

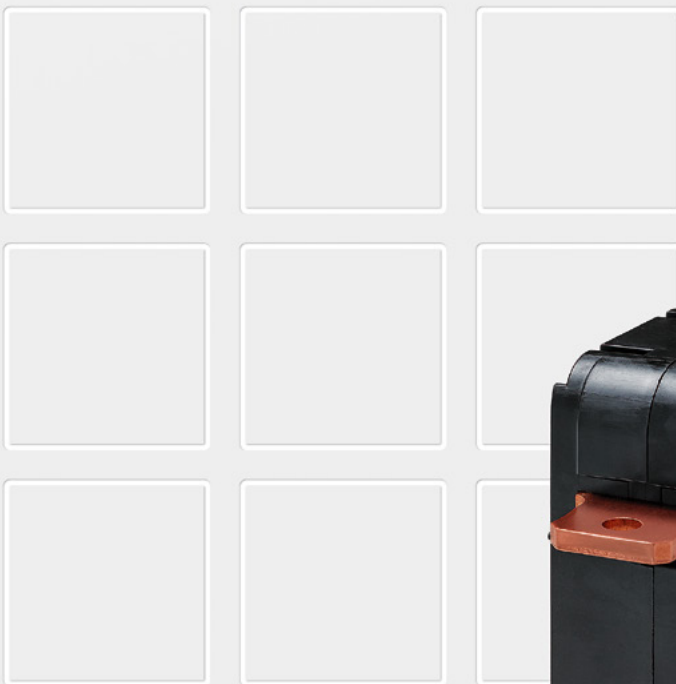
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Contactors

C800 series

**1 pole bi-directional
DC NO contactors up to 500 amps
for automotive applications**

Flyer C800.en



More information
schaltbau.com

C800 – 1 pole bi-directional DC NO contactors for automotive applications

Schaltbau's new compact bi-directional DC contactors C800 series for automotive applications in the modern mobility industry. They switch high power in a small space and have a making capacity of up to 6,000 amps. The contactors permanently carry up to 500 amps; in the event of a short circuit, even 7,000 amps may flow for 200 milliseconds without the contacts welding. Thus, the contactor retains its full function to switch large powers when required, for example up to 1,200 amps and 450 volts – regardless of the direction of the current.

- Compact dimensions – high rated insulation voltage U_i up to 1,000 volts
- High thermal continuous current I_{th} of up to 500 amps and high short-time withstand current rating I_{cw} of up to 7,000 amps
- High making capacity I_{cm} of up to 6,000 amps, due to high contact forces and burn-off resistant silver contacts

This makes C800 series contactors ideal for use in the Battery Disconnect Unit (BDU) of modern e-vehicles. The BDU connects the high-performance battery with the electrical components of the drive train. And it performs an important safety function: in the event of danger, it disconnects the high-voltage battery from the high-voltage grid. In the event of thermal overload or a short circuit, the electrical drive train is thus reliably galvanically isolated from the battery.

- 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: **C800-500-G0T-24E-V1**

Series, contact configuration	C800 1 pole DC NO contactor for automotive applications	Auxiliary switches, number / type	1x / Integrated aux. contact NC V1
Conv. thermal current	500 $I_{th} = 500$ A	Coil control	External *1 E
Assembly*1	G Mounting holes	Coil voltage*2	$U_s = 12$ V DC, operating range 8,5 ... 16 V DC 12 $U_s = 24$ V DC, operating range 16 ... 32 V DC 24
Terminal main contacts	0 Hole \varnothing 8.75 mm, fixed contacts solid copper 1 Thread M6, fixed contacts solid copper		
Connector coil and aux. switch*1	T Tyco TE 5-104361 4-pol		

Note:
Presented in this flyer are only stock items. For some variants minimum quantities apply.
*1 Coil control: External, PWM control and suppressor diode to be implemented by customer.
*2 Please ask for customer-specific versions

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

- Pin 1, Pin 2: coil terminal
- Pin 3, Pin 4: 1 pole NC, mirror contact function

Main contact terminals

- Material: Copper
- Thickness: 5 mm
- Connection: 8.75 mm (for M8) or thread M6

Circuit diagram

- 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		C800-500
Type of voltage		DC bi-directional
Main contacts, configuration		1 NO
Main contacts		
Rated operational voltage	U_e	1,000 V
Rated insulation voltage	U_i	1,000 V
Rated impulse withstand voltage	U_{imp}	2,5 kV
Pollution degree		PD3
Overvoltage 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		
Rated short-time withstand current	I_{cw}	7,000 A @ t = 200 ms
Aux contact		
Number, configuration		1 NC
Rated insulation voltage	U_i	24 V
Conv. free air thermal current	I_{th}	2 A
Magnetic drive		
Rtd. contr. supply volt. U_s		12 / 24 V DC
Operating range		8.5 ... 16 / 16 ... 32 V DC
PWM control / coil suppression		External / external*1
Vibration		
LV 124, M04 / ISO 16750-3		Profile D / profile IV
Shock		
LV 124, M05 / ISO 16750-3		50g / 6 ms (Temporary contact closing @ > 20 g/6 ms)
Mechanical endurance		
200,000 operations		
Mounting position		
horizontal, vertical		
Temperatures		
-40 °C ... +85 °C		
Weight		
0.75 kg		



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