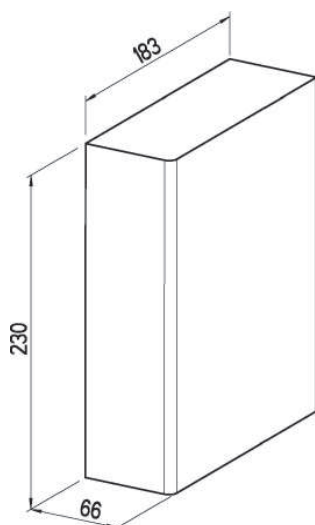




- 960 watts output power
- Only 66mm wide
- Wide range input AC: 3 x 340 - 550 V
- Output DC: 40 - 55 V and 56 - 80 V
- Parallel connection with load sharing
- Advanced Power Boost
- Operation in any assembly position
- Primary and secondary overvoltage protection
- Overtemperature protection
- For IT- or Delta-mains
- 3 Year Warranty



Dimensions W x H x D:

DIN rail 66 x 230 x 183 mm (+28 mm for connector)



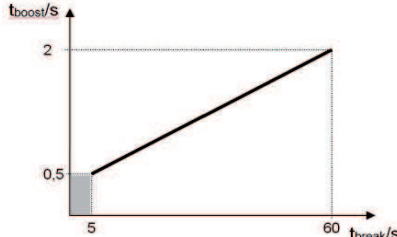
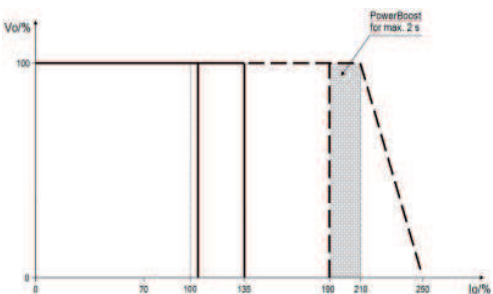
Wall-mounting 66 x 230 x 177 mm (+28 mm for connector)

Detailed dimension drawing / 3D-file (.stp) on request or www.mgv.de

ORDER DATA				
Vo V	Io A	Preset range Vo V	Type number Order number DIN rail	Type number Order number Wall mounting
48	0 - 20	40 - 55	SPH1013-4821 14.5943.800	SPH1013-4821 14.5943.805
72	0 - 13.5	56 - 80	SPH1013-7214 14.5943.900	SPH1013-7214 14.5943.905

Operation in any assembly position possible. The distance between the surrounding components and the air admission and air exit holes should be at least 50 mm. Please ensure that exhaust air is not immediately sucked in again.

AC / DC POWER SUPPLY
PRIMARY SWITCHED · SINGLE OUTPUT
SPH1013 - 48V / 72V SERIES

1. INPUT		6. SAFETY AND STANDARDS	
Input voltage range	AC 3 x 340 - 550 V, 50/60Hz	EN 60950-1 / IEC 60950-1 / VDE 0160 safety class I / VDE 0100 / IP20 CSA-C22.2 No 107 / CSA-C22.2 No. 60950-1-03 UL Std. 60950-1 / UL Std. 508 (Operation in Delta mains only for UL508) SELV-output according EN60950-1 at 48V pollution degree 2	
Efficiency	48V: 90.5% typ. / 72V: 91.5% typ.	Ensure fire protection by means of the surrounding housing system.	
Input current limitation	< 35 A _{peak} typ. - in cold state < 70 A _{peak} typ. - in hot state	7. OPERATING DATA	
Internal fuse	3 x 6.3AT	Temperature range	-25...+70°C, integral, temperature controlled fan, air intake bottom-up (fan switched on/off in two steps dependent on temperature)
External branch circuit	16A (IEC), 20A (USA) necessary	Derating	2%/K at +60°C
2. OUTPUT		Weight	2.0 kg
Preset range Vo	48V: 40 - 55VDC / 72V: 56 - 80VDC adjusted by MGV: Vo _{norm} ±0.15/0.2V 1000W	8. MECHANICS	
Max. output power	1000W	Connection: Main input	4-pole 1.5 - 4 mm ² strand/wire min. tightening torque 0.5Nm
Max. output current	48V: 20A / 72V: 13.5A	Load output	5-pole 2.5 - 4 mm ² strand/wire min. tightening torque 0.5Nm
Powerboost >0.5s - 2s:	boost break necessary, see diagram	Control signals	4-pole 0.5 - 1.5 mm ² strand/wire min. tightening torque 0.22Nm
Powerboost <0.5s:	no boost break necessary, but the boost time in the last 4s may not be longer as 2s, otherwise a boost break 1min is necessary (boostbreak <25ms will be not recognized)	Assembly	All systems can be snapped onto a symmetrical 35 mm DIN rail according to EN 50022 with a diameter of 1 to 2.5 mm or directly be screwed onto the wall. Please notice the assembly conditions.
Operation indicator	green LED for Vo, red LED for error	9. EXPLANATION	
Ripple	48V: 40mV _{ss} typ. / 72V: 40mV _{ss} typ.	PE	 Protective conductor Do not use supply without PE connection!
Noise voltage	48V: 150mV _{ss} typ. / 72V: 200mV _{ss} typ.	L1 / L2 / L3	Mains phases
Temperature coefficient	≤ 0.025% / K	+ / -	Load connection
Switch on / switch off	No Vo overshoot (soft-start)	Relay OK/FAIL	Monitoring connections
Start-up delay	250ms typ.	OFF	Control connection
Rise time	48V: 25ms typ. / 75ms at 50,000 µF load 72V: 20ms typ. / 155ms at 50,000 µF load	 Please read the MGV safety instructions on our homepage before use: www.mgv.de	
Back feeding voltage	48V: approx. 63VDC / 72V approx. 100VDC		
Serial connection	yes, max. 2 identical power supplies	Context between powerboost time and minimum break time	
Parallel connection	yes, max. 3 identical power supplies		
battery operation	after consulting MGV possible	Current limiting characteristic Start-up takes place with power boost between 190% and 210% of the nominal current for a period of approx. 2s. You can use power boost also in running operation.	
3. REGULATION			
Line regulation	< 0.3% for bei U _{e_min} - U _{e_max}		
Load regulation	< 0.5% for Vo at Io 0 - 100% single operation < 3% for Vo at Io 0 - 100% parallel operat.		
Response time	1 ms typ. at Io 20 - 80%		
4. PROTECTION AND CONTROLLING			
Oversvoltage protection (OVP)	48V: ≤ 60V / 72V: approx. 87V automatical repeating		
Current limitation	see diagramm output permanent short-circuit proof		
Overtemperature	Switches off if inside temperature becomes to high, reconnection with hysteresis		
Mains buffering	11 ms typ. in normal operation		
Relay contact	Relay contact (<80V/0.2A), changing at Vo < 37 / 52V from OK to FAIL		
Control signal OFF	external switch-off with 5 - 63VDC/5mA _{min} or switch from Vo		
5. EMC			
Interference suppression/ interference immunity	EN 61000-6-2 / EN61204-3 EN 61000-4-2 8/15 kV EN 61000-4-3 Noise level 10V/m		
Burst (input)	EN 61000-4-4 4 kV		
(output)	EN 61000-4-4 2 kV		
Surge (input)	EN 61000-4-5 2/4 kV		
(output)	EN 61000-4-5 0,5 kV EN 61000-4-6 Noise level 10V EN 61000-4-8 30 A/m EN 61000-4-11		
Interference emission	EN 61000-6-3 / EN61204-3 EN 55022 / EN 55011 class B Radiation depends on assembly		
Flicker	EN 61000-3-3		