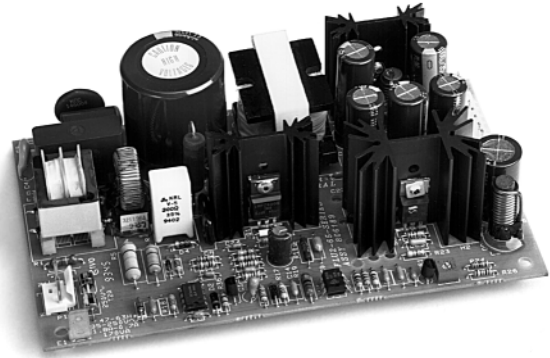


# 65W

## OPEN-FRAME SWITCHING POWER SUPPLIES

- ✓ Dual and Triple Output Models
- ✓ Low-Profile and Standard Height Formats
- ✓ 65W Continuous Output Power—Convection Cooled
- ✓ 85-265 VAC Universal Input Models
- ✓ CE Mark: UL/CSA/EN60950 Approvals
- ✓ EN55022/FCC Class B Input Line Filter
- ✓ 0% Minimum Load Requirement—All Outputs
- ✓ Over-Current/Short-Circuit Protection
- ✓ 2-Year Warranty
- ✓ Minimum 175,000-Hour MTBF



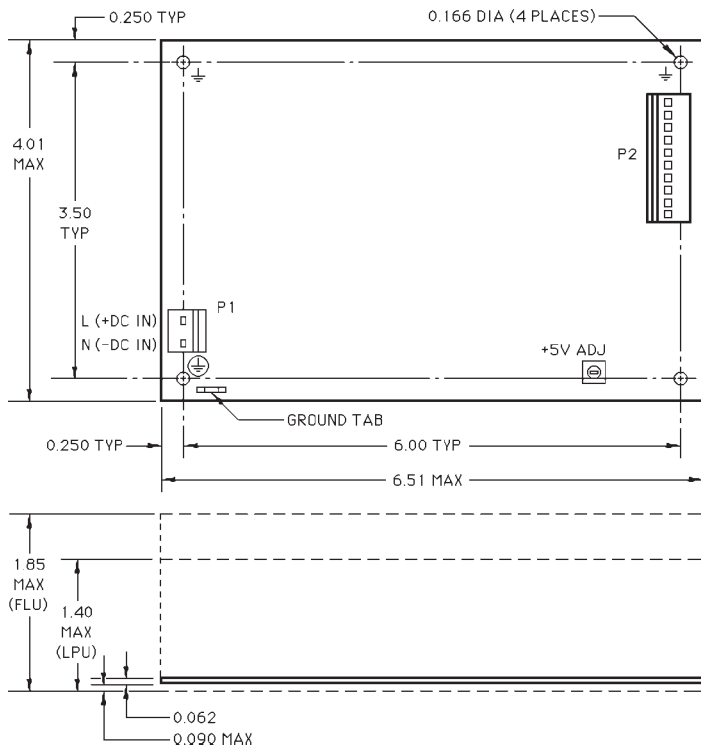
### CHARACTERISTICS

Input Voltage .....	Universal input voltage range, 85-265 VAC single phase or 100-370 VDC.
Input Line Frequency .....	47-440 Hz (50/60 Hz, nominal).
Input Line Protection .....	MOV transient protected. Input line fuse on-board. Replace the input line fuse with the same type and rating. Recommended: 2A/250V slow-blow fuse.
EMI Filter .....	Standard. Performance surpasses conducted EMI requirements of EN55022/FCC Class B by 10 dB, typ.
Continuous Output Power .....	65W, maximum.
Output Voltage Adjust .....	Primary output adjustable $\pm 5\%$ . Auxiliary outputs fixed.
Efficiency .....	65%, minimum, 115 or 230 VAC input, full load conditions.
Hold-Up Time .....	16 ms (115 VAC input), 32 ms (230 VAC input), minimum, at full load.
Overload Protection .....	Power-limit circuit.
Short-Circuit Protection .....	Continuous.
Over-Voltage Protection .....	Primary output only (120% of rated output voltage, typical).
Soft Start .....	Standard on all models.
Design Topology .....	Flyback converter with current-mode control.
Frequency of Operation .....	40 kHz (fixed).
Electrical Strength/Isolation .....	5300 VDC, input-to-output for one minute. (See Note 1).
Noise, Ripple and Spike .....	1% peak-to-peak, maximum. (Note 4.)
Transient Response .....	4 ms recovery to within 1% of the regulation band with no more than 5% deviation.
Temperature Range .....	-20°C to +70°C.
Output Power De-Rating .....	De-rate output power and current linearly 2%/°C from +50°C to +70°C.
Temperature Coefficient .....	$\pm 0.05\%/^{\circ}\text{C}$ over the entire operating temperature range.
Relative Humidity .....	0 to 95%, non-condensing.
Altitude .....	0 to 10,000 feet.
Cooling .....	Convection cooling is adequate. Moving air is recommended for operation in a confined area.
Storage Temperature .....	-40°C to +85°C.
Storage Humidity .....	0 to 95%, non-condensing.
Mean Time Between Failures .....	>175,000 hours, calculated using the parts stress method in MIL-HDBK 217F (ground benign, $T_A = +25^{\circ}\text{C}$ ).

Model	Output Voltage Output (V)		Output Current			Output			
			Min. (A)	Nom. (A)	Max. (A)	Voltage Tol.	Line Reg.	Load Reg.	Cross-Reg.
<b>AC-DC Duals</b>			85-265 VAC Input						
FLU2-65-2AD	V1	+5	0.00	4.00	5.00	1.0%	0.2%	0.5%	—
	V2	+15	0.00	4.00	5.00	5.0%	0.5%	5.0%	4.0%
FLU2-65-3AD	V1	+5	0.00	8.00	8.50	1.0%	0.2%	0.5%	—
	V2	+24	0.00	1.25	2.50	5.0%	0.5%	5.0%	4.0%
<b>AC-DC Triples</b>			85-265 VAC Input						
LPU3-65-5AD	V1	+5	0.00	5.00	6.00	1.0%	0.2%	0.5%	—
	V2	+12	0.00	1.70	3.00	5.0%	0.5%	3.0%	4.0%
	V3	-12	0.00	1.70	3.00	5.0%	0.5%	4.0%	4.0%
LPU3-65-6AD	V1	+5	0.00	5.00	6.00	1.0%	0.2%	0.5%	—
	V2	+15	0.00	1.30	2.00	5.0%	0.5%	3.0%	4.0%
	V3	-15	0.00	1.30	2.00	5.0%	0.5%	4.0%	4.0%
FLU3-65-6AD	V1	+5	0.00	5.00	6.00	1.0%	0.2%	0.5%	—
	V2	+15	0.00	1.30	2.00	5.0%	0.5%	3.0%	4.0%
	V3	-15	0.00	1.30	2.00	5.0%	0.5%	4.0%	4.0%

# 65W

## OPEN-FRAME SWITCHING POWER SUPPLIES



### FLU2-65 SERIES

- A. Dimensions shown are in inches.  
 B. Tolerances = 0.00 ±0.01 inch.  
 0.000 ±0.005 inch.  
 C. P1 input connectors are Molex 26-62-4030. The mating connector combines Molex housing 43061-0003 and crimp terminal 08-70-1030.  
 D. P2 output connectors are Molex 26-60-4100. The mating connector combines the Molex housing 43061-0010 and the Molex crimp terminal 08-70-1030.

### Notes

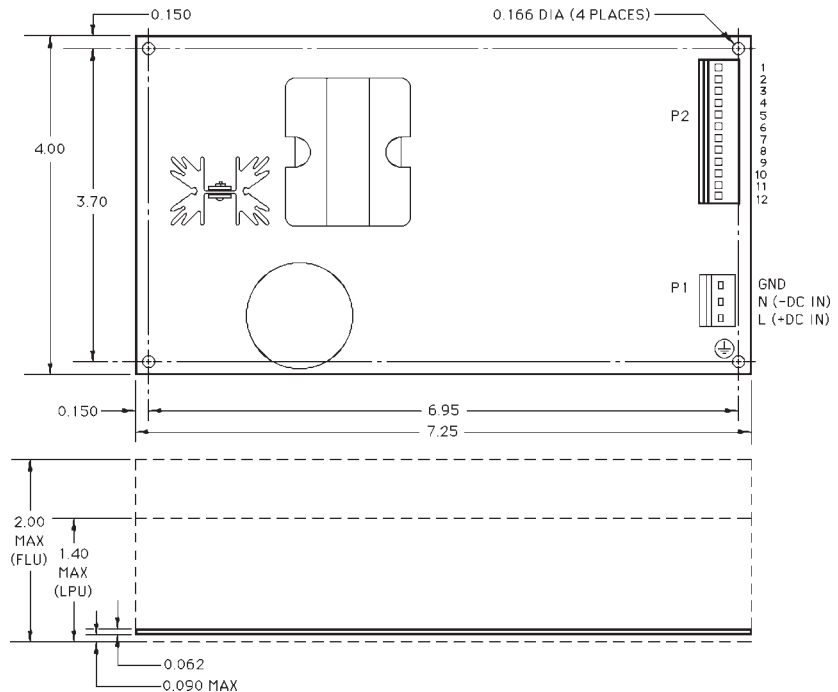
- Electrical strength/isolation is 2200 VDC from the input of the supply to ground for 60 seconds.
- All measurements are made directly at the power supply terminals.
- Peak-to-peak and RMS metering equipment must have a 20 MHz frequency response with probes and cables that maintain a frequency response of 20 Hz to 20 MHz. Output ripple and spikes are measured directly at the output terminals of the power supply with a 0.1 µF ceramic capacitor. The probe ground band must make direct contact with the output return or the common terminal of the power supply to prevent erroneous noise measurements.
- Output voltage tolerance is measured under nominal load current conditions specified for the power supply.
- Line regulation is measured under nominal load conditions as the input voltage is varied from 85 to 265 VAC (ac-input models) or from 36 to 75 VDC (dc-input models).
- Load regulation is measured at 115 VAC or 230 VAC input. The output under test is brought to 60% of nominal load; load current is then varied +40%/-30% of nominal while other outputs are held at nominal load conditions.
- Cross-regulation is tested by changing the load on the primary output from 50% to 100% of nominal load while measuring the voltage change on the auxiliary output under test.
- The FLU2-65 and FLU3-65 series are approved to UL1950 (File E140439), and CAN/CSA22.2 No. 234 (File LR52335). The FLU3-65 series is approved to EN60950/IEC950/DIN VDE 0805 (TÜV Licenses R9071576 and R9071575), as is FLU2-65-3AD (TÜV License R0097629).

### Pin-Out

Pin	FLU2-65	LPU3-65 FLU3-65
1	Comm	V1
2	Comm	V1
3	V2	V1
4	V2	V1
5	Comm	V1 Comm
6	Comm	V1 Comm
7	Comm	V2 Comm
8	V1	V2
9	V1	V3 Comm
10	V1	V3
11	N/A	N/A
12	N/A	N/A

### LPU3-65, FLU3-65 SERIES

- A. Dimensions shown are in inches.  
 B. Tolerances = 0.00 ±0.01 inch.  
 0.000 ±0.005 inch.  
 C. P1 input connectors are Molex 26-60-4051. The mating connector combines Molex housing 43061-0005 and Molex crimp terminal 08-70-1030.  
 D. P2 output connectors are Molex 26-60-4120. The mating connector combines Molex housing 43061-0012 and Molex crimp terminal 08-70-1030.



**POWER  
GENERAL**

Rev. PG/ABBB