



# BPEU2004

## AC-DC Converter

The BPEU Series of AC-DC Converters are available with multiple outputs and output power from 1300 W up to 3000 W. All models incorporate active Power Factor Correction (PFC).

Other standard features include current and voltage monitoring, overvoltage, overtemperature as well as short circuit protection.

These power supplies were designed to power radio-frequency power amplifier (RFPA) applications in the broadcasting industry.



### Key Features

- Output power up to 2000 W
- Active Power Factor Correction
- High Efficiency
- Universal Input Voltage: Single Phase 220 / 240 VAC
- Multiple Outputs:
  - Main Outputs: 48 V / 40 A
  - Auxiliary Outputs: 45 V/3 A, 48 V/1.3 A, 24 V/0.8 A
- Current & Voltage Monitoring
- Remote Enable / Disable
- Baseplate / Air Cooling

## TECHNICAL PARAMETERS

### INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION
Voltage	185 ÷ 264 VAC Single Phase
Current	≤ 16 A @ full load @ 185 VAC Single Phase
Frequency	47...63 Hz
Efficiency	≥ 93% @ V1 full load @ 230 VAC
Power Factor	> 0,95 @ full load @ 230 VAC
Inrush Current	≤ 30 Apk @ 230 VAC

### OUTPUT SPECIFICATIONS

OUTPUT	VOLTAGE (VDC)	I nom. (A)	TOLERANCE (%)	RIPPLE (%)	POWER nom. (W)
V1 *	+20 ÷ 50	40	≤ 2	< 2	2000
V2	+48	1,3	≤ 5	≤ 5	62.5
V3**	+24	0,8	≤ 5	≤ 5	20
V4**	+44 ÷ 46	3,0	≤ 5	≤ 5	140

\* Adjustable by trimmer or remote 0 ÷ 5 V signal

\*\* Internal OR diode

### PROTECTIONS

PARAMETER	DESCRIPTION / CONDITION
Over-Load	Constant Current
Short-Circuit	Hicc-up mode (auto recovery)
Over-Voltage (V1)	Set point = 56 V ± 5%, not automatic return to operation
Over-Temperature	Automatic return to operation with hysteresis
General:	Provide external fuses or equivalent protection on AC mains

### ALARM / SIGNALS / CONTROLS

PARAMETER	DESCRIPTION / CONDITION
Output V1 Current Monitor	Linear analogic signal 100 mV → 1 A; 5 mA max. supply current
Output V1 Voltage Monitor	Linear analogic signal 100 mV → 1 V; 5 mA max. supply current
Over Temperature Alarm	Open collector, 4 mA max. sink current ; Alarm = Low (Power supply V1 still ON)
Over Temperature Protection	Open collector, 4 mA max. sink current ; Alarm = Low (Power supply V1 OFF)
Power Fail - Main Under-Voltage	Open collector, 4 mA max. sink current ; Alarm = Low (Power supply V1 OFF)
Remote Enable Output V1	Connected to COM = Power-On, floating = Off (sink 5 mA min.)

### THERMAL CHARACTERISTICS

PARAMETER	DESCRIPTION / CONDITION
Operating Temperature	-10 ÷ +45 °C (see Thermal Protections)
Storage Temperature	-20 ÷ +85 °C

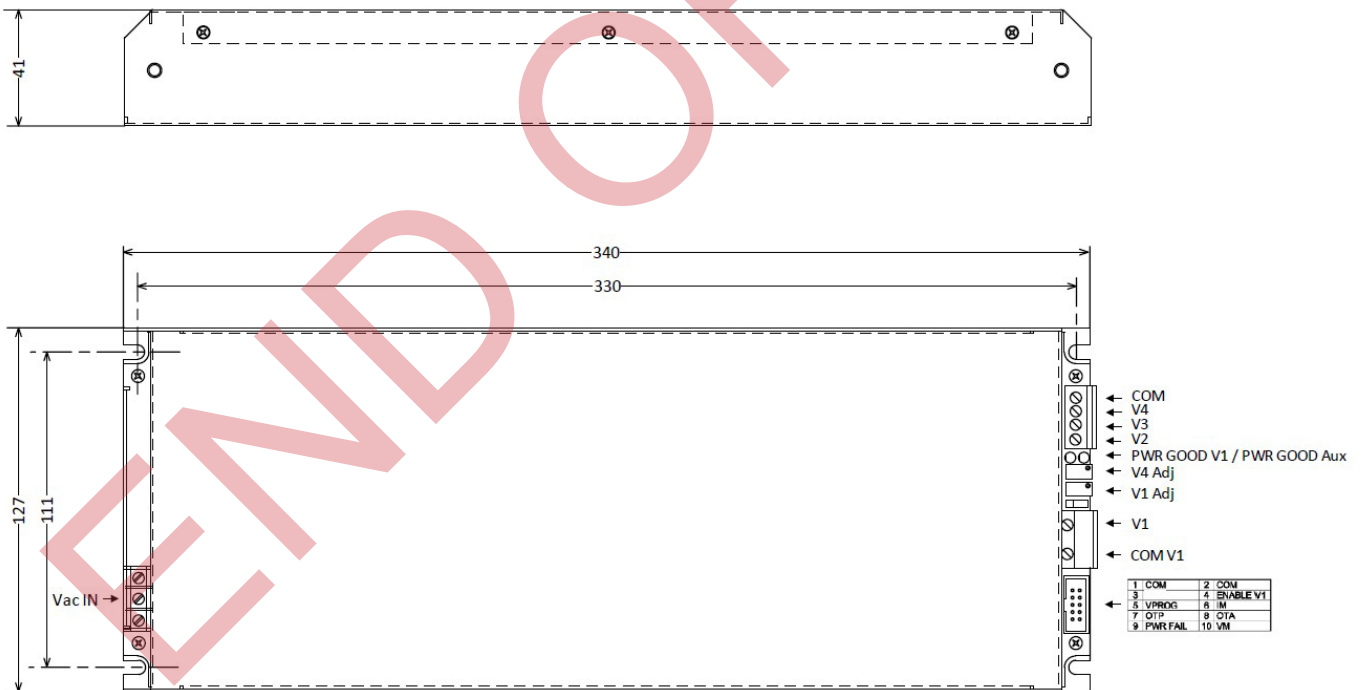
## STANDARDS / REGULATIONS

<b>SAFETY</b>	EN60950-1	
	EN55022	Conducted Noise ( Industrial level )
<b>EMI/EMC</b>	EN61000-4-4	Fast-Transients
	EN61000-4-5	Surges ( ± 2 kV common ± 1 kV differential)
	EN61000-4-11	Voltage-Dips
	EN61000-3-2	Harmonics Current
<b>CE Mark</b>		

## CONNECTIONS

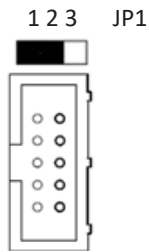
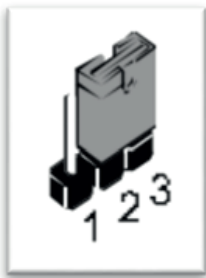
CONNECTIONS	DESCRIPTION / CONDITION
INPUT	Barrier type terminal block - mod. DG25C-B-03P-13
OUTPUT	V1: 2 pole screw type terminal block 10 mm <sup>2</sup> (Positive / Negative);
	V2, V3, V4: 4 Pole screw type terminal block 1.5 mm <sup>2</sup>
SIGNALS /CONTROLS	Male FLAT type 10 pole dual in line connector

## DIMENSIONS / CONNECTIONS / SCHEME

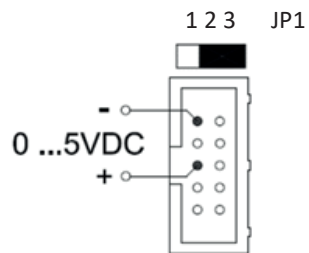


All dimensions are nominal and expressed in millimeters. Tolerance 0.5 mm max.

### MAIN OUTPUT VOLTAGE TRIM (V1)



To adjust  $V_{out}$  manually by on board trimmer  
place jumper cap shorting pins 1-2



To adjust  $V_{out}$  by external 0-5 VDC source  
place jumper cap shorting pins 2-3  
0 V →  $V_{out}$  = 100% nominal voltage  
5 V →  $V_{out}$  = nominal voltage reduced of 30 V

For more information on these products consult: [tech.support@psbel.com](mailto:tech.support@psbel.com)

**NUCLEAR AND MEDICAL APPLICATIONS** - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

**TECHNICAL REVISIONS** - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.