eddicy A Schaltbau Brand

C110B

Single pole DC NO contactors for industrial trucks

C110B – DC contactors for battery voltages

C110B series DC contactors are the cost-effective and environmentally friendly solution for operational currents up to 300 amps and battery voltages up to 48 volts.
The NO contactors are fitted with DC coils that have a coil tolerance as required by modern traction batteries of industrial trucks and other electric vehicles.
Due to economical material consumption (e.g. using as little silver and copper as possible), Schaltbau can offer these environmentally friendly switching devices at a reduced price - without compromising performance.
The single pole contactors are especially designed for use as main contactors or auxiliary contactors in all kinds of battery-powered vehicles in material handling.
A closed contact housing is standard with these contactors. It prevents plasma exit and, at the same time, protects the contactor from ingress of dust and dirt.

Features

- Compact, rugged design
- 4 sizes
- Closed contact housing, standard
- Double-break, cadmium free contacts
- Bidirectional version for DC applications
- Standards: Following EN 1175-1 and IEC 60947-4-1

Applications

- Main contactor for industrial trucks
- Main contactor for all kinds of battery-powered vehicles
- Auxiliary contactor for vehicle control and similar functions

C110B/80 and C110B/120 Series contactors

C110B/200 and C110B/320 Series contactors

Ordering code

C110B/300 24RX

Series
C110B 1 pole DC NO contactor

Rated operating current (70% duty cycle)
80 I_e = 80 A DC
120 I_e = 120 A DC
200 I_e = 200 A DC
320 I_e = 320 A DC

Coil voltage
24 / 48 V DC

Coil tolerance
R -20 % … +10 %

Coil suppression
X ---

Note:

Presented in this catalogue are only stock items which can be supplied in short delivery time.
For some variants minimum quantities apply. Please do not hesitate to ask for the conditions.

Special variants

If you need a special variant of the contactor, please do not hesitate to contact us. Maybe, the type of contactor you are looking for is among our many special designs. If not, we can also supply customized designs. In this case, however, minimum order quantites apply.

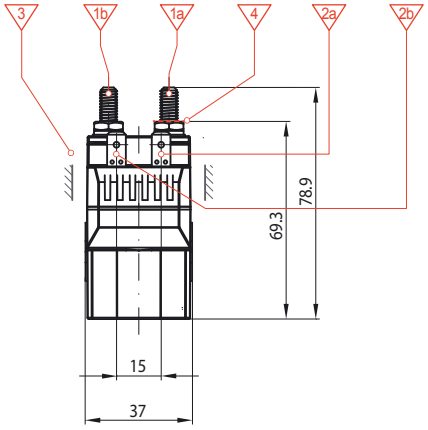
Specifications

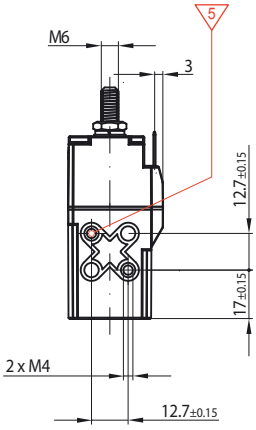
Series	Standard	C110B/80	C110B/120	C110B/200	C110B/300
Kind of voltage		DC (bi-directional)			
Main contacts, number of, configuration		1x NO			
Electrical data					
Utilization category	EN 60947-4-1	DC-1			
Rated operating voltage U_e	EN 60947-4-1	48 V			
Rated insulation voltage U_i	EN 60947-4-1	80 V			
Rated impulse withstand voltage U_{imp}	EN 60947-4-1	1.5 kV			
Pollution degree Overvoltage category	EN 60947-4-1	PD3 OV3			
Rated operating current I_e (70 % duty cycle, duration 60 s)	EN 60947-1	80 A	120 A	200 A	300 A
Conventional thermal current I_{th}	EN 60947-1	60 A	100 A	150 A	250 A
Rated short-circuit making capacity I_{cm}	EN 60947-1	300 A	600 A	1,000 A	1,500 A
Rated short-circuit breaking capacity I_{cn}	EN 60947-1	300 A	300 A	500 A	1,200 A
Rated short time withstand current I_{cw}	EN 60947-1	400 A	800 A	1,500 A	1,800 A
Minimum wire gauge at I_{th}		10 mm²	25 mm²	50 mm²	95 mm²
Main contacts					
Contact material Terminals / torque		$AgSnO_2$ M6 / 3 Nm max.	$AgSnO_2$ M8 / 6 Nm max.	$AgSnO_2$ M8 / 6 Nm max.	$AgSnO_2$ M10 / 10 Nm max.
Magnetic drive					
Coil voltage U_s		24 / 48 V DC	24 / 48 V DC	24 / 48 V DC	24 / 48 V DC
Coil tolerance		–20 % ... +10 % U_s	–20 % ... +10 % U_s	–20 % ... +10 % U_s	–20 % ... +10 % U_s
Coil suppression		---	---	---	---
Power consumption at Us (Ta = 20 °C) cold / warm coil		< 6.5 W / < 5 W	< 13.5 W / < 10 W	< 17 W / < 13 W	< 17 W / < 13 W
Pull-in time, typical at T_a = 20 °C Pull-in voltage, typical (cold coil, T_a = 20 °C)		25 ms 0.6 x U_s	40 ms 0.6 x U_s	50 ms 0.6 x U_s	50 ms 0.6 x U_s
Drop-out time, typical at T_a = 20 °C Drop-out voltage, typical		10 ms 0.1 ... 0.4 x U_s	20 ms 0.1 ... 0.4 x U_s	15 ms 0.1 ... 0.4 x U_s	20 ms 0.1 ... 0.4 x U_s
Coil terminals, flat tabs		6,3 x 0,8 mm	6,3 x 0,8 mm	6,3 x 0,8 mm	6,3 x 0,8 mm
Degree of protection	EN 60529	Terminals IP00 / Switching chamber IP40			
Endurance electrical mechanical		 > 50,000 cycles (U_e, I_e, T < 1 ms) > 1 million cycles			
Vibration, Shock Vibration Shock Shock (Transport)	 EN 60068-2-6 EN 60068-2-27	 5 g (10 ... 500 Hz) *1 20 g (10 ms, half sinus) *1 70 g (6 ms, half sinus)			
Mounting position		Vertical (studs pointing upwards) or horizontal			
Temperature range Operating temperature T_a Storage temperature		 –25 °C … +40 °C –40 °C … +85 °C			
Approvals		CE cULus EAC UKCA			
Weight		< 850 g			

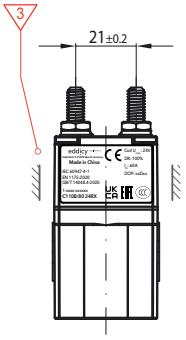
*1 Contact opening times <2 ms

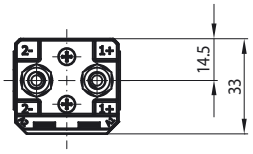
C110B/80 – Single pole NO contactor I_e = 80 A DC / I_{th} = 60 A DC

Dimension diagram

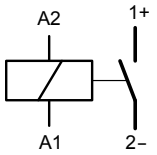








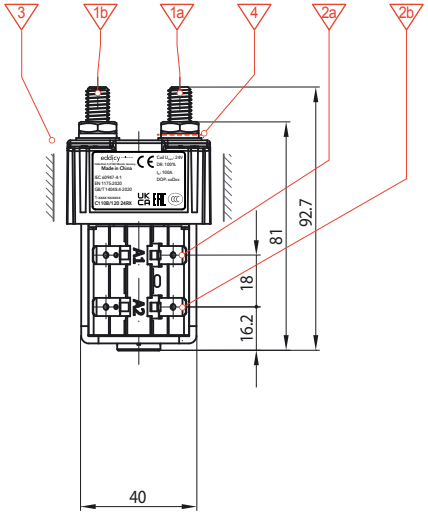
Circuit diagram

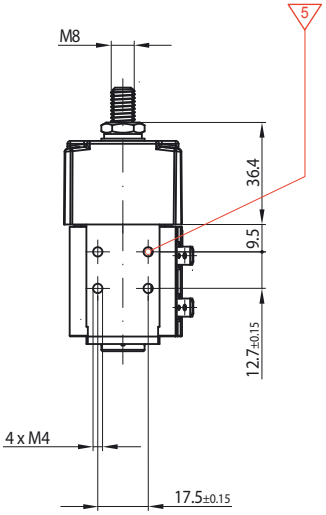


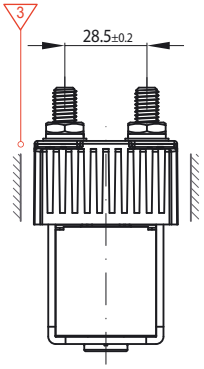
1a Main terminal »1+«: Threaded stud M6, tightening torque 5 Nm max.
1b Main terminal »2–«: Threaded stud M6, tightening torque 5 Nm max.
2a Coil terminal »A1«: Flat tabs 6.3x0.8 according to DIN46244
2b Coil terminal »A2«: Flat tabs 6.3x0.8 according to DIN46244
3 Clearance 5 mm to all sides of earthed as well as live parts
4 Stud terminals: Do not use the nut for termination! Nuts and washers for termination not included in delivery
5 Mounting with 4x M5 screws on each side, maximum length of thread engagement 2.5 mm, tightening torque 1.5 Nm

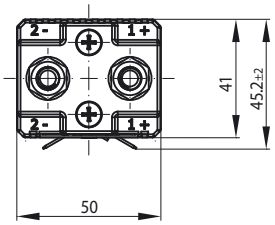
C110B/120 – Single pole NO contactor I_e = 120 A DC / I_{th} = 100 A DC

Dimension diagram

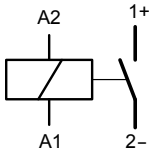








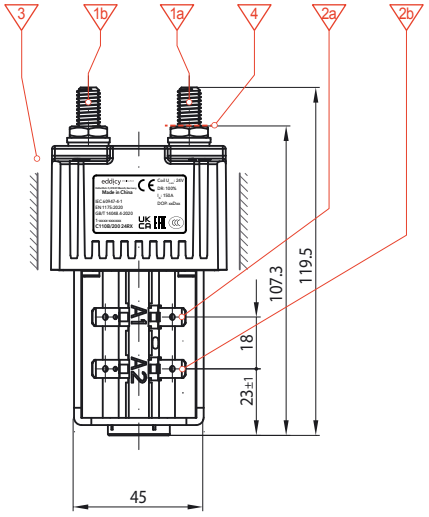
Circuit diagram

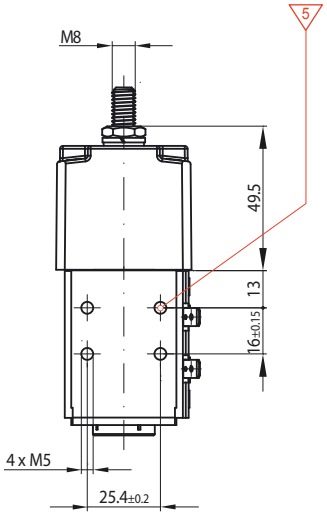


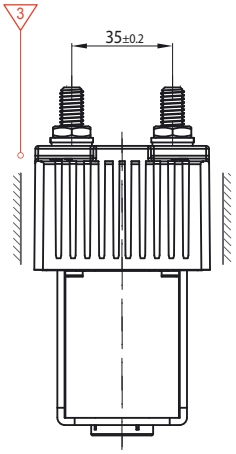
1a Main terminal »1+«: Threaded stud M8, tightening torque 7 Nm max.
1b Main terminal »2–«: Threaded stud M8, tightening torque 7 Nm max.
2a Coil terminal »A1«: Flat tabs 6.3x0.8 according to DIN46244
2b Coil terminal »A2«: Flat tabs 6.3x0.8 according to DIN46244
3 Clearance 5 mm to all sides of earthed as well as live parts
4 Stud terminals: Do not use the nut for termination! Nuts and washers for termination not included in delivery
5 Mounting with 4x M5 screws on each side, maximum length of thread engagement 2.5 mm, tightening torque 1.5 Nm

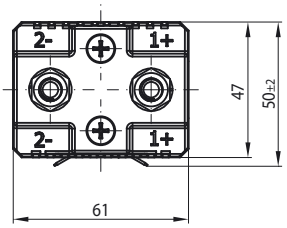
C110B/200 – Single pole NO contactor I_e = 200 A DC / I_{th} = 150 A DC

Dimension diagram

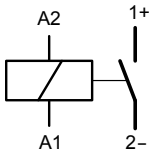








Circuit diagram



1a Main terminal »1+«: Threaded stud M8, tightening torque 7 Nm max.

1b Main terminal »2–«: Threaded stud M8, tightening torque 7 Nm max.

2a Coil terminal »A1«: Flat tabs 6.3x0.8 according to DIN46244

2b Coil terminal »A2«: Flat tabs 6.3x0.8 according to DIN46244

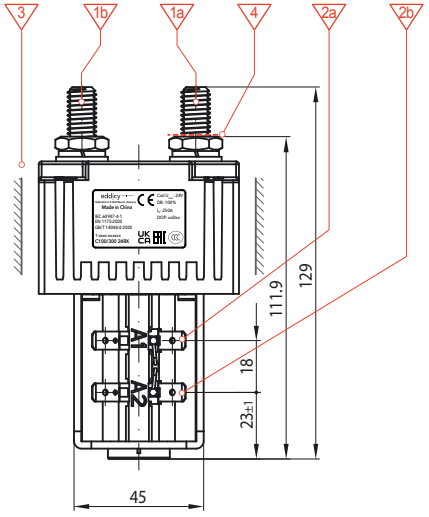
3 Clearance 5 mm to all sides of earthed as well as live parts

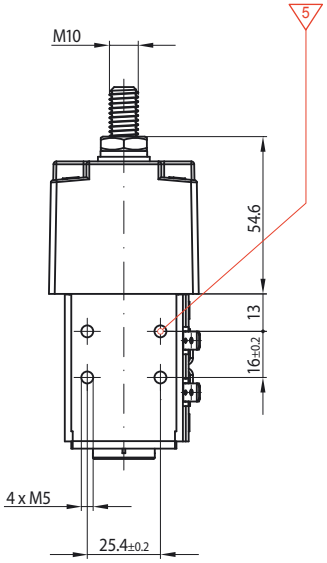
4 Stud terminals: Do not use the nut for termination! Nuts and washers for termination not included in delivery

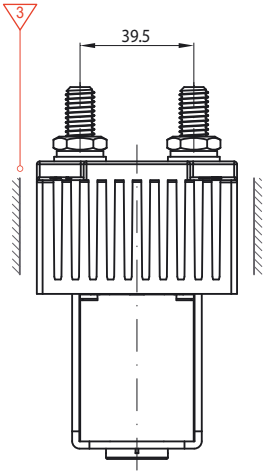
5 Mounting with 4x M5 screws on each side, maximum length of thread engagement 3 mm, tightening torque 2 Nm

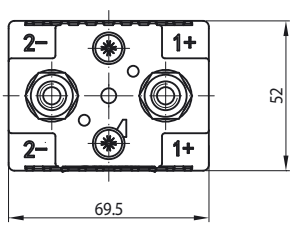
C110B/300 – Single pole NO contactor I_e = 300 A DC / I_{th} = 250 A DC

Dimension diagram

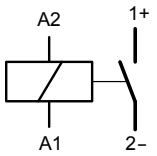








Circuit diagram



1a Main terminal »1+«: Threaded stud M10, tightening torque 10 Nm max.

1b Main terminal »2–«: Threaded stud M10, tightening torque 10 Nm max.

2a Coil terminal »A1«: Flat tabs 6.3x0.8 according to DIN46244

2b Coil terminal »A2«: Flat tabs 6.3x0.8 according to DIN46244

3 Clearance 5 mm to all sides of earthed as well as live parts

4 Stud terminals: Do not use the nut for termination! Nuts and washers for termination not included in delivery

5 Mounting with 4x M5 screws on each side, maximum length of thread engagement 3 mm, tightening torque 2 Nm

We enable electrification for a sustainable future

Schaltbau is a global technology leader specializing in contactors, connectors, switches, and electrical devices.

As pioneers of electrification, Schaltbau has been championing safety on rail for generations. Building on nearly a century of rail experience, with our sub-brand Eddicy we also create future-oriented products and solutions with the highest standards of safety and reliability to switch, connect, control and protect DC applications in energy and e-mobility.

Headquartered in Germany, Schaltbau has a worldwide presence with 12 production and sales sites on all major continents.

Find out more on www.schaltbau.com.

SCHALTBAU
Schaltbau GmbH
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