

Preliminary  
Edition

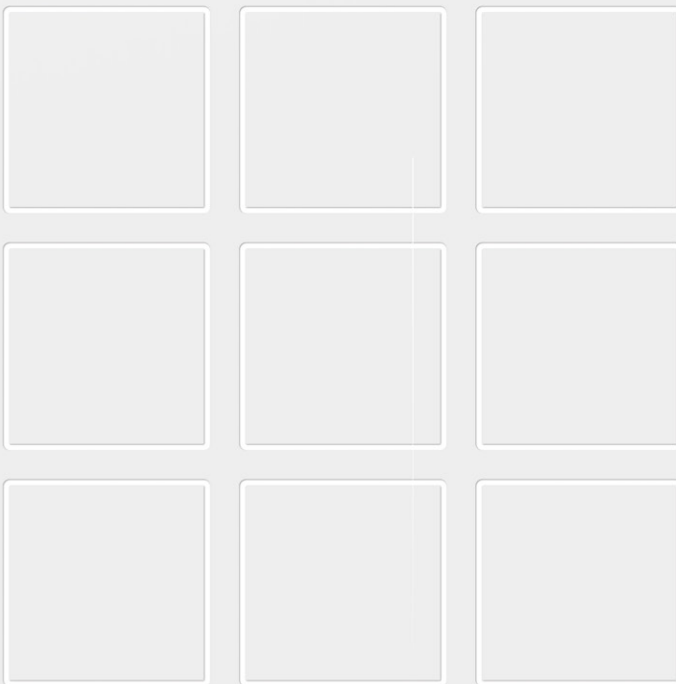
# 3

## Contactors

### C320 Series

1 pole  
AC and bi-directional DC  
NO contactors for 1,000 A

Flyer C320.en



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

## C320 – 1 pole AC and bi-directional DC NO contactors

The C320 is a single-pole AC and bi-directional DC contactor in the power class up to 1,000 A. It ensures that high loads are switched safely and provides reliable protection in the event of a fault in the system. Typical applications are the use as main contactor in battery management systems of high-voltage vehicle batteries, in charging

stations for e-mobility, in battery test benches but also in the DC circuits of inverters of photovoltaic systems. A very efficient ceramic arc chamber, double-break contacts and high breaking capacity are important features of the new contactor.

- Compact dimensions – high rated insulation voltage  $U_i$  up to 1,500 volts
- High making capacity  $I_{cm}$  up to 4,000 amps and an excellent breaking capacity
- High thermal continuous current  $I_{th}$  of up to 1,000 amps and high rated short-time withstand current  $I_{cw}$  up to 5,000 amps
- Full bidirectionality – safe disconnection of high power independent of the current flow direction
- 4 auxiliary switches with mirror contact function for diagnosis and switching status monitoring
- Low energy consumption and low heating thanks to sophisticated coil saving circuit

### Ordering code

Example: **C320K/1000 24E-BBBB**

#### Series, contact configuration

C320 1 pole NO contactor, AC and DC bi-directional

#### Version

K 1,500 V DC  
S 60 V DC

#### Conv. thermal current

1000  $I_{th} = 1,000$  A

#### Coil voltage

24  $U_s = 24$  V DC

#### Auxiliary switches, number / type

Snap-action switch S870 W1D1 t

Position 1: 1x / 0x	B / 0
Position 2: 1x / 0x	B / 0
Position 3: 1x / 0x	B / 0
Position 4: 1x / 0x	B / 0

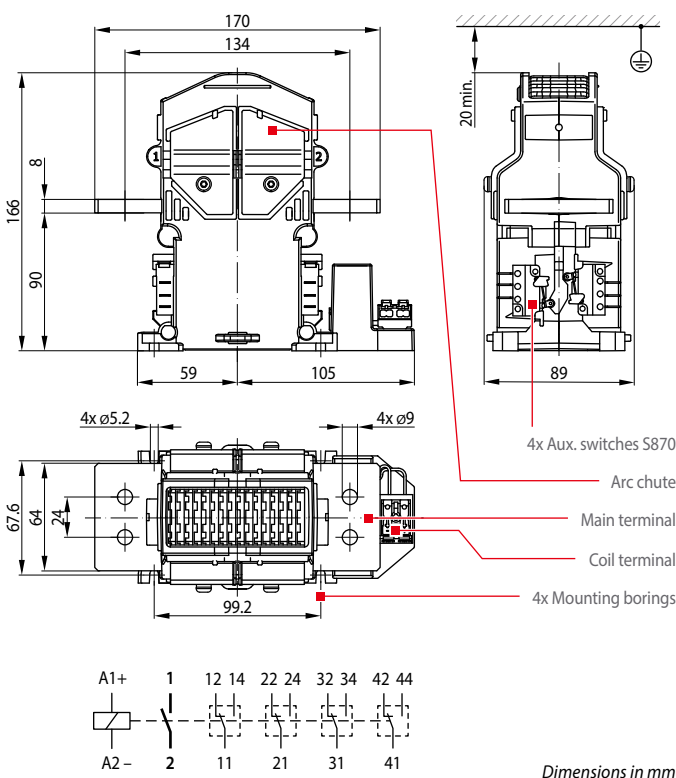
#### Coil design

Monostable with integrated PWM module

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**i Note:** Presented in this flyer are only stock items which can be supplied in short delivery time. For some variants minimum quantities apply. Please ask for your customer-specific version.

### C320K/1000 Dimension diagram, circuit diagram



### Specifications

C320K/1000, C320S/1000	
<b>Type of voltage</b>	DC, bidirectional / AC ( $f \leq 60$ Hz)
Main contacts, configuration	1x NO
<b>Main contacts</b>	
Rated operational voltage $U_e$ @ PD3	C320K: 1,500 V / C320S: 60 V
Rated insulation voltage $U_i$	1,800 V
Rated impulse withstand voltage $U_{imp}$	10 kV
Pollution degree	PD3
Overvoltage category	OV3
Conventional free air thermal current $I_{th}$	1,000 A @ $T_a = 85^\circ$ C
Rated short-time withstand current $I_{cw}$	5,000 A / 1 sec
Breaking capacity	60 operations @ L/R = 0.1 ms, $U_e = 1,500$ V, $I_e = 750$ A
<b>Auxiliary contacts</b>	
Number, configuration	4x max. changeover S870
Utilization category	EN 60947-5-1 AC-15: 230 V AC/1,5 A; DC-13: 60 V DC/0,5 A
<b>Magnetic drive</b>	
Coil voltage $U_s$	24 V DC
Coil tolerance	0.7 ... 1.25 x $U_s$
<b>Vibration / Shock</b>	IEC 61373 Category 1, Class B
<b>Mechanical endurance</b>	2 million operating cycles
<b>Mounting position</b>	horizontal, vertical (do not mount upside down)
<b>Temperatures</b>	-40° C ... +85° C
<b>Weight</b>	approx. 2.8 kg