SCHALTBAU
Connect Contact Control

3

Contactors

C295 Series

Double pole
NO contactors

Catalogue B295.en

More information here:
schaltbau-gmbh.com

Double pole NO contactor, C295 Series

Compact double-pole high-voltage NO contactor for DC and AC

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. Switching 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

C295 series

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

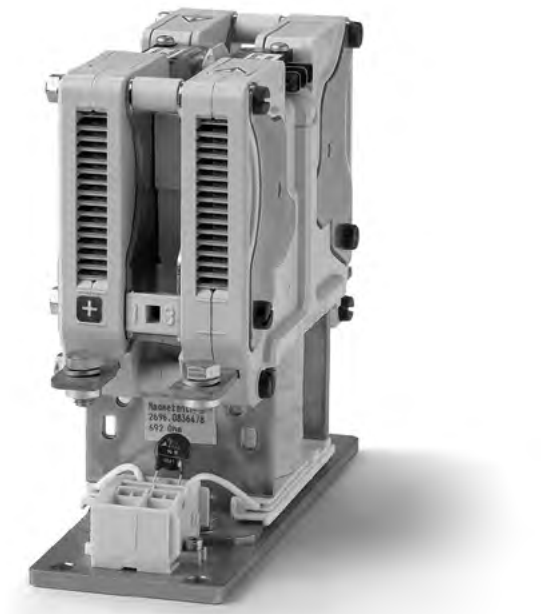
Standards

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



Double pole NO contactor **C295 A/G/ 72EV-U2**

Ordering code

C295 series

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

Series

Version of main contacts

A	U_n = 750 V DC
B	U_n = 750 V AC*
K	U_n = 1,200 V DC
L	U_n = 1,200 V AC*
S	U_n = 200 V DC } no splitters
T	U_n = 200 V AC* } no splitters

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

Version of coil, Coil tolerance

E	Standard	-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 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 quantities apply.

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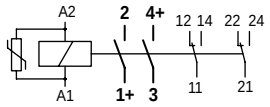
Circuit and dimension diagram, Mounting

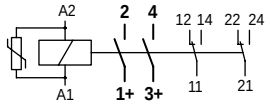
C295 series

Circuit diagrams:

- **Polarity G** for series connection

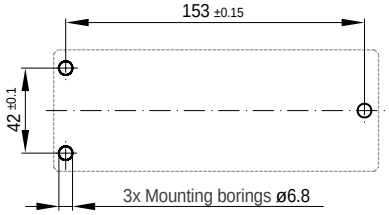


- **Polarity P** for parallel connection

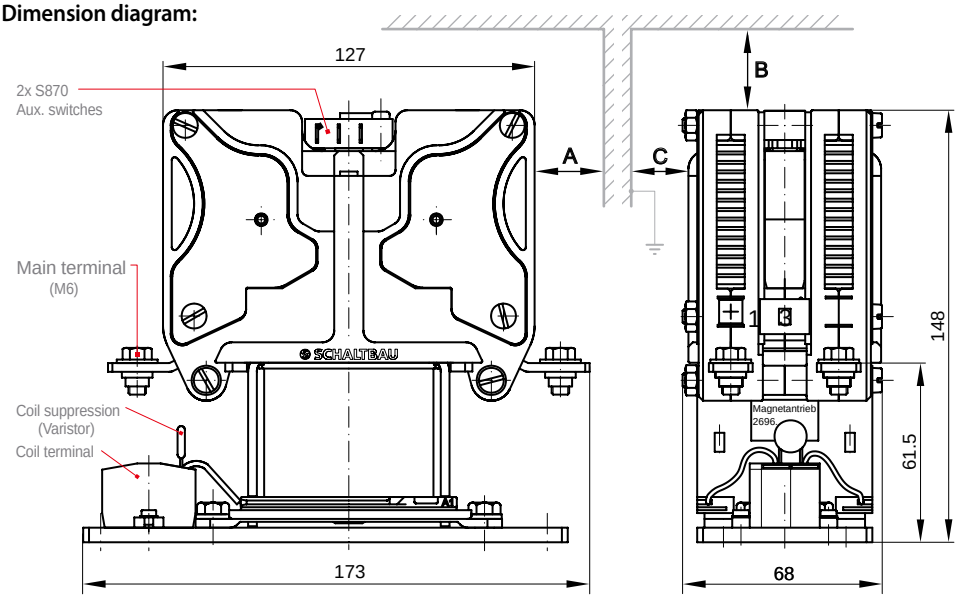


- **Polarity X** no polarization for AC operation (no diagram)

Mounting holes:



Dimension diagram:



Note: Observe clearance of at least 10 mm towards live or earthed parts!

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

C295 Series, Version	A	B	K	L	S	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 Overvoltage category	PD3 OV3	PD3 OV3	PD3 OV3	PD3 OV3	PD3 OV3	PD3 OV3
Conventional thermal current I_{th} of individual contact, for wire cross-section 50 mm² at T_a = 70°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, cosφ 1.0: 140 A	1,500 V DC, L/R 1 ms: 60 A L/R 15 ms: 25 A	1,500 V AC, cosφ 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	 $AgSnO_2$ 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 °C / U_s) Coil suppression Coil terminals	 24 / 36 / 48 / 60 / 72 / 96 / 110 V DC -30 % ... +25 % U_s at T_a = 70° C max. cold coil approx. 27 W / warm coil approx. 13.5 W Varistor Cage clamp					
Degree of protection	IP20, terminals and lower baffel IP00					
Mechanical endurance	> 3 million 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)	5g (11 ms half sinus) / 1g (10 ... 100 Hz)					
Mounting position	Any, except: do not mount upside down					
Temperature Operating temperature Storage temperature	 -40 °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

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

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with compliments:

RoHS 2011/65/EC

Schaltbau GmbH manufactures in compliance with RoHS.

IRIS Certification

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

Schaltbau GmbH ISO 14001 certified since 2002

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

Schaltbau GmbH ISO 9001 certified since 1994

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

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