

SCHIEDERWERK

Electronic Power Supply

SMPS 48/4 400-2 M 20 U

Technical Specifications



ORDER NUMBER

Type	Order No.	Output Power / W	Lamps
SMPS 48/4 400-2 M 20 U	35 139 1000	1900W (boosted 2100W)	400 VDC; 4,3A (boosted 4,75A) 48VDC; 4,2A

TECHNICAL DATA

Input

Input voltage	200 – 240 V AC; 50-60Hz
Maximum operating range	180 – 264 V AC; 50-60Hz
Input current range (EN61000-3-2 Class A)	0-15A (not fused)
Inrush current (peak value)	< 40A
Power factor	>0,9
Efficiency (over rated input voltage range with full power)	≥ 97%
Hold up – time (over rated input voltage range with full power)	≥ 20ms
EMI	Internal noise filter
Ambient operating temperature	0°C ...+50°C
Cooling	Forced cooling with min. 1,15 m ³ /min (40 CFM) (Overtemperature protection with automatic restart after cooling down)
Approvals	UL 60950-1 CAN/CSA C22.2 No. 60950-1-07
Weight (grams)	1250
Dimensions (case size) in mm (BxHxD)	220 x 117 x 60
Leakage current (together with ELD 15-15)	Max. 1mA (264V, 60Hz)

Output 1 (line potential)

Voltage:	400V DC +/- 5%
Current, max:	5A(not fused)
Power, max:	1900W
Ripple-Voltage:	20Vss

Output 2 (isolated from line potential)

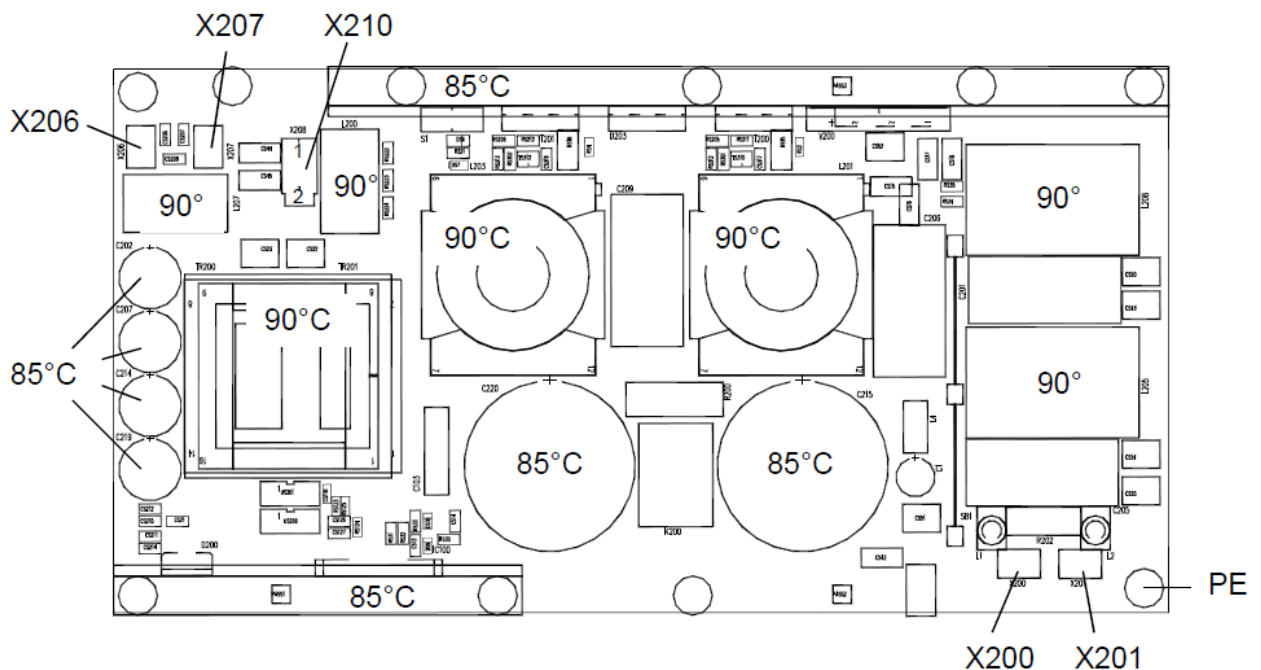
Voltage:	48V DC +/- 3%
Current, nominal:	4,2A possible 5sec overstress to 6,25A
Power, nominal:	200W possible 5sec overstress to 300W
Insulation voltage input / output:	3000V AC or 4242V DC
Insulation voltage input / PE:	1500V AC or 2121V DC
Insulation voltage output / PE:	100V AC or 150V DC

Subject to changes without notice

CONNECTOR WIRING

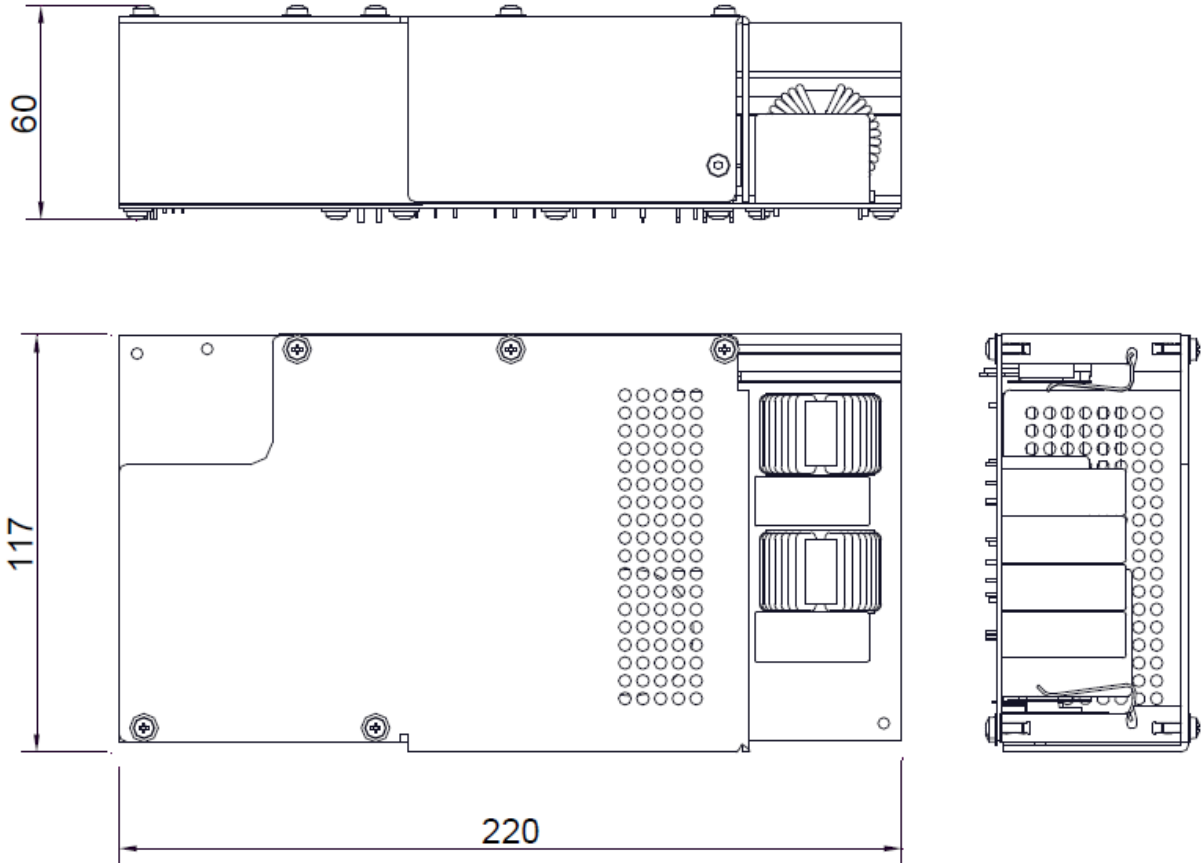
Name connection	Connector name	Pin configuration
Power input	X200 (main board) X201 (main board)	AC Input voltage AC Input voltage
Output 1 (400V)	X210 (main board, JST B2P3-VH 2POL or equiv.)	pin1 DC output voltage 400V pin2 GND
Output 2 (48V)	X206 (main board) X207 (main board)	DC output voltage 48V GND

PERMITTED MAXIMAL OPERATION TEMPERATURES ON COMPONENT SURFACES



All points in the drawing marked with PE must be connected to protective ground

MOUNTING DETAILS



WARNING NOTICE

A basic requirement for both installation and initial operation of the power supply assembly is the knowledge of the updated mounting and wiring instructions that are included in delivery. In case of any doubt it is imperative to contact Schiederwerk.

The power supply assembly (SMPS) has been designed to be installed in closed housings. Mounting, wiring and replacement if necessary has to be done by qualified personnel only. Due observation of the valid norms and safety regulations is mandatory when mounting and wiring the device. See that sufficient cooling is provided during operation.

The voltage of output 1 of the assembly is not galvanically isolated from mains voltage. The output is not short-circuit proof.

The voltage of output 2 of the assembly is galvanically isolated from mains voltage. The output is short-circuit proof. However, short-circuits on the output side should be avoided in order to prevent sparking. Use tools or measuring equipment that is mostly insulated.

The power supply assembly must never be used in explosive areas or close to inflammable material.

Do not expose the devices to moisture, dust or other kind of contamination because this may cause short circuits or fire in worst case.

For measurements at the power supply use an isolating transformer and carry out your work with due diligence. Measuring equipment must not be connected to Protective Earth (PE) in any way.

Schiederwerk does not assume liability for disregarding of this notice, incorrect use of the SMPS or disregarding of any legal requirements.

CAUTION:

Mains supply must be fused according to local safety regulations.

Schiederwerk recommends a 2 pole fuse protection (L+N) with UL-Listed fuses. The tripping characteristic should be time-lag

The appropriate fuse value can be calculated as:

$$1,5 * \frac{P_{out,total}}{V_{in}} \geq I_{Fuse} \geq 1,3 * \frac{P_{out,total}}{V_{in}}$$

Last Update: 30.11.2014