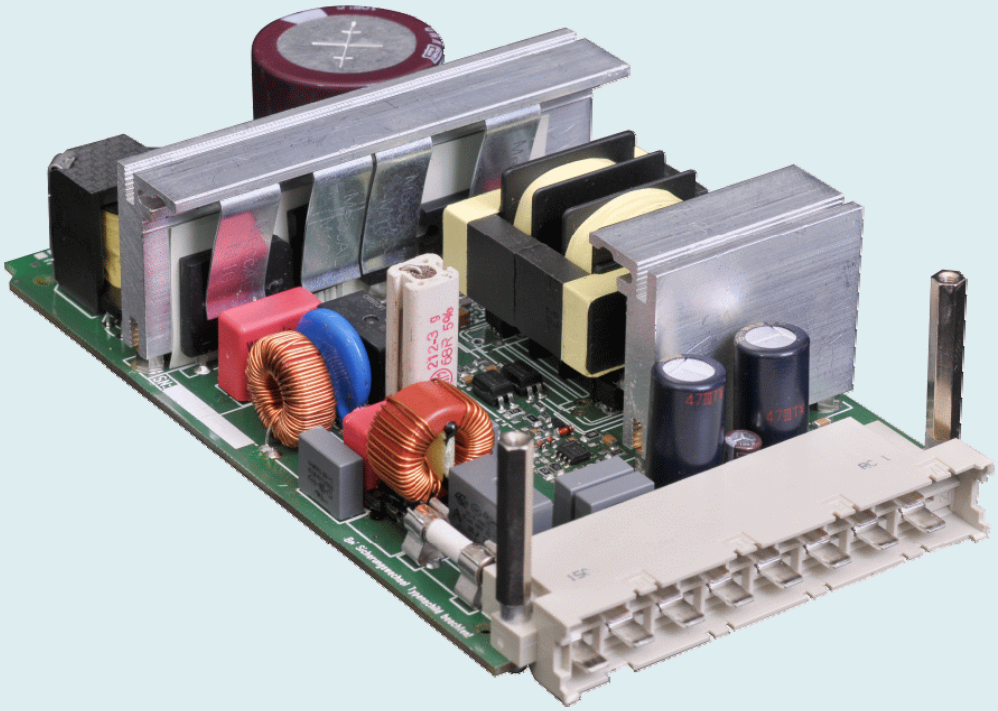
- Suited for high temperatures (>80 °C without derating)
- No fan necessary, free convection
- Extra high hold up time (>40ms)
- Low leakage current (<0.5 mA)
- Efficiency 91%
- Power Factor >0,99 and world wide usable due to PFC
- Integrated µC to control switch-on behaviour and failure management



Short description

At the input the power supply unit (PSU) HT150 has a power-factor-correction circuit to meet the standard EN61000 part 3-2. The primary-secondary conversion in modern resonant LLC-technology works highly efficient and allows efficiencies up to 91 %. A primary µC controls the switch-on behaviour and provides failure management and the LED.
The PSU has a large hold-up time (>40ms) and a low leakage current (<0.5 mA).

Variations

Further variations are possible within following borders:

max. 150 W at 80°C
max. 10 A
max. 150 V

Various mechanical variations are possible with reduced power or ambient temperature also without case or cooling surface (Open Frame)

At lower maximum temperatures a significant power increase is possible.

Voltage	Current	Power	Ambient	Application
12 V	10 A	120 W	-40°C...80°C	10 TE
24 V	6 A	150 W	-40°C...80°C	10 TE
48 V	3 A	150 W	-40°C...80°C	10 TE
12 V	8 A	100 W	-40°C...50°C	Open Frame
24 V	5 A	120 W	-40°C...50°C	Open Frame
48 V	2,5 A	120 W	-40°C...50°C	Open Frame

Input

Input voltage nom.	230 V_{AC} / 220 V_{DC}
Input voltage range	90 - 265 V_{AC} , 90 V_{AC}: power derating of 40% 100 – 375 V_{DC}, 110 V_{DC}: power derating of 40%
Input current	<2.5 A
Inrush current	<16 A_{pk} limited by thermistor
Input power	Max. output power +10%
Input frequency	47 - 63 Hz or DC
Power factor	0.99 at full load

Output

Output voltage	Max. 150 V, see table, further vaiations on demand
Output current	Max. 10 A, see table, further variations on demand
Ripple	<0.2% rms; <1% pp (range 30 Mhz)
Dyn. Regulation	±1% load changing 40% / 60%
Line regulation	0.02%
Load regulation	1%
Temperature coefficient	0.2%/°K
Hold up time	>40 ms at nominal voltage and load
Efficiency	typ. 91%

Ambient conditions

Temperature range	0°C to 80°C (150 W, with cover)
	0°C to 50°C (120 W, open)
Storage temperature range	-20°C to +85°C
Humidity	0 - 90% non condensing

Standards

Safety	EN 60950, EN 61010
High-voltage test	EN 60950
Clearance- and creeping distances	6.4 mm input - output / 3.2 mm input - chassis / 2 mm output - chassis
Leakage current	< 0.5 mA at 50 Hz and 265 V_{AC}
PFC	EN 61000-3-2
EMC	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	I
Ingress protection rating	IP20
Low voltage directive	2006/95/EG

Protection

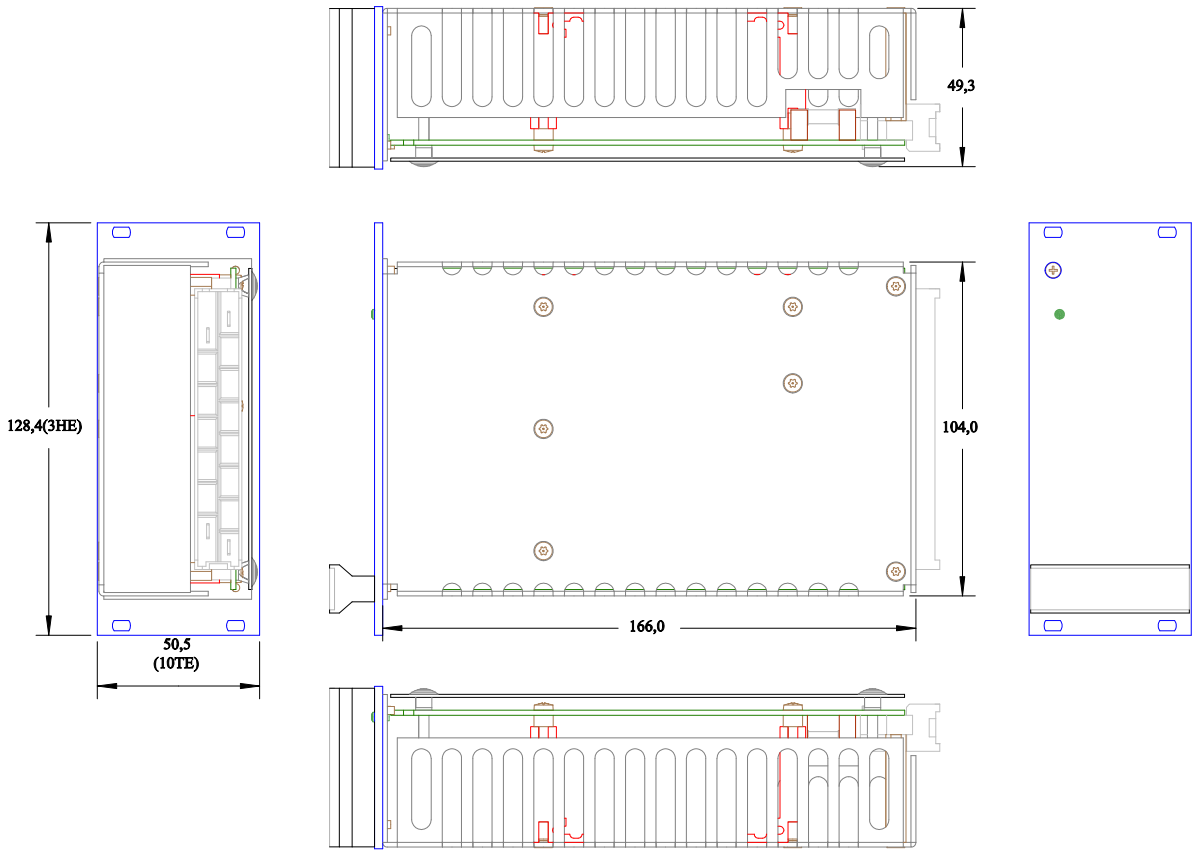
Current limiting	Constant current > 105%	
Power limiting	105% ±5%	
Over voltage protection	105 – 117%, depends on variation	resettable by mains separation
Over temperature protection	>80 C internally limited	resettable by cooling

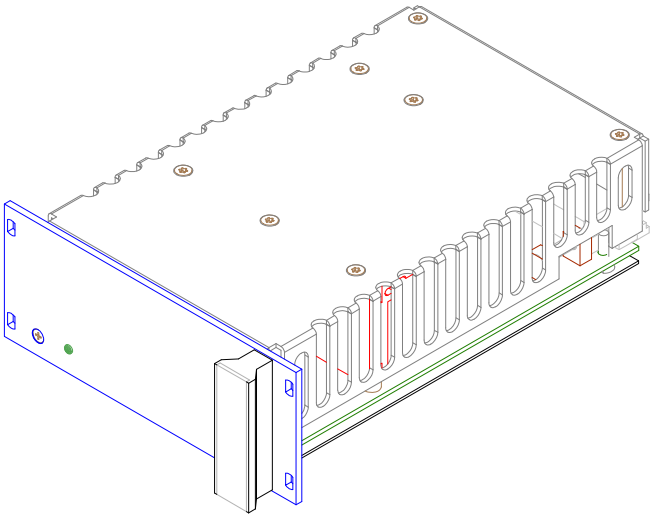
Interfaces and signals

LED green	PSU in normal operating mode
LED flashing	Status- and failure information by µC
PE2	The potential of the output voltage can be tied to PE by an internal voltage divider

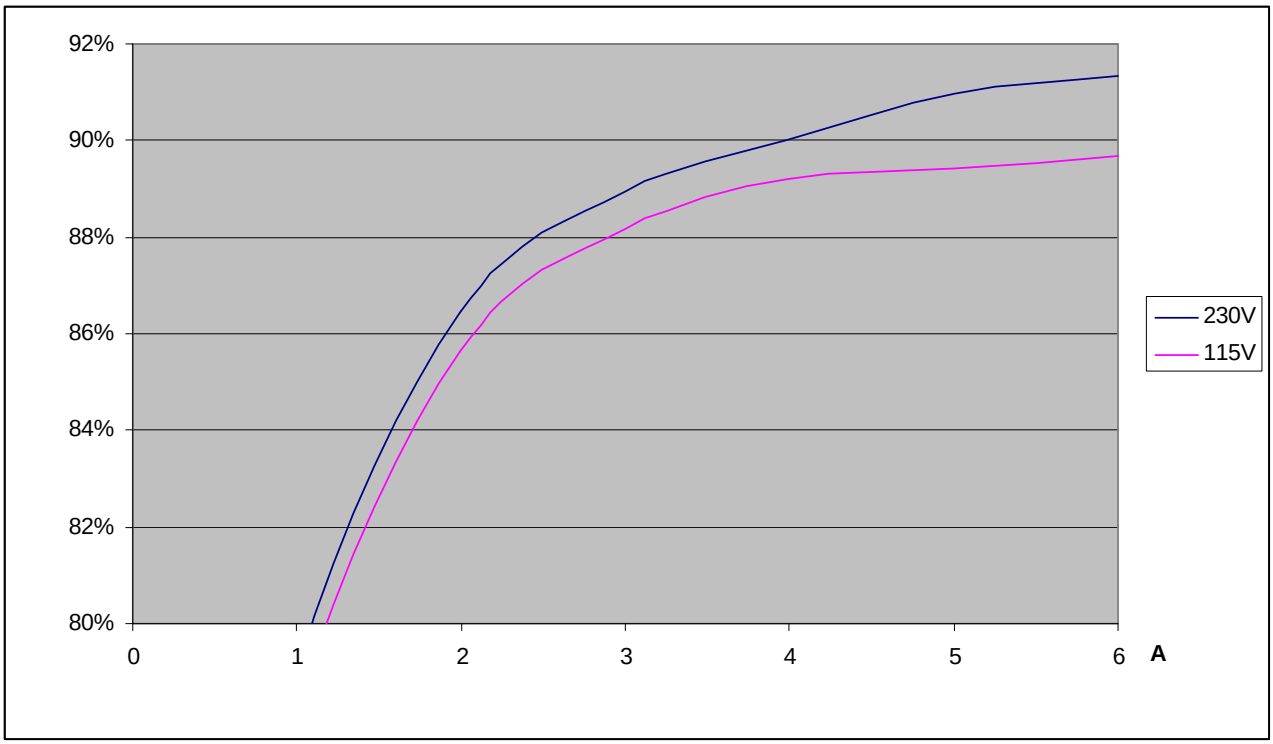
Mechanics / mounting

Cooling	Free convection
Mounting	19”-rack, DIN-rail – or wall mounting **Custom built application design-in on demand!**
Measurements	See drawing
Weight	0.7 kg





Efficiency (Uout=24V)



Interfaces

Input- and output connector H15

DIN 41612 H15	30 Line	26	22	18 0 V	14 0 V	10 0 V	6	
Earth 32	Neutral 28	PE2 24	20	Ua 16	Ua 12	Ua 8	4	

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

Telephone +499 (6023) 9798-0, Fax: +49 (6023) 9798-18
Email: info@quel.de, Internet: www.quel.de

Subject to change. Datasheet **HT150**. Version 3 of 24.07.2019
DS_HT150.doc
Author: JL