

MODEL 430L/H POWER SUPPLIES

The Models 430L and 430H Power Supplies are components of the IED 400 Power Supply Series.

The 430L is a +30 VDC at 6 A supply whose input voltage range is 105 VAC to 130 VAC. The 430H is a +30 VDC at 6 A supply whose input voltage range is 210 VAC to 260 VAC.

Each version has two LED indicators which can be viewed from the front of the frame. The upper, green LED indicates power supply loading. When there is no load on the supply, the LED is Off. As the load increases the intensity of the LED increases to maximum at maximum load. The lower, tricolor LED indicates the status of the supply. It flashes green if the supply and the on-board microprocessor are running. It flashes red if the microprocessor is running but the supply is in a fault condition. It flashes yellow if the supply is in a maintenance mode.

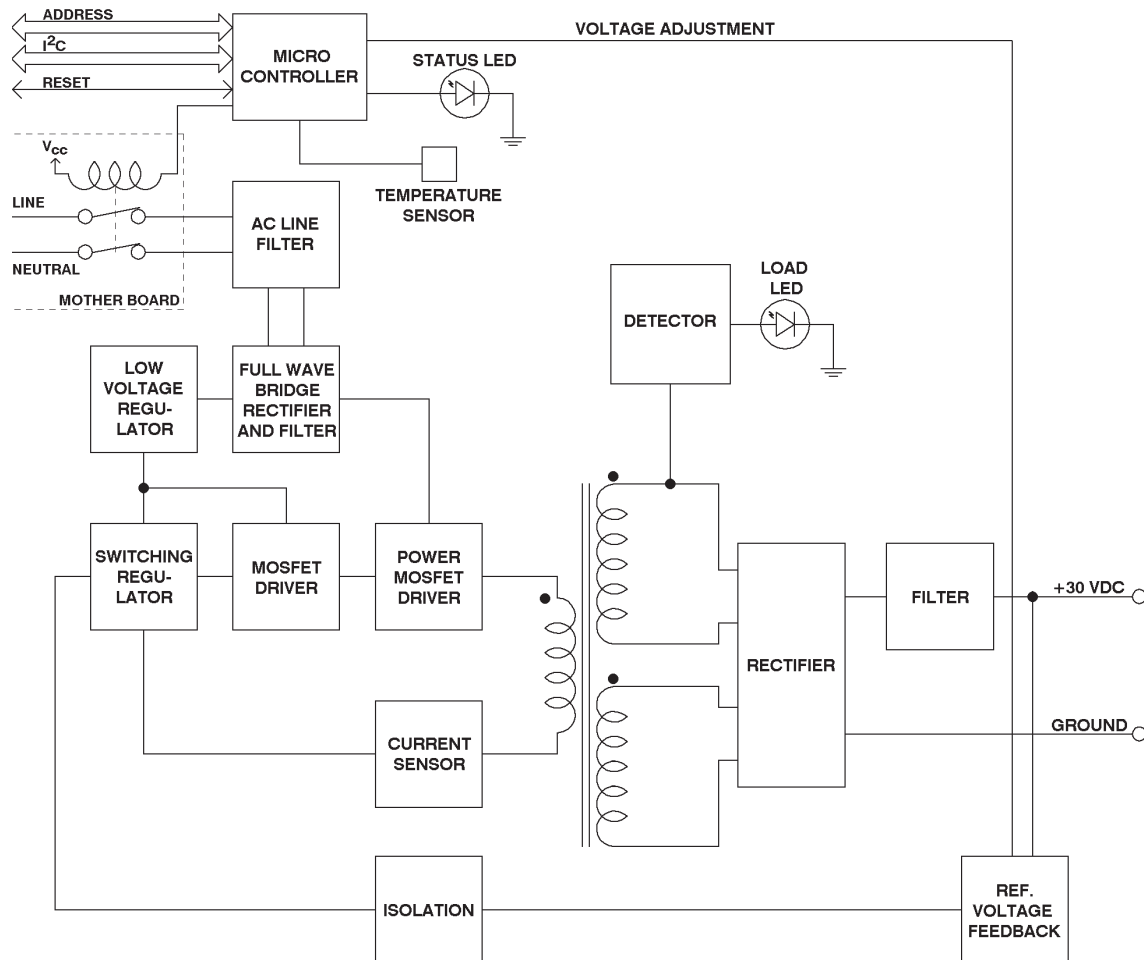


Figure 1 - 430L Power Supply Block Diagram



An on-board microcontroller allows the main microprocessor, the 452CPU, to have access to on-board information and control. The on-board microcontroller enables the 452CPU to switch the supply On and Off by use of a relay on the mother board. It allows the 452CPU to adjust the output voltage. The 452CPU can measure the heat sink temperature of the supply and check the status of the output fuse. The microcontroller also drives the status LED on the front panel.

Multiple means of protection are provided. An AC fuse prevents line overloads. A DC output fuse protects against output overload conditions. Output power limiting protects against short circuits and current overloads.

Voltage test points for the +30 VDC output are located on the mother board which is a part of the mainframe. This test point on the motherboard does not indicate the voltage of an individual supply in the system unless there is only one, since the DC power is bussed. The test point voltage is the bus voltage.

| PIN | FUNCTION | PIN | FUNCTION |
|-----|------------------------|-----|------------------------|
| 1 | Line | 2 | Line |
| 3 | Neutral | 4 | Neutral |
| 5 | +35 VDC | 6 | Relay |
| 7 | Ground | 8 | Reset |
| 9 | Ground | 10 | Ground |
| 11 | Ground | 12 | Ground |
| 13 | -15 VDC | 14 | -15 VDC |
| 15 | +15 VDC | 16 | +15 VDC |
| 17 | +30 vdc | 18 | +30 vdc |
| 19 | +30 vdc | 20 | +30 vdc |
| 21 | -15 V Sense | 22 | +5 V Sense |
| 23 | +15 V Sense | 24 | -20 VDC |
| 25 | +30 V Sense | 26 | +30 VDC |
| 27 | Address A2 | 28 | +5 V REF from CPU |
| 29 | Address A1 | 30 | Address A0 |
| 31 | I ² C - SCL | 32 | I ² C - SDA |

Table 1 - 430L/H Pin Connections

*Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: <http://www.iedaudio.com>*

SPECIFICATIONS1

ELECTRICAL, ANALOG

1. AC Input Voltage
 - 430L 105 - 130 VAC
 - 430H 210 - 260 VAC
2. Input Line Frequency 50 - 400 Hz
3. DC Output Voltage +30 VDC
4. Output Voltage Adjustment Range ±10%
Set by on-board microcontroller, not field adjustable
5. Efficiency, η (min) 70%
6. Output Power Limiting 200 W
7. Output Voltage Overshoot at Startup 0 V
Soft start
8. Switching frequency (Fixed) 75 kHz
9. Peak Noise, Ripple and Spikes, (max) 75 mV
10. Overload Protection
 - AC Line
 - 430L 2 A, 2AG, 250 V Slow Blow Fuse
 - 430H 1.5 A, 2AG, 250 V Slow Blow Fuse
 - 30 VDC Output 8 A, 3AG, 32 V Slow Blow Fuse

INDICATORS

1. Load Green LED
Lights when the 430L/H is supplying current
2. Status Tricolor LED
 - Green flashing Supply Normal
 - Red flashing Supply Fault
 - Yellow flashing Supply in Maintenance mode

CONNECTORS

1. Card edge connector Panduit 100-032-033
See Table 1 for pin connections

MECHANICAL

1. Size (maximum overall dimensions as viewed from the front)
 - Height (17.8 cm) 7.0"
 - Width (4.87 cm) 1.92"
 - Depth (23.2 cm) 9.15"
2. Weight (623 gm) 1.37 lb

ENVIRONMENTAL

1. Operating Temperature Range (+32 °F - +104 °F) 0 °C - +40 °C
2. Storage Temperature Range. (-40 °F - +158 °F) -40 °C - +0 °C



This page left blank intentionally

*Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: <http://www.iedaudio.com>*