

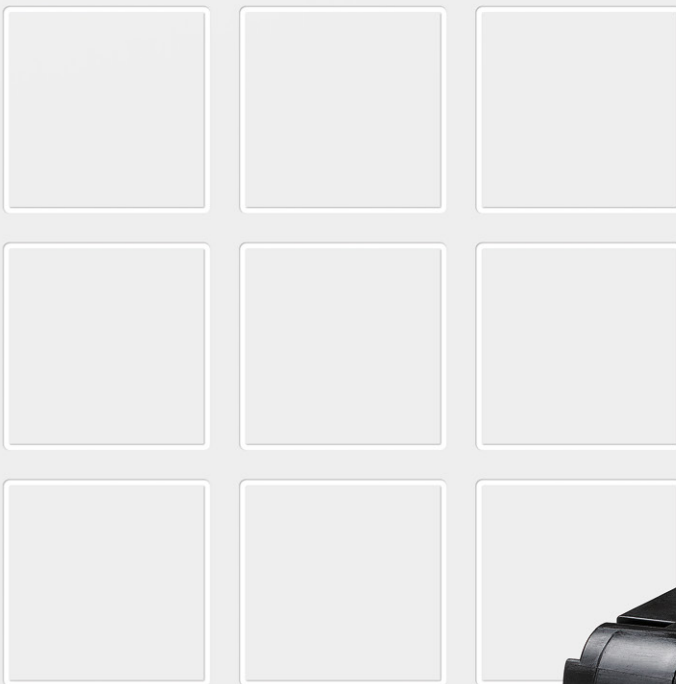
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Contactors

C300 Series

1 pole
bi-directional DC
NO contactors
up to 500 amps

Flyer C300.en



More information
schaltbau.com

C300 – 1 pole bi-directional DC NO contactors

Schaltbau's new super-compact bi-directional DC contactors of the C300 series switch high power in a very small space. With a making capacity of up to 2,500 amperes, the extremely compact series is suitable for applications with high inrush currents or high capacitances. All versions can carry up to 500 amperes continuously. In the event of a short circuit, even 5,000 amperes may flow for 20 milliseconds without the contacts welding. This

- Super-compact dimensions – high rated insulation voltage U_i up to 1,500 volts
- High thermal continuous current I_{th} of up to 500 amps and high short-time withstand current rating I_{cw} of up to 5,000 amps
- High making capacity I_{cm} of up to 2,500 amps, due to high contact forces and burn-off resistant silver contacts

means that the contactor retains its full function to switch large powers when required: up to 500 amperes and up to 1,500 volts – regardless of the direction of the current. This full bi-directionality is important for systems with a charging and discharging process, such as in battery storage or electric vehicles. Typical applications are the DC circuit in inverters, e.g. in combiner boxes in photovoltaic systems or in battery storage systems.

- Full bi-directionality – reliable switching of high performances, regardless of the current direction
- Auxiliary switch with mirror contact function according to IEC 60947-4-1, annex F

Ordering code

Example: **C300-500-GOP-24I-V1**

Series, contact configuration	C300 1 pole DC NO contactor	Auxiliary switches, number / type	1x / Integrated aux. contact NC* V1
Conv. thermal current	500 $I_{th} = 500$ A	Coil design	Monostable with PWM module I
Assembly	G Mounting holes R Top-hat rail mounting	Coil voltage	24
Terminal main contacts	0 Standard, copper fixed contacts	$U_s = 12 \dots 24$ V DC, operating range 8 ... 36 V DC	
Connector coil and aux. switch	P with PWM-Modul, Phoenix Contact MCV 1,5/4-GF-3,5		

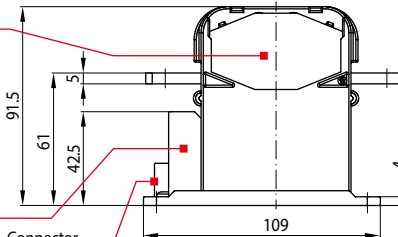
Note:
Presented in this flyer are only stock items which can be supplied in short delivery time. For some variants minimum quantities apply. Please ask for your customer-specific version.

*With mirror contact function according to IEC 60947-4-1, annex F

Dimension diagram, circuit diagram

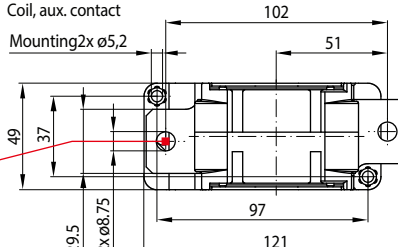
Main contact system, arc chamber

- Massive designed 1-pole contact system
- Highly efficient arc chamber with permanent magnetic blowing



Electronic coil controller

- Permanently reliable switching
- Regardless of the ambient temperature
- Reduced energy consumption and less heat generation

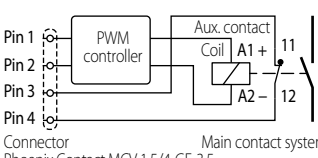


Main contact terminals

- Material: Copper
- Thickness: 5 mm
- Diameter: 8.75 mm (for M8)

Circuit diagram with PWM module

- Main contact 1 Fixed contact 1
2 Fixed contact 2
- Coil terminal Pin 1 Coil A1+ U_s+
Pin 2 Coil A2- U_s-
- Aux. contact Pin 3 Contact 11
Pin 4 Contact 12



Dimensions in mm

Specifications

Series		C300-500
Type of voltage	DC bi-directional	
Main contacts, configuration	1 NO	
Main contacts		
Rated operational voltage	U_e	1,000 V @ PD3 / 1,500 V @ PD2
Rated insulation voltage	U_i	1,000 V @ PD3 / 1,500 V @ PD2
Rated impulse withstand voltage	U_{imp}	8 kV
Pollution degree	PD2 / PD3	
Overtoltage category	OV3	
Conventional free air thermal current	I_{th}	500 A / 600 A / 1.200 A
8 h / 10 min / 10 sec @ Connection cross section 300 mm ²		
Rated short-time withstand current	I_{cw}	5,000 A @ t = 20 ms
Aux contact		
Number, configuration	1 NC	
Mirror contact function	●	
Minimum voltage / current	5 V / 10 mA	
Magnetic drive		
Rtd. contr. supply volt. U_s	12 ... 24 V DC	
Operating range	9 ... 36 V DC	
Coil suppression	PWM module, integrated	
Vibration		
ISO 16750-3	Profil IV	
Shock		
ISO 16750-3	50g / 6 ms	
Mechanical endurance		
200,000 operations		
Mounting position		
horizontal, vertical		
Temperatures		
-40 °C ... +40 °C		
Weight		
0.75 kg		