

Power supplies CP range



- Switching power supplies, primary switch mode
- Wide range of supply voltages
- DIN-rail mounted
- Approvals (depending on type): cULUS, UL 1604 (Class I, Div. 2), UL 1310 (Class 2)
- In accordance to EN 60950
- High efficiency, compact dimensions

ABB's reliable power supplies:

The **CP range** offers first-rate technology within compact dimensions.

This range comprises types with output voltages from 5 V DC to 48 V DC at output currents from 300 mA to 20 A.

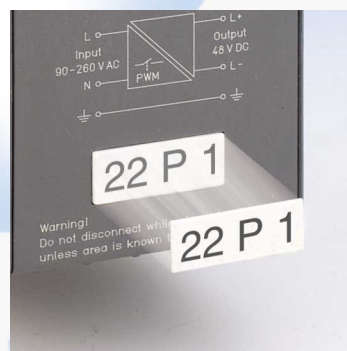
All CP power supplies are cULUS-approved, CE-certified and comply to European EMC guidelines EN 50081-2 and EN 50082-2.

CP power supplies come with complete enclosures in compact dimensions. The connection terminals are touch-proof.

Switching power supplies

With primary switch mode, the **CP range** offers the following advantages in comparison to conventional power supplies:

- Constant or adjustable output voltage (depending on type)
- High efficiency up to 90%
- Low power dissipation and low heating
- Power Factor Correction (PFC) in accordance to EN 61000-3-2 (for type CP-24/5,0)
- CP 24/10 adj and CP 24/20 adj are possible to be operated in parallel
- Open-circuit, overload and short-circuit stable, automatic recovery
- Integrated input fuse



Integrated markers

Integrated markers allow the product to be marked quickly and simply. No additional marking labels are required.



Double-chamber cage connecting terminals

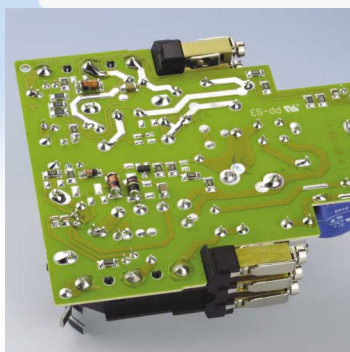
Double-chamber cage connecting terminals provide connection of up to two wires to 2x2.5mm² (2x14AWG), solid or stranded, with or without wire end ferrules. Potential distribution does not require additional terminations, thus saving time and money. Wiring is considerably simplified through integrated cable



CP-24
 → L+
 Output
 24 V DC
 → L-

Wide range of supply voltages

- Most CP types offer a wide range of supply voltage from 90 to 260 V AC, 47 to 440 Hz. No adjustments are necessary.
- Supply with 105 to 260 V DC is possible with nearly all CP types.



Mounting on DIN-rail

- Easy and fast mounting.

Safety


The 'real distance' is hidden.

Our products' air and creepage distances, exceed international standards, and substantially increase the safety.

Adjustable output voltage

The CP adj types offer a potentiometer to adjust the output voltage. This is to adapt the power supply to the needs of the application, e.g. to compensate voltage drop along long cable distances.



	CP-5/3.0	CP-6/3.0	CP-12/2.0	CP-12/2.0 adj	CP-24/0.3	CP-24/0.5	CP-24/1.0	CP-24/1.5 adj	
Power supplies CP range	5 V DC / 3 A	6 V DC / 3 A	12 V DC / 2 A	12 V DC / 2 A	24 V DC / 0,3 A	24 V DC / 0,5 A	24 V DC / 1 A	24 V DC / 1,5 A	
Order code:	1SVR 423 418 R3000	1SVR 423 418 R4000	1SVR 423 418 R1000	1SVR 423 418 R1100	1SVR 423 418 R2000	1SVR 423 414 R0000	1SVR 423 418 R0000	1SVR 423 418 R5000	1SVR 423 418 R5000
Approvals									
 UL 1604, Class I, Div. 2 UL 1310, Class 2	■	■	■	■	■	■	■	■	■
Technical data, Input									
Input voltage ⁽¹⁾	90...260V AC / 105...260V DC								
Input frequency	47...440 Hz								
Input voltage buffering	min. 10ms at 100%								
Input current at nominal load	0,31 A (115 V) 0,19 A (230 V)	0,38 A (115 V) 0,25 A (230 V)	0,46 A (115 V) 0,27 A (230 V)	0,46 A (115 V) 0,27 A (230 V)	0,2 A (90 V) 0,1 A (260 V)	0,46 A (115 V) 0,27 A (230 V)	0,46 A (115 V) 0,27 A (230 V)	0,7 A (115 V) 0,39 A (230 V)	0,7 A (115 V) 0,39 A (230 V)
Inrush current at 25°C (< 2 ms)	7,5 A	7,5 A	7,5 A	33 A	7,5 A	7,5 A	7,5 A	33 A (260 V)	33 A (260 V)
Internal input fuse	3 AT	3 AT	3 AT	3 AT	3 AT	3 AT	3 AT	3,15 AT	3,15 AT
Technical data, Output									
Output voltage	5 V DC ± 3%	6 V DC ± 3%	12 V DC ± 3%	12 V DC ± 3%	24 V DC ± 3%	24 V DC ± 3%	24 V DC ± 3%	24 V DC ± 3%	24 V DC ± 3%
Adjustable range	–	–	–	9 ... 15 V DC	–	–	–	21 ... 28V DC	21 ... 28V DC
Rated current ⁽²⁾	3 A	3 A	2 A	2 A	0,3 A	0,5 A	1 A	1,5 A	1,5 A
Efficiency	typ. 81%	typ. 83%	typ. 83%	typ. 83%	typ. 83%	typ. 84%	typ. 84%	typ. 86%	typ. 86%
Short-circuit / overload protection	continuous short-circuit stability, automatic recovery / over-temperature								
Parallel operation	No								
Elektromagn. immunity EN to EN 50082-2 ESD RF field Burst Surge Conducted RF					EN 61000-4-2 level 3	6/8kV			
					EN 61000-4-4 level 3	10V/m			
					EN 61000-4-5 level 3	4kV			
					EN 61000-4-5 level 3	3kV			
					EN 61000-4-6 level 3	10V			
EMC compatibility to EN 50081-2	EN 55011 Class B, PS 4,2 A and 5 A								
Power factor correction (PFC) to EN 61000-3-2	No								
Other data									
Protection housing	IP 50	IP 50	IP 50	IP 30	IP 30	IP 30	IP 50	IP 30	IP 30
Protection terminals	IP 20								
Operating temperature	0°C ... +55°C								
Dimensions (WxHxD, mm)	45 x 78 x 100	45 x 78 x 100	45 x 78 x 100	45 x 78 x 100	22,5 x 78 x 120	22,5 x 78 x 120	45 x 78 x 100	45 x 78 x 100	45 x 78 x 100
Weight (kg)	approx. 0,22	approx. 0,22	approx. 0,22	approx. 0,22	approx. 0,22	approx. 0,22	approx. 0,22	approx. 0,22	approx. 0,22



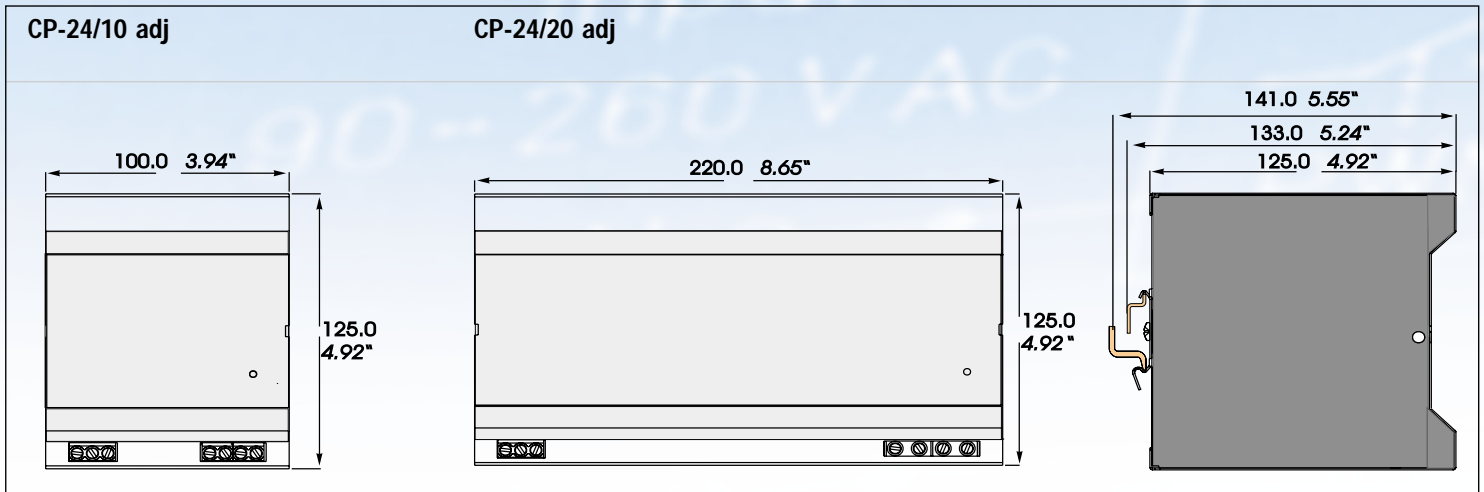
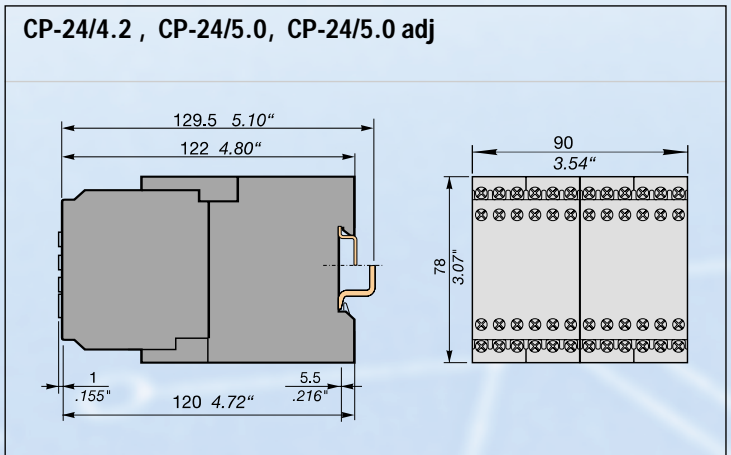
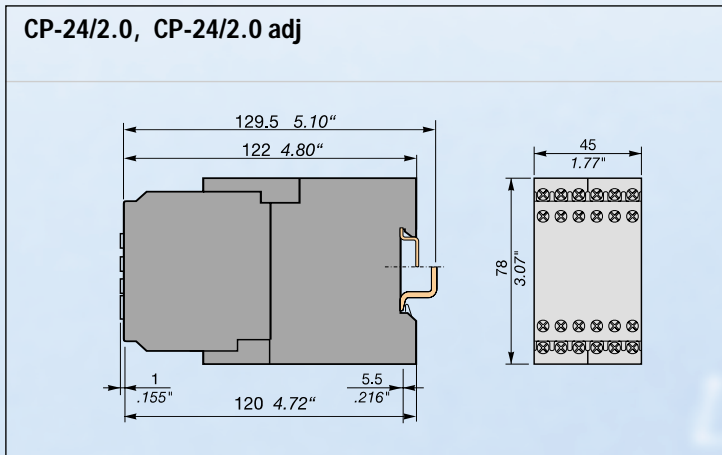
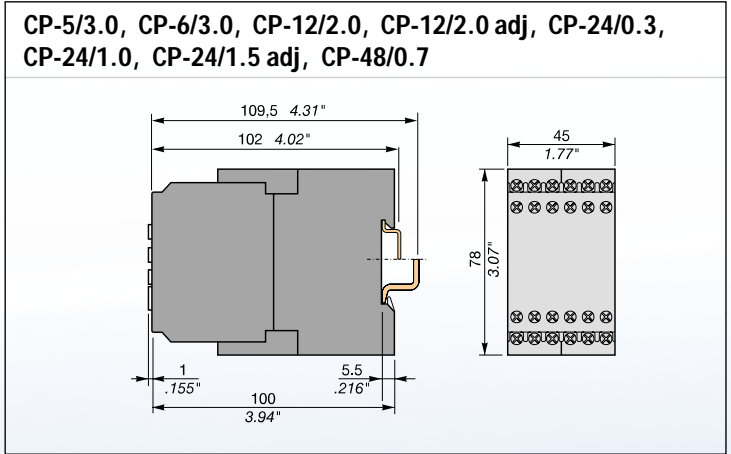
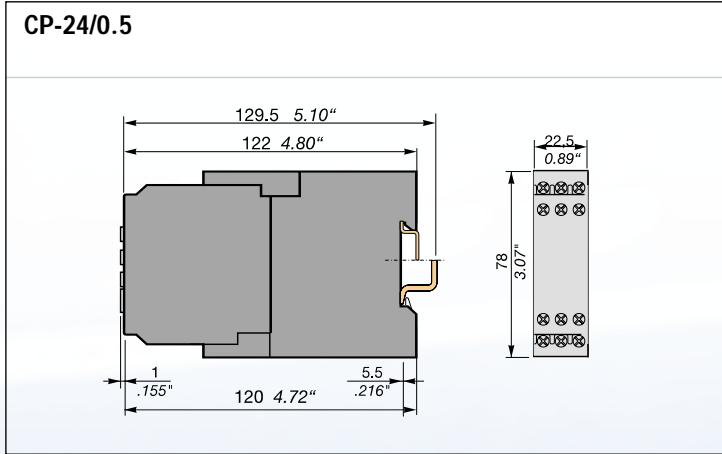
CP-24/2.0	CP-24/2.0 adj	CP-24/4.2	CP-24/5.0	CP-24/5.0 adj	CP-24/10 adj	CP-24/20 adj	CP-48/0.7
24 V DC / 2 A	24 V DC / 2 A	24 V DC / 4,2 A	24 V DC / 5 A	24 V DC / 5 A	24 V DC / 10 A	24 V DC / 20 A	48 V DC / 0,7 A
1SVR 423 417 R0000 (90...140V AC) 1SVR 423 417 R1000 (140...260V AC, 160...260V DC)	1SVR 423 417 R1000 (140...260V AC, 160...260V DC)	1SVR 423 416 R1000	1SVR 423 416 R0000	1SVR 423 416 R0100	1SVR 423 415 R0000	1SVR 423 415 R1000	1SVR 423 418 R6000
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
140...260V AC / 160...260V DC		90...260V AC / 127...260V DC			93...132V AC / 187...264V DC		90...260V AC / 105...260V DC
47...440 Hz (1SVR 423 417 R0000: 47...63 Hz)		47...63 Hz					47...440 Hz
0% load							
1 A (90 V)	0,8 A (140 V)	1,1 A (115 V)	1,3 A (115 V)	1,3 A (115 V)	3,5 A (115 V)	7,2 A (115 V)	0,7 A (115 V)
0,45 A (230 V)	0,45 A (260 V)	0,53 A (230 V)	0,63 A (230 V)	0,63 A (230 V)	1,7 A (260 V)	3,5 A (260 V)	0,35 A (260 V)
18 A (140 V)	33 A (260 V)	40 A (260 V)	40 A (260 V)	40 A (260 V)	69 A (260 V)	max. 65A (260V)	33 A (260 V)
33 A (260 V)							
3 AT	3 AT	2 AT	2 AT	2 AT	4 AT	10 AT	3 AT
24 V DC ± 3%							
-	21 ... 28V DC	-	-	23 ... 28V DC	24... 28V DC	24... 28V DC	-
2 A	2 A	4,2 A	5 A	5 A	10 A	20 A	0,7 A
typ. 86%	typ. 86%	typ. 85%	typ. 85%	typ. 85%	typ. 90%	typ. 88%	typ. 85%
switch off, reset with disconnection of input voltage min. 30 sec.							
					Yes (internally jumpered)	No	
		EN 61000-4-2 level 3 6/8kV	6/8kV		EN 61000-4-2 level 3 6/8kV		
		EN 61000-4-3 level 3 10V/m	10V/m		EN 61000-4-3 level 3 10V/m		
		EN 61000-4-4 level 3 2kV	2kV		EN 61000-4-4 level 3 4kV		
		EN 61000-4-5 2kV	2kV		EN 61000-4-5 level 4 2/4kV (CP 48/0.7: EN 61000-4-5 3kV)		
		EN 61000-4-6 level 3 10V	10V		EN 61000-4-6 level 3 10V		
Class A (Class B in process)							
				Yes	No		
IP 20	IP 30	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
					-25°C ... +70° C (derating at 60...70°C)		0°C ... +55°C
45 x 78 x 120	45 x 78 x 120	90 x 78 x 120	90 x 78 x 120	90 x 78 x 120	100 x 125 x 125	220 x 125 x 125	45 x 78 x 100
approx. 0,3	approx. 0,3	approx. 0,58	approx. 0,58	approx. 0,58	approx. 1,05	approx. 2,2	approx. 0,22

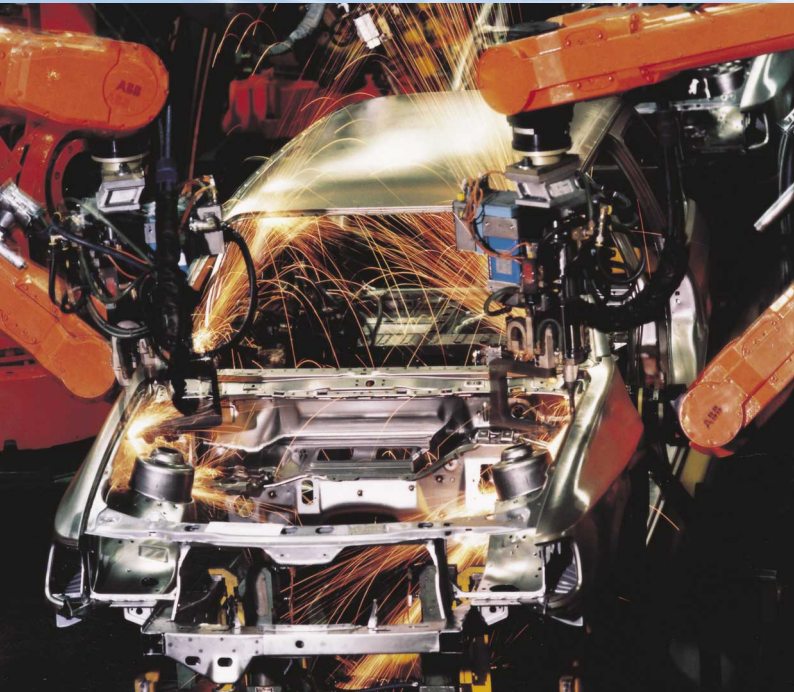


Redundant power supply CP-RUD
1SVR 423 418 R 9000

Monitors two ABB power supplies, each up to 5 A maximum. If one power supply fails, the module automatically switches to the alternate supply without interruption of the load current. Allow for one volt drop across module.

Dimensions





Reliability in different environments

- Due to their reliable construction, the CP range power supplies can be used in very harsh environments.
- Adherence to electrical safety standards makes these power supplies very safe and well-suited for industrial equipment while also allowing their use in domestic applications, wherever automation is important.
- The wide AC/DC range of input power makes these power supplies very flexible and offers a perfect solution for DC networks, power failure back-up systems, and much more.
- Adjustable output voltage compensates for drops in the DC power line.

cULus, CE, EN 50178 (VDE0160) and EN 60950 certifications

- Universal certifications for all CP range power supplies ensure high quality and reliability.
- All types are UL 508 listed, which allows them to be used in UL applications without any output current derating.
- Class B compatibility with EN 50081-2 for radiated noise allows the use of CP range power supplies in both industrial and domestic applications.
- Almost all CP range power supplies are certified to UL standard 1604 and CSA 22.2 No. 213-M1987. These power supplies are suitable for use in hazardous locations to Class I, Division 2, Groups A, B, C, and D or non-hazardous locations only.
- Some CP power supplies additionally are approved to UL 1310 Class 2.

High efficiency within compact dimensions

- With efficiency up to 90%, CP range power supplies have a very low power loss, thereby reducing generated heat considerably.
- The small sizes make these power supplies ideal for all types of equipment, especially mounted on DIN-rail.



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