

# 3

## Contactors

### CP Series

1 pole bi-directional  
high-voltage contactors,  
disconnectors,  
changeover switches  
for DC and AC

Flyer C40.en



More information here:  
[schaltbau-gmbh.com](http://schaltbau-gmbh.com)

**CP series** 1 pole bi-directional high-voltage contactors, disconnectors, changeover switches for DC and AC

**Modular and compact switchgear for modern power converters**

With the CP series Schaltbau is introducing once more an innovative concept to the switchgear market. The arc-handling is done exclusively by permanent-magnetic blowout. This patented technology ensures fully bi-directional breaking capability and a more compact design. By reducing dimensions and weight we save you valuable space.

For the first time the universal devices can be configured as NO/NC contactor, disconnector or changeover switch. This enables us to react flexibly to changing customer requirements. The high switching functionality and reliability ensure practical and cost effective operation.

The combination of innovative technology, compact design and high versatility makes the CP-power contactors particularly suitable for use in railway and industrial applications. Thanks to its unique modular design, the new product family includes a variety of possible configurations catering to a wide range of applications.

**Features**

**Applications**

- Innovative Design**

  - Easily configurable as NO/NC contactor, disconnector or changeover switch
  - DC bi-directional or AC up to 60 Hz max.
  - Exclusively permanent-magnetic blowout – no critical currents and low wear of main contact system thanks to effective arc-handling
  - High making capacity, also as disconnector and changeover switch
  - Low total cost of ownership, modular and compact
- Main contact system**

  - Conventional thermal current: 600 A / 1,200 A / 2,000 A
  - Nominal voltage: 1,5 kV, 3 kV
  - Double-break contacts
  - 1, 2 pole versions
- Easy maintenance:**

  - Toolless inspection of main contact tips
  - Toolless replacement of the arc chamber

- Main contactor**, optional with pre-charging contactor and high-voltage discharging contact for:

  - Traction converters
  - Inverters for auxiliary equipment
- Switchgear for various mobile and stationary applications**

  - Locomotives and multiple-unit trains
  - Photovoltaic systems, wind turbines, cranes, welding systems, mining
- Contactor for:**

  - Field circuits of motors
  - Conventional resistor based traction units
  - Activating the brake unit for DC drives
  - Starter and compressor motors, solar cells
- Switchgear for the configuration of electrical system**

  - Selection from among various energy sources
  - Filter configuration for multisystem operations
  - Connect/disconnect the DC link

**Technische Daten**

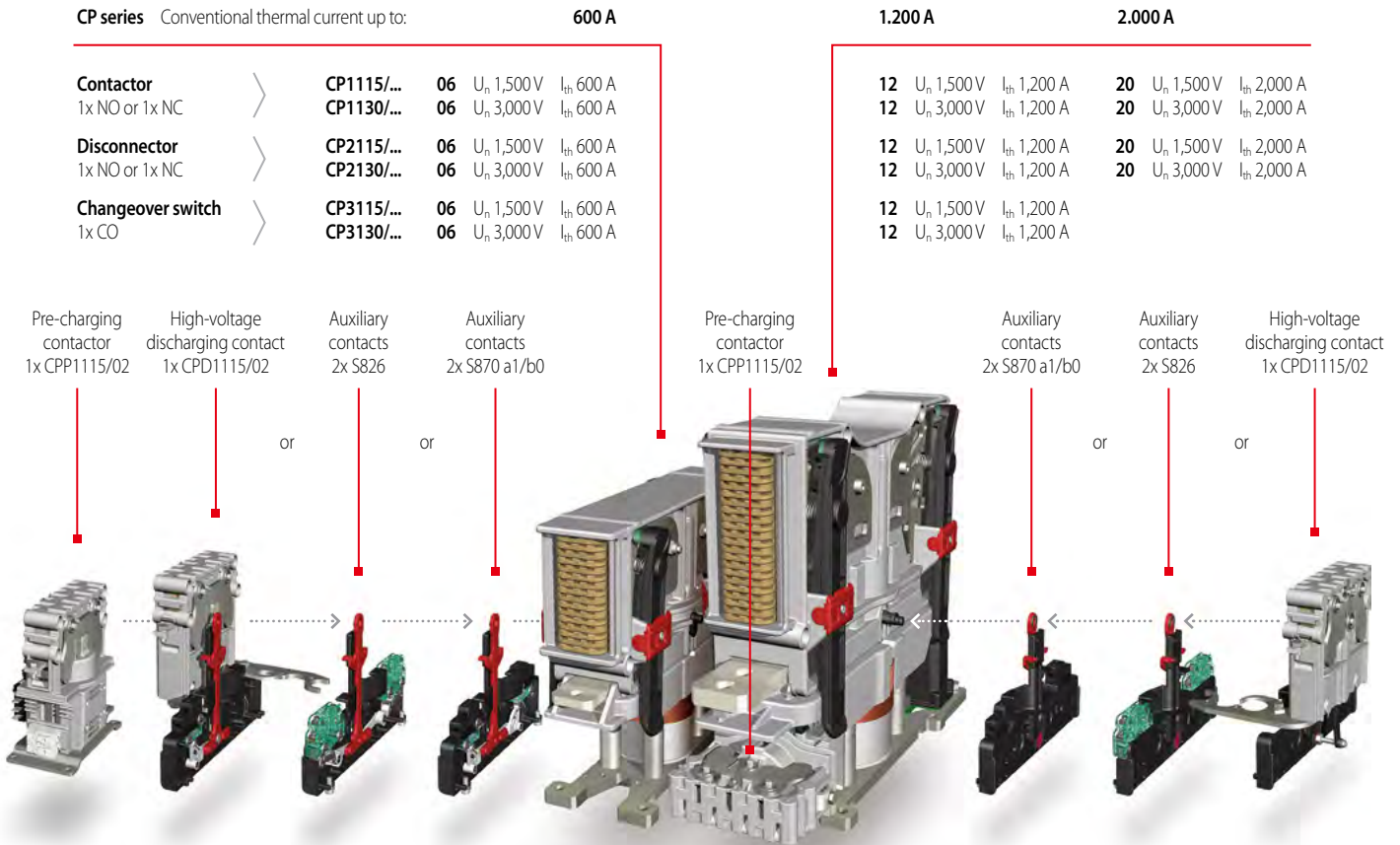
	U <sub>n</sub> 1,500 V: U <sub>n</sub> 3,000 V:	CP1115/06 – CP2115/06 – CP3115/06 CP1130/06 – CP2130/06 – CP3130/06	CP1115/12 – CP2115/12 – CP3115/12 CP1130/12 – CP2130/12 – CP3130/12	CP1115/20 – CP2115/20 CP1130/20 – CP2130/20
<b>Type of voltage</b> DC (bi-directional) / AC (f < 60 Hz)		☉ / ☉	☉ / ☉	☉ / ☉
<b>Main contacts</b>				
Number of / NO / NC / CO		1x / ☉ / ☉ / ☉	1x / ☉ / ☉ / ☉	1x / ☉ / ☉
Nominal Voltage U <sub>n</sub>		1,500 V ..... 3,000 V	1,500 V ..... 3,000 V	1,500 V ..... 3,000 V
Rated operating voltage U <sub>e</sub>		1,800 V ..... 3,600 V	1,800 V ..... 3,600 V	1,800 V ..... 3,600 V
Rated insulation voltage U <sub>Nm</sub>		3,000 V* ..... 4,800 V*	3,000 V* ..... 4,800 V*	3,000 V* ..... 4,800 V*
Rated impulse withstand voltage U <sub>Ni</sub> /U <sub>imp</sub>		15 kV ..... 25 kV	15 kV ..... 25 kV	15 kV ..... 25 kV
Pollution degree / overvoltage category		PD3 / OV3	PD3 / OV3	PD3 / OV3
Conventional thermal current I <sub>th</sub>		600 A	1,200 A	2,000 A
Rated operating current I <sub>e</sub> (at operational frequency C1)				
DC, U <sub>e</sub> = 1,800 V (T2 = 1 ms)		600 A (medium arc chamber)	1.200 A (medium arc chamber)	2.000 A (medium arc chamber)
DC, U <sub>e</sub> = 3,600 V (T2 = 1 ms)		600 A (medium arc chamber)	1.200 A (medium arc chamber)	2.000 A (large arc chamber)
Component category (EN 60077-2)		NO: A2 – C1 / NC: A2 – C1 / CO: A4 – C1		NO: A2 – C1 / NC: A2 – C1
<b>Auxiliary contacts</b> number of, type		1x S870 (a1) + 1x S870 (b0) + 2x S826 or 4x S826 or High-voltage discharging contact		
<b>Magnetic drive</b> coil voltage U <sub>c</sub>		24 ... 48, 60 ... 84, 96 ... 110 V DC		

\* 4,300 V with reinforced insulation in accordance to EN 50124

**Configuration** A product tailored to your needs

**Configure your switching device:**

The magnetic drive and the performance are identical whether you need a contactor, a disconnecter or a changeover switch. Furthermore, a high-voltage discharging contact, a pre-charging contactor or several auxiliary contacts can be integrated. Multipole versions are also available.



**Highly customer-configurable:**

Find your ideal switching device and configure it as NO/NC contactor, disconnecter or changeover switch.

Switch	NO NC	600 A 1,200 A 2,000 A	1,500 V 3,000 V	monostable	Contactor	Breaking capacity <b>High</b> ▶ Large arc chamber Breaking capacity <b>Medium</b> ▶ Medium arc chamber Breaking capacity <b>None</b> ▶ Cover only	✓
Disconnect	NO NC	600 A 1,200 A 2,000 A	1,500 V 3,000 V	monostable	Disconnecter	Breaking capacity <b>High</b> ▶ Large arc chamber Breaking capacity <b>Medium</b> ▶ Medium arc chamber Breaking capacity <b>None</b> ▶ Cover only	✓
Changeover	NO NC	600 A 1,200 A 2,000 A	1,500 V 3,000 V	monostable or bistable	Changeover switch	Breaking capacity <b>None</b> ▶ Cover only	✓

# Schaltbau GmbH

For detailed information on our products and services visit our website – or give us a call!

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with compliments:



Schaltbau GmbH manufactures in compliance with RoHS.



The production facilities of Schaltbau GmbH have been IRIS certified since 2008.



Certified to DIN EN ISO 14001 since 2002. For the most recent certificate visit our website.



Certified to DIN EN ISO 9001 since 1994. For the most recent certificate visit our website.

## Electrical Components and Systems for Railway Engineering and Industrial Applications

### Connectors

- Connectors manufactured to industry standards
- Connectors to suit the special requirements of communications engineering (MIL connectors)
- Charging connectors for battery-powered machines and systems
- Connectors for railway engineering, including UIC connectors
- Special connectors to suit customer requirements

### Snap-action switches

- Snap-action switches with positive opening operation
- Snap-action switches with self-cleaning contacts
- Enabling switches
- Special switches to suit customer requirements

### Contactors

- Single and multi-pole DC contactors
- High-voltage AC/DC contactors
- Contactors for battery powered vehicles and power supplies
- Contactors for railway applications
- Terminal bolts and fuse holders
- DC emergency disconnect switches
- Special contactors to suit customer requirements

### Electrics for rolling stock

- Equipment for driver's cab
- Equipment for passenger use
- High-voltage switchgear
- High-voltage heaters
- High-voltage roof equipment
- Equipment for electric brakes
- Design and engineering of train electrics to customer requirements

We reserve the right to make technical alterations without prior notice.

For updated product information visit [www.schaltbau-gmbh.com](http://www.schaltbau-gmbh.com).

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