eddicy A Schaltbau Brand

C803

1 pole bi-directional DC NO contactors up to 500 amps for e-mobility applications

DC

C803 – 1 pole bi-directional DC NO contactors for e-mobility applications

Efficient and compact single-pole DC NO contactors up to 1,500 volts switching voltage, continuous currents up to 500 amps and high inrush and short-time currents for most diverse e-mobility applications.

The contactors in the C803 series offer a breaking capacity of up to 1,800 amps at 450 volts and ensure safety in the Battery Disconnect Unit (BDU) by reliably disconnecting the high-voltage battery from the drivetrain in the event of danger. In the event of a short circuit, the C803 can rapidly handle up to 5,000 amps for 20 milliseconds – without contact welding. The switching devices are available with an energy-saving PWM drive for optimum power consumption when switching and low heating when holding or with an optimized coil with external control for maximum efficiency.

- **More efficiency:** An over-life low contact resistance and lower contact heating reduces 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 automotive applications
- **High safety level:** Mirror contact for safe feedback of the switching status according to IEC 60947-4-1, annex F

Ordering code

C803-500-G0F-24E-V0

Series, contact configuration
C803 1 pole bi-directional DC NO contactor

Conventional thermal current
350 I_{th} = 350 A, fixed contacts copper
500 I_{th} = 500 A, fixed contacts copper, silver-plated

Assembly
G Mounting holes

Design fixed contacts
0 Standard, fixed copper contacts, M6 connection

Auxiliary switch
w/o aux. switch **V0**
1x S880, integrated aux. switch CO (SPDT) **V1**

Coil control
PWM module **I**
External*1 **E**

Coil voltage*2 (monostable)
12 V DC **12**
24 V DC **24**

Coil, aux. connector
5pole Phoenix Contact 180° RM 3,5 GF for version «I» and «V1» **P**
2x flat tabs 4,8 x 0,5 mm for version «E» and «V0» **F**

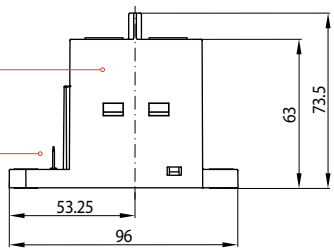
Note: Presented in this flyer are preferred types.
For some variants minimum quantities apply.

*1 PWM control and suppressor diode to be implemented by customer.
*2 Please ask for customer-specific versions

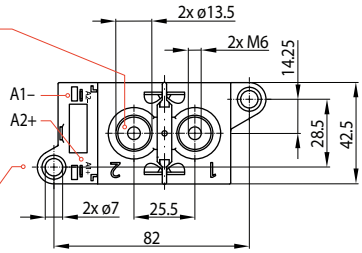
Dimension diagram, circuit diagram

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

Coil terminals
- 2x flat tab 4,8 x 0,5 mm



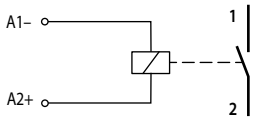
Connections fixed contacts main contact system
- Material:
  C803-350: Copper
  C803-500: Copper, silver plated
- Terminal: M6, Screw-in depth 10 mm tightening torque 6 ±0,6 Nm max.
- Diameter: 13.5 mm



Mounting
- 2x holes for M6 screws, tightening torque 6 ... 8 Nm max.

Dimension diagram, circuit diagram:
Shown w/o auxiliary switch and w/o PWM module

Circuit diagram
- Main contacts 1 Fixed contact 1
  2 Fixed contact 2
- Coil A1+ U_s +
  A2- U_s –



Specifications

Series		C803-350	C803-500
Type of voltage Main contacts, configuration		DC bi-directional/AC, f ≤ 60 Hz 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}	2,5 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		5 pole connector	
Magnetic drive (monostable)			
Rtd. control supply voltage Us / Operating range		12 V DC / 8 ... 16 V DC 24 V DC / 16 ... 32 V DC	
PWM control / coil circuit Terminals		internal / external*1 5 pole connector / 2x flat tabs	
Vibration, shock	ISO 16750-3	Test VII	
Mechanical endurance		200,000 operations	
Mounting position		vertical / horizontal	
Temperatures		-40 °C ... +85 °C	
Approvals / certifications		CE cULus UKCA / IATF 16949	
Weight		< 0.5 kg	

Dimensions in mm

Technical data are subject to change without prior notice.
For updated product information visit **www.schaltbau.com**

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