Contactors

C320 Series
1 pole
AC and bi-directional DC
NO contactors for 1,000 A
Flyer C320.en
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 switch-off 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

Series, contact configuration

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

Version

- K 1,500 V DC
- S 60 V DC

Conventional free air thermal current $I_{th}$

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

Coil voltage

- 24 $U_e = 24$ V DC

Example: C320K/1000 24E-BBBB

Auxiliary switches, number / type

<table>
<thead>
<tr>
<th>Position</th>
<th>1x / 0x</th>
<th>1x / 0x</th>
<th>1x / 0x</th>
<th>1x / 0x</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>B / 0</td>
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<tr>
<td>2</td>
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Snap-action switch S870 W1D1 t

Monostable with integrated PWM module

Coil design E

Specifications

C320K/1000, C320S/1000

<table>
<thead>
<tr>
<th>Type of voltage</th>
<th>DC, bidirectional / AC (f ≤ 60 Hz)</th>
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<tbody>
<tr>
<td>Main contacts</td>
<td>1x NO</td>
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</tbody>
</table>

- Rated operational voltage $U_e$ @ P03
- Rated insulation voltage $U_i$
- Rated impulse withstand voltage $U_{imp}$
- Pollution degree
- Overvoltage category

- Conventional free air thermal current $I_{th}$
- Rated short-time withstand current $I_{cw}$
- Breaking capacity

- Auxiliary contacts

<table>
<thead>
<tr>
<th>Number, configuration</th>
<th>Utilization category</th>
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<tbody>
<tr>
<td>4x max. changeover S870</td>
<td>EN 60947-5-1 AC-15: 230 V AC/1,5 A; DC-13: 60 V DC/0,5 A</td>
</tr>
</tbody>
</table>

Magnetic drive

- Coil voltage $U_e$
- Coil tolerance

- $24$ V DC
- $0.7 \ldots 1.25 \times U_e$

Vibration / Shock

- IEC 61373 Category 1, Class B
- 2 million operating cycles
- (do not mount upside down)

Mechanical endurance

- Dimension in mm

Dimensions in mm

Dimensions

- Weight approx. 2.8 kg

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.