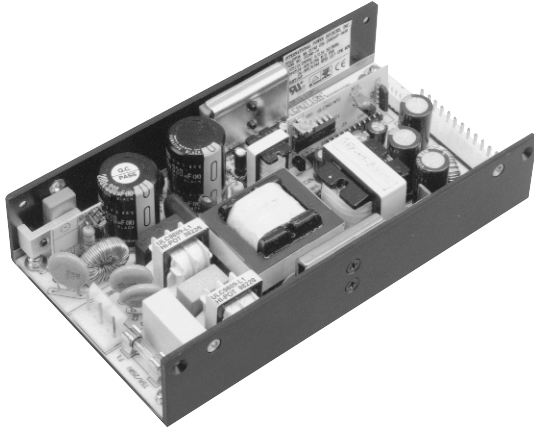


# AC/DC U-Channel

## 300 Watts HUL300 Series

**XPiQ inc.**

Intelligent Design Quality Product



Meets EN61000-3-2, -3

•  
Remote On/Off

•  
Thermal Shutdown

•  
Short Circuit Protection  
With Auto Recovery

•  
Power Good/LED on Power Supply

•  
International Safety Approvals with  
CE Mark (LVD)

## Specification

### Input

- Input Voltage* • 90-132 VAC, 180 to 264 VAC (auto-ranging)
- Input Frequency* • 47-63 Hz
- Input Current* • 6.3 A at 115 VAC  
3.15A at 230 VAC
- Leakage Current* • 3.5mA at 230 VAC

### Output

- Output Voltage* • See Tables
- Output Current* • See Tables
- Hold Up Time* • 20 msec min at 125 VAC/80% load
- Ripple & Noise* • 1% p-p or 100mV max
- Overvoltage Protection* • Set at 110-135% of maximum output voltage (on output #1 only)
- Overcurrent Protection:* • All outputs protected to short circuit conditions
- Temperature coefficient:* •  $\pm 0.1\%/^{\circ}\text{C}$  maximum
- Transient Response* • Maximum excursion of 5% recovering to 1% of final value in less than 500 $\mu\text{s}$  after a 50% step load change
- Overtemperature Protection* • Standard
- Fan Output* • 12 V/160 mA

### General

- Efficiency* • 70% min. at 230 VAC
- Line Regulation* •  $\pm 1\%$  maximum at full load
- Inrush Current* • 35A at 115 VAC or  
70A at 230 VAC at 25°C cold start
- Withstand Voltage* • 3000 VAC from input to output  
1500 VAC from input to ground
- Switching Frequency* • 30kHz
- Hold Up Time* • 20ms min at 125 VAC/80% load

### Environmental

- Operating Temperature* • 0°C to +60°C\*
- Storage Temperature* • -20°C to +85°C
- Relative Humidity* • 5% to 90% non condensing
- MTBF* • 100,000 hrs (MIL-HDBK-217D)

### Safety and EMC

- Safety Approvals* • UL1950, CSA C22.2 No. 234  
IEC 950 (EN60950)
- EMI* • In compliance with CISPR22  
(EN55022), Class A and  
FCC Class B

\* Derate linearly from 100% load at 40°C to 50% load at 60°C

OUTPUT VOLTAGE & CURRENT RATINGS															HUL300	
Output #1				Output #2				Output #3				Output #4				Model Number
Vnom	Imin	I <sub>max</sub>	Tol.	Vnom	Imin	I <sub>max</sub>	Tol.	Vnom	Imin	I <sub>max</sub>	Tol.	Vnom	Imin	I <sub>max</sub>	Tol.	
5.0 V	0.5 A	60.0 A	2%													HUL300-10
3.3 V	0.5 A	60.0 A	2%													HUL300-10-1
12.0 V	0.5 A	25.0 A	2%													HUL300-12
15.0 V	0.5 A	20.0 A	2%													HUL300-13
24.0 V	0.5 A	12.5 A	2%													HUL300-14
48.0 V	0.5 A	6.25 A	2%													HUL300-18
+5.0 V	0.5 A	30.0 A	5%	+12 V	0 A	12.5 A	5%									HUL300-23
+5.0 V	0.5 A	30.0 A	5%	+15 V	0 A	10.0 A	5%									HUL300-24
+5.0 V	0.5 A	30.0 A	5%	+24 V	0 A	6.3 A	5%									HUL300-25
+5.0 V	0.5 A	30.0 A	5%	+12 V	0 A	10.5 A	5%					F 12 V	0 A	2 A	5%	HUL300-31
+5.0 V	0.5 A	30.0 A	5%	+15 V	0 A	8.0 A	5%					F 15 V	0 A	2 A	5%	HUL300-32
+5.0 V	0.5 A	30.0 A	5%	+12 V	0 A	10.0 A	5%	-5 V	0 A	2 A	5%	F 12 V	0 A	2 A	5%	HUL300-40
+5.0 V	0.5 A	30.0 A	5%	+24 V	0 A	4.3 A	5%	-12 V	0 A	2 A	5%	F 12 V	0 A	2 A	5%	HUL300-45
+5.0 V	0.5 A	30.0 A	5%	+15 V	0 A	7.4 A	5%	-5 V	0 A	2 A	5%	F 15 V	0 A	2 A	5%	HUL300-46

**Notes**

1. Use part number UL300-XX for product without harmonic correction. Example: UL300-10.
2. Output #4 is floating. It can be connected externally for positive or negative output.
3. Total output power for HUL300-12,13,14,18 is 200W convection cooled, 300W with 30cfm forced air cooling.
4. Total output power for all other HUL300 models is 150W convection cooled, 300W with 30cfm forced air cooling.

**Pin Chart**

Output Connector P2

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single O/P Models	Output #1	Output #1	Output #1	Output #1	Output #1	Output #1	Output #1	Return	Return	Return	Return	Return	Return	Return
Multi O/P Models	Output #3	Output #1	Output #1	Output #1	Output #1	Common Return	Common Return	Common Return	Common Return	Common Return	Output #2	Output #2	Output #4	Output #4 Return

**Mechanical Details**

P3 Single Outputs		Multiple Outputs	
Pin 1	FAN+	Return	Return
Pin 2	Return	DC OK	Return
Pin 3	DC OK	Return	Return
Pin 4	Power Good	Remote ON/OFF	Return
Pin 5	Remote ON/OFF	Return	Return
Pin 6	Return	Power Good	Return

**NOTES:**

1. Dimensions shown in mm (inches)
2. Tolerance 0.5 (0.02) maximum
3. Input connector P1 mates with Molex housing 09-91-0500 and Molex 2478/2578/8818 series crimp terminal.
4. Output connector P2 mates with Molex housing 09-91-1400 and Molex 2478/2578/8818 series crimp terminal.
5. Connector P3 mates with JST XHP-6 or equivalent.
6. Weight: 1000 grams approx.

A: M4 x 0.7 8 places