Total Power International, Inc.

DUAL SELECTABLE AC INPUT AC-DC 19" COMPATIBLE EUROCARD MULTI-OUTPUT 45-100 WATTS SWITCHING MODE POWER SUPPLIES TPSU45, TPSU60 & TPSU100 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**
- **TPSU45: 3U x 6HP x 160MM VMEbus STANDARD**
  TPSU60: 3U x 8HP x 160MM VMEbus STANDARD
  TPSU100: 3U x 10HP 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: TPSU45 0.88A@115Vac/0.44A@230Vac.
Use T2.0A/250Vac fuse.
TPSU60 1.2A@115Vac/0.7A@230Vac.
Use T2.5A/250Vac fuse.
TPSU100 2.2A@115Vac/1.2A@230Vac.
Use T3.15A/250Vac fuse.
Dielectric Withstand: Meet IEC 60950-1.
EMI: Meet CISPR PUB. 22 & 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.

OUTPUT SPECIFICATION

Output Voltage: See Ratings Chart.
Output Current: See Ratings Chart.
Output Wattage: Typ. 45 Watts for TPSU45.
Typ. 60 Watts for TPSU60.
Typ. 100 Watts for TPSU100.
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.
Overload Protection (OLP): Fully protected against output overload and short circuit.
Consult the factory for OLP setting.

GENERAL SPECIFICATION

Efficiency: Typ. 70-75%.
Switching Frequency: Typ. 100K Hz.
Circuit Topology: Forward circuit.
Transient Response: Typ. 3mS following a 25% load-change.
Safety Standard: IEC 60950-1/UL 60950-1 Class I.
Power Density: 1.4 Watts/Cubic Inch for TPSU45 & TPSU60
1.9 Watts / Cubic Inch for TPSU100.
Operating Temperature: 0 to +50°C at full load.
Derates 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: 6,8,10HP(TE) X 3U X 160mm
19" compatible Eurocard VMEbus standard.

Note: Due to requests in market and advances in technology, specifications subject to change without notification.

For the details of safety approval, please consult the factory.

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OUTPUT VOLTAGE / CURRENT RATINGS CHART

TPSU45 Series

SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★@#	
	Typ.	Volt.
TPSU45-10/(E)	9.0A	5.0V
TPSU45-11	4.0A	12.0V
TPSU45-11/(E)	3.7A	12.0V
TPSU45-12/(E)	3.0A	15.0V
TPSU45-13/(E)	2.0A	24.0V

(E) With gas-tube for safety purpose.

DUAL OUTPUT

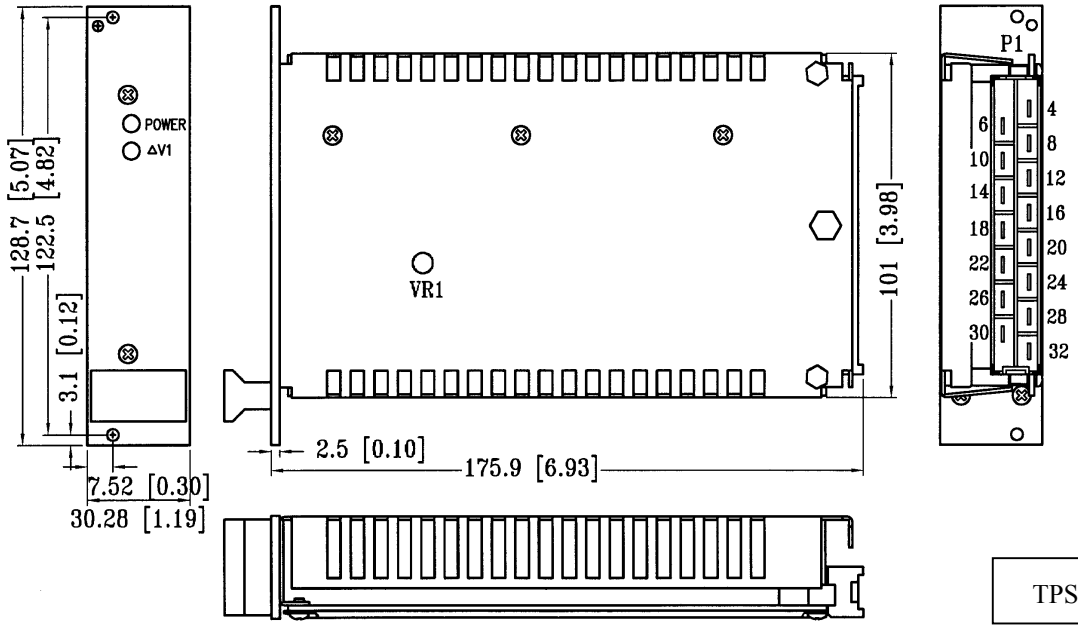
MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇●	
	Typ.	Volt.	Typ.	Volt.
TPSU45-20	4.0A	5.0V	2.0A	12.0V
TPSU45-21	2.0A	12.0V	1.5A	12.0V
TPSU45-22	4.0A	5.0V	1.2A	15.0V
TPSU45-23	1.5A	15.0V	1.5A	15.0V
TPSU45-24	4.0A	5.0V	1.0A	24.0V
TPSU45-25	1.0A	24.0V	1.0A	24.0V

TRIPLE OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇●		AUX. VO3 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
TPSU45-30	3.0A	5.0V	2.0A	12.0V	0.5A	5.0V
TPSU45-31	3.0A	5.0V	2.0A	15.0V	0.5A	15.0V
TPSU45-32	3.0A	5.0V	2.0A	12.0V	0.5A	12.0V
TPSU45-33	3.0A	5.0V	1.0A	24.0V	0.5A	12.0V

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

MECHANICAL DIMENSIONS: MM [INCHES] **WEIGHT:** TPSU45 537.0g (18.94 Oz.)



TPSU45

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
TPSU45-1X	28	30	32	4,6	12,14	-	-	-	-	16,18,24,26	20	8	10	22
TPSU45-2X	28	30	32	4	6	8	10	-	-	12,14,16,18,24,26	20	-	-	22
TPSU45-3X	28	30	32	4,6,	8,10	12	14	16	18	24,26	20	-	-	22

Mating connector: DIN41612-H15 Female

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OUTPUT VOLTAGE / CURRENT RATINGS CHART

TPSU60 Series

SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★@#	
	Typ.	Volt.
TPSU60-10	12.0A	5.0V
TPSU60-10B1	10.0A	6.0V
TPSU60-11	5.0A	12.0V
TPSU60-12	4.0A	15.0V
TPSU60-13	2.5A	24.0V
TPSU60-15	3.0A	19.0V

DUAL OUTPUT

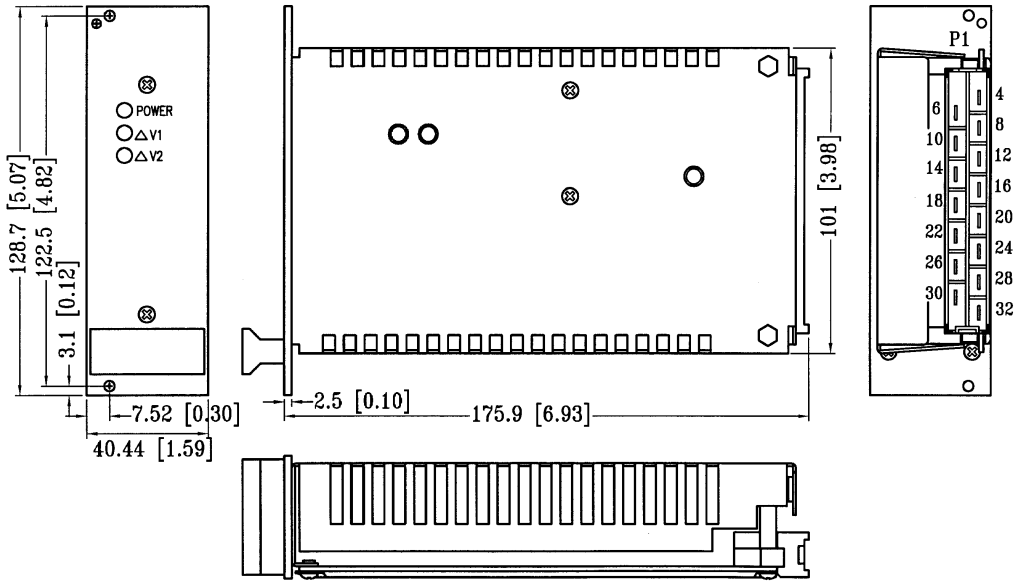
MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲	
	Typ.	Volt.	Typ.	Volt.
TPSU60-20	5.0A	5.0V	3.0A	12.0V
TPSU60-21	2.5A	12.0V	2.5A	12.0V
TPSU60-22	5.0A	5.0V	2.5A	15.0V
TPSU60-23	2.0A	15.0V	2.0A	15.0V
TPSU60-24	5.0A	5.0V	1.5A	24.0V
TPSU60-25	1.4A	24.0V	1.4A	24.0V

TRIPLE OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲		AUX. VO3 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
TPSU60-30	5.0A	5.0V	2.5A	12.0V	1.0A	5.0V
TPSU60-31	5.0A	5.0V	2.0A	12.0V	0.5A	15.0V
TPSU60-32	5.0A	5.0V	2.5A	12.0V	0.5A	12.0V
TPSU60-33	5.0A	5.0V	1.5A	24.0V	0.5A	12.0V

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

MECHANICAL DIMENSIONS: MM [INCHES]WEIGHT: TPSU60 707.0g (24.94 Oz.)



TPSU60

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
TPSU60-1X	28	30	32	4,6	12,14	-	-	-	-	16,18,24,26	20	8	10	22
TPSU60-2X	28	30	32	4	6	8	10	-	-	12,14,16,18,24,26	20	-	-	22
TPSU60-3X	28	30	32	4,6,	8,10	12	14	16	18	24,26	20	-	-	22

Mating connector: DIN41612-H15 Female

Total Power International, Inc.

OUTPUT VOLTAGE / CURRENT RATINGS CHART

TPSU100 Series

SINGLE OUTPUT

MODEL NO.	MAIN VO1 ★@#	
	Typ.	Volt.
TPSU100-10	20.0A	5.0V
TPSU100-11	8.0A	12.0V
TPSU100-12	7.0A	15.0V
TPSU100-13	4.2A	24.0V
TPSU100-16	3.6A	28.0V
TPSU100-18	2.0A	48.0V

DUAL OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲	
	Typ.	Volt.	Typ.	Volt.
TPSU100-20	8.0A	5.0V	5.0A	12.0V
TPSU100-21	4.2A	12.0V	4.2A	12.0V
TPSU100-22	8.0A	5.0V	4.0A	15.0V
TPSU100-23	3.4A	15.0V	3.4A	15.0V
TPSU100-24	8.0A	5.0V	2.5A	24.0V
TPSU100-25	2.1A	24.0V	2.1A	24.0V
TPSU100-26E	8.0A	12.0V	0.5A	24.0V

TRIPLE OUTPUT

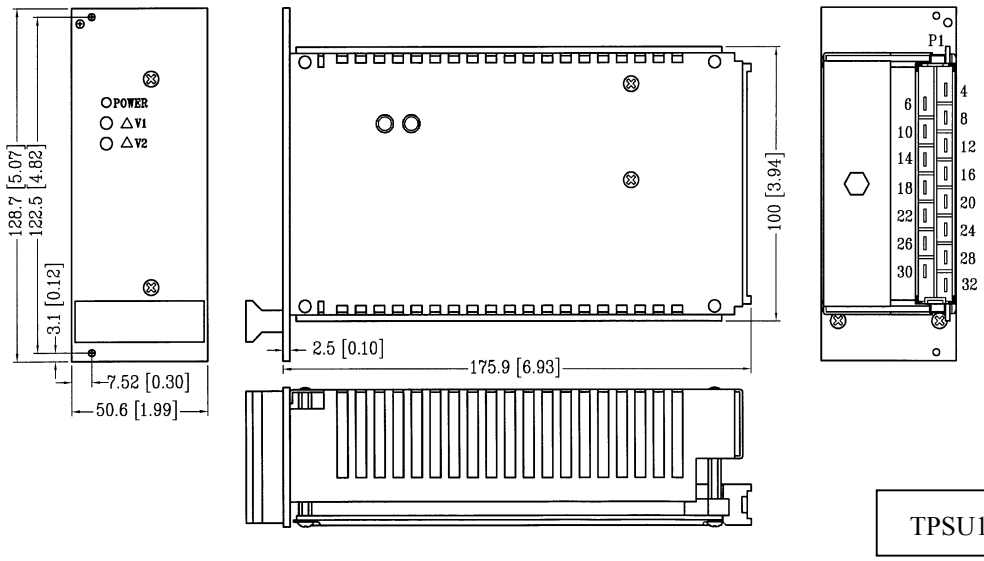
MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ◇▲		AUX. VO3 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
TPSU100-30	7.0A	5.0V	5.0A	12.0V	1.0A	5.0V
TPSU100-31	6.0A	5.0V	4.0A	15.0V	0.6A	15.0V
TPSU100-32	7.0A	5.0V	5.0A	12.0V	0.5A	12.0V
TPSU100-33	7.0A	5.0V	2.5A	24.0V	0.5A	12.0V

QUAD OUTPUT

MODEL NO.	MAIN VO1 ★@#		AUX. VO2 ■†		AUX. VO3 ◇●		AUX. VO4 ◇●	
	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.	Typ.	Volt.
TPSU100-48	4.0A	12.0V	2.0A	24.0V	0.5A	12.0V	0.5A	12.0V
TPSU100-Q050MII	10.0A	5.0V	1.0A	24.0V	1.0A	12.0V	1.0A	12.0V
TPSU100-Q050QII	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. "●" Installed with Post Regulator.
"†" Stacked on main output. "◇" Floating(or isolated) output. "■" Couple common choke.

MECHANICAL DIMENSIONS: MM [INCHES]WEIGHT: TPSU100 943.0g (33.26 Oz.)



TPSU100

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
TPSU100-1X	28	30	32	4,6	12,14	-	-	-	-	-	-	16,18,24,26	20	8	10	22
TPSU100-2X	28	30	32	4	6	8	10	-	-	-	-	12,14,16,18,24,26	20	-	-	22
TPSU100-3X	28	30	32	4,6,	8,10	12	14	16	18	-	-	24,26	20	-	-	22
TPSU100-4X	28	30	32	4	-	10	-	12	14	16	18	6,8,20,22,24	-	-	-	-

Mating connector: DIN41612-H15 Female