BPEU3000
AC/DC Converter

The BPEU Series of AC/DC Converters is 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 & Benefits

- Output Power 3000 W
- Input Voltage:
  - Single-Phase 230 VAC
  - Three-Phase 208 VAC
- Power Factor:
  - > 0.98 @ full-load @ 230 VAC Single-Phase
  - > 0.92 @ full-load @ 208 VAC Three-Phase
- Main Outputs: 4x +50 V/23.5 A (Imax total 58 A)
- Auxiliary Outputs: +48 V/2.5 A, +5 V/500 mA
- Current and Voltage Monitoring
- Remote Inhibit

North America
+1-866.513.2839

Asia-Pacific
+86.755.29885888

Europe, Middle East
+353 61 225 977

Bel Power Solutions
152 North 3rd Street, Suite 805
San Jose, CA 95112 USA

tech.support@psbel.com
belpowersolutions.com

© 2015 Bel Power Solutions, inc.

bel POWER SOLUTIONS & PROTECTION
a bel group

BPEU3000

TECHNICAL PARAMETERS

Input Specifications

PARAMETER	DESCRIPTION / CONDITION
Voltage:	185 – 264 VAC Single-Phase / 170 – 242 VAC Three-Phase
Frequency:	47…63 Hz
Efficiency:	> 88% @ full-load @ Vnom
Power Factor:	> 0.98 @ full-load @ 230 VAC Single-Phase / > 0.92 @ full-load @ 208 VAC Three-Phase

Output Specifications

OUTPUT	VOLTAGE (VDC)	Inom (A)	Imax (A)	TOLERANCE (%)	RIPPLE (%)	POWER (W)
V1	+41 to +50 *	23.5	25	≤ 2	< 2	1175
V2	+41 to +50 *	23.5	25	≤ 2	< 2	1175
V3	+41 to +50 *	23.5	25	≤ 2	< 2	1175
V4	+41 to +50 *	23.5	25	≤ 2	< 2	1175
V5	+26 to 48**	2.5	3	≤ 5	< 5	120
V6	+5.1***	500 mA	1	≤ 5	< 5	5.1

* V1 - V4 adjustable by multi-turns trimmer set on board. Imax total V1- V4 = 58 A @ 50 V
** Output V5 increase with temperature (Jumper JP1 pos. A); Output V5 48 V (Jumper JP1 pos. B).
*** Internal OR Diode

Protection

PARAMETER	DESCRIPTION / CONDITION
Over-load:	Constant current
Short-circuit:	Hiccup mode (with auto recovery)
Over-voltage:	Set point = 60 V ± 5%, not automatic return to operation
Over-temperature:	Set point = 75°C Heatsink, 90°C internal, automatic return to operation with hysteresis 10°C
General:	Provide external fuses or equivalent protection

Alarms / Signals / Controls

PARAMETER	DESCRIPTION / CONDITION
Output V1 current monitor **IM**	Linear analogic signal 200 mV → 1 A
Output V1 - V4 Voltage monitor **VM**	Linear analogic signal 100 mV → 1 V
Remote inhibit Output V1 - V4 **INHIBIT**	No connected = ON; +5 V = OFF (referenced to COM)
Over temperature alarm **OTP**	+5 V = Alarm, 0 V = OK
LEDs	Green LED V1 - V4 = ON; Green LED V5 = ON; Green LED V6 = ON Red LED INHIBIT V1 - V4
Output V1 - V4 Current monitor **IM**	linear analogic signal 200 mV → 1 A

Thermal Characteristics

PARAMETER	DESCRIPTION / CONDITION
Operating Temperature:	see Thermal Protection
Storage Temperature:	-20 to +85°C

866.513.2839
tech.support@psbel.com
belpowersolutions.com

© 2015 Bel Power Solutions, inc.

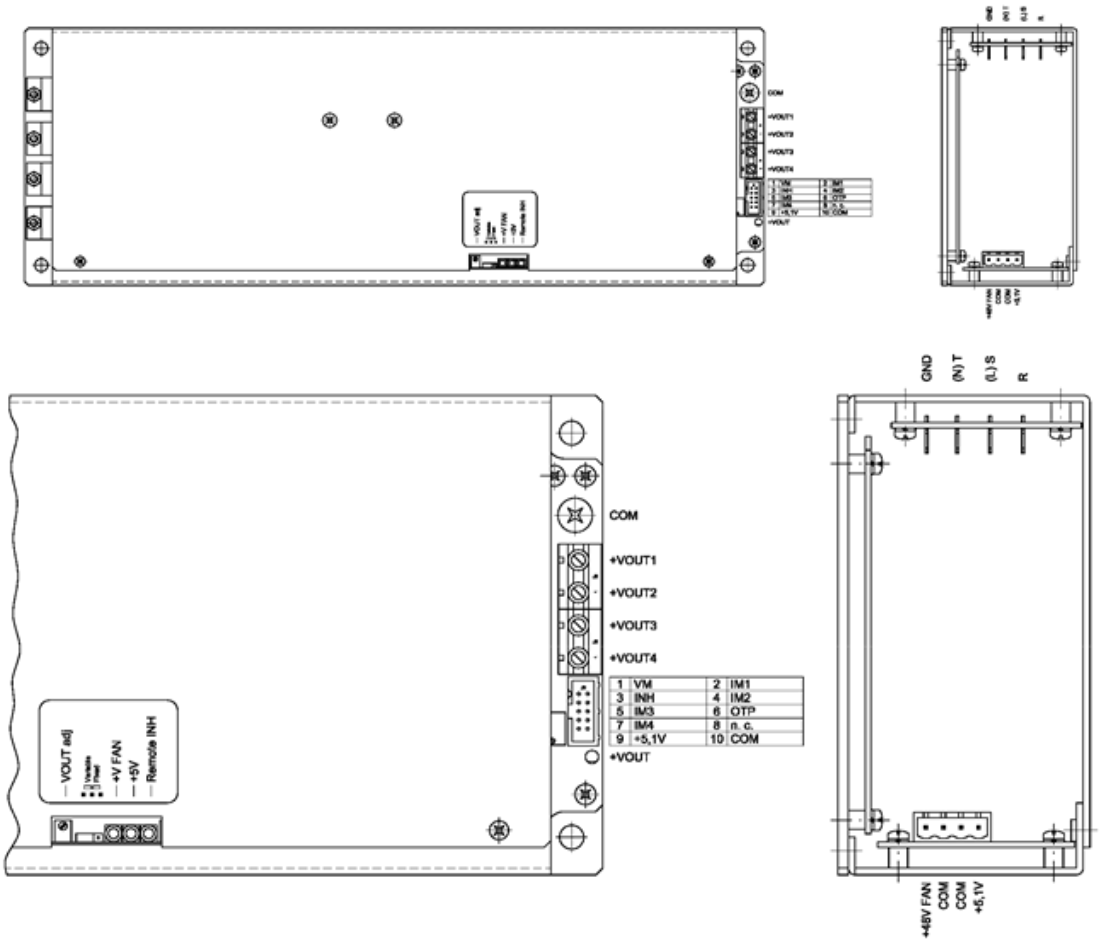
Standards / Regulations

PARAMETER	DESCRIPTION / CONDITION	
Safety:	EN60950-1	
EMC / EMI	EN55022	Conducted Noise (Industrial level)
	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
CE Mark		

Connections

PARAMETER	DESCRIPTION / CONDITION
Input	N° 4 Fast-on male connectors (6.35 x 0.8 mm)
Output	4 pole screw type terminal block 30 A (outputs V1- V4 positive pole, negative pole is connected to the case) 4 pole screw type terminal block 5 A (outputs V5 - V6)
Signals / Controls	Male FLAT type connector 10 pole DIL

Figure 1 – Connections



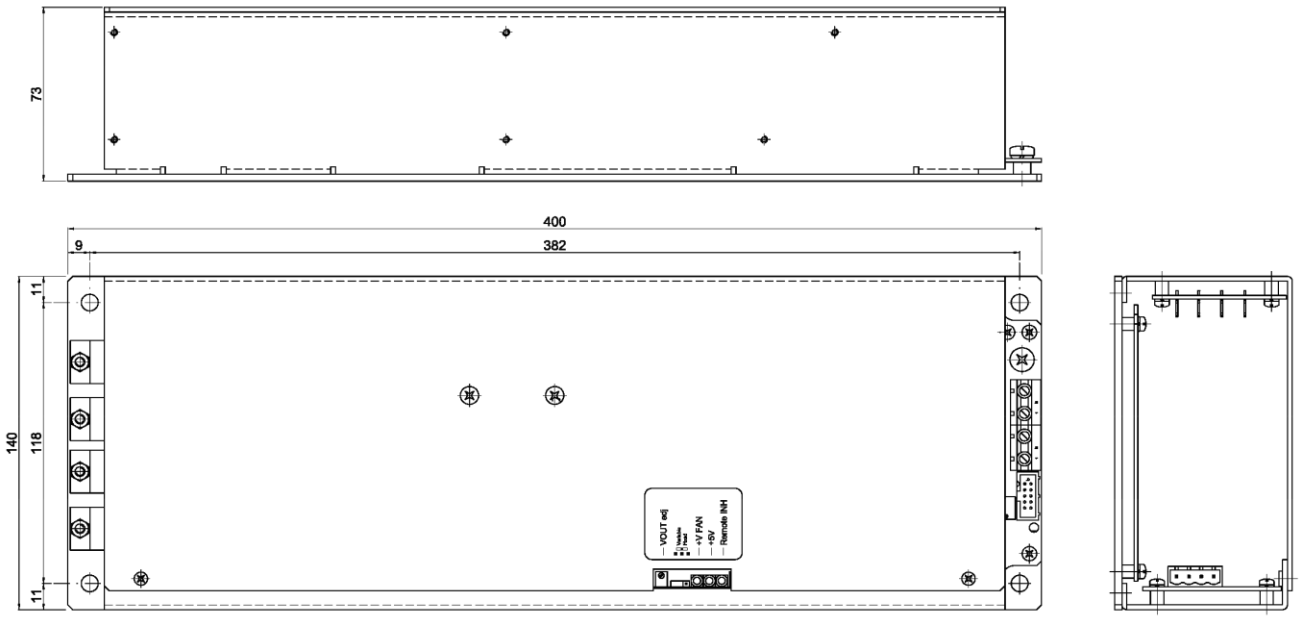
866.513.2839
tech.support@psbel.com
belpowersolutions.com

© 2015 Bel Power Solutions, inc.

Mechanical

PARAMETER	DESCRIPTION / CONDITION
Materials	Case: Aluminium Cover: Aluminium
Fixing	N° 4 hole Ø 7 mm (see Dimensions)
Dimensions (W x H x D)	140 x 73 x 400 mm Notes: Tolerances 0.5 mm max

Figure 2 - Mechanical Drawing



For more information on these products consult: 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.

866.513.2839
tech.support@psbel.com
belpowersolutions.com

© 2015 Bel Power Solutions, inc.