TOTAL POWER INT'L

DUAL SELECTABLE AC INPUT AC-DC SINGLE & MULTIPLE OUTPUT 45-150 WATTS 19" COMPATIBLE EUROCARD SWITCHING POWER SUPPLIES HSU45,HSU60 & HSU100 SERIES



FEATURES:

- **DUAL INPUT RANGE USER SELECTABLE**
- **19" COMPATIBLE EUROCARD FORMAT**
- **MEET THE SAFETY STANDARDS**
- **EMI MEET CISPR PUB.22 & FCC CLASS B**
- **CE MARKING COMPLIANCE**
- **HSU45 6TE x 3U x 160MM VMEbus STANDARD**
  HSU60 8TE x 3U x 160MM VMEbus STANDARD
  HSU100 10TE x 3U x 160MM VMEbus STANDARD

SPECIFICATION

INPUT SPECIFICATION

Input Voltage: 115Vac/230Vac dual selectable.
Input Connector: DIN 41612 at rear.
Input Frequency: 47-63Hz.
Inrush Current: Typ.25A @230Vac.
Input Current: HSU45 0.88A@115Vac/0.44A@230Vac.
Use T2.0A/250Vac fuse.
HSU60 1.2A@115Vac/0.7A@230Vac.
Use T2.5A/250Vac fuse.
HSU100 2.2A@115Vac/1.2A@230Vac.
Use T3.15A/250Vac fuse.
Dielectric Withstand: Meet IEC950.
EMI: Meet CISPR PUB.22 or FCC Class B.
Power Fail Signal: Installed.
Remote (Logic) Inhibit: Available.
Hold-up Time: Typ. 20mS @115Vac/50mS @230Vac.
Earth leakage: Typ. 0.3mA @230Vac.
Overload Protection (OLP): Fully protected against output overload and short circuit.
Consult the factory for OLP setting.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: Typ. 45 Watts for HSU45.
Typ. 60 Watts for HSU60.
Typ. 100 Watts for HSU100.
Output Connector: DIN 41612 at rear.
Line Regulation: Typ. 0.4%.
Load Regulation: Main VO1 typ. ±1.0%.
Aux. VO2 typ. ±2-3.0% (PR).
±2.0% (Mag. Amp.)
Aux. VO3 typ. ±2-3.0% (PR).
Aux. VO4 typ. ±2-3.0% (PR).
Noise & Ripple: Typ. 1% peak to peak.
OVP: Built-in at main VO1 (latch).
Adjustability: Available at main output VO1 and Aux. output VO2 (Mag. Amp.).
Remote Sense: Installed in main VO1.

GENERAL SPECIFICATION

Efficiency: Typ. 70-75%.
Switching Frequency: Typ. 100K Hz.
Circuit Topology: Forward circuit.
Transient Response: Output voltage returns in less than 3mS following a 25% load change.
Safety Standard: IEC950/UL1950.
Power Density: 1.4 Watt / Cubic Inch for HSU45 & HSU60.
1.9 Watt / Cubic Inch for HSU100.
Operating Temperature: 0 to +50°C at full load.
Derate linearly to +70°C at half load.
Storage Temperature: -20 to +85°C.
Temperature Coefficient: Typ. 0.04%/°C.
Cooling: Free air convection cooling.
Construction format: 6,8,10TEx3Ux160mm 19" compatible Eurocard VMEbus standard.

Note: All measurements are at nominal input, full load, and +40°C unless otherwise specified.

TOTAL POWER INT'L Tel: 877-646-0900 Fax: 978-453-7395
Email: sales@total-power.com http://www.total-power.com

OUTPUT VOLTAGE/CURRENT RATINGS CHART

10/15/2001

HSU45 Series

SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★@#	
	Typ.	Volt.
HSU45-10/(E)	9.0A	**5.0V**
HSU45-11	4.0A	**12.0V**
HSU45-11/(E)	3.7A	**12.0V**
HSU45-12/(E)	3.0A	**15.0V**
HSU45-13/(E)	2.0A	**24.0V**

(E) With gas-tube for safety purpose.

DUAL OUTPUT

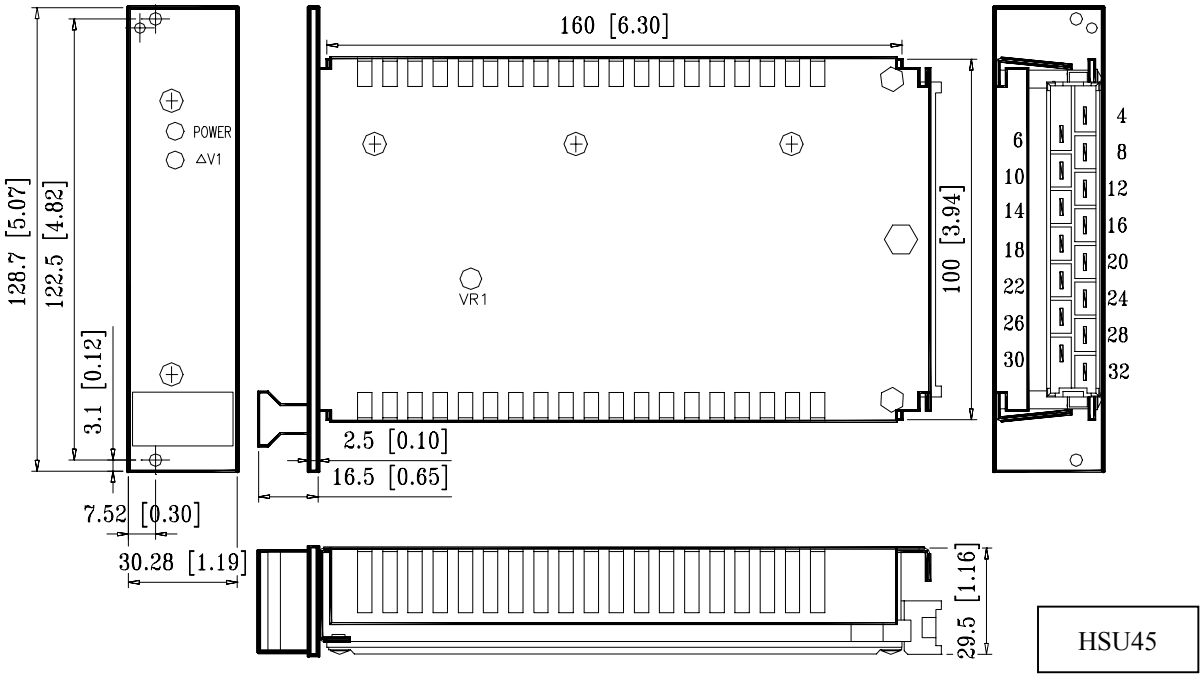
MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇●	
	Typ.	Volt.	Typ.	Volt.
HSU45-20	4.0A	**5.0V**	2.0A	**12.0V**
HSU45-21	2.0A	**12.0V**	1.5A	**12.0V**
HSU45-22	4.0A	**5.0V**	1.2A	**15.0V**
HSU45-23	1.5A	**15.0V**	1.5A	**15.0V**
HSU45-24	4.0A	**5.0V**	1.0A	**24.0V**
HSU45-25	1.0A	**24.0V**	1.0A	**24.0V**

TRIPLE OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇●		AUX. VO3 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HSU45-30	3.0A	**5.0V**	2.0A	**12.0V**	0.5A	**5.0V**
HSU45-31	3.0A	**5.0V**	2.0A	**15.0V**	0.5A	**15.0V**
HSU45-32	3.0A	**5.0V**	2.0A	**12.0V**	0.5A	**12.0V**
HSU45-33	3.0A	**5.0V**	1.0A	**24.0V**	0.5A	**12.0V**

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "▲" Magnetic Amplifier.
"●" Post Regulator. "◇" Floating (or isolated) output.

MECHANICAL DIMENSIONS: MM [INCHES] WEIGHT: HSU45 537.0g (18.90 Oz.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENTS

	AC INPUT			SINGLE/DUAL/TRIPLE OUTPUT							ASSORTED SIGNAL			
ASSIGNMENT	**AC-L**	**AC-N**	**AC-G**	**+VO1**	**-VO1**	**+VO2**	**-VO2**	**+VO3**	**-VO3**	**NC**	**LOG. INH.**	**+S**	**-S**	**POWER FAIL**
HSU45-1X	28	30	32	4,6	12,14	-	-	-	-	16,18,24,26	20	8	10	22
HSU45-2X	28	30	32	4	6	8	10	-	-	12,14,16,18,24,26	20	-	-	22
HSU45-3X	28	30	32	4,6,	8,10	12	14	16	18	24,26	20	-	-	22

Mating connector: DIN41612-H15 Female

OUTPUT VOLTAGE/CURRENT RATINGS CHART

10/15/2001

HSU60 Series

SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★@#	
	Typ.	Volt.
HSU60-10	12.0A	**5.0V**
HSU60-10B1	10.0A	**6.0V**
HSU60-11	5.0A	**12.0V**
HSU60-12	4.0A	**15.0V**
HSU60-13	2.5A	**24.0V**
HSU60-15	3.0A	**19.0V**

DUAL OUTPUT

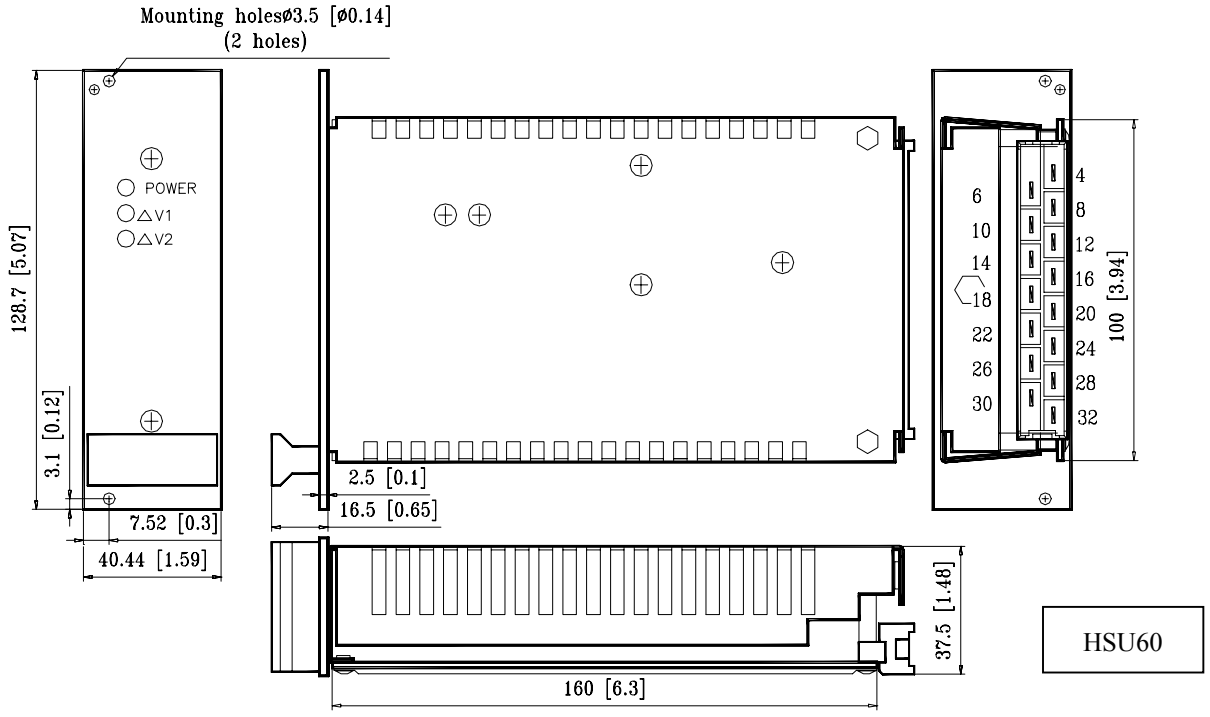
MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲	
	Typ.	Volt.	Typ.	Volt.
HSU60-20	5.0A	**5.0V**	3.0A	**12.0V**
HSU60-21	2.5A	**12.0V**	2.5A	**12.0V**
HSU60-22	5.0A	**5.0V**	2.5A	**15.0V**
HSU60-23	2.0A	**15.0V**	2.0A	**15.0V**
HSU60-24	5.0A	**5.0V**	1.5A	**24.0V**
HSU60-25	1.4A	**24.0V**	1.4A	**24.0V**

TRIPLE OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲		AUX. VO3 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HSU60-30	5.0A	**5.0V**	2.5A	**12.0V**	1.0A	**5.0V**
HSU60-31	5.0A	**5.0V**	2.0A	**12.0V**	0.5A	**15.0V**
HSU60-32	5.0A	**5.0V**	2.5A	**12.0V**	0.5A	**12.0V**
HSU60-33	5.0A	**5.0V**	1.5A	**24.0V**	0.5A	**12.0V**

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. "▲" Magnetic Amplifier.
"●" Post Regulator. "◇" Floating(or isolated) output.

MECHANICAL DIMENSIONS: MM [INCHES] WEIGHT: HSU60 707.0g (24.94 Oz.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENTS

	AC INPUT			SINGLE/DUAL/TRIPLE OUTPUT							ASSORTED SIGNAL			
ASSIGNMENT	**AC-L**	**AC-N**	**AC-G**	**+VO1**	**-VO1**	**+VO2**	**-VO2**	**+VO3**	**-VO3**	**NC**	**LOG. INH.**	**+S**	**-S**	**POWER FAIL**
HSU60-1X	28	30	32	4,6	12,14	-	-	-	-	16,18,24,26	20	8	10	22
HSU60-2X	28	30	32	4	6	8	10	-	-	12,14,16,18,24,26	20	-	-	22
HSU60-3X	28	30	32	4,6,	8,10	12	14	16	18	24,26	20	-	-	22

Mating connector: DIN41612-H15 Female

OUTPUT VOLTAGE/CURRENT RATINGS CHART

10/15/2001

HSU100 Series

SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★@#	
	Typ.	Volt.
HSU100-10	20.0A	**5.0V**
HSU100-11	8.0A	**12.0V**
HSU100-12	7.0A	**15.0V**
HSU100-13	4.2A	**24.0V**
HSU100-16	3.6A	**28.0V**
HSU100-18	2.0A	**48.0V**

DUAL OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲	
	Typ.	Volt.	Typ.	Volt.
HSU100-20	8.0A	**5.0V**	5.0A	**12.0V**
HSU100-21	4.2A	**12.0V**	4.2A	**12.0V**
HSU100-22	8.0A	**5.0V**	4.0A	**15.0V**
HSU100-23	3.4A	**15.0V**	3.4A	**15.0V**
HSU100-24	8.0A	**5.0V**	2.5A	**24.0V**
HSU100-25	2.1A	**24.0V**	2.1A	**24.0V**
HSU100-26E	8.0A	**12.0V**	0.5A	**24.0V**

TRIPLE OUTPUT

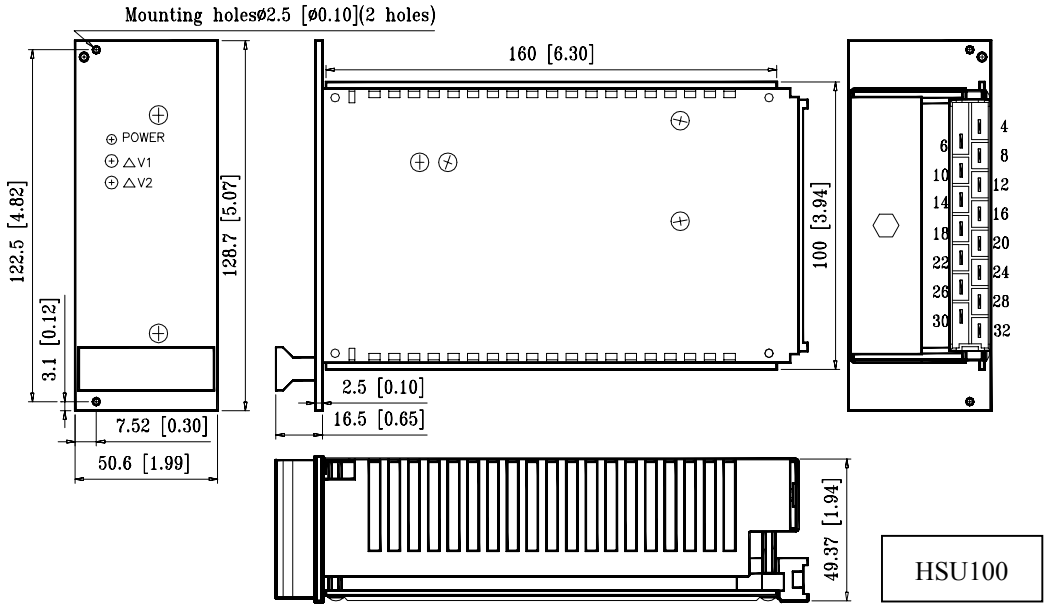
MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲		AUX. VO3 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HSU100-30	7.0A	**5.0V**	5.0A	**12.0V**	1.0A	**5.0V**
HSU100-31	6.0A	**5.0V**	4.0A	**15.0V**	0.6A	**15.0V**
HSU100-32	7.0A	**5.0V**	5.0A	**12.0V**	0.5A	**12.0V**
HSU100-33	7.0A	**5.0V**	2.5A	**24.0V**	0.5A	**12.0V**

QUAD OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ■†		AUX. VO3 ◇●		AUX. VO4 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
HSU100-48	4.0A	**12.0V**	2.0A	**24.0V**	0.5A	**12.0V**	**0.5A**	**12.0V**
HSU100Q-050MII	10.0A	**5.0V**	1.0A	**24.0V**	1.0A	**12.0V**	**1.0A**	**12.0V**
HSU100Q-050QII	10.0A	**5.0V**	1.0A	**48.0V**	0.5A	**12.0V**	**0.5A**	**12.0V**

Symbol: "★" OVP built-in. "@" Adjustable. "#" Remote sensing. . "▲" Magnetic Amplifier. "●" Post Regulator. "†" Stacked on main output.
"◇" Floating(or isolated) output. "■" Couple common choke.

MECHANICAL DIMENSIONS: MM [INCHES] WEIGHT: HSU100 943.0g (33.6 Oz.)



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENTS

	AC INPUT			SINGLE/DUAL/TRIPLE/QUAD OUTPUT									ASSORTED SIGNAL			
ASSIGNMENT	AC-L	AC-N	AC-G	+VO1	-VO1	+VO2	-VO2	+VO3	-VO3	+VO4	-VO4	NC	LOG. INH.	+S	-S	POWER FAIL
HSU100-1X	28	30	32	4,6	12,14	-	-	-	-	-	-	16,18,24,26	20	8	10	22
HSU100-2X	28	30	32	4	6	8	10	-	-	-	-	12,14,16,18,24,26	20	-	-	22
HSU100-3X	28	30	32	4,6,	8,10	12	14	16	18	-	-	24,26	20	-	-	22
HSU100-4X	28	30	32	4	-	10	-	12	14	16	18	6,8,20,22,24	-	-	-	-

Mating connector: DIN41612-H15 Female