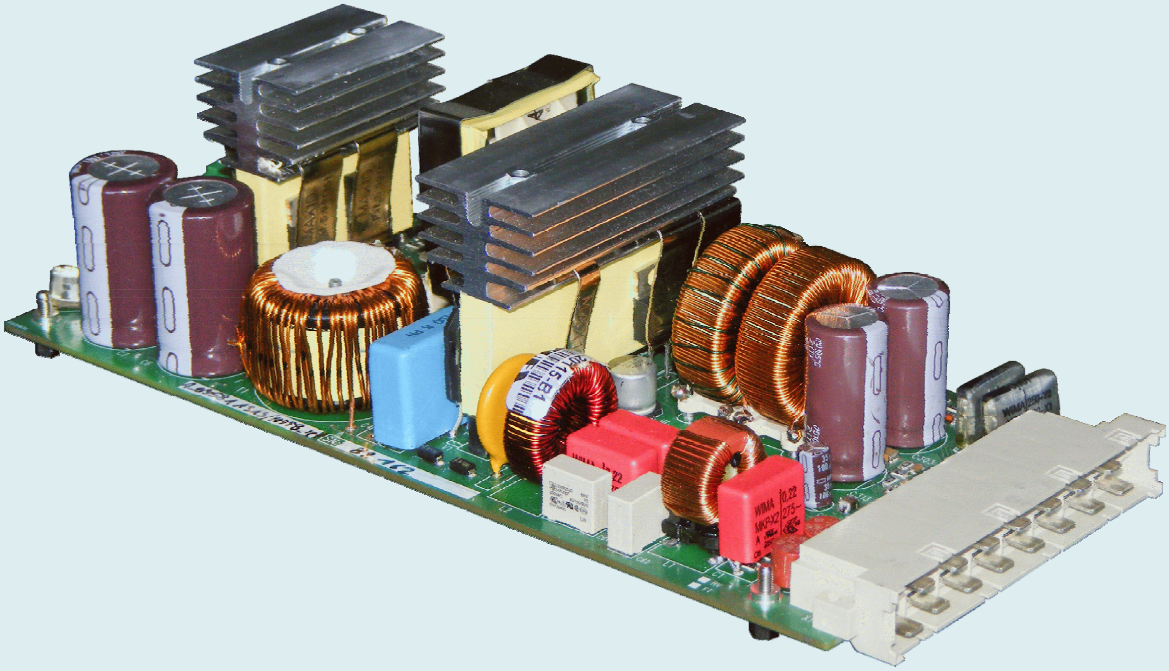
- **High peak power 800 W**
- **Current / voltage source**
- **Modifiable boostmode**
- **Up to 3 potential-free outputs**
- **Main output up to 160 V**
- **PFC according to EN61000-3-2**



Concept

This power supply has been developed for short peak loads of up to 800 W that do not exceed determinable time limits. It is also suitable for e.g. loading capacitor batteries or other applications with fixed pulse and intermission conditions. Beside the main output for high peak power that can be powered on/off by an external signal, there are two auxiliary outputs for continuous load. Cooling is provided fanless by free convection. Optionally the power supply can also be delivered without PFC.

Variants

The power supply can be adapted to a wide range of customer's requirements as long as the average output power stays below 110 W.
Output voltage and output current can be vastly varied and the power boost mode may be adjusted to customer's needs in terms of maximum power, duration and repetition interval (see table).

Variations (only examples, please inquire!)

U_a	I_a	I_{boost}	T_{boost}	repetitions
40 V	2.8 A			without Power Boost
43 V	0.5 A	10 A	0.5 s	2.5 s
60 V	1.8 A			without Power Boost
150 V	0.1 A	2 A	1 s	3 s
160 V	0.5 A	5 A	0.4 s	9 s

Input

Input voltage range	230 V_{AC}, +10%, -15%, 47-63 Hz
Input current	0.5 A nom., with optional PFC
Safety	EN 61010
Appliance class	I
Power factor	0.99 at full load

Output (also see table on page 1)

	U1	U2	U3
Voltage	24-160 $V_{DC\ max}$	5-30 V_{DC}	5-30 V_{DC}
Output current	continuous and pulse- / intermission-Mode	500 mA, max.	500 mA, max
Overvoltage protection	115% (Reset: U_e=0 V)		
Over temperature protection	Shutdown, Reset by cooling down		
Normal rating	80 – 115 W (depending on boost power)		
Peak power	e.g. 800 W for 400 ms every 9 s		
Potential-free	yes*	yes	yes
Holdup-time	45 ms	All outputs 500 mA	

*) can be put to PE-Potential highly resistive (100 kΩ) with bridge „Pot.-GND“ to „Pot-PE“.

Ambient Conditions

Temperature range	0°C to 50°C (without derating)
Storage temperature range	-25°C to +85°C
Humidity	0 – 90% non-condensing
Operating altitude	Up to 2000 m

Standards

Low voltage directive	2006/95/EG
Safety	EN 61010-1
High voltage test	EN 60950-1 compliant
Clearance and creeping distances	8 mm input - output / 4 mm input - chassis / 2 mm output - chassis
Leakage current	<3.5 mA at 50 Hz and 265 V_{AC}
PFC	EN 61000-3-2
EMC (electromagnetic compatibility)	2004/108/EG
ESD	EN 61000-4-2: 4/8 kV
Burst	EN 61000-4-4: 2 kV
Surge	EN 61000-4-5
RFI	EN 55011 class B
Appliance class	Class I
Ingress protection rating	IP20

Protection

Current limiting	Multilevel, see above	
Overvoltage protection	105–130%, depends on variation	resettable by input voltage disconnection
Overtemperature protection	>50 C internally limited	resettable by cooling down

Signals

LED	Green = booster running
ROF	Booster on by connection with –UD (optional, also inverted if desired)

Mechanics / Mounting

Cooling	Free convection
Mounting	110 mm x 70 mm x 230 mm or open frame
Dimensions 19″	3 U / 14 HP/ 220 mm

Interfaces

DIN 41612 H15	30	26	22	18	14	10	6	
	N	(PE)	-U3	ROF	+U2	GND	+Ua1	

PE	L	Pot.-PE	+U3	-U2	Pot.-GND	GND	Ua1
32	28	24	20	16	12	8	4

Pin	Description	Value/Name	Pin	Wire
4	+Ua1	Ua1		1.0 mm² flexible min. H03 (300 V)
6	+Ua1			
8	GND	0 V		
10	GND			
12	Pot.-GND			
potential isolation				
14	+U2	Ua2		1,0 mm² flexible H01 (100 V)
16	-U2			
potential isolation				
18	ROF	Remote On/Off		1,0 mm² flexible H01 (100 V)
20	+U3	Ua3		
22	-U3			
potential isolation				
24	Pot.-PE			1,0 mm², flexible, H01 (100 V)
26	(PE)		Unused	
28	L	line	Mains	1,5 mm² flexible min. H05 (500 V)
30	N	neutral		
32	PE	potential earth		

QUEL Produktions- und Vertriebs-GmbH,
Hans-Sachs-Str. 2, 63755 Alzenau

Phone +49 (6023) 9798-0, Fax: +49 (6023) 9798-18
Email: info@quel.de, Internet: www.quel.de

Subject to change. Data sheet **ER80**. Version 1 dated 24.11.2015
DS_ER80.doc
Author: Ladeburg