

C303

1-pole bi-directional DC NO
contactors up to 350 amps

DC



C303 - 1-pole bi-directional DC NO contactors up to 350 amps

Compact 1-pole NO contactors for DC up to 1,500 volts rated insulation voltage, continuous currents up to 350 amps and high making and short-time currents.

The C303 bi-directional DC contactors are compact, high-performance switchgear for applications with high making currents or large capacities. All versions can carry up to 350 amps continuously; in the event of a short circuit, significantly higher currents can flow without the contacts welding together. This means that the contactor retains its full function to disconnect high loads - up to 1.5 MW - regardless of the current direction. This full bi-directionality is important for systems with a charging and discharging process.

Typical applications are DC circuits in inverters, in battery storage systems or in charging stations in the e-mobility sector.

- Compact dimensions with a high rated insulation voltage U_i of up to 1,500 volts
- High thermal continuous current I_{th} of up to 350 amps
- High breaking capacity up to 1.5 megawatts max. and full bidirectionality - safe disconnection of high power loads
- 3 versions: Coil control with energy-saving PWM module, economical high-efficiency drive or special version as precharge contactor
- Auxiliary switch with mirror contact function according to IEC 60947-4-1, annex F

Ordering code

C303-350-G0P-24I-V1

Series, contact configuration	C303	1-pole bi-directional DC NO contactor	Auxiliary switch, number / type	V1	1x integrated aux. switch CO (SPDT) with mirror contact function according to IEC 60947-4-1, annex F
Conventional thermal current	350	$I_{th} = 350$ A	Coil voltage/coil control	24I	$U_s = 12 \dots 24$ V DC, operating range 9 ... 32 V DC, Monostable with PWM module
Assembly	G	Mounting holes	Coil voltage/coil control	24E	$U_s = 24$ V DC, operating range 20.4 ... 26.4 V DC, Monostable with high-efficiency drive
Design fixed contacts	0	Standard, fixed copper contacts, M6 connection	Coil connector	P	with PWM module: Phoenix Contact 2-pol 180° RM 3.5 GF
				F	with high-efficiency drive: Flat tabs 4.8 x 0.5 mm

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

Option «I», Coil control with PWM module

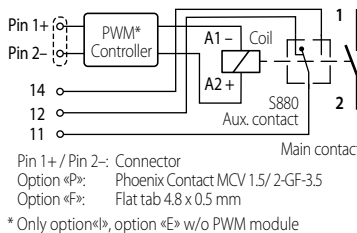
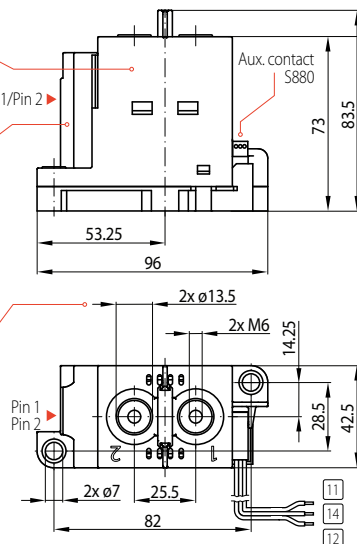
- Permanently reliable switching behaviour regardless of the ambient temperature
- Reduced energy consumption, lower heat generation
- Note: Version "E" without PWM module

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	
Type of voltage	DC bi-directional	
Main contacts, configuration	1 NO	
Rated operational voltage	U_e	1,000 V
Rated insulation voltage	U_i	1,500 V
Rated impulse withstand voltage	U_{imp}	8 kV
Pollution degree	PD2	
Overvoltage category	OV2	
Conventional free air thermal current	I_{th}	350 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 I:	24 V DC / 9 ... 32 V DC	
E:	24 V DC / 20.4 ... 27.6 V DC	
Vibration	ISO 16750-3	upon request
Schock	ISO 16750-3	upon request
Mechanical endurance	200,000 operations	
Mounting position	vertical / horizontal	
Temperatures	-40 °C ... +85 °C	
Weight	< 0.5 kg	