

Power contactor, AC-3 40 A, 18.5 kW / 400 V 72 V DC, 4-pole, 2 NO + 2 NC Size S2, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2

<b>product brand name</b>	SIRIUS
<b>Product designation</b>	power contactor

### General technical data

<b>Size of contactor</b>	S2
<ul style="list-style-type: none"> <li>Insulation voltage of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul style="list-style-type: none"> <li>Insulation voltage of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
<b>Surge voltage resistance</b>	
<ul style="list-style-type: none"> <li>of main circuit rated value</li> </ul>	6 kV
<ul style="list-style-type: none"> <li>of auxiliary circuit rated value</li> </ul>	6 kV
<ul style="list-style-type: none"> <li>protection class IP on the front</li> </ul>	IP00
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>of contactor typical</li> </ul>	10 000 000
<ul style="list-style-type: none"> <li>of the contactor with added electronics-compatible auxiliary switch block typical</li> </ul>	5 000 000
<ul style="list-style-type: none"> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
<b>Reference code acc. to DIN EN 81346-2</b>	Q

### Ambient conditions

<b>Installation altitude at height above sea level</b>	
<ul style="list-style-type: none"> <li>maximum</li> </ul>	2 000 m
<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>during operation</li> </ul>	-25 ... +60 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-55 ... +80 °C

### Main circuit

<b>Number of poles for main current circuit</b>	4
<b>Number of NO contacts for main contacts</b>	2
<b>Number of NC contacts for main contacts</b>	2
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>at AC-1           <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 40 °C rated value</li> </ul> </li> </ul>	60 A
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul>	55 A

<ul style="list-style-type: none"> <li>• at AC-2 at AC-3 at 400 V <ul style="list-style-type: none"> <li>— per NO contact rated value</li> <li>— per NC contact rated value</li> </ul> </li> </ul>	<p>40 A</p> <p>40 A</p>
<b>Minimum cross-section in main circuit</b>	
<ul style="list-style-type: none"> <li>• at maximum AC-1 rated value</li> </ul>	16 mm <sup>2</sup>
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at 1 current path at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> </ul> </li> <li>• with 2 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> </ul> </li> </ul>	<p>50 A</p> <p>4.5 A</p> <p>1 A</p> <p>0.4 A</p> <p>50 A</p> <p>45 A</p> <p>5 A</p> <p>1 A</p>
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V per NC contact rated value</li> <li>— at 24 V per NO contact rated value</li> <li>— at 110 V per NC contact rated value</li> <li>— at 110 V per NO contact rated value</li> <li>— at 220 V per NC contact rated value</li> <li>— at 220 V per NO contact rated value</li> <li>— at 440 V per NC contact rated value</li> <li>— at 440 V per NO contact rated value</li> </ul> </li> <li>• with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V per NC contact rated value</li> <li>— at 24 V per NO contact rated value</li> <li>— at 110 V per NC contact rated value</li> <li>— at 110 V per NO contact rated value</li> <li>— at 220 V per NC contact rated value</li> <li>— at 220 V per NO contact rated value</li> <li>— at 440 V per NC contact rated value</li> <li>— at 440 V per NO contact rated value</li> </ul> </li> </ul>	<p>35 A</p> <p>35 A</p> <p>1.25 A</p> <p>2.5 A</p> <p>0.5 A</p> <p>1 A</p> <p>0.05 A</p> <p>0.1 A</p> <p>50 A</p> <p>50 A</p> <p>12.5 A</p> <p>25 A</p> <p>2.5 A</p> <p>5 A</p> <p>0.135 A</p> <p>0.27 A</p>
<b>Operating power</b>	
<ul style="list-style-type: none"> <li>• at AC-2 at AC-3 <ul style="list-style-type: none"> <li>— at 230 V per NC contact rated value</li> <li>— at 230 V per NO contact rated value</li> <li>— at 400 V per NC contact rated value</li> <li>— at 400 V per NO contact rated value</li> </ul> </li> </ul>	<p>9.5 kW</p> <p>9.5 kW</p> <p>18.5 kW</p> <p>18.5 kW</p>

<b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>	2.6 W
<b>Operating frequency</b>	
• at AC-1 maximum	1 000 1/h

### Control circuit/ Control

<b>Type of voltage of the control supply voltage</b>	DC
<b>Control supply voltage at DC</b>	
• rated value	72 V
<b>Operating range factor control supply voltage rated value of magnet coil at DC</b>	
• initial value	0.8
• Full-scale value	1.1
<b>Closing power of magnet coil at DC</b>	13.3 W
<b>Holding power of magnet coil at DC</b>	13.3 W
<b>Closing delay</b>	
• at DC	50 ... 110 ms
<b>Opening delay</b>	
• at DC	15 ... 30 ms
<b>Arcing time</b>	10 ... 15 ms
<b>Control version of the switch operating mechanism</b>	conventional
<b>Residual current of the electronics for control with signal &lt;0&gt;</b>	
• at DC at 24 V maximum permissible	0.038 A

### Auxiliary circuit

<b>Number of NC contacts for auxiliary contacts</b>	
• instantaneous contact	0
<b>Number of NO contacts for auxiliary contacts</b>	
• instantaneous contact	0
<b>Operating current at AC-12 maximum</b>	10 A
<b>Operating current at AC-15</b>	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
<b>Operating current at DC-12</b>	
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
<b>Operating current at DC-13</b>	
• at 24 V rated value	10 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 220 V rated value	0.3 A
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)

## Short-circuit protection

### Design of the fuse link

- for short-circuit protection of the main circuit
  - with type of coordination 1 required
  - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

fuse gL/gG: 160 A

fuse gL/gG: 80 A

fuse gL/gG: 10 A

## Installation/ mounting/ dimensions

### • mounting position

with vertical mounting surface +/-180° rotatable, with vertical mounting surface +/- 30° tiltable to the front and back

### Mounting type

screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022

- Side-by-side mounting

Yes

### Height

112 mm

### Width

73 mm

### Depth

130 mm

### Required spacing

- for grounded parts
  - at the side

6 mm

## Connections/ Terminals

- Type of electrical connection for main current circuit

screw-type terminals

- Type of electrical connection for auxiliary and control current circuit

screw-type terminals

### Type of connectable conductor cross-sections

- for main contacts
  - solid
  - stranded
  - single or multi-stranded
  - finely stranded with core end processing
  - finely stranded without core end processing
- at AWG conductors for main contacts

2x (0.75 ... 16 mm<sup>2</sup>)

2x (0.75 ... 25 mm<sup>2</sup>)

2x (0,75 ... 16 mm<sup>2</sup>)

2x (0.75 ... 16 mm<sup>2</sup>)

2x (0.75 ... 16 mm<sup>2</sup>)

2x (18 ... 2)

### Type of connectable conductor cross-sections

- for auxiliary contacts
  - solid
  - single or multi-stranded
  - finely stranded with core end processing
- at AWG conductors for auxiliary contacts

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>), max. 2x (0.75 ... 4 mm<sup>2</sup>)

2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>), max. 2x (0,75 ... 4 mm<sup>2</sup>)

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)

2x (20 ... 16), 2x (18 ... 14), 1x 12

## Safety related data

### Protection against electrical shock

finger-safe

## Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery
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[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Special Test Certificate](#)



Marine / Shipping	other	Railway
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[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

## Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<https://www.siemens.com/ic10>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1535-1BJ80>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1535-1BJ80>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1535-1BJ80>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1535-1BJ80&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1535-1BJ80&lang=en)

**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1535-1BJ80/char>

**Further characteristics (e.g. electrical endurance, switching frequency)**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1535-1BJ80&objecttype=14&gridview=view1>

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