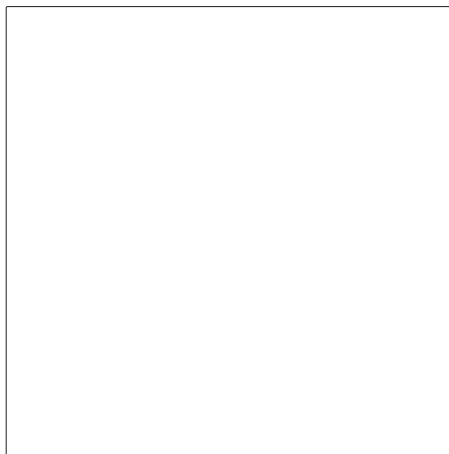
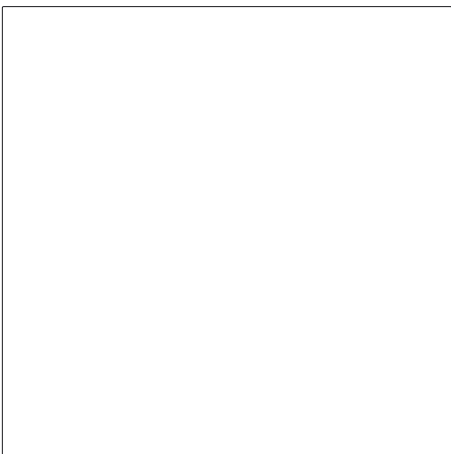
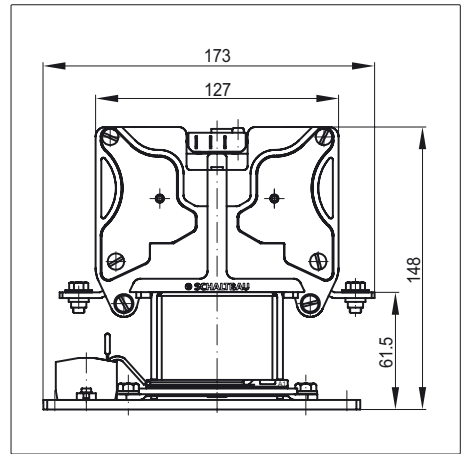
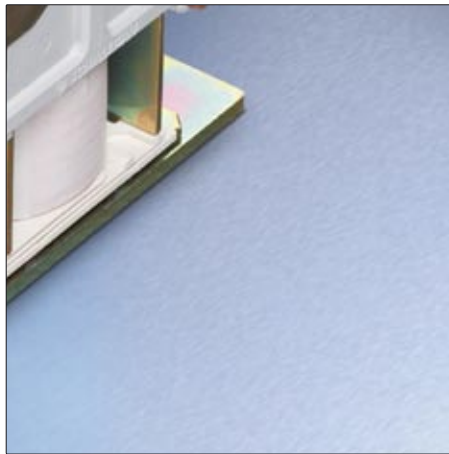
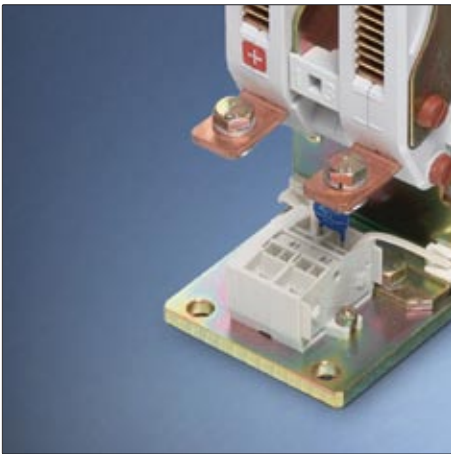
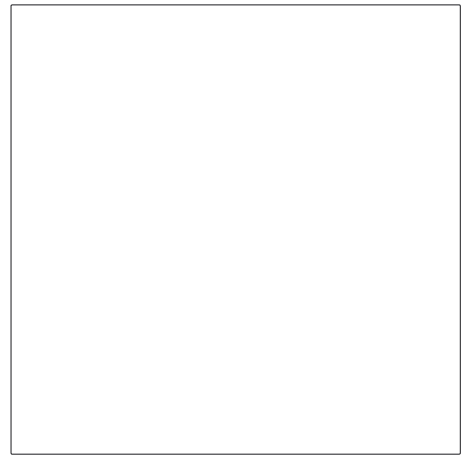


**Double-pole  
NO contactor  
C295 Series**



## Double-pole NO contactor, C295 Series

**Compact double-pole high-voltage NO contactor for DC and AC operation:** With its compact size and efficient arc chute our C295 Series contactor allows the handling of voltages up to 1,500 V and currents of 120 A max. Switch-

ing high amperage even at significant inductance can be achieved by series connection of the main contacts, whereas parallel connection results in longer contact life.

### Features

- Compact in size
- Double-break contacts
- With magnetic blowout for DC arc quenching
- Switching of high inductive loads by means of main contacts connected in series
- Parallel connection: Longer life of main contacts

### Applications

Typical applications are to be found in traffic engineering equipment, particularly in heating circuits, air conditioning equipment and conversion engineering of complex power supplies.

### Standard

Meet requirements for industrial applications to:

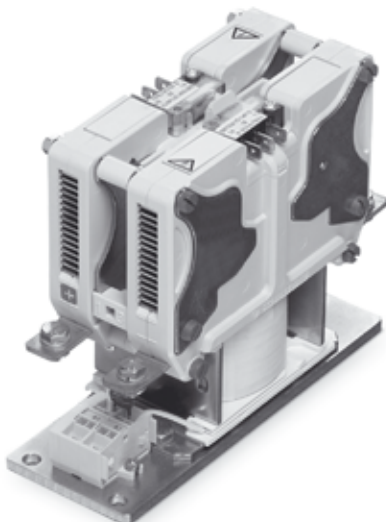
**IEC 60947-1** Low-voltage switchgear and controlgear - Part 1: General rules

**IEC 60947-4-1** Low-voltage switchgear and controlgear - Part 4-1: Contactors and motor starters - Electromechanical contactors and motor starters.

Meet requirements for railway applications to:

**IEC 60077-1**, Railway applications - Electric equipment for rolling stock - Part 1: General service conditions and general rules.

**IEC 60077-2**, Railway applications - Electric equipment for rolling stock - Part 2: Electrotechnical components; General rules



C295 Series double-pole NO contactor

### Ordering code



Example: **C295 A/P/ 24EV-U2**

#### Series

#### Version

A	U <sub>n</sub> 750 V DC
B	U <sub>n</sub> 750 V AC*
K	U <sub>n</sub> 1,200 V DC
L	U <sub>n</sub> 1,200 V AC*
S	U <sub>n</sub> 200 V DC } no baffles
T	U <sub>n</sub> 200 V AC* }

#### Polarity of main contacts

G	for series connection	
P	for parallel connection	
X	AC*, no polarization	

#### Coil voltage

24 / 36 / 48 / 60 / 72 / 96 / 110 V DC

#### Coil tolerance

E	-30 % ... +25 %
B	magnetically latching version -30 % ... +25 %

#### Coil suppression

V Varistor

#### Auxiliary contacts

U2	2x snap-action switch S870 W1D1 a 012, standard
I2	2x snap-action switch S870 W1D4 a 012, gold-plated contacts

\* Types for AC operation are without permanent-magnetic blowout

#### Note:

Presented in this catalogue are only stock items that can be supplied in short delivery time.

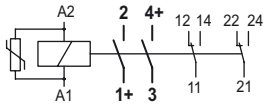
#### Special variant

If you need a special variant feel free 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 quantities apply.

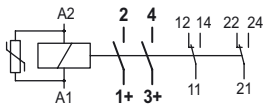
## Circuit and dimension diagrams, Mounting

### Circuit diagrams:

#### • Polarity G for series connection

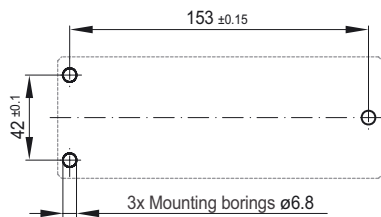


#### • Polarity P for parallel connection

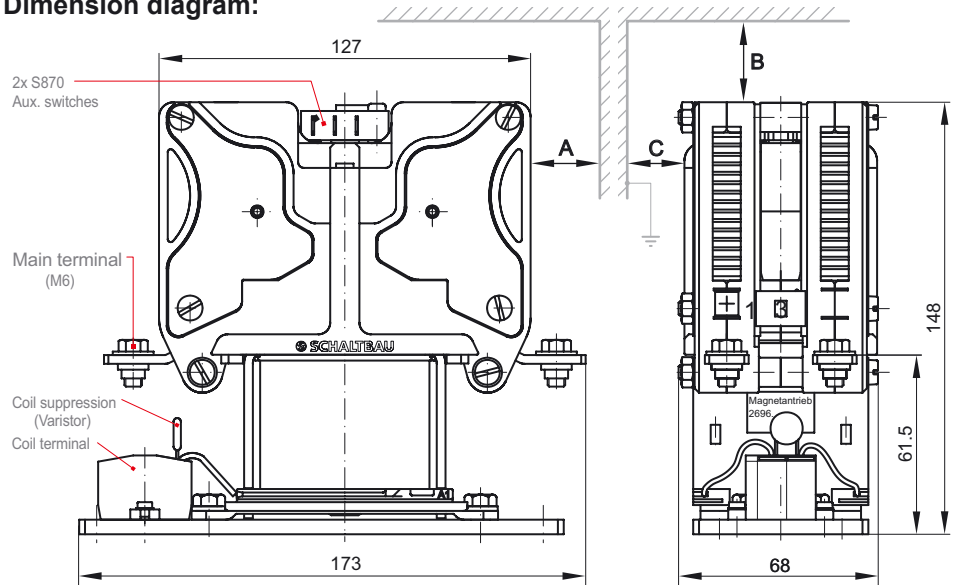


#### • Polarity X, no polarization for AC operation (no diagram)

### Mounting holes:



### Dimension diagram:



**Note:** Observe clearance of at least 10 mm towards live or earthed parts!  
Reduced scale diagrams / dimensions in mm

Clearance towards plasma exit (see diagram):	A	B	C
P < rated power	20 mm	15 mm	10 mm
P ≥ rated power	30 mm	20 mm	15 mm

## Specifications

C295 Series, Version	I	A	I	B	I	K	I	L	I	S	I	T
Type of voltage		DC		AC		DC		AC		DC		AC
Main contacts (number, configuration)		2x SPST-NO										
Nominal voltage $U_n$		750 V DC		750 V AC		1,200 V DC		1,200 V AC		200 V DC		200 V AC
Rated insulation voltage $U_i$		1,000 V		1,000 V		1,600 V		1,600 V		1,000 V		1,000 V
Pollution degree		PD3		PD3		PD3		PD3		PD3		PD3
Overtoltage category		OV3		OV3		OV3		OV3		OV3		OV3
Conventional thermal current $I_{th}$ of individual contact, for wire cross-section 50 mm <sup>2</sup> at $T_a = 70^\circ\text{C}$ ,		120 A		120 A		120 A		120 A		120 A		120 A
Making capacity, resistive, $T = 0$ ms		1,000 A		1,000 A		1,000 A		1,000 A		1,000 A		1,000 A
Breaking capacity		1,000 V DC, L/R 1 ms: 90 A L/R 15 ms: 25 A		1,000 V AC, $\cos\phi$ 1.0: 140 A		1,500 V DC, L/R 1 ms: 60 A L/R 15 ms: 25 A		1,500 V AC, $\cos\phi$ 1.0: 40 A		220 V DC, L/R 1 ms: 1,200 A L/R 15 ms: 800 A		---
Main contacts Contact material Main terminals		AgSnO <sub>2</sub> M6, tightening torque 6 Nm max.										
Auxiliary contacts Number, Configuration Utilization category Terminals, Flat quick connect		2x snap-action switch S870, SPDT, optional (see catalogue D70) AC-15: 1.5 A at 230 V AC; DC-13: 0.5 A at 60 V DC; DC-13: 2 A at 24 V DC 6.3 x 0.8 mm										
Magnetic drive Rated control supply voltage $U_s$ Operating range of $U_s$ Coil power dissipation ( $T_a = 20^\circ\text{C} / U_s$ ) Coil suppression Coil terminals		24 / 36 / 48 / 60 / 72 / 96 / 110 V DC -30 % ... +25 % $U_s$ at $T_a = 70^\circ\text{C}$ max. cold coil approx. 27 W / warm coil approx. 13.5 W Varistor Cage clamp										
Degree of protection		IP20, terminals and lower baffle IP00										
Mechanical endurance		> 3 x 10 <sup>6</sup> operating cycles										
Electrical endurance		> 400.000 cycles ( $U_n = 700$ V DC, $I_{th} = 70$ A, L/R = 1 ms, parallel connection)										
Shock / Vibration (IEC 61373)		5 g (30 ms half sinus) / Class B, Cat. 1: 5 ... 150 Hz										
Mounting position		Any, except: do not mount upside down										
Temperature Operating temperature Storage temperature		-25 °C ... +70 °C -40 °C ... +80 °C										
Weight		2.8 kg		2.8 kg		2.8 kg		2.8 kg		2.6 kg		2.6 kg



Schaltbau GmbH manufactures in compliance with RoHS.



Schaltbau GmbH has an environment management system that has been certified since 2002.



Schaltbau GmbH has a quality management system that has been certified since 1994.

## 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 stop switches
- Special contactors to suit customer requirements

### Control devices

- Master controllers and reversers for railway applications
- Toggle switch devices
- Handles and foot switches for railway applications (dead-man equipment)
- Switching elements with high breaking capacity
- Emergency brake handles
- Signal devices

### Transportation system equipment

- Power supplies for passenger coaches (electric equipment)
- Battery chargers for locomotives and passenger coaches
- High-voltage equipment for single and multi-phase operation
- Heating devices and heating controls
- Design and engineering services for high-voltage equipment
- Special equipment to suit customer requirements

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with compliments: