Contactors

CS115/10 series
4 pole DC and AC contactors for voltages up to 800 V
Catalogue C50.en
**CS115/10 – 4 pole DC and AC contactors**

Multi-pole unidirectional DC or AC contactor up to 800 V and 30 A of continuous current.

With the 4 pole CS115/10 series Schaltbau has expanded its product line of contactors. Designed for the low and medium power range, the switching devices are universally applicable and available in many versions. The 30 A control contactor for voltages up to 800 V is available with various contact arrangements. Optionally up to 4 snap-on auxiliary switches can be mounted to it.

### Application

The contactor is specifically designed for small and medium loads in DC and AC applications, such as:
- Locking
- Signalling
- Controlling power contactors.

### Features

- Compact, rugged Design
- Nominal voltage \( U_n \), 800 V DC or AC
- Conv. thermal current \( I_{th} \), 30 A
- DIN rail mounting acc. to IEC 60715
- Double-break contacts
- Various coil voltages
- Possible contact configurations:
  - 4 NO
  - 3 NO / 1 NC
  - 2 NO / 2 NC
  - 4 optional aux. contacts NO or NC max. that can be configured individually

### Ordering code

#### CS115/10 series 4 pole contactor

<table>
<thead>
<tr>
<th>Series</th>
<th>Main contacts, Configuration</th>
<th>Coil voltage</th>
<th>Coil tolerance</th>
<th>Coil suppression</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS115/10</td>
<td>4x NO</td>
<td>24 / 36 / 48 / 72 / 96 / 110 V DC</td>
<td>E -30 % … +25 % ( U_{in} )</td>
<td>Suppressor diode, standard</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Example:</th>
<th>CS115/10-31-72ET</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 31 22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### AS115 series auxiliary switch

<table>
<thead>
<tr>
<th>Series</th>
<th>Configuration</th>
<th>Example:</th>
<th>AS115/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS115/</td>
<td>10 01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1x NO, red release button</td>
<td>1x NC, yellow release button</td>
<td></td>
</tr>
</tbody>
</table>

**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.

### Applicable standards

- IEC 60947-4-1 Low-voltage switchgear and controlgear – Part 4-1: Contactors and motor-starters – Electromechanical contactors and motor-starters
- IEC 60077-2 Railway applications – Electric equipment for rolling stock – Part 2: Electrotechnical components; General rules
- IEC 61373 Railway applications – Rolling stock equipment – Shock and vibration tests
### Specifications

**CS series**

<table>
<thead>
<tr>
<th>Series</th>
<th>CS515/10-40-xxET</th>
<th>CS515/10-31-xxET</th>
<th>CS515/10-22-xxET</th>
</tr>
</thead>
</table>

#### Main contacts

<table>
<thead>
<tr>
<th>Configuration</th>
<th>CS515/10-40-xxET</th>
<th>CS515/10-31-xxET</th>
<th>CS515/10-22-xxET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of voltage</td>
<td>DC (unidirectional), AC (f ≤ 60Hz)</td>
<td>3x NO, 1x NC (NO-NO-NO-N)</td>
<td>2x NO, 2x NC (NO-NC-NC-NC)</td>
</tr>
</tbody>
</table>

#### Magnetic drive

<table>
<thead>
<tr>
<th>Configuration</th>
<th>CS515/10-40-xxET</th>
<th>CS515/10-31-xxET</th>
<th>CS515/10-22-xxET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil tolerance</td>
<td>±3%...±3% Ue</td>
<td>±3%...±3% Ue</td>
<td>±3%...±3% Ue</td>
</tr>
<tr>
<td>Coil suppression</td>
<td>DPD / OV2</td>
<td>DPD / OV2</td>
<td>DPD / OV2</td>
</tr>
</tbody>
</table>

### Auxiliary contacts

<table>
<thead>
<tr>
<th>Configuration</th>
<th>CS515/10-40-xxET</th>
<th>CS515/10-31-xxET</th>
<th>CS515/10-22-xxET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage Ue</td>
<td>optional 1x...4x NO (AS115/10) or NC (AS115/01) snap on type</td>
<td>optional 1x...4x NO (AS115/10) or NC (AS115/01) snap on type</td>
<td>optional 1x...4x NO (AS115/10) or NC (AS115/01) snap on type</td>
</tr>
</tbody>
</table>

### General data

<table>
<thead>
<tr>
<th>Configuration</th>
<th>CS515/10-40-xxET</th>
<th>CS515/10-31-xxET</th>
<th>CS515/10-22-xxET</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP rating</td>
<td>IP00</td>
<td>IP00</td>
<td>IP00</td>
</tr>
<tr>
<td>Mechanical endurance</td>
<td>&gt; 5 million cycles</td>
<td>&gt; 5 million cycles</td>
<td>&gt; 5 million cycles</td>
</tr>
<tr>
<td>Vibration / Shock</td>
<td>Category 1, Class B</td>
<td>Category 1, Class B</td>
<td>Category 1, Class B</td>
</tr>
<tr>
<td>Mounting orientation</td>
<td>vertical / horizontal</td>
<td>vertical / horizontal</td>
<td>vertical / horizontal</td>
</tr>
<tr>
<td>Mounting style</td>
<td>Top-hat rail 35 mm or 4x screws M6 / torque 2.5 Nm</td>
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<td>Top-hat rail 35 mm or 4x screws M6 / torque 2.5 Nm</td>
</tr>
<tr>
<td>Temperature</td>
<td>-40 °C...+70 °C</td>
<td>-40 °C...+70 °C</td>
<td>-40 °C...+70 °C</td>
</tr>
<tr>
<td>Altitude</td>
<td>&lt; 2,000 m above sea level</td>
<td>&lt; 2,000 m above sea level</td>
<td>&lt; 2,000 m above sea level</td>
</tr>
<tr>
<td>Humidity</td>
<td>&lt; 75 % on annual average</td>
<td>&lt; 75 % on annual average</td>
<td>&lt; 75 % on annual average</td>
</tr>
<tr>
<td>Weight</td>
<td>2x NO, 2x NC (NO-NC-NC-NC)</td>
<td>2x NO, 2x NC (NO-NC-NC-NC)</td>
<td>2x NO, 2x NC (NO-NC-NC-NC)</td>
</tr>
</tbody>
</table>

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* Subject to change

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*1 After mounting mind the clearance distances!  *2 Values at PD2 for seldom switching  *3 End sleeve according DIN 46228-1
CS115/10-40-xxET, CS115/10-31-xxET, CS115/10-22-xxET Dimensions, Configuration, Mounting

- **Dimension diagram**

  - Mounting borings
    4x screw M4
  - Mounting
    35 mm top hat rail
  - 1x...4x Aux. switches
    A5115 optionally
  - Blow out magnets
  - Main terminal
    screw M3.5
  - Coil terminal
    screw M3.5

- **Main contacts, Configuration**

  - CS115/10-40-xxET
  - CS115/10-31-xxET
  - CS115/10-22-xxET

- **Possible mounting orientations**

  - horizontal
  - vertical

- **Mounting holes**

CS115/10-40-xxET, CS115/10-31-xxET, CS115/10-22-xxET Circuit diagrams

- **CS115/10-40-xxET (NO-NO-NO)**

- **CS115/10-31-xxET (NO-NO-NC)**

- **CS115/10-22-xxET (NO-NC-NC-NO)**

  Example: Polarity-correct series connection of all main contacts to increase the rated operating voltage $U_e$, s. a. table «Specifications».
**Maintenance and safety instructions**

**Maintenance:**
- CS115/10 series contactors are maintenance free.
- Make regular in-depth visual inspections once or twice a year.

**Safety instructions:**
- The device must be used according to the intended purpose as specified in the technical documentation. You are obliged to observe all specifications depending on operating temperature, degree of pollution etc. that are relevant to your application.
- Without further safety measures the CS series contactors are not suited for use in potentially explosive atmospheres.
- In case of malfunction of the device or uncertainties stop using it any longer and contact the manufacturer instantly.
- Tampering with the device can seriously affect the safety of people and equipment. This is not permitted and leads to an exclusion of liability and warranty.
- Coil suppression for reducing surges when the coil is switched off is optimally attuned to the contactor’s switching behaviour. The existing opening characteristic must not be negatively influenced by parallel connection with an external diode.
- Contactors running permanently may heat up. So make sure that the contactor has sufficiently cooled down before you start any inspection or maintenance work.
- When installing CS contactors with magnetic blowout make sure to do it in such a way that no magnetizable parts can be attracted by the permanent magnets that are also capable of destroying all data of swipe cards.
- Strong electromagnetic induction caused when switching off can influence other components installed near the contactor.
- Improper handling of the contactor, e.g. when hitting the floor with some impact, can result in breakage, visible cracks and deformation.

⚠️ **Defective parts must be replaced immediately!**
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
- Snap-action switch made of robust polyetherimide (PEI)
- Snap-action switch with two galvanically isolated contact bridges
- 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

Electric components and systems for railway engineering and industrial applications

- 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 electric systems to customer requirements

Schaltbau GmbH

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