



# Switched mode power supplies CP-S, CP-C & CP-A Range



### CP-S and CP-C range

- Output current 5 A, 10 A and 20 A
- Integrated power reserve of up to 50 %
- 5 A and 10 A devices with pluggable connecting terminals
- Approvals / marks (depending on device, partly pending)



### CP-S range

- 10 A and 20 A devices with front-face selector switch to adjust rated input voltage range: 110-120 V AC or 220-240 V AC
- Output voltage fixed at 24 V DC
- Parallel operation for redundancy

### CP-C range

- Wide range input 110-240 V AC (85-264 V AC, 100-350 V DC)
- Output voltage adjustable in a range of 22-28 V DC
- Parallel operation for increased capacity and redundancy
- Power factor correction (PFC) acc. to EN 61000-3-2
- Function module pluggable onto the front side

### Messaging module CP-C MM:

- LED for status indication
- Relay outputs "Input OK" and "Output OK"
- REMOTE ON/OFF function to switch on and off the power supply externally
- Output voltage monitoring is only possible in decoupled parallel operation

### CP-A range

#### Redundancy unit CP-A RU

- Redundancy unit with 2 inputs / channels for decoupling of 2 CP-S or 2 CP-C power supplies
- Up to 20 A per input / channel and output up to 40 A
- True redundancy by 100 % decoupling with 2 integrated diodes

#### Control module CP-A CM

- Pluggable onto redundancy unit CP-A RU
- One relay output per monitored input / channel
- Threshold values adjustable (14-28 V)
- Indicates the presence of both input voltages (of the CP-A RU) via LEDs and energized output relays



CP-A RU + CP-A CM

### Integrated power reserve

The new CP-S and CP-C range power supplies feature an integrated power reserve of up to 50 %. No oversized electricity supply is needed, especially under heavy load conditions.



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### Pluggable connecting terminals

Extended flexibility in operation due to pluggable connecting terminals (this feature is not offered on all devices).



### Adjustable output voltage

The CP-C range types feature a continuously adjustable output voltage from 22 to 28 V. Thus, they can be optimally adapted to the application, e.g. compensating the voltage drop caused by long line length.



### Pluggable function modules

The CP-C range power supplies can be equipped with pluggable modules to add additional functions (e.g. messaging module). Thus, the power supplies can be ideally adapted to the relevant application.



## Switched mode power supplies CP-S, CP-C & CP-A



CP-S 24/5.0



CP-C 24/10.0



CP-S 24/20.0



CP-A RU



CP-A CM

Type	Rated input voltage	Rated output voltage / current	Order code	Pack. unit pieces	Weight 1 piece kg / lb
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### CP-S range

CP-S 24/5.0	110-240 V AC	24 V DC / 5 A	1SVR 427 014 R0000	1	0.96 / 2.11
CP-S 24/10.0	110-120 V AC / 220-240 V AC	24 V DC / 10 A	1SVR 427 015 R0100	1	1.07 / 2.35
CP-S 24/20.0	110-120 V AC / 220-240 V AC	24 V DC / 20 A	1SVR 427 016 R0100	1	2.83 / 6.23

### CP-C range

CP-C 24/5.0	110-240 V AC	24 V DC / 5 A	1SVR 427 024 R0000	1	0.96 / 2.11
CP-C 24/10.0	110-240 V AC	24 V DC / 10 A	1SVR 427 025 R0000	1	1.34 / 2.95
CP-C 24/20.0	110-240 V AC	24 V DC / 20 A	1SVR 427 026 R0000	1	3.15 / 6.94

Type	Description	Order code	Pack. unit pieces	Weight 1 piece kg / lb
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### Accessories for CP-C range

CP-C MM	Messaging module	1SVR 427 081 R0000	1	0.065 / 0.14
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### Accessories for CP-S and C range

CP-A RU	Redundancy unit	1SVR 427 071 R0000	1	0.89 / 1.96
CP-A CM	Control module	1SVR 427 075 R0000	1	0.063 / 0.14

# Technical data

## CP-S, CP-C & CP-A Range

Data at  $T_a = 25\text{ °C}$ ,  $U_{IN} = 230\text{ V AC}$  and rated values, if nothing else indicated

Type		CP-C 24/5.0 CP-S 24/5.0	CP-C 24/10.0 CP-S 24/10.0	CP-C 24/20.0 CP-S 24/20.0
Input circuit - supply circuit		L, N		
Rated input voltage $U_{IN}$	CP-C	110-240 V AC		
	CP-S	110-240 V AC	switch position 115 110-120 V AC	
			switch position 230 220-240 V AC	
Input voltage range	CP-C	85-264 V AC / 100-350 V DC <sup>1)</sup>		
	CP-S	85-264 V AC / 100-350 V DC <sup>1)</sup>	switch position 115 85-132 V AC	
			switch position 230 184-264 V AC / 220-350 V DC <sup>1)</sup>	
Frequency range AC		47-63 Hz		
Current consumption		at 110-240 V AC	approx. 2.2-1.2 A	approx. 3.5-1.6 A
		at 110-120 V AC	-	approx. 4.2-4.0 A
		at 220-240 V AC	-	approx. 2.4-2.2 A
Power consumption		typ. 135 W	typ. 269 W	typ. 538 W
Inrush current / $I^2t$ (cold start)	CP-C	< 23 A / approx. 0.9 A <sup>2</sup> s	< 33 A / approx. 0.2 A <sup>2</sup> s	< 40 A / approx. 1.9 A <sup>2</sup> s
	CP-S		< 40 A / approx. 1.8 A <sup>2</sup> s	< 70 A / approx. 8 A <sup>2</sup> s
Power failure buffering at rated load	CP-C	> 100 ms	> 40 ms	typ. > 40 ms
	CP-S		> 50 ms	typ. > 50 ms
Transient overvoltage protection		varistors		
Internal input fuse (apparatus protection, not accessible)		4 A (slow-acting)	6.3 A (slow-acting)	12 A (fast-acting)
Indication of operational states		OUTPUT OK: green LED		
Output voltage		V: output voltage OK		
Output circuit		L+, L+, L-, L- : short-circuit, no-load and overload proof		
Rated output voltage		24 V DC		
Tolerance of the output voltage	CP-C	w1 %		
	CP-S	-1...+5 %		
Adjustment range of the output voltage	CP-C	22-28 V DC, default setting 24 V w0.5 %		
	CP-S	fixed		
Rated output power		120 W	240 W	480 W
Rated output current		$T_a < 60\text{ °C}$ 5 A	10 A	20 A
Peak output current (power reserve)		$T_a < 40\text{ °C}$ typ. m 7.25 A	typ. m 12.25 A	typ. m 22.5 A
Derating		$60\text{ °C} < T_a < 70\text{ °C}$ 2.5 % per Kelvin temperature increase		
Deviation with	CP-C	load change statical	typ. < w0.05 %	
	CP-S	load change statical	typ. < w0.1 %	
		load change dynamical 10-90 %	typ. < w3 %	
		change of the input voltage of w10 %	typ. < w0,05 %	
Control time		typ. < 1 ms		
Starting time after applying supply voltage	CP-C	< 100 ms	< 5 ms	typ. < 370 ms
	CP-S		< 10 ms	typ. < 20 ms
Response time 10-90 %	CP-C	typ. < 30 ms	typ. < 4 ms	typ. < 12 ms
	CP-S		typ. < 5 ms	typ. < 15 ms
Residual ripple and switching peaks		20 MHz	typ. < 50 mV <sub>pp</sub>	
Parallel connection		yes, up to 5 devices, to enable redundancy and to increase capacity, current not symmetrical (CP-S only redundancy)		
Series connection		yes, to increase voltage		
Resistance to reverse feed		approx. 35 V DC		
Power factor correction (PFC)	CP-C	yes		
	CP-S	no		
Output circuit - No-load, overload and short-circuit behaviour		see also U/I and I/T curves		
Output curve		U/I curve with power reserve		
Current limitation at short circuit		approx. 11 A	approx. 19 A	approx. 25 A
Short-circuit protection		continuous short-circuit stability		
Overload protection		thermal protection		
Starting of capacitive loads		unlimited		
General data				
Power dissipation		typ. < 15 W	typ. < 29 W	typ. < 58 W
Efficiency		typ. 88-89 %		
Discharge current for PE		< 3.5 mA		
MTBF	CP-C	500.000 h		
	CP-S	350.000 h		
Dimensions (W x H x D)		56.5 (60 <sup>2)</sup> ) x 130 x 137 mm [2.22 (2.36 <sup>2)</sup> ) x 5.12 x 5.39 in]	90 (93.5 <sup>2)</sup> ) x 130x 137 mm [3.54 (3.68 <sup>2)</sup> ) x 5.12 x 5.39 in]	200 (203.5 <sup>2)</sup> ) x 130 x 137 mm [7.87 (8.01 <sup>2)</sup> ) x 5.12 x 5.39 in]

## Technical data CP-S, CP-C & CP-A Range

Data at  $T_a = 25\text{ °C}$ ,  $U_{IN} = 230\text{ V AC}$  and rated values, if nothing else indicated

Type		CP-C 24/5.0 CP-S 24/5.0	CP-C 24/10.0 CP-S 24/10.0	CP-C 24/20.0 CP-S 24/20.0
Weight	CP-C	approx. 0.96 kg (2.12 lb)	approx. 1.34 kg (2.95 lb)	approx. 3.15 kg (6.94 lb)
	CP-S		approx. 1.07 kg (2.36 lb)	approx. 2.83 kg (6.23 lb)
Minimum distance to other units	horizontal / vertical	10 mm / 80 mm (0.39 in / 3.15 in)		
Degree of protection	enclosure / terminals	IP20 / IP20		
Material of enclosure	enclosure shell / cover	aluminium / zinc-coated sheet steel		
Protection class (EN 61140)		I		
Mounting		DIN rail (EN 50022), snap-on mounting		
Mounting position		horizontal		
Electrical connection - Input circuit		3)	3)	-
Wire size	fine-strand with wire end ferrule	0.2-2.5 mm <sup>2</sup> (24-14 AWG)		2.5-10 mm <sup>2</sup> (14-8 AWG)
	fine-strand without wire end ferrule			0.5-10 mm <sup>2</sup> (20-8 AWG)
	rigid			0.5-16 mm <sup>2</sup> (20-6 AWG)
Stripping length		7 mm (0.28 in)	12 mm (0.47 in)	
Tightening torque		0.4 Nm		1.2-1.5 Nm
Electrical connection - Output circuit		3)	3)	-
Wire size	fine-strand with wire end ferrule	0.12-2.5 mm <sup>2</sup> (26-14 AWG)		2.5-10 mm <sup>2</sup> (14-8 AWG)
	fine-strand without wire end ferrule			0.5-10 mm <sup>2</sup> (20-8 AWG)
	rigid			0.5-16 mm <sup>2</sup> (20-6 AWG)
Stripping length		8 mm (0.31 in)	12 mm (0,47 in)	
Tightening torque		0.4 Nm		1.2-1.5 Nm
<b>Environmental data</b>				
Ambient temperature range	operation	-25...+70 °C		
	full load	0...+60 °C (without derating)		
	storage	-40...+85 °C		
Damp heat (IEC/EN 60068-2-3)		93 % at +40 °C, no condensation		
Climatic category (IEC/EN 60721)		3K3		
Vibration (IEC/EN 60068-2-6)				
Shock (IEC/EN 60068-2-27)				
<b>Isolation data</b>				
Rated impulse withstand voltage $U_{imp}$ (type test)	input / output	3 kV AC		
	input / PE	1.5 kV AC		
Power-frequency withstand voltage test (routine test)	input / output	1.2 kV AC		
	input / PE	1.2 kV AC		
	output / PE	350 V AC		
Pollution degree (EN 50178)		2		
<b>Standards</b>				
Product standard		IEC/EN 61204		
Low Voltage Directive		2006/95/EC		
EMC Directive		2004/108/EC		
Electrical safety		EN 50178, EN 60950, UL 60950, UL 508		
Protective low voltage		SELV (EN 60950)		
<b>Electromagnetic compatibility</b>				
<b>Interference immunity</b>				
electrostatic discharge (ESD)	IEC/EN 61000-4-2	IEC/EN 61000-6-2 Level 4 (8 kV / 15 kV)		
electromagnetic field (HF radiation resistance)	IEC/EN 61000-4-3	Level 3 (10 V/m)		
fast transients (Burst)	IEC/EN 61000-4-4	Level 4 (4 kV)		
powerful impulses (Surge)	IEC/EN 61000-4-5	Level 4 (2 kV symmetrical, level 3 - 3 kV asymmetrical)		
HF line emission	IEC/EN 61000-4-6	Level 3 (10 V)		
<b>Interference emission</b>				
electromagnetic field (HF radiation resistance)	IEC/CISPR 22, EN 55022	IEC/EN 61000-6-3 Class B		
HF line emission	IEC/CISPR 22, EN 55022	Class B		

1) at  $U > 264\text{ V}$  use additionally an appropriate external fuse

2) with lateral screw

3) pluggable connecting terminals, actuate only when power is off

## Technical data CP-S, CP-C & CP-A Range

Data at  $T_a = 25\text{ °C}$ ,  $U_{IN} = 230\text{ V AC}$  and rated values, if nothing else indicated

Type	CP-C MM		
Input circuit - Supply circuit			
Rated input voltage $U_{IN}$	powered by the input circuit of the power supply		
Input voltage range	70-264 V AC / 80-350 V DC		
Power consumption	2.5 VA / 1.5 W		
Input circuit - Control circuit			
Kind of triggering	volt-free triggering		
Control input, control function	Remote OFF	remote off	
Threshold "Switching-off power supply unit"	R m 1 k $\Omega$		
Threshold "Switching-on power supply unit"	R M 10 k $\Omega$		
Input current	typ. 1 mA (200 mA for 200 $\mu$ s)		
Maximum cable length to the control input	25 m		
Measuring circuit - INPUT			
Monitoring function	undervoltage monitoring of input voltage of the power supply unit		
Thresholds	85 V AC / 90 V DC		
Hysteresis, related to the threshold value	AC: typ. -8 % / DC -30 %		
Accuracy, tolerance	-5 % at AC and DC		
Maximum measuring cycle	typ. < 50 ms		
Measuring circuit - OUTPUT			
Monitoring function	undervoltage monitoring of output voltage of the power supply unit		
Thresholds	20 V DC		
Hysteresis, related to the threshold value	typ. 5 %		
Accuracy, tolerance	w1 %		
Maximum measuring cycle	typ. < 10 ms		
Indication of operational states			
Remote off	REMOTE OFF: green LED	V: „REMOTE OFF“ input R m 1k $\Omega$	
Status of power supply input	Input OK: green LED	V: relay „INPUT OK“ energized	
Status of power supply output	OUTPUT OK: green LED	V: relay „OUTPUT OK“ energized	
Output circuits	11-12/14, 21-22/24		
Kind of output	relays, 2 x 1 c/o contacts		
Operating principle	closed-circuit principle		
Contact material	AgNi		
Rated voltage (VDE 0110, IEC/EN 60947-1)	250 V		
Minimum switching voltage / Minimum switching current	24 V / 10 mA		
Maximum switching voltage / Maximum switching current	250 V / 1 A		
Rated operating current $I_b$ (IEC/EN 60947-1)	AC12 (resistive)	230 V	1 A
	AC15 (inductive)	230 V	1 A
	DC12 (resistive)	24 V	1 A
	DC13 (inductive)	24 V	1 A
Mechanical lifetime	30 x 10 <sup>6</sup> switching cycles		
Electrical lifetime	0.1 x 10 <sup>6</sup> switching cycles		
Short circuit proof, maximum fuse rating	n/c contact	2 A, gL	
	n/o contact	2 A, gL	
General data			
Duty time	100 %		
Dimensions (W x H x D, when mounted)	56.5 x 54 x 24 mm (2.22 x 2.13 x 0.94 in)		
Weight	0.065 kg (0.14 lb)		
Degree of protection	enclosure / terminals	IP20 / IP20	
Material of enclosure	UL94V0		
Protection class (EN 61140)	II		
Mounting	snap-on mounting, without any tool		
Mounting position	plugged onto the power supply unit		
Electrical connection			
Wire size	fine-strand with wire end ferrule		0.2-2.5 mm <sup>2</sup> (24-14 AWG)
	fine-strand without wire end ferrule		
	rigid		0.2-4 mm <sup>2</sup> (24-12 AWG)
Stripping length	7.5 mm (0.3 inch)		
Tightening torque	0.4-0.6 Nm		

## Technical data

### CP-S, CP-C & CP-A Range

Data at  $T_a = 25\text{ °C}$ ,  $U_{IN} = 230\text{ V AC}$  and rated values, if nothing else indicated

Type		CP-C MM
Environmental data		
Ambient temperature range	operation	-25...+70 °C
	storage	-40...+85 °C
Damp heat (IEC/EN 60068-2-3)		93 % at +40 °C, no condensation
Climatic category (IEC/EN 60721)		3K3
Vibration (IEC/EN 60068-2-6)		
Shock (IEC/EN 60068-2-27)		
Isolation data		
Rated insulation voltage $U_i$ (IEC/EN 60974-1, EN 50178, VDE 0160)		250 V
Protective separation (EN 50178, EN 60950) supply / measuring circuits / relay outputs		yes
Rated impulse withstand voltage $U_{imp}$ between all isolated circuits (IEC 664, VDE 0110)		4 kV; 1.2/50 $\mu$ s
Test voltage between all circuits (type test)		2.5 kV AC
Pollution degree (EN 60950)		2
Overvoltage category (EN 60950)		II
Standards		
Product standard		IEC/EN 61204
Low Voltage Directive		2006/95/EC
EMC Directive		2004/108/EC
Electrical safety		EN 50178, EN 60950, UL 60950, UL 508
Electromagnetic compatibility		
Inference immunity		IEC/EN 61000-6-2
electrostatic discharge (ESD)	IEC/EN 61000-4-2	Level 3 and 4 (6 kV / 8 kV)
electromagnetic field (HF radiation resistance)	IEC/EN 61000-4-3	Level 3 (10 V/m)
fast transients (Burst)	IEC/EN 61000-4-4	Level 4 and 2 (4 kV power input / 1 kV control input)
powerful impulses (Surge)	IEC/EN 61000-4-5	Level 3 and 2 (4 kV symmetrical power input / 1 kV control input)
HF line emission	IEC/EN 61000-4-6	Level (10 V)
Interference emission		IEC/EN 61000-6-3
HF line emission	IEC/CISPR 22 / EN 55022	Class B
electromagnetic field (HF radiation resistance)	IEC/CISPR 22 / EN 55022	Class B

## Technical data CP-S, CP-C & CP-A Range

Power  
supplies

Data at  $T_a = 25\text{ °C}$ , if nothing else indicated




Type		CP-A RU
Input circuit - Supply circuit		(+/-, +/-)
Rated input voltage $U_{IN}$		24 V DC
Input voltage range		10-40 V DC
Rated input current $I_{IN}$ per channel		1-20 A
Maximum input current per channel		30 A for 300 s
Transient overvoltage protection		yes
Output circuit		(+/-)
Rated output voltage		24 V DC
Voltage drop		typ. 0.6 V, max. 0.9 V
Rated output current		1-40 A
Peak output current		60 A for 300 s
Resistance to reverse feed		< 40 V
General data		
Dimensions (W x H x D)		56.5 (60 <sup>1)</sup> ) x 130 x 137 mm (2.22 (2.36 <sup>1)</sup> ) x 5.12 x 5.39 in)
Weight		0.89 kg (1.96 lb)
Minimum distance to other units	horizontal / vertical	10 mm / 50 mm (0.39 in / 1.97 in)
Degree of protection	enclosure / terminals	IP20 / IP20
Material of enclosure	enclosure shell / cover	aluminium / zinc-coated sheet steel
Protection class		III 2)
Mounting		DIN rail
Mounting position		horizontal
Electrical connection - Input circuit / Output circuit		
Wire size	fine-strand with wire end ferrule	2.5-10 mm <sup>2</sup> (14-8 AWG)
	fine-strand without wire end ferrule	0.5-10 mm <sup>2</sup> (20-8 AWG)
	rigid	0.5-16 mm <sup>2</sup> (20-6 AWG)
Stripping length		12 mm (0.47 in)
Tightening torque		1.2-1.5 Nm
Environmental data		
Ambient temperature range	operation	-25...+70 °C
	full load	-25...+60 °C (without derating)
	storage	-40...+85 °C
Damp heat (IEC/EN 60068-2-3)		93 % at 40 °C, no condensation
Climatic category (IEC/EN 60721)		3K3
Vibration (IEC/EN 60068-2-6)		
Shock (IEC/EN 60068-2-27)		
Isolation data		
Insulation voltage	between input / output / enclosure	500 V AC (routine test)
Pollution degree (EN 50178)		2
Standards		
Product standard		IEC/EN 61204
Low Voltage Directive		2006/95/EC
EMC Directive		2004/108/EC
Electrical safety		EN 50178, EN 60950, UL 60950, UL 508
Electromagnetic compatibility		
Interference immunity		
electrostatic discharge (ESD)	IEC/EN 61000-4-2	Level 3 (air discharge w8 kV, contact discharge w6 kV)
electromagnetic field (HF radiation resistance)	IEC/EN 61000-4-3	Level 3 (10 V/m)
fast transients (Burst)	IEC/EN 61000-4-4	Level 3 (w2 kV)
powerful impulses (Surge)	IEC/EN 61000-4-5	Level 1 (w0.5 kV)
HF line emission	IEC/EN 61000-4-6	Level 3 (10 V)
Interference emission		
electromagnetic field (HF radiation resistance)	IEC/CISPR 22 / EN 55022	Class B
HF line emission	IEC/CISPR 22 / EN 55022	Class B

1) includes lateral screw

2) This device is designed for connection to a safety extra-low voltage source. If no safety extra-low voltage is used at the input side, the lateral screw can be used for grounding of the enclosure (protection class I).

## Technical data CP-S, CP-C & CP-A Range

Data at  $T_a = 25\text{ °C}$ , if noting else indicated

Type			CP-A CM
Input circuit - Supply circuit			24 V DC
Rated input voltage $U_{IN}$			13-30 V DC
Input voltage range			approx. 1 W
Power consumption	at 24 V DC		11-12/14, 21-22/24
Measuring circuit			undervoltage monitoring
Monitoring function			rated operational voltage
Measuring voltage			14-28 V
Thresholds			3-5 % fixed
Hysteresis, related to the threshold value			10 % of full-scale value
Accuracy, tolerance			6 ms
Maximum measuring cycle			
Indication of operational states			
Status of input 1	IN 1: green LED		L: voltage at input 1 > than threshold 1 = no faults present
Status of input 2	IN 2: green LED		L: voltage at input 2 > than threshold 2 = no faults present
Output status	OUT: green LED		L: $U_{OUT} > 3\text{ V}$ = no faults present
Output circuit			+, +, -
Kind of output			relays, 2 x 1 c/o contact
Contact material			AgNi
Operating principle			closed-circuit principle
Rated operational voltage $U_e$ (IEC/EN 60947-1, VDE 0110)			250 V
Minimum switching voltage / Minimum switching current			24 V / 10 mA
Maximum switching voltage / Maximum switching current			250 V / 1 A
Rated operational current $I_e$ (IEC/EN 60947-5-1)	AC12 (resistive)	230 V	1 A
	AC15 (inductive)	230 V	1 A
	DC12 (resistive)	24 V	1 A
	DC13 (inductive)	24 V	1 A
Mechanical lifetime			30 x 10 <sup>6</sup> switching cycles
Electrical lifetime			0.1 x 10 <sup>6</sup> switching cycles
Short-circuit proof, maximum fuse rating	n/c contact		2 A, gL
	n/o contact		2 A, gL
General data			
Duty time			100 %
Dimensions (W x H x D, when mounted)			56.5 x 54 x 24 mm (2.22 x 2.13 x 0.94 in)
Weight			0.063 kg (0.14 lb)
Degree of protection	enclosure / terminals		IP20 / IP20
Material of enclosure			UL94V0
Protection class			II
Mounting			snap-on mounting, without any tool
Mounting position			plugged onto the redundancy unit CP-A RU
Electrical conection			
Wire size	fine-strand with wire end ferrule		0.2-2.5 mm <sup>2</sup> (24-14 AWG)
	fine-strand without wire end ferrule		
	rigid		
Stripping length			7.5 mm (0.3 in)
Tightening torque			0.4-0.6 Nm
Isolation data			
Rated insulation voltage $U_i$ (IEC/EN 60947-1, EN 50178, VDE 0160)			250 V
Rated impulse withstand voltage $U_{imp}$ (type test) between all circuits (IEC 664, VDE 0110)			2.5 kV
Power-frequency withstand voltage test (routine test) between all circuits			1.2 kV AC
Protective separation (EN 50178) between input and output			yes
Pollution degree			2
Overvoltage category			II
Environmental data			
Ambient temperature range	operation		-25...+70 °C
	storage		-40...+85 °C
Damp heat (IEC/EN 60068-2-3)			93 % at 40 °C, no condensation
Climatic category (IEC/EN 60721)			3K3
Vibration (IEC/EN 60068-2-6)			
Shock (IEC/EN 60068-2-27)			

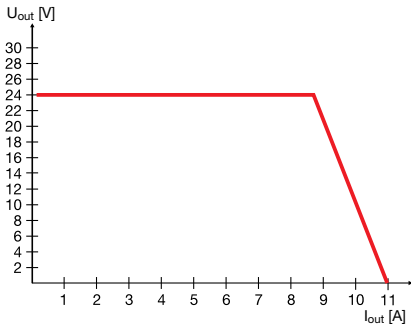
# Technical diagrams

## CP-S, CP-C & CP-A Range



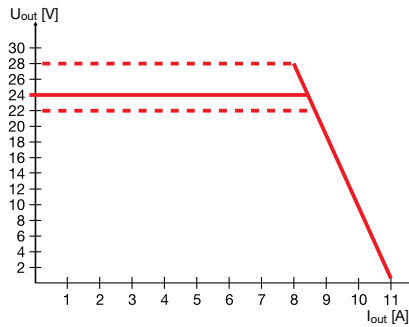
### Technical diagrams

Output curve at 25 °C



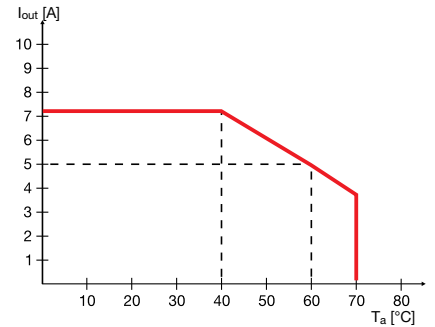
CP-S 24/5.0

Output curve at 25 °C

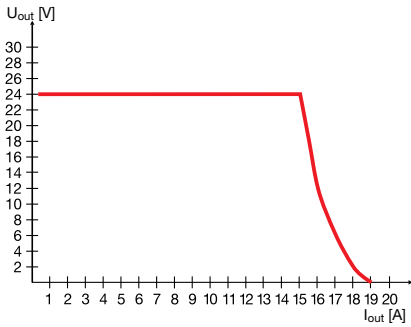


CP-C 24/5.0

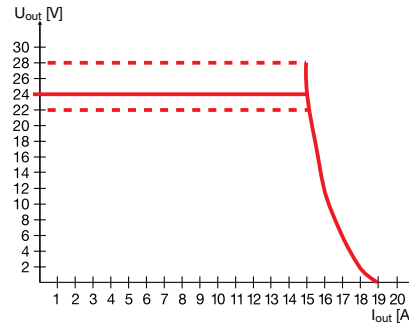
Temperature curve at U<sub>out</sub> = 24 V DC



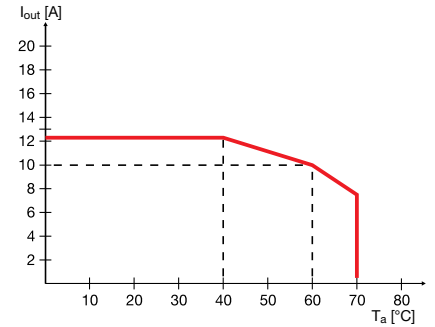
CP-S 24/5.0, CP-C 24/5.0



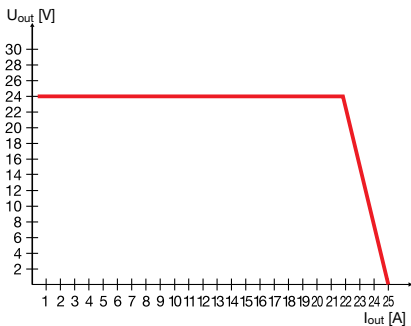
CP-S 24/10.0



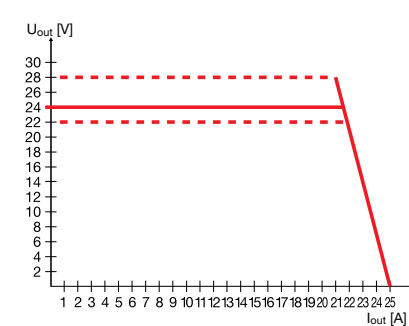
CP-C 24/10.0



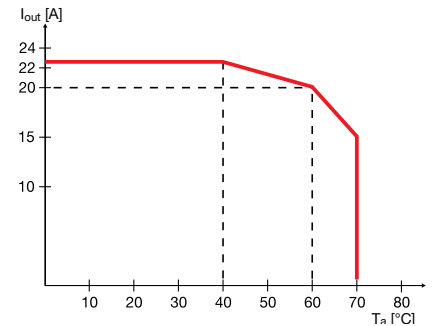
CP-S 24/10.0, CP-C 24/10.0



CP-S 24/20.0



CP-C 24/20.0

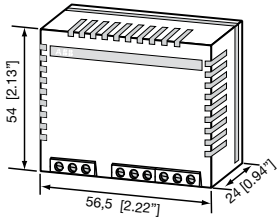
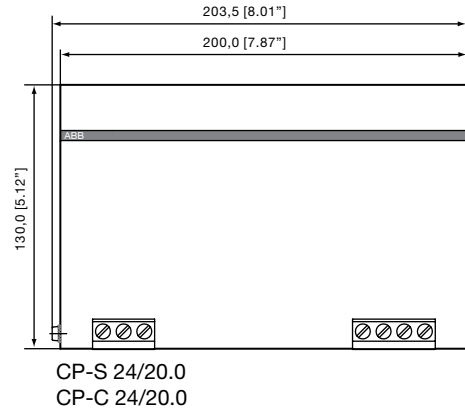
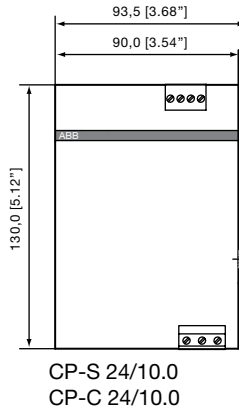
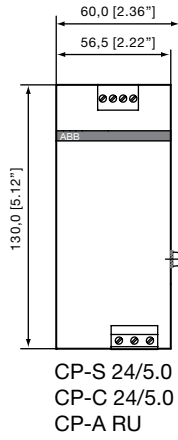
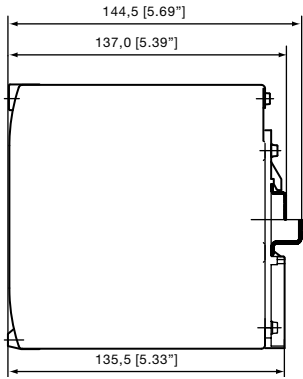


CP-S 24/20.0, CP-C 24/20.0

## Approximate dimensions CP-S, CP-C & CP-A Range

### Dimensional drawings

dimensions in mm



CP-C MM  
CP-A CM