

C303

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

DC



up to
**25%
MORE**
energy cost
savings



C303 - 1 pole bi-directional DC NO contactors up to 1,500 volts and 500 amps

The C303 bi-directional DC contactors are compact high-performance switching devices with high making and short-time currents of up to 5,000 amperes or large capacities for applications such as battery storage, charging stations or test benches.

The switching devices are available with 3 coil controls:

- **Ecosave:** With energy-saving PWM module for optimum power consumption when switching and low heating when holding
- **High-efficiency drive (HED):** With economical drive without PWM module for maximum efficiency
- **Precharging contactor:** For limiting high making currents and to protect main contactors, special variant without economy circuit

- **Up to 25% energy cost savings:** A permanently low contact resistance and lower contact heating reduce energy losses and require less cooling
- **Full bidirectionality:** Safe disconnection of high power during charging and discharging thanks to specially designed extinguishing chamber; V2G ready
- **Safe breaking of high power:** High breaking capacity under full load up to 1.5 megawatts thanks to innovative main contact system
- **No risk of explosion:** Permanent magnetic arc extinguishing without gas encapsulation equalises overheating and overpressure at all times
- **High mounting compatibility:** Compact size specially designed for industrial applications
- **High safety level:** Mirror contact for safe feedback of the switching status according to IEC 60947-4-1, annex F

Ordering code

C303-500-G0P-24I-V1-P00

Series, contact configuration	C303 1 pole bi-directional DC NO contactor	Special variant	Ecosave, HED w/o Precharge P00
Conventional thermal current	350 $I_{th} = 350$ A, fixed contact copper	Auxiliary switch	w/o aux. switch V0
	500 $I_{th} = 500$ A, fixed contact copper, silver-plated**		1x S880, integrated aux. switch CO (SPDT) V1
Assembly	G Mounting holes	Coil voltage/coil control (monostable)	Ecosave: 12 ... 24 V DC, with PWM module (w/o -P00) 24I
Design fixed contacts	0 Standard, fixed copper contacts, M6 connection		HED: 12 V DC, w/o PWM module (w/o -P00) 12H
			HED: 24 V DC, w/o PWM module (w/o -P00) 24H
			Precharge: 12 V DC, w/o PWM module (with -P00) 12I
			Precharge: 24 V DC, w/o PWM module (with -P00) 24I
		Coil connector	Phoenix Contact 2-pol 180° RM 3.5 GF P
			Flat tabs 4.8 x 0.5 mm F

Note: Presented in this flyer are only stock items. For some variants minimum quantities apply.

Dimension diagram, circuit diagram

Main contact system with arc chamber

- Solid 1 pole NO contact system
- High-efficiency arc chamber with permanent magnetic blow-out

PWM module*

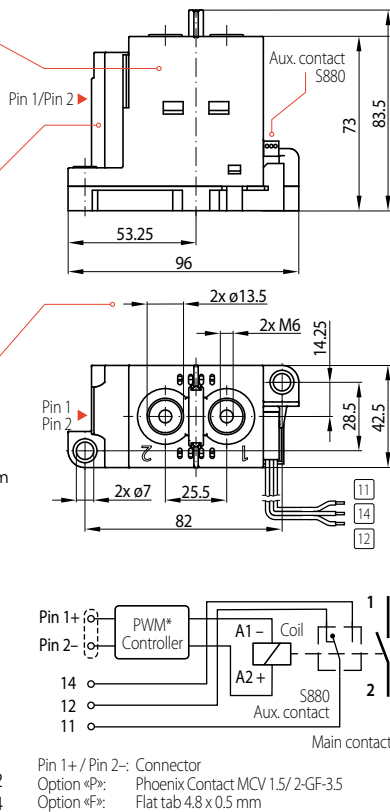
- Permanently reliable switching behaviour regardless of the ambient temperature
- Reduced energy consumption, lower heat generation

Connections fixed contacts main contact system

- Material: Copper
- Terminal: M6, Screw-in depth 10 mm
- Diameter: 13.5 mm

Circuit diagram with PWM module*

- Main contacts
 - 1 Fixed contact 1
 - 2 Fixed contact 2
- Coil terminal
 - Pin 1+ U_S+ Coil A1-
 - Pin 2- U_S- Coil A2+
- Aux. contact
 - Lead black Contact 11
 - Lead grey Contact 12
 - Lead blue Contact 14



Specifications

Series	C303-350	C303-500
Type of voltage	DC bi-directional/AC, $f \leq 60$ Hz	
Main contacts, configuration	1 NO	
Max. switching voltage	U	1,500 V
Rated insulation voltage	U_i	1,000 V @ PD3 / 1,500 V @ PD2
Rated impulse withstand voltage	U_{imp}	10 kV
Pollution degree / overvoltage category	PD 2, PD3: see U_i / OV2	
Conventional free air thermal current	I_{th}	350 A / 500 A**
Aux contact		
Number, configuration / Contact material	1x Snap-action switch S880 / Silver	
Mirror contact	IEC 60947-4-1, annex F	●
Minimum voltage / current	5 V / 10 mA	
Terminals	Leads, length 500 mm	
Magnetic drive (monostable)		
Rtd. control supply voltage U_S / Operating range	Ecosave 24I 12 ... 24 V DC / 10.5 ... 30 V DC	
	HED 12H 12 V DC / 10.2 ... 13.8 V DC	
	24H 24 V DC / 20.4 ... 27.6 V DC	
	Precharge 12I 12 V DC / 8.4 ... 15 V DC	
	24I 24 V DC / 16.8 ... 30 V DC	
Vibration, shock	ISO 16750-3	upon request
Mechanical endurance	200,000 operations	
Mounting position	vertical / horizontal	
Approvals		
Temperatures	-40 °C ... +85 °C	
Weight	< 0.5 kg	
* Option HED and Precharge w/o PWM module ** Ecosave and HED only		