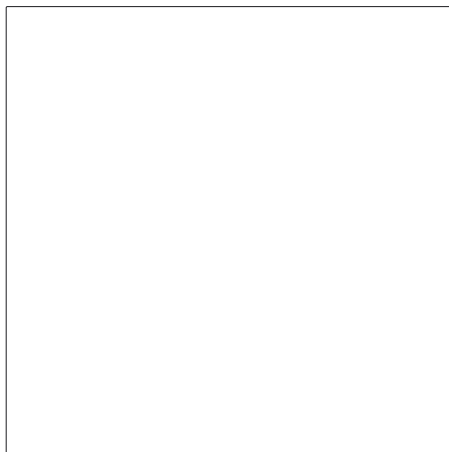
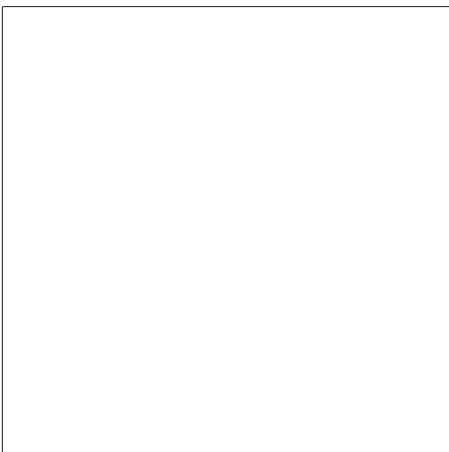
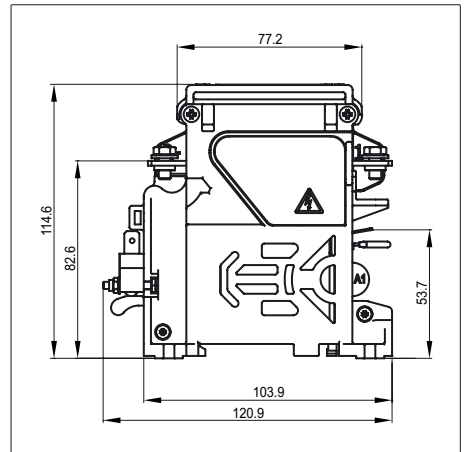
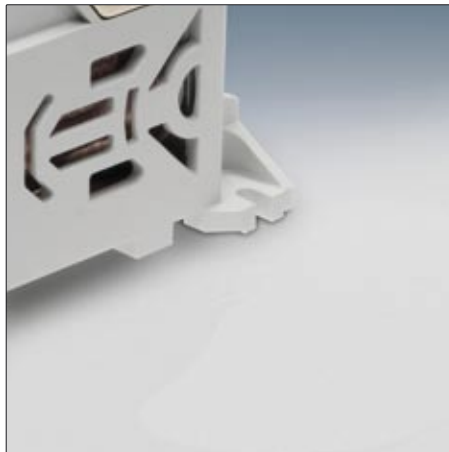
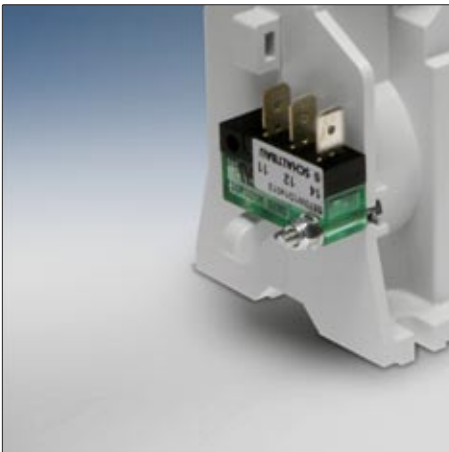
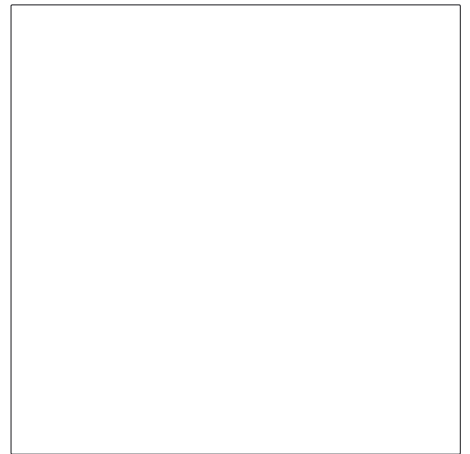


**Double pole
NO contactors
C294 Series**



Double pole NO contactor, C294 Series

Double pole high-voltage contactor of compact design: Notwithstanding its small size, the C294 Series contactor features an extraordinary switching capacity for DC applications up to 1,000 V.

Best suited for the harsh environment of public transport, the C294 has proven to be a transportation system component of high reliability which has an electrical life that is above average.

Features

- Suitable for years of continuous duty
- Intended for high ambient temperatures
- Compact design
- Double-break contacts
- DC versions with blowout magnets for arc quenching

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.

Standards

Contactors 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.

Contactors 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.

Ordering code

Example: **C294 A/ 24EV-U1**

Series	_____	_____	_____	_____	_____	_____
Version	_____	_____	_____	_____	_____	_____
A	for DC operation with baffles for arc quenching					
Coil voltages	_____	_____	_____	_____	_____	_____
24 / 36 / 72 / 110 V DC						
Coil tolerance	_____	_____	_____	_____	_____	_____
E	+25 % ... -30 %					
Coil suppression	_____	_____	_____	_____	_____	_____
V	Varistor					
Auxiliary contacts	_____	_____	_____	_____	_____	_____
U1	1x snap-action switch S870 W1D4 a 012, pushbutton, silver plated contacts					
J1	1x snap-action switch S870 W1D4 a 063, gold plated contacts, terminals angled 45°					



Double pole NO contactor **C294 A/ 110EV-U1**

Note:

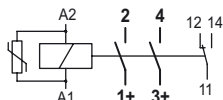
Presented in this catalogue are only stock items which can be supplied in short delivery time.

Special variant

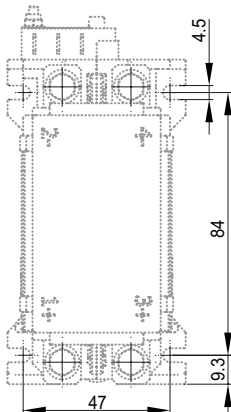
If you need a special variant feel free to contact us. Maybe the type of contactor you are looking for is among our many **special designs**. If not, we also supply **customized designs**. In this case, however, minimum order quantities apply.

Circuit and dimension diagram, Mounting

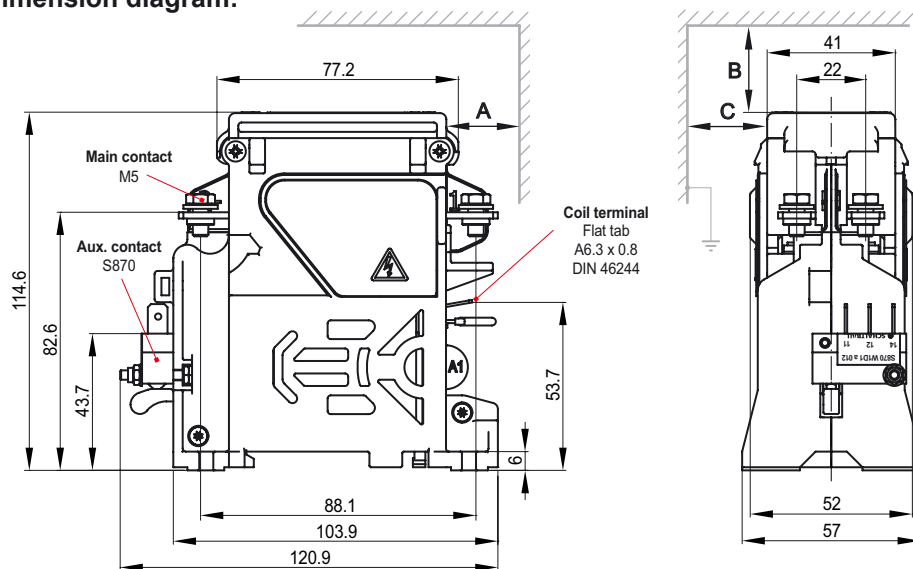
Circuit diagram:



Mounting:



Dimension diagram:



Reduced scale diagrams / dimensions in mm

M4, tightening torque 2 Nm max. 4, use washer

Note:
Clearance towards live or earthed parts ≥ 10 mm!

Clearance towards plasma exit (see diagram):	A	B	C
P < rated power	10 mm	10 mm	10 mm
P \geq rated power	10 mm	10 mm	50 mm

Specifications

C294 Series, Version	I	A
Type of voltage		DC
Main contacts, Number of, Configuration		2x SPST-NO
Nominal voltage U_n		1,000 V
Rated insulation voltage U_i		1,200 V
Rated impulse withstand voltage U_{imp}		8 kV
Pollution degree / Overvoltage category		PD3 / OV3
Conventional thermal current I_{th} at $T_a = 70^\circ\text{C}$, Wire cross-section 50 mm ²		40 A
Rated short-time withstand current I_{cw}		1,500 A / 100 ms
Making capacity (resistive, T = 0 ms)		550 A
Breaking capacity per contact system main contacts connected in series		1,200 V DC, L/R 1 ms: 60 A, L/R 15 ms: 13 A 1,200 V DC, L/R 1 ms: 120 A, L/R 15 ms: 30 A
Switching off, no motor reversing circuits		only in one direction
Arc chute for DC operation		•
Blowout, magnetic		•
Main contacts: Material Terminals		AgSnO ₂ M5, tightening torque 3 Nm max.
Auxiliary contacts: Number of, configuration Utilization category (IEC 60947-5-1) Terminals		1x snap-action switch S870, SPDT, optional (see also catalogue D70e) AC-15: 1.5 A at 230 V AC; DC-13: 0.5 A at 60 V DC or 2.0 A at 24 V DC Quick-connect 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 temperature Coil suppression Terminals		24 / 36 / 72 / 110 V DC -30 % ... +25 % at $T_a = 70^\circ\text{C}$ max. Cold coil approx. 15 W, warm coil approx. 9 W 155° C at $T_{a,max}$ and $U_{s,max}$ Varistor Quick-connect 6.3 x 0.8 mm
Degree of protection (IEC 60529)		IP00
Mechanical endurance		> 3 million operating cycles
Electrical endurance		600,000 operating cycles ($U_i = 1,200$ V DC, $I_{th} = 30$ A, L/R = 1 ms, per contact system)
Shock / Vibration (DIN EN 61373)		5g (20 ms half sinus) / 2g (5 ... 150 Hz)
Duty cycle		100 %
Mounting position		Any, except: do not mount upside down, so that mounting plate points upwards or coil terminals point downwards
Temperature Operating temperature / Storage temperature		-25° C ... +70° C / -40° C ... +70° C
Weight		1.0 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

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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with compliments: