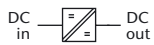


# Series S 600

## Features

- DC input: 10 - 380 V
- AC input: 115 / 230 V, 47 - 400 Hz
- DC output: 5 / ... / 250 V
- Continuous short circuit protection
- Overvoltage protection with auto restart
- Industrial grade components
- Compact and robust design



## DC / DC Converters

▶ 200 W		▶ 300 W		▶ 350 W							
Input VDC										Output VDC	
10–16 VDC	Output Amps	18–36 VDC	Output Amps	36–75 VDC	45–90 VDC	80–160 VDC	160–320 VDC	320–380 <sup>1)</sup> VDC	Output Amps	Adj.	Range
S 600	30	S 620	50	S 630	S 640	S 650	S 670	S 680 Z	50	5	4.5– 5.5
S 601	20	S 621	30	S 631	S 641	S 651	S 671	S 681 Z	32	9	8– 10
S 602	15	S 622	24	S 632	S 642	S 652	S 672	S 682 Z	26	12	11– 13
S 603	12	S 623	20	S 633	S 643	S 653	S 673	S 683 Z	22	15	14– 16
S 604	8	S 624	12	S 634	S 644	S 654	S 674	S 684 Z	14	24	23– 26
S 605	7	S 625	10	S 635	S 645	S 655	S 675	S 685 Z	12	28	26– 30
S 609	4.4	S 629	6	S 639	S 649	S 659	S 679	S 689 Z	6.5	48	45– 55
S 606	3.6	S 626	5	S 636	S 646	S 656	S 676	S 686 Z	5.2	60	58– 68
S 607	1.8	S 627	2.5	S 637	S 647	S 657	S 677	S 687 Z	3	110	100– 130
S 608	0.9	S 628	1.25	S 638	S 648	S 658	S 678	S 688 Z	1.5	220	200– 250



## AC / DC Converters

▶ 350 W					
Input VAC, 1-Phase				Output VDC	
115 ±20%	230 <sup>+15%</sup> <sub>-20%</sub>	115 ±20% / 230 <sup>+15%</sup> <sub>-20%</sub>	Output Amps	Adj.	Range
S 660	S 680	S 690	50	5	4.5– 5.5
S 661	S 681	S 691	32	9	8– 10
S 662	S 682	S 692	26	12	11– 13
S 663	S 683	S 693	22	15	14– 16
S 664	S 684	S 694	14	24	23– 26
S 665	S 685	S 695	12	28	26– 30
S 669	S 689	S 699	6.5	48	45– 55
S 666	S 686	S 696	5.2	60	58– 68
S 667	S 687	S 697	3	110	100– 130
S 668	S 688	S 698	1.5	220	200– 250

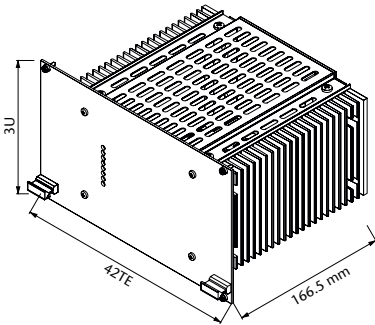
### Assistance in table use:

- 1 Select the column for input voltage range.
- 2 Select the row for the appropriate output voltage.
- 3 The intersection of both results in the module required.

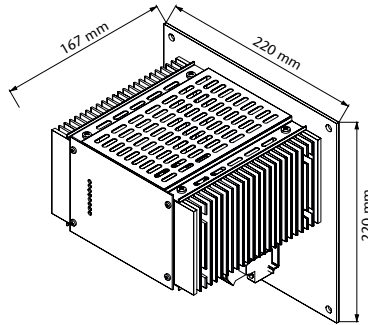
### For example:

- 1 input voltage = 24 VDC
- 2 output voltage = 5 VDC @ 50 A
- 3 results in a S 620 module.

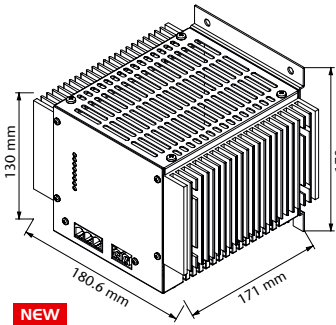
<sup>1)</sup> input supply from PFC also suitable



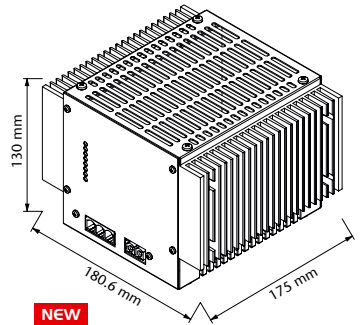
**Eurocassette / approx. 2.6 kg**  
(pluggable module for 19" sub-rack)



**Wall mount / approx. 3.6 kg**



**NEW**  
**Chassis mount / approx. 3.1 kg**



**NEW**  
**DIN rail mount / approx. 3.0 kg**

## Specifications

### Input

Voltage range . . . . . see table, unit switches off at under- and overvoltage  
 No-load input power. . . . . 5 - 6 W  
 Switch-on time . . . . . 500 ms typical  
 Inrush current . . . . . AC input: limited by thermistor  
 Hold-up time . . . . . AC input: 10 ms typical

### Immunity

- ESD . . . . . acc. to DIN / EN 61000-4-2 level 3  
 - Fast transients . . . . . acc. to DIN / EN 61000-4-4 level 3  
 - Surges . . . . . acc. to DIN / EN 61000-4-5 level 3

### Output

Line regulation ( $\pm 10\%$ ) . . . . . 0.1 %  
 Load regulation (10 - 90 %) . . . 0.2 %  
 Load transient (10-90-10 %) . . 6 % typical  
 Response time to  $\pm 1\%$  . . . . . 2 - 3 ms  
 Turn-on rise time . . . . . Soft-start, 100 ms typical  
 Ripple . . . . .  $\leq 1\% + 30\text{ mV}_{\text{p-p}}$   
 Overload protection . . . . . current limited to 105 - 110 % of  $I_{\text{nom}}$   
 Overvoltage protection . . . . . OVP switches off module with automatic return to operation  
 Remote sense . . . . . standard for C series, up to 10 % of  $U_{\text{nom}}$  for output < 60 VDC, up to 6 V for output > 60 VDC

### General

Efficiency . . . . . 70 - 90 %  
 Operating temperature . . . . .  $-20$  to  $+75\text{ }^\circ\text{C}$   
 Load derating . . . . . 2.5 % /  $^\circ\text{C}$  from  $+55\text{ }^\circ\text{C}$   
 Storage temperature . . . . .  $-40$  to  $+85\text{ }^\circ\text{C}$   
 Humidity . . . . . up to 95 % RH, non-condensing  
 Cooling . . . . . natural convection  
 Temperature coefficient . . . . . 0.02 % /  $^\circ\text{C}$  typical  
 Safety / Construction . . . . . acc. to DIN / EN 60950-1: 2003  
 Protection category . . . . . IP 20, others or NEMA upon request  
 EMI . . . . . acc. to EN 55022, class A, optionally class B  
 MTBF . . . . . approx. 120,000 h @  $40\text{ }^\circ\text{C}$   
 acc. to MIL - HDBK - 217 E (notice 1)  
 Connector for eurocassette - std. design . . . . H 15  
 Marking . . . . . CE

## Options

### Input

- Inrush current limiting for DC input
- Reverse polarity protection for DC input
- Autoranging for 115 / 230 VAC input

### Output

- Parallel operation
- Redundant operation
- Inhibit (remote on / off)

### Signals

via open collector or relay contacts

- Power ok (input)
- DC ok (output)
- Sys-reset

### Programming

- Output voltage or current via
  - external potentiometer
  - analog signal
  - interface card RS232 or IEEE488 (external)

### Battery charger

- Temperature compensated charging voltage
- Automatic / manual selection of charging characteristic (external)

### Monitoring

- Input / output voltage or current via
  - analog signal
  - interface card RS232 or IEEE488 (external)

### Mechanics / environment:

- 19" sub-rack for eurocassette
- Wall mount
- Chassis mount
- DIN rail mount
- Increased mechanical strength
- Tropical protection
- Extended temperature range to  $-40\text{ }^\circ\text{C}$