

C800

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





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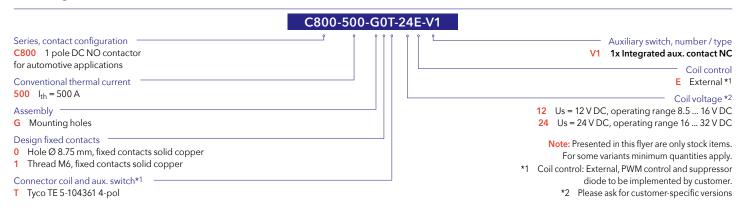
Schaltbau's new compact bi-directional DC contactors C800 series for automotive applications in the modern mobility industry. They switch high power in a small space and have a making capacity of up to 6,000 amps.

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.

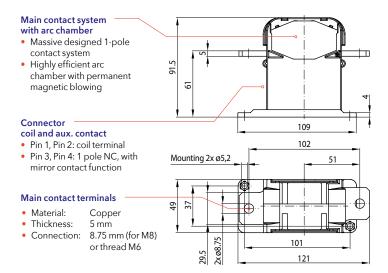
This makes C800 series contactors ideal for use in the Battery Disconnect Unit (BDU) of modern e-vehicles. The BDU connects the high-performance battery with the electrical components of the drive train. And it performs an important safety function: in the event of danger, it disconnects the high-voltage 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.

- ullet 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
- 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

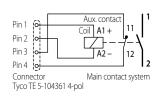


Dimension diagram, circuit diagram



Circuit diagram

Main contact	1 2	Fixed contact 1 Fixed contact 2
Coil terminal		Coil A1+ U _s + Coil A2- U _s -
Aux. contact		Contact 11 Contact 12



Specifications

Series		C800-500	
Type of voltage Main contacts, configuration		DC bi-directional 1 NO	
Main contacts,	configuration	TNO	
Rated operational voltage U _e		1,000 V	
$Rated insulation voltage \hspace{1cm} U_i \\$		1,000 V	
Rated impulse with stand voltage U_{imp}		2.5 kV	
Pollution degree		PD3	
Overvoltage category		OV3	
Conventional free air thermal current I _{th} 8 h / 10 min / 10 sec @ Connection cross section		500 A / 600 A / 2,500 A 185 mm ²	
Rated short-time withstand current I _{cw}		7,000 A @ t = 200 ms	
Aux contact Number, configuration Rated insulation voltage U _i Conv. free air thermal current I _{th}		1 NC 24 V 2 A	
Magnetic drive Rtd. contr. supply volt. U _s Operating range PWM control / coil suppression		12/24 V DC 8.5 16/16 32 V DC External / external*1	
Vibration Shock	LV 124, M04 / ISO 16750-3 LV 124, M05 / ISO 16750-3	Profile D / profile IV 50g / 6 ms (Temporary contact closing @>20g/6ms)	
Mechanical endurance		200,000 operations	
Mounting position		horizontal, vertical	
Temperatures		-40 °C +85 °C	
Weight		0.75 kg	