



# New era. New power. DC power.

Eddicy product overview for  
energy and e-mobility applications

# Powering Possibility

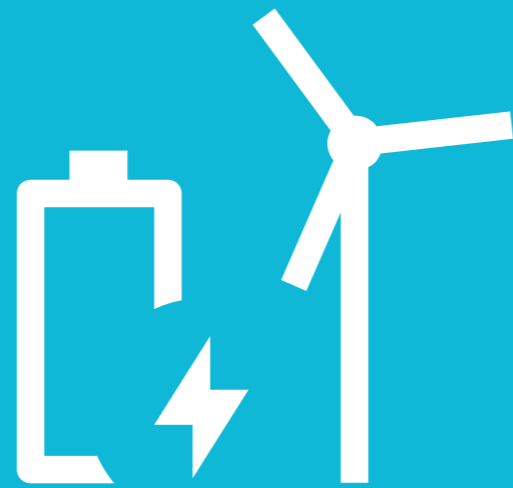
## Pioneering safe e-mobility

As a specialist for direct current applications, we have been developing high-quality electromechanical components for almost a century. This expertise in direct-current switching and control makes us the perfect partner for designing the future of e-mobility. With our innovative solutions, we aim to improve safety, reliability and performance across all vehicle classes to electrify the transport of people, goods and freight.









## Unlocking the energy potential

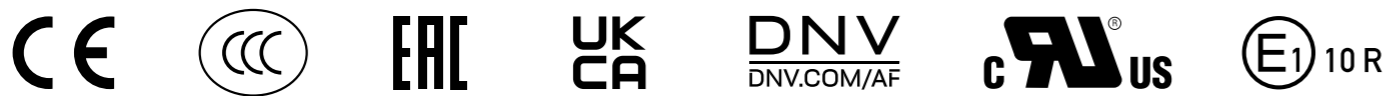
Our products are establishing new market standards for the direct connection of renewable energy sources, energy storage systems and electrical consumers. Our pioneering direct-current technologies not only reliably switch, protect and secure high-voltage systems but also save up to 25 percent energy costs.









Unlocking the energy potential

<p><b>EV Charging</b></p> 	<p>Fast charging at any time</p>	<p><b>Energy Storage</b></p> 	<p>Flexibility in the energy supply</p>
<p><b>Power Conversion</b></p> 	<p>Safe AC/DC conversion</p>	<p><b>Test Benches</b></p> 	<p>Safe battery testing</p>
<p><b>Data Centers</b></p> 	<p>Protecting sensitive infrastructure</p>	<p><b>DC Microgrids</b></p> 	<p>New standard for green production</p>

Certified product safety for energy and e-mobility



Pioneering safe e-mobility

<p><b>Automotive</b></p> 	<p>Battery safety for e-vehicles</p>	<p><b>Commercial Vehicles</b></p> 	<p>Transforming commercial transportation</p>
<p><b>Intralogistics</b></p> 	<p>Zero-emission material handling</p>	<p><b>Aviation</b></p> 	<p>Sustainable solutions for the aviation industry</p>
<p><b>Off-road</b></p> 	<p>Electrification off the beaten track</p>	<p><b>Marine</b></p> 	<p>Decarbonization on the water</p>
<p><b>Agriculture</b></p> 	<p>Clean mobility in the countryside</p>	<p><b>Specialty Vehicles</b></p> 	<p>Electromobility for the special case</p>

Certified quality and environmental management

- IATF 16949** Quality management in the automotive industry
- ISO 9001** International standard for quality management systems
- ISO 14001** Globally accepted standard for environmental management systems



Compact single-pole NO contactors for AC and DC up to 1,500 volts rated insulation voltage. Making current up to 6,000 amps; conventional thermal current up to 500 amps; short-time current up to 6,000 amps.

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

Features

- Compact dimensions - high rated insulation voltage up to 1,500 volts
- High thermal continuous current of up to 500 amps
- High making capacity up to 6,000 amps
- High short-time current-carrying capacity up to 6,000 amps
- Full bidirectionality - safe switching of high currents and voltages, regardless of the current direction
- Auxiliary switch with mirror contact function according to IEC 60947-4-1, annex F

Applications

Charging stations, battery test benches, photovoltaic systems, uninterruptible power supplies (UPS), maritime applications

Specifications

Series	C300	C303
Type of voltage	DC bi-directional	DC bi-directional
Main contact Configuration	1x NO	1x NO
Rated operating voltage $U_o$	1,500 V	1,500 V
Rated insulation voltage $U_i$	1,000 V@PD3 / 1,500 V@PD2	1,000 V@PD3 / 1,500 V@PD2
Rated impulse withstand voltage $U_{imp}$	8 kV	10 kV
Pollution degree	PD2 / PD3, see $U_i$	PD2 / PD3, see $U_i$
Overvoltage category	OV3	OV2
Conv. free air thermal current $I_{th}$	500 A @ 70° C	350 / 500 A
Rated short-time withstand current $I_{cw}$	6,000 A @ t = 20 ms	5,000 A @ t < 20 ms
Aux. contact number, configuration	1x, NC	1x max., snap-action switch S880, SPDT
Mirror contact function	IEC 60947-4-1, annex F	IEC 60947-4-1, annex F
Magnetic drive	Monostable	Monostable
Coil voltage $U_s$ (operating range)	12 ... 24 V DC (10.5 ... 36 V DC)	Ecosave: 12 ... 24 V DC (10.5 ... 30 V DC) HED: 12 V DC (10.2 ... 13.8 V DC) / 24 V DC (20.4 ... 27.6 V DC) Precharge: 12 V DC (8.4 ... 15 V DC) / 24 V DC (16.8 ... 30 V DC)
Coil control	PWM	Ecosave (PWM), high-efficiency drive (HED), precharge



Compact single-pole NO contactors for AC and DC up to 1,500 volt rated insulation voltage. Making current up to 2,500 amps; conventional thermal current up to 500 amps; short-time current up to 3,000 amps.

Compact single-pole NO contactors for DC up to 1,800 volts rated insulation voltage. Making current up to 3,000 amps; conventional thermal current up to 1,000 amps; short-time current up to 4,500 amps.

Features

- Compact dimensions - high rated insulation voltage up to 1,500 volts
- High thermal continuous current of up to 500 amps
- High making capacity up to 2,500 amps
- High short-time current-carrying capacity up to 3,000 amps
- Full bidirectionality - safe switching of high currents and voltages, regardless of the current direction
- Auxiliary switch with mirror contact function according to IEC 60947-4-1, annex F

Applications

Charging stations, energy storage systems, industrial DC grids, photovoltaic systems, test systems

Specifications

Series	C310K - C310A - C310S	C320K - C320S
Type of voltage	DC bi-directional / AC, $f \leq 60$ Hz	DC bi-directional / AC, $f \leq 60$ Hz
Main contact Configuration	1x NO	1x NO
Rated operating voltage $U_o$	C310K/C310A: 1,000 V@PD3 / 1,500 V@PD2 / C310S: 60 V@PD3	C320K: 1,500 V / C320S: 60 V
Rated insulation voltage $U_i$	1,000 V@PD3 / 1,500 V@PD2	1,800 V
Rated impulse withstand voltage $U_{imp}$	10 kV	10 kV
Pollution degree	PD2 / PD3	PD3
Overvoltage category	OV3	OV3
Conv. free air thermal current $I_{th}$	150 / 300 / 500 A @ 85° C	1,000 A @ 60° C
Rated short-time withstand current $I_{cw}$	3,000 A @ 1 s	4,500 A @ 100 ms
Aux. contact number, configuration	2x max., snap-action switch S880, SPDT	4x max., snap-action switch S870, SPDT
Mirror contact function	IEC 60947-4-1, annex F	max. 2, IEC 60947-4-1, annex F
Magnetic drive	Monostable	Monostable
Coil voltage $U_s$ (operating range)	12 ... 24 V DC (9.5 ... 36 V DC) / 48 V DC (33.6 ... 60 V DC)	24 / 48 V DC
Coil control	PWM	Impuls 0.1 ... 0.5 s max.

Features

- Compact dimensions - high rated insulation voltage up to 1,800 volts
- High thermal continuous current of up to 1,000 amps
- High making capacity up to 3,000 amps and an excellent breaking capacity
- Low energy consumption and low heating thanks to sophisticated coil saving circuit
- Full bidirectionality - reliable disconnection of high power ratings
- Auxiliary switch with mirror contact function according to IEC 60947-4-1, annex F

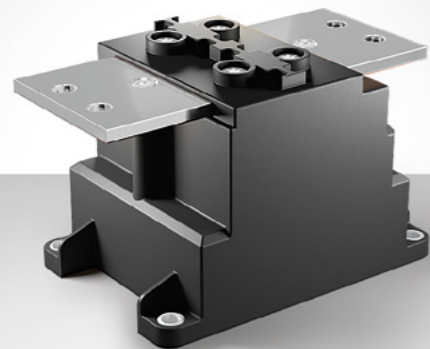
Applications

Charging stations, energy storage systems, industrial DC grids and photovoltaic systems, test systems, maritime applications



The future of charging, delivered today

Innovative DC contactors engineered for rapid megawatt charging. Compact, customer-driven, and ready for stationary and mobile applications.

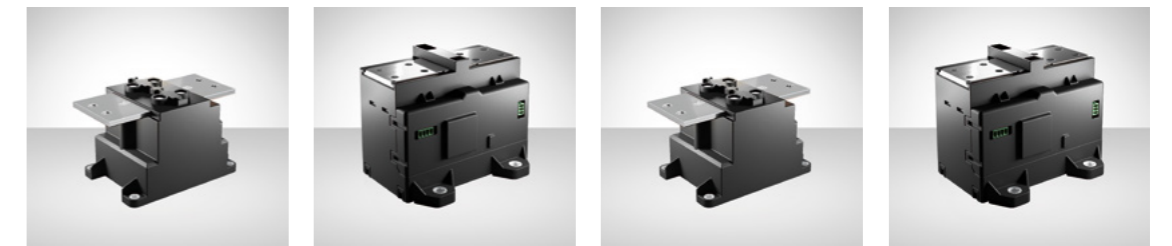


## Innovative DC contactors engineered for rapid megawatt charging

The C305/C330 and C805/C830 series meets the growing demand for high-performance, compact solutions that align with rapid electrification. Handling up to 3,000 amps in a compact design the series supports both stationary infrastructure and mobile applications. Engineered for seamless integration, they're optimized for Level 2 and Level 3 megawatt-class charging, accelerating development timelines and reducing system complexity. With built-in energy-saving features, integrated thermal design, and consistent performance under continuous load, the C305/C330 and C805/C830 series reduces operational costs without compromising reliability.

- **No explosion risk:** permanent magnetic arc quenching without gas encapsulation to prevent overheating and overpressure at all times
- **Best-in-class performance:** silver alloy contact pills with a contact resistance of just  $\mu\text{Ohm}$  35 for low power losses and less cooling
- **High longevity:** separate contact systems for switching and current carrying ensure high safety and endurance
- **Maximum protection:** high breaking capacity up to 15,000 amps for 5 milliseconds without contact welding
- **Low power consumption:** integrated economizer ensures optimal pull-in performance during switch-on and minimizes energy consumption in holding mode

C305 (stationary use)      C330 (stationary use)      C805 (mobile use)      C830 (mobile use)



	C305 (stationary use)	C330 (stationary use)	C805 (mobile use)	C830 (mobile use)
<b>Type of voltage</b>	DC bi-directional / AC, $f \leq 60$ Hz	DC bi-directional / AC, $f \leq 60$ Hz	DC bi-directional	DC bi-directional
<b>Main contacts, configuration</b>	1 NO	1 NO	1 NO	1 NO
<b>Switching voltage, max.</b>	$U = 1,500$ V	$U = 1,000$ V	$U = 1,500$ V	$U = 1,000$ V
<b>Rated insulation voltage</b>	$U_i = 1,500$ V	$U_i = 1,500$ V	$U_i = 1,500$ V	$U_i = 1,500$ V
<b>Rated imp. withstand voltage</b>	$U_{imp} = 10$ kV	$U_{imp} = 8$ kV	$U_{imp} = 10$ kV	$U_{imp} = 8$ kV
<b>PD rating / OV rating</b>	PD2 / OV2	PD2 / OV2	PD2 / OV2	PD2 / OV2
<b>Con. free air thermal current @ cross section</b>	1,500 A 2x 500 mm <sup>2</sup>	$I_{th} = 2,000$ A (3,000 A @ 95° C*) 3x 500 mm <sup>2</sup>	1,500 A 2x 500 mm <sup>2</sup>	$I_{th} = 2,000$ A (3,000 A @ 95° C*) 3x 500 mm <sup>2</sup>
<b>Pole impedance, typical</b>	50 $\mu\Omega$	35 $\mu\Omega$	50 $\mu\Omega$	35 $\mu\Omega$
<b>Rtd. short-time withstand current</b>	$I_{cw} = 10,000$ A @ 20 ms, $L < 50$ $\mu\text{H}$	$I_{cw} = 15,000$ A @ 5 ms, $L < 50$ $\mu\text{H}$	$I_{cw} = 10,000$ A @ 20 ms, $L < 50$ $\mu\text{H}$	$I_{cw} = 15,000$ A @ 5 ms, $L < 50$ $\mu\text{H}$
<b>Aux. contact</b>	1x Snap-action switch S880	1x Snap-action switch S880	optional	optional
<b>Mirror contact</b>	IEC 60947-4-1, annex F	IEC 60947-4-1, annex F		
<b>Magnetic drive (monostable)</b>	$U_s = 24$ V DC / 16 ... 32 V DC	$U_s = 24$ V DC / 16 ... 32 V DC	$U_s = 24$ V DC / 16 ... 32 V DC	$U_s = 24$ V DC / 16 ... 32 V DC
<b>Coil control (economizer)</b>	PWM module, integrated	PWM module, integrated	PWM module, optional	PWM module, optional
<b>Shock, vibration</b>	IEC 61373	IEC 61373	ISO 16750-3 Test VII	ISO 16750-3 Test VII
<b>Mechanical endurance</b>	200,000 operations	200,000 operations	200,000 operations	200,000 operations
<b>Temperatures</b>	-40 °C ... +85 °C	-40 °C ... +85 °C	-40 °C ... +85 °C	-40 °C ... +85 °C
<b>Dimensions (L x W x H)</b>	149.5 x 91 x 92 mm	134.8 x 114.5 x 116.2 mm	149.5 x 91 x 92 mm	134.8 x 114.5 x 116.2 mm

\* The maximum terminal temperature must be ensured by the system integration.

# Powerful contactors for e-mobility

Eddicy offers innovative and safe high-voltage contactors the e-mobility of today and tomorrow.

To achieve comparable power in electric vehicles as in combustion engines, high direct current (DC) voltages are indispensable. Powerful lithium-ion batteries are currently the most used battery-type for electromobility. DC contactors play a key role within the safety circuit of electric cars, buses, trucks and off-road vehicles: They reliably disconnect the high-voltage battery from the rest of the vehicle's electrical system in case of failure, thermal overload or an accident. Once the battery is disconnected from the vehicle's electrical system, currents can no longer flow. In an emergency, our solutions therefore ensure safety for passengers, emergency services as well as the vehicle itself.

## C800 - 1-pole bi-directional DC NO contactors



Schaltbau's compact bi-directional DC contactors C800 series for auto motive 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.

### Features

- Compact dimensions - High rated insulation voltage up to 1,000 volts
- High continuous thermal current up to 500 amps and high short-time withstand current rating of up to 6,000 amps
- High making capacity 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

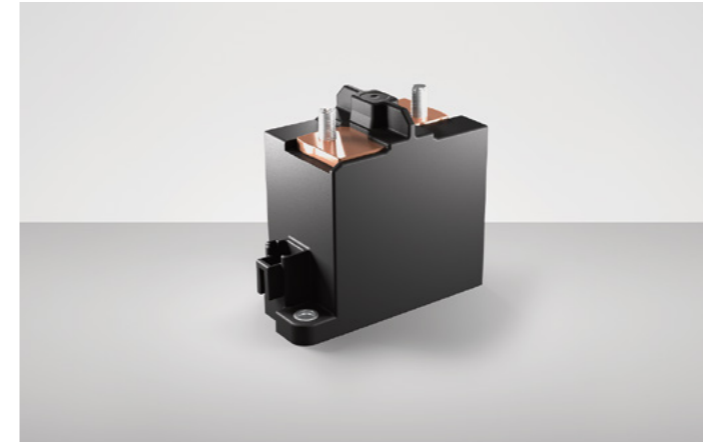
### Applications

Passenger cars, buses, trucks, off-road and specialty vehicles

### Specifications

Series	C800
Type of voltage	DC bi-directional
Main contact, configuration	1x NO
Rated operating voltage $U_e$	1,500 V@PD2
Rated insulation voltage $U_i$	1,000 V
Rated impulse withstand voltage $U_{imp}$	2.5 kV
Pollution degree	PD2 / PD3, see $U_i$
Overvoltage category	OV3
Conv. free air thermal current $I_{th}$	500 A
Rated short-time withstand current $I_{cw}$	6,000 A @ $t = 20$ ms
Aux. contact number, configuration	1x, NC
Mirror contact function	IEC 60947-4-1, annex F
Magnetic drive	Monostable
Coil voltage $U_c$	12 / 24 V DC
Coil control	PWM or external coil circuit

## C801 - 1-pole bi-directional DC NO contactors



C801 interlock contactors enable 800 volt electric vehicles with two battery banks of 400 volts each to charge quickly and safely at 400 volt charging stations. For this purpose, both battery banks are configured during the charging process so that they are charged in parallel.

### Features

- Universal, flexible and resource-efficient - Schaltbau-Interlock contactors enable powerful 800 volt e-vehicles to charge quickly and easily even at 400 volt charging stations
- NO position with a patented mechanical locking mechanism and extremely high shock resistance
- Compact dimensions - High rated insulation voltage up to 1,000 volts
- High continuous thermal current up to 250 amps
- High short-time withstand current rating up to 16,000 amps

### Applications

Passenger cars, buses, trucks, off-road and specialty vehicles

### Specifications

Series	C801
Type of voltage	DC bi-directional
Main contact, configuration	1x NO
Rated operating 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	---
Conv. free air thermal current $I_{th}$	250 A
Rated short-time withstand current $I_{cw}$	2,100 A @ $t < 1.000$ ms
Aux. contact number, configuration	---
Mirror contact function	---
Magnetic drive	Monostable
Coil voltage $U_c$	12 ... 36 V DC
Coil control	PWM, current controlled

## C803 - 1-pole bi-directional DC NO contactors



Efficient and compact high-performance switching devices for switching voltages of up to 1,500 volts and continuous currents of up to 500 amps. High making and short-time currents ensure safety in the Battery Disconnect Unit (BDU) by reliably disconnecting the high-voltage battery from the drivetrain in the event of danger.

### Features

- Compact dimensions - High rated insulation voltage up to 1,500 volts
- Efficient main contact system with permanently low contact resistance and low contact heating reduces energy losses and lowers the cooling requirement.
- Thermal continuous currents up to 500 amps with high breaking capacity and full bi-directionality for safe disconnection of high powers
- Energy-saving PWM control of the coil ensures optimum switching behavior and low heating during holding, or uses an optimized coil with maximum efficiency for external control.

### Applications

Passenger cars, buses, trucks, off-road and specialty vehicles

### Specifications

Series	C803
Type of voltage	DC bi-directional / AC, $f \leq 60$ Hz
Main contact, configuration	1x NO
Rated operating voltage $U_e$	1,500 V@PD2
Rated insulation voltage $U_i$	1,500 V@PD2
Rated impulse withstand voltage $U_{imp}$	2.5 kV
Pollution degree	PD2
Overvoltage category	OV2
Conv. free air thermal current $I_{th}$	500 A
Rated short-time withstand current $I_{cw}$	5,000 A @ $t < 20$ ms
Aux. contact number, configuration	1x Snap-action switch S880, SPDT
Mirror contact function	IEC 60947-4-1, annex F
Magnetic drive	Monostable
Coil voltage $U_c$	12 / 24 V DC
Coil control	PWM or external coil circuit



Powerful, compact, bidirectional DC NO contactors for modern industrial trucks. The compact contactors are suitable for continuous currents of up to 500 amps and can handle high making and short-time currents.

#### Features

- Compact, robust design: Optimized for the requirements of modern industrial trucks
- Efficient main contact system with low contact resistance and low contact heating reduces energy losses and lowers the cooling requirement
- High breaking capacity and full bi-directionality
- Energy-saving PWM control of the coil ensures optimum switching behaviour and low heating during holding

#### Applications

Stationary/mobile DC applications: Battery chargers, AGVs, lifting platforms, intralogistics, telecommunications, UPSs

The S100 series emergency stop switches guarantee immediate shutdown by manual operation. Special feature: The actuator button can be used as a key to prevent unauthorized use of the vehicle.

#### Features

- Compact, robust design: Emergency stop switch with snap-action mechanism
- Key function: Knob removable in OFF position
- Double-break contacts
- Closed contact housing
- Optimised for the requirements of industrial trucks

#### Applications

Stationary/mobile DC applications: Battery chargers, lifting platforms and intralogistics applications

A combination of a DC line contactor and a manual cut-off switch, fuses and an optional horn in an all-in-one device.

#### Features

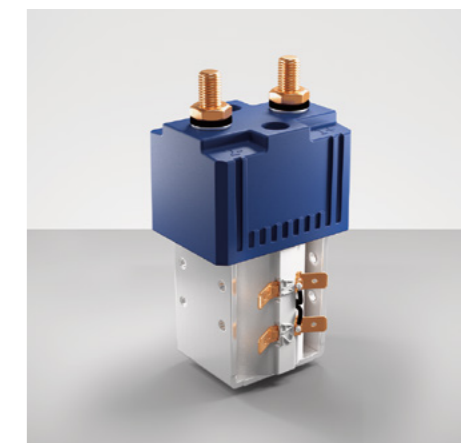
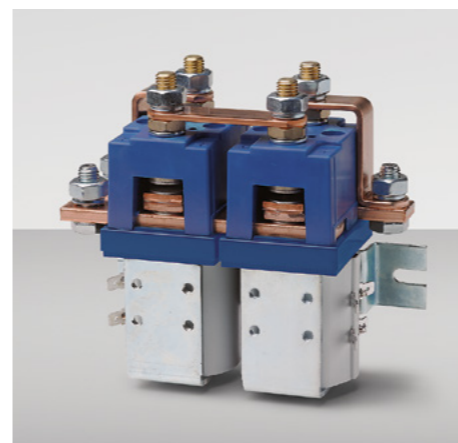
- Compact design
- Emergency stop switch with rugged snap mechanism
- Battery contactor with main fuse, optional
- Permanent magnetic blowout
- Double-break contacts
- Optional horn and fuses

#### Applications

Intralogistics applications: Battery-powered industrial trucks, forklift trucks and reach trucks, pedestrian-controlled vehicles

#### Specifications

Series	C303 LV	S100/80	C130/180 - C130/250
Type of voltage	DC bi-directional	DC bi-directional	DC uni-directional
Main contact, configuration	1x NO	1x NC	1x NO
Rated operating voltage $U_e$	60 V (higher values on request)	24 V / 36 V / 48 V	C130/180: 24 V / C130/250: 80 V
Rated insulation voltage $U_i$	1,500 V	150 V	150 V
Rated impulse withstand voltage $U_{imp}$	10 kV	2.5 kV	2.5 kV
Pollution degree	PD2	PD3	PD3
Overvoltage category	OV2	OV3	OV3
Conv. free air thermal current $I_{th}$	350 / 500 A	60 A	C130/180: 180 A / C130/250: 250 A
Rated short-time withstand current $I_{cw}$	5,000 A @ $t < 20$ ms	400 A @ 100 ms	1,500 A @ $t < 100$ ms
Aux. contact number, configuration	1x Snap-action switch S880, SPDT	1x SPDT, upon request	1x, SPDT (C130/180) / 2x, SPDT (C130/250)
Mirror contact function	IEC 60947-4-1, annex F	---	---
Magnetic drive	Monostable	---	Monostable
Coil voltage $U_s$ (operating range)	12 / 24 V DC	---	C130/180: 24 V DC (16.8 ... 26.4 V DC) C130/250: 48 V DC (33.6 ... 52.8 V DC)
Coil circuit	PWM or external	---	---



AFS contactors are designed for electric vehicles in the intralogistics. Sizes are available for continuous currents up to 80, 150 and 250 amperes. They are in demand as spare parts for all leading forklift brands in the after-sales market.

#### Features

- Compact, robust DC contactors in numerous sizes and versions
- NO, NC, changeover contactors: Single and double pole
- Reversing contactors: Assembly of two SPDT or two DPST-NO
- Double-break contacts
- Optional: Blow-out magnets, auxiliary switches, coil duties from highly intermittent to continuous, coil suppression options and highly customisable final assembly and customer connections

#### Applications

Stationary/mobile DC applications: Battery chargers, AGVs, lifting platforms, intralogistics, telecommunications, UPSs

#### Specifications

Series	AFS	C100/80 .. /120 .. /200 .. /320	C110B/80 .. /120 .. /200 .. /300 .. /400
Type of voltage	DC uni-directional, with blowout magnets DC bi-directional, w/o blowout magnets	DC uni-directional	DC bi-directional
Main contact, configuration	1 - 2 - 4x NO - NC - CO - motor reverser	1x NO	1x NO
Rated operating voltage $U_e$	80 V	80 V	48 V
Rated insulation voltage $U_i$	150 V	150 V	80 V
Rated impulse withstand voltage $U_{imp}$	1.5 kV	2.5 kV	1.5 kV
Pollution degree	PD3	PD3	PD3
Overvoltage category	OV3	OV3	OV3
Conv. free air thermal current $I_{th}$	100 A - 150 A - 250 A	60 A - 100 A - 150 A - 250 A	60 A - 100 A - 150 A - 250 A - 400 A
Rated short-time withstand current $I_{cw}$	800 A - 1,500 A - 2,000 A @ 1 ms	400 A - 800 A - 1,500 A - 2,000 A @ 100 ms	400 A - 800 A - 1,500 A - 1,800 A - 2,000 A @ 100 ms
Aux. contact number, configuration	1x, SPDT, optional	1x, CO max.	---
Mirror contact function	IEC 60947-4-1, annex F	IEC 60947-4-1, annex F	---
Magnetic drive	Monostable	Monostable	Monostable
Coil voltage $U_s$ (operating range)	6 ... 130 V DC 230 V AC (up on request)	24 V DC (16.8 ... 26.4 V DC) 48 V DC (33.6 ... 52.8 V DC)	24 V DC (19.2 ... 26.4 V DC) 48 V DC (38.4 ... 52.8 V DC)
Coil control	---	---	---

## M - Circular modular connectors

## NF - Circular audio miniature connectors



Rugged industrial connectors from the M1 and M3 series have a modular design and are dust and pressurised water-tight. They offer a wide range of options for the individual and cost-effective realisation of your application.

Robust 7- and 10-pole audio connectors NF07 and NF10 specially designed for use in communications engineering. Shock and vibration-resistant spring-loaded contacts and a high protection class ensure sealing even when not coupled.

### Features

- Number of poles from 4 to 14 contacts + PE  
M1: 4+PE, 6+PE  
M3: 6+PE, 5+3+PE, 12+PE, 7+7+PE
- High-quality machined contacts: Silver or gold plated, crimp connection
- Modular plug connector with robust housings made of impact-resistant plastic
- Functional threaded coupling with protection degree IP67/IP69K (when mated/unmated only with closed protection cap)

### Applications

Industrial connectors for mining, shipbuilding, power plant construction, machinery, transport and environmental technology or the food industry.

### Specifications

Series	M1 - M3	NF07 - NF10
Number of contacts	M1: 4+PE - 6+PE M3: 6+PE - 5+3+PE - 12+PE - 7+7+PE	7 - 10
Orientations	2 coding positions	NF07: 4 coding positions, NF10: 5 coding positions
Rated voltage	400 V max., depending on contact arrangement	50 V
Rated current	M1: 16 A M3: 16 A, 32A, 50 A, depending on contact arrangement	2,5 A
Contacts Finish Terminal type	Silver / gold Crimp	Gold Solder
Mechanical endurance	5,000 operating cycles	5,000 operating cycles
Coupling	Threaded coupling	Bayonet coupling

## LV - High power charging connectors for DC applications

## HV - High power connectors for DC applications



Modern charging connectors with an optimised main contact system: The solid power contacts carry high currents with minimal self-heating and have extremely low contact resistances for a long service life.

Schaltbau's robust HV connectors feature solid power and signal contacts and are suitable for a wide range of high-current applications.

### Features

- High-quality, solid power contacts for a permanently high current carrying capacity
- Mechanical safety in harsh everyday use with integrated locking and strain relief
- Arc prevention when plugging and unplugging the connector
- Modular connectors, are intermateable with commercially available charging connectors according to EN 1175 and DIN VDE 0623-589 with a comparable design

### Applications

Forklift trucks, automatic guided vehicles, autonomous mobile robots, mobile and stationary chargers for lithium-ion, dry and wet batteries

### Specifications

Series	LV80/120 - LV160/250 - LV320/400 - LV500	HV
Number of contacts	2 main contacts 2 pilot contacts, optional: air tube and 2 aux. contacts	2 main contacts + PE 2 + 2 signal contacts
Orientations	Keying: charger/vehicle plug, battery socket Voltage: 24 V, 36 V, 48 V, 72 V, 80 V, 96 V	1 coding position 1x feedback contact in socket shell, optional
Rated voltage Main contacts Pilot/aux/signal contacts	150 V DC 150 V DC	1,000 V DC 60 V DC
Rated current Main contacts Pilot/aux/signal contacts	500 A max. @ AWG 4/0 20 A max. @ 2.5 mm <sup>2</sup>	470 A max. @ 95 mm <sup>2</sup> 50 A max. @ 6 mm <sup>2</sup>
Contacts Finish Terminal type	Silver-plated Main contacts: w/ crimping, aux./pilot contacts: crimping	Silver, signal contacts gold optional Crimp
Mechanical endurance	> 5,000 operating cycles	> 10,000 operating cycles
Coupling	Safety interlock	Sliding interlock (handle)

# Where power meets progress

Power isn't just about energy - it's about reliability, endurance, and the ability to drive progress where it matters most. For decades, Schaltbau contactors have powered the world's most demanding rail applications. Now, that same proven technology is transforming high-power needs in mining, construction, test benches, and beyond - ensuring safety, efficiency, and durability in every connection.

The electromechanical high-performance contactors are designed for switching and carrying high currents and high voltages in harsh operating conditions.

- **Rail-Tested, Industry-Ready**  
Decades of expertise, now applied to new frontiers
- **Uncompromising Performance**  
High-voltage, high-current capability for the most demanding environments
- **Essential for the Energy Transition**  
Supporting the electrification of key industries that shape our future



## CF - Multi-pole bi-directional DC and AC contactors



Modern and modular 1 to 6-pole contactors for a wide range of applications. Equipped with a patented permanent-magnetic arc chamber and suitable for rated operating voltages up to 3,000 volts. Available with switching chambers for 200 amps, 300 amps or 400 amps. Configurable as normally open and/or normally closed.

### Features

- 1 to 6-pole power contactor up to 3,000 volts and 400 amps per switching chamber for DC and AC, designed for frequently switching under load
- DC, bi-directional / AC,  $f \leq 400$  Hz
- Configurable as NO, NC or changeover switch
- Innovative application-dependent arc chamber design
- Low energy consumption and low heating thanks to sophisticated coil saving circuit
- 4 auxiliary switches with mirror contact function
- Tested to railway standard IEC 60077

### Applications

AC and DC solutions for energy distribution and energy conversion, test systems

### Specifications

Series	CF
Type of voltage	DC/AC 200 A/300 A: uni-directional / 50 Hz DC/AC 400 A: bi-directional / 50 Hz AC 200 A/300 A/400 A: < 400 Hz
Main contact, configuration	1...6x NO und/or NC
Rated operating voltage $U_n$	1,500 V 3,000 V
Rated insulation voltage $U_{Nm}$	3,600 V 3,600 V
Rated impulse withstand voltage $U_{Ni}$	15 kV 25 kV
Pollution degree	PD3
Overvoltage category	OV3
Conv. free air thermal current $I_{th}$	200 A - 300 A - 400 A
Rated short-time withstand current $I_{cw}$	200 A/300A, DC: NO 3.5 kA / NC 3.5 kA @T < 100 ms 200 A/300A, AC: NO 4 kA / NC 3.5 kA @T < 100 ms 400A, DC: NO 4 kA / NC: 3.5 kA @T < 100 ms 400A, AC: NO 4 kA / NC: 3.5 kA @T < 100 ms
Aux. contact number, configuration	4x max., snap-action switch S870, SPDT
Mirror contact function	IEC 60947-4-1, annex F
Magnetic drive	Monostable, bistable
Coil voltage $U_s$	24 / 36 / 72 / 110 V DC
Coil control	PWM

## CP - 1-pole bi-directional DC and AC contactors



CP power contactors with patented and exclusively permanent-magnetic arc handling. The devices, which are extremely compact for this power class, can be configured as normally open or normally closed contacts, as load/disconnector or changeover switch. A high-voltage discharge contact and a precharging contactor can be optionally integrated.

### Features

- 1-pole power contactor, disconnector or changeover switch up to 3,000 volts and 2,000 amps for DC and AC, designed for frequently switching under load
- DC bi-directional / AC,  $f \leq 60$  Hz
- Easily configurable as a NO/NC contactor, disconnector or changeover switch
- Exclusively permanent-magnetic blowout - no critical currents
- 4 optional auxiliary switches, 1x with mirror contact function
- Low total cost of ownership, modular and compact (TCO)
- Tested to railway standard IEC 60077

### Applications

Electrification of heavy duty equipment in mining, UPS and maritime applications, battery test benches

### Specifications

Series	CP
Type of voltage	DC, bi-directional AC, $f \leq 60$ Hz
Main contact, configuration	1x, SPST-NO / 1x, SPST-NC / 1x, SPDT-DB
Rated operating voltage	$U_n = 1,500$ V $U_n = 3,000$ V
Rated insulation voltage	$U_{Nm} = 3,600$ V $U_{Nm} = 4,800$ V
Rated impulse withstand voltage	$U_{Ni} = 15$ kV $U_{Ni} = 25$ kV
Pollution degree	PD3
Overvoltage category	OV3
Conv. free air thermal current $I_{th}$	600 A - 800 A - 1,000 A - 1,200 A - 1,500 A - 2,000 A
Rated short-time withstand current $I_{cw}$	600 / 800 / 1,000 A: NO: 10 ... 12 kA @T < 100 ms / NC: approx. 2 kA @T < 100 ms 1,200 A / 1,500 A / 2,000 A: NO: 15 kA @T < 100 ms / NC: 8 kA @T < 100 ms
Aux. contact number, configuration	4x max.: 1x S870 (a1) + 1x S870 (b0) + 2x, S826 or 4x S826
Mirror contact function	b0 (a1, b0 according to EN 60077-2, b0 „well open“)
Magnetantrieb	Monostable, bistable
Spulenspannung $U_s$	24 / 36 ... 60 / 72 ... 110 V DC
Spulenansteuerung	PWM

## CPP - 1-pole uni-directional DC NO and NC contactors



The super-compact DC and AC contactors in the CPP series are the smallest Schaltbau switching devices in the power class up to 160 amps and are suitable for rated voltages up to 1,500 volts. The single-pole contactors are available as normally open or normally closed contactors and are suitable as integrated or separate precharging contactors for the large Schaltbau CP and CT series.

### Features

- 1-pole NO and NC contactor up to 1,500 volts and 160 amps for DC or AC, designed for frequently switching under load
- DC uni-directional / AC,  $f \leq 60$  Hz
- Permanent magnetic blowout - no critical current range
- High making and breaking capacity
- 2 auxiliary switches with mirror contact function
- Compact, robust, reliable
- Tested to IEC/UL 60947-4-1, GB/T 14048.4

### Applications

Electric commercial vehicles and special vehicles, UPS and maritime applications, battery test benches

Series	CPP
Type of voltage	DC, uni-directional AC, $f \leq 60$ Hz
Main contact, configuration	1x NO or 1x NC
Rated operating voltage	$U_n = 1,500$ V
Rated insulation voltage	$U_i = 1,500$ V
Rated impulse withstand voltage	$U_{imp} = 8$ kV
Pollution degree	PD3
Overvoltage category	OV3
Conv. free air thermal current $I_{th}$	NO: 160 A / NC: 50 A
Rated short-time withstand current $I_{cw}$	NO 2,000 A @T < 100 ms / NC 1,800 A @T < 100 ms
Aux. contact number, configuration	2x max. Snap-action switch S870, SPDT
Mirror contact function	---
Magnetic drive	Monostable
Coil voltage $U_s$	24 / 36 / 48 / 60 / 72 / 84 / 96 / 110 V DC
Coil control	Supressordiode

# Snap-action switches for safety applications

Featuring a VDE certified positive opening function, snap-action switches from Schaltbau have for decades proven themselves as ideal components for use in rail. Product specifications including double-break contacts offering both high breaking capacity and up to 10 million mechanical operating cycles, provide solid reasons to make Schaltbau switches also components of choice in energy and e-mobility to help realise the functional safety of machines and systems.

- **Positive opening**  
Safe contact separation of the NC contact circuit in the event of welded contacts, in accordance with DIN EN 60947-5-1, Annex K
- **Fast response, high precision**  
Snap-action switches are known for their fast and reliable response time making them best suited for applications requiring precisely defined switching points.
- **Compact design**  
Microswitches and limit switches have a compact size so that they can be easily integrated into various systems and devices.



## S826 - Snap-action switch with positive opening operation



The S826 snap-action switch from Schaltbau is a versatile micro-switch for medium and low power ratings with a mechanical positive opening for reliable opening. The galvanically isolated contact bridges rub against the V-shaped fixed contacts and ensure high contact reliability. They are suitable for switching low currents and voltages in safety applications, especially as position or limit switches.

### Features

- Performance according to IEC 60947-5-1
- Positive opening operation, IEC 60947-5-1 Annex K
- Dimensions according to DIN 41636-6, type F
- Degree of protection IP40, IEC 60529
- Wiping, double-break contacts
- Form Z SPDT-DB, galvanically isolated
- Contact material: hard silver or gold alloy
- Magnetic blowout, optional

### Applications

Safety limit and control switches in food and medical technology, industrial automation, smart buildings transportation or intralogistics.

### Specifications

Series	S826	
Contact configuration	Form Zb SPDT-DB, 2 galvanically isolated contact bridges, 4 terminals	
Utilization category	Silver contacts Gold contacts	AC-15, 230VAC/1.0A DC-13, 110VDC/0.5A AC-15, 230VAC/0.1A DC-13, 110VDC/0.1A
Conventional thermal current I <sub>th</sub>	10 A	
Actuator	Styles	Push button (standard), Roller lever
	Maximum actuator travel*	3.2 mm
	Actuating force*	Standard 3.6 N / reinforced 5,5 N
	Release force*	Standard 0.2 N / reinforced 2,0 N
Positive opening operation	⊞	
IP rating	Contacts Terminals	IP40 IP00: M3 Screws, Flat tabs 6.3x0.8 mm

\* directly on the push button

## S870 - Snap-action switch with positive opening operation



The S870 series offers versions with self-cleaning contacts and protection against dust, moisture and pollutants, and are particularly reliability even with low contact loads. Their compact dimensions, ingress protection up to IP67 and special versions with prefabricated cable or individual wire make the switch predestined for many applications.

### Features

- Performance according to IEC 60947-5-1
- Positive opening operation, IEC 60947-5-1 Annex K
- Dimensions according to DIN 41636-2, type A
- Degree of protection: contacts IP40, IP60, IP67, terminals IP00, IP20B, IP67 according to IEC 60529
- Wiping, self-cleaning contacts
- Contact material: hard silver or gold alloy
- High resistance to shock and vibration

### Applications

Safety limit and control switches in food and medical technology, industrial automation, smart buildings transportation or intralogistics.

### Specifications

Series	S870		S880
Contact configuration	1x SPDT, Form C, single break contacts, 3 terminals		1x SPDT, Form C, single break contacts, 3 terminals
Utilization category	Silver contacts Gold contacts	AC-15, 230VAC/1.5A DC-13, 60VDC/0.5A DC-13, 24VDC/2A AC-15, 230VAC/1A DC-13, 60VDC/0.5A DC-13, 24 VDC/2A	AC-15, 230VAC/1A DC-13, 60VDC/0.5A upon request
Conventional thermal current I <sub>th</sub>	10 A		6 A
Actuator	Styles	Push button (standard), plain lever short/medium/long, Roller lever short/long, simulated roller lever, medium/long	Push button (standard), plain lever short, Roller lever short/long, simulated roller lever, medium
	Maximum actuator travel*	3.0 mm	1.95 mm
	Actuating force*	3.0 N max.	2.0 N max.
	Release force*	0.5 N min.	0.15 N min.
Positive opening operation	⊞		⊞
IP rating	Contacts Terminals	IP40 / IP60 / IP67 IP00: M3 Screws, flat tabs 6.3x0.8 mm, PCB, solder lugs IP67: Cable, leads	IP40 / IP60 / IP67 IP00: Flat tabs 2.8x0.5 mm, PCB, solder lugs IP67: Leads

\* directly on the push button

## S880 - Subminiature switch with positive opening operation



Schaltbau's S880 series snap-action switches in V4 miniature design are equipped with self-cleaning contacts and positive opening. The sub-miniature switches are available up to IP67, with prefabricated single wires and different actuators. The minimal size in combination with high reliability enable a wide range of applications where space is limited.

### Features

- Performance according to IEC 60947-5-1
- Positive opening operation, IEC 60947-5-1 Annex K,
- Dimensions to DIN 41636-3, type B (V4 subminiature switch)
- Degree of protection: contacts IP40, IP60, IP67, terminals IP00, IP67 according to IEC 60529
- Wiping, self-cleaning contacts
- Contact material: hard silver or gold alloy
- Snap mechanism highly resistant to shock and vibration

### Applications

Safety limit and control switches in food and medical technology, industrial automation, smart buildings transportation or intralogistics.

## 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](http://www.schaltbau.com).