms) max for 115VAC
 0.85A (rms) max for 230VAC

OUTPUT SPECIFICATIONS

Output Voltage/Current: See Rating Chart
 Ripple & Noise: 65mV peak to peak on V1
 1% peak to peak on other outputs
 Overvoltage Protection: Provided on V0, V1 & V2; set at 112 - 132 % of its nominal output voltage
 Overcurrent Protection: All outputs protected to short circuit conditions
 Temperature Coefficient: All outputs ± 0.04%/ °C max.
 Transient Response: Maximum excursion of 4% or better on all models; recovering to 1% of final value within 500uS after a 25% step load change
 PG/PFD Signal: TTL logic high for normal operation and TTL logic low upon loss of input power. This signal appears at least 10 ms prior to master output dropping 5% below its nominal value. This signal also provides a minimum delay of 100 ms after master output is within regulation.

GENERAL SPECIFICATIONS

Power Factor: 0.98 typical
 Efficiency: 75% typical
 Hold-up Time: 15msec minimum at full load
 Line Regulation: ± 0.5% maximum at full load
 Inrush Current: 35 Amps @ 115VAC, or 70 Amps @ 230VAC
 Withstand Voltage: 3000VAC from input to output
 1500VAC from input to ground
 500VAC from output to ground
 Operating Temp.: 0 °C to +70 °C
 Storage Temp.: -40 °C to +85 °C
 Relative Humidity: 5% to 95% non-condensing
 Derating: Derate from 100% at +50 °C linearly to 50% at +70 °C
 Cooling: Two 5CFM fans are required and provided by user. Air velocity is measured with power supply mounted on 0.2" standoffs. Airflow direction is from the input section to the output section.
 MTBF: To be calculated
 EMI Requirements: (a) FCC Level B
 (b) EN 55022 Class B
 Safety Requirement: (a) UL 1950
 (b) CSA C22.2 No. 950
 (c) IEC 950 (EN 60950)

preliminary

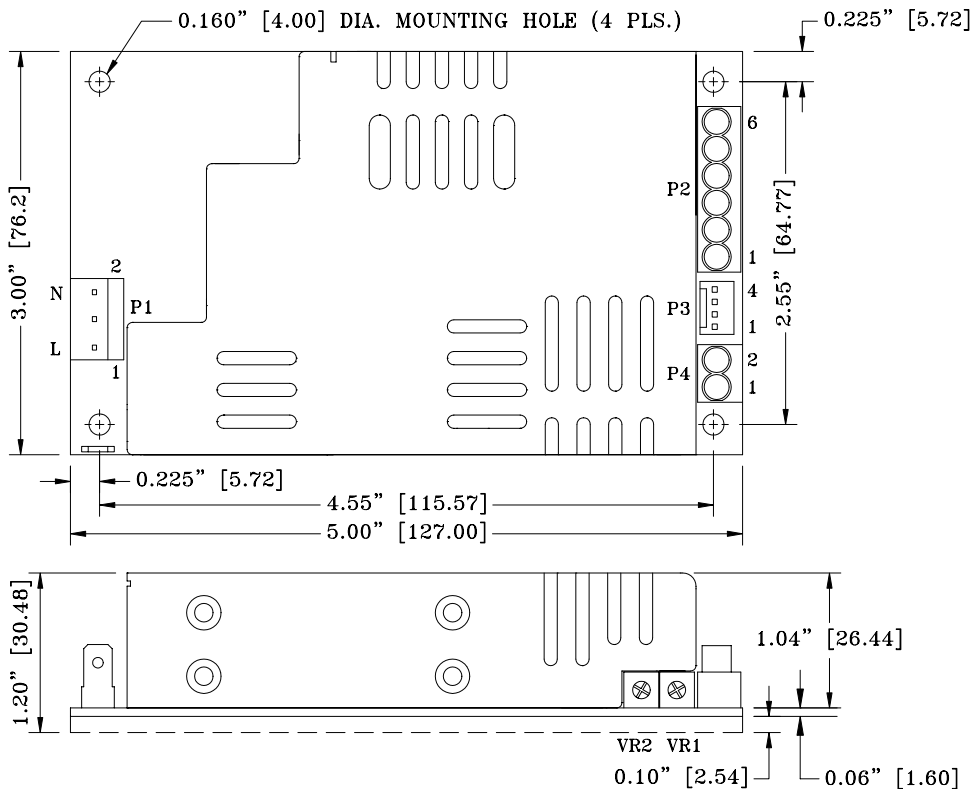
PFC130 SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

Model	V1				V2			V3			V4			V0						
	Vnom.	I _{typ}	I _{max.}	Tol.	Vnom.	I _{typ}	I _{max.}	Tol.	Vnom.	I _{typ}	I _{max.}	Tol.	Vnom.	I _{typ}	I _{max.}	Tol.	Vnom.	I _{typ}	I _{max.}	Tol.
PFC130-23-3	+5.1V	8A	12A	2%													3.3V	8A	12A	2%
PFC130-23	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%												
PFC130-24	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%												
PFC130-25	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%												
PFC130-31	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%	+5V~+24V	0.5A	1A	2%								
PFC130-32	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%	+5V~+24V	0.5A	1A	2%								
PFC130-33	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%	+5V~+24V	0.5A	1A	2%								
PFC130-34	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%					-5V~-24V	0.5A	1A	2%				
PFC130-35	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%					-5V~-24V	0.5A	1A	2%				
PFC130-36	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%					-5V~-24V	0.5A	1A	2%				
PFC130-31-3	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%									3.3V	8A	12A	2%
PFC130-33-3	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%									3.3V	8A	12A	2%
PFC130-39-3	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%									3.3V	8A	12A	2%
PFC130-41	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%	+5V~+24V	0.5A	1A	2%	-5V~-24V	0.5A	1A	2%				
PFC130-42	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%	+5V~+24V	0.5A	1A	2%	-5V~-24V	0.5A	1A	2%				
PFC130-43	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%	+5V~+24V	0.5A	1A	2%	-5V~-24V	0.5A	1A	2%				
PFC130-41-3	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%	+5V~+24V	0.5A	1A	2%					3.3V	8A	12A	2%
PFC130-42-3	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%	+5V~+24V	0.5A	1A	2%					3.3V	8A	12A	2%
PFC130-43-3	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%	+5V~+24V	0.5A	1A	2%					3.3V	8A	12A	2%
PFC130-44-3	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%					-5V~-24V	0.5A	1A	2%	3.3V	8A	12A	2%
PFC130-45-3	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%					-5V~-24V	0.5A	1A	2%	3.3V	8A	12A	2%
PFC130-46-3	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%					-5V~-24V	0.5A	1A	2%	3.3V	8A	12A	2%
PFC130-51-3	+5.1V	8A	12A	2%	+12V	3.25A	6A	3%	+5V~+24V	0.5A	1A	2%	-5V~-24V	0.5A	1A	2%	3.3V	8A	12A	2%
PFC130-52-3	+5.1V	8A	12A	2%	+15V	2.6A	4.8A	3%	+5V~+24V	0.5A	1A	2%	-5V~-24V	0.5A	1A	2%	3.3V	8A	12A	2%
PFC130-53-3	+5.1V	8A	12A	2%	+24V	1.63A	3A	3%	+5V~+24V	0.5A	1A	2%	-5V~-24V	0.5A	1A	2%	3.3V	8A	12A	2%

- Notes: (1) The maximum output power combined V0 and V1 is 100 watts. The maximum output power combined V2, V3 and V4 is 100 watts. The total output power is 130 watts.
- (2) V1 needs a minimum current of 0.8A to support V0 well-regulated.
- (3) Ripple and noise is measured peak-to-peak with 20 MHz bandwidth and a 10uF tantalum capacitor in parallel with a 0.1uF multi-layer ceramic capacitor at rated line voltage and load ranges.

MECHANICAL SPECIFICATIONS



preliminary

PFC130 SERIES

PIN CHART

MODEL \ CONN PIN	P1		P2						P3				P4	
	1	2	1	2	3	4	5	6	1	2	3	4	1	2
PFC130-23-3	AC LIVE	AC NEUTRAL	V1	COM.	COM.	N.C.	N.C.	N.C.	-SENSE (V0)	+SENSE (V0)	PG/PFD Signal	PG/PFD COM.	V0	V0 RTN
PFC130-23 PFC130-24 PFC130-25								V2					N.C.	N.C.
PFC130-31 PFC130-32 PFC130-33	AC LIVE	AC NEUTRAL	V1	COM.	COM.	N.C.	V3	V2	-SENSE (V0)	+SENSE (V0)	PG/PFD Signal	PG/PFD COM.	N.C.	N.C.
PFC130-34 PFC130-35 PFC130-36							V4						N.C.	N.C.
PFC130-31-3 PFC130-33-3 PFC130-39-3	AC LIVE	AC NEUTRAL	V1	COM.	COM.	N.C.	V3	V2	-SENSE (V0)	+SENSE (V0)	PG/PFD Signal	PG/PFD COM.	V0	V0 RTN
PFC130-41 PFC130-42 PFC130-43													V4	N.C.
PFC130-41-3 PFC130-42-3 PFC130-43-3	AC LIVE	AC NEUTRAL	V1	COM.	COM.	N.C.	V3	V2	-SENSE (V0)	+SENSE (V0)	PG/PFD Signal	PG/PFD COM.	V0	V0 RTN
PFC130-44-3 PFC130-45-3 PFC130-46-3													V4	N.C.
PFC130-51-3 PFC130-52-3 PFC130-53-3	AC LIVE	AC NEUTRAL	V1	COM.	COM.	V3	V4	V2	-SENSE (V0)	+SENSE (V0)	PG/PFD Signal	PG/PFD COM.	V0	V0 RTN



ELECTRONIC COMPONENTS

RSG Electronic Components GmbH ▪ Sprendlinger Landstr. 115 ▪ D-63069 Offenbach/Germany
 Tel. +49 69 984047-0 ▪ Fax +49 69 984047-77 ▪ info@rsg-electronic.de ▪ www.rsg-electronic.de

Änderungen vorbehalten / subject to change without notice