

Power contactor, AC-3 80 A, 37 kW / 400 V 24 V DC, 3-pole, Size S3  
Spring-type terminal !!! Phased-out product !!! Successor is SIRIUS  
3RT2 Preferred successor type is >>3RT2038-3KB40<<



product brand name	SIRIUS
Product designation	power contactor
General technical data	
Size of contactor	S3
• Insulation voltage rated value	1 000 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• between coil and main contacts acc. to EN 60947-1	690 V
• protection class IP on the front	IP20; IP20 on the front with cover / box terminal
• Protection class IP of the terminal	IP00
Shock resistance at rectangular impulse	
• at DC	6,8g / 5 ms, 4g / 10 ms
Shock resistance with sine pulse	
• at DC	10,6g / 5 ms, 6,2g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	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>	3
<b>Number of NO contacts for main contacts</b>	3
<b>Number of NC contacts for main contacts</b>	0
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at AC-1 at 400 V <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C rated value</li> </ul> </li> </ul>	120 A
<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>	120 A
<ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul>	100 A
<ul style="list-style-type: none"> <li>— up to 1000 V at ambient temperature 40 °C rated value</li> </ul>	60 A
<ul style="list-style-type: none"> <li>— up to 1000 V at ambient temperature 60 °C rated value</li> </ul>	50 A
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>	80 A
<ul style="list-style-type: none"> <li>— at 690 V rated value</li> </ul>	58 A
<ul style="list-style-type: none"> <li>— at 1000 V rated value</li> </ul>	30 A
<ul style="list-style-type: none"> <li>• at AC-4 at 400 V rated value</li> </ul>	66 A
<b>Connectable conductor cross-section in main circuit at AC-1</b>	
<ul style="list-style-type: none"> <li>• at 60 °C minimum permissible</li> </ul>	35 mm²
<ul style="list-style-type: none"> <li>• at 40 °C minimum permissible</li> </ul>	50 mm²
<b>Operating current for approx. 200000 operating cycles at AC-4</b>	
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>	34 A
<ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>	22 A
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at 1 current path at DC-1</li> </ul>	

— at 24 V rated value	100 A
— at 110 V rated value	9 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
<b>Operating current</b>	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	40 A
— at 110 V rated value	2.5 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
<b>Operating power</b>	
• at AC-1	
— at 230 V at 60 °C rated value	38 kW
— at 400 V rated value	66 kW
— at 690 V rated value	114 kW
— at 690 V at 60 °C rated value	114 kW
— at 1000 V at 60 °C rated value	82 W
• at AC-2 at 400 V rated value	37 kW
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
— at 1000 V rated value	37 W
<b>Operating power for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	17.9 kW
• at 690 V rated value	21.1 kW
<b>Thermal short-time current limited to 10 s</b>	
	760 A
<b>No-load switching frequency</b>	
• at DC	1 000 1/h
<b>Operating frequency</b>	
• at AC-1 maximum	900 1/h
• at AC-2 maximum	400 1/h

• at AC-3 maximum	1 000 1/h
• at AC-4 maximum	300 1/h

#### Control circuit/ Control

Type of voltage of the control supply voltage	DC
Control supply voltage at DC	
• rated value	24 V
Operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• Full-scale value	1.1
Closing power of magnet coil at DC	15 W
Holding power of magnet coil at DC	15 W
Closing delay	
• at DC	90 ... 230 ms
Opening delay	
• at DC	14 ... 20 ms
Arcing time	10 ... 15 ms

#### Auxiliary circuit

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

#### UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / Q600
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#### 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: 250 A  
 fuse gL/gG: 160 A  
 fuse gL/gG: 10 A

## Installation/ mounting/ dimensions

<b>Mounting type</b>	screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail
• Side-by-side mounting	Yes
<b>Height</b>	146 mm
<b>Width</b>	70 mm
<b>Depth</b>	152 mm
<b>Required spacing</b>	
• 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	spring-loaded terminals
<b>Type of connectable conductor cross-sections</b>	
• for main contacts	
— solid	2x (2.5 ... 16 mm <sup>2</sup> )
— stranded	2x (10 ... 50 mm <sup>2</sup> )
— single or multi-stranded	2x (2,5 ... 16 mm <sup>2</sup> )
— finely stranded with core end processing	2x (2.5 ... 35 mm <sup>2</sup> )
— finely stranded without core end processing	2x (10 ... 35 mm <sup>2</sup> )
• at AWG conductors for main contacts	2x (10 ... 1/0)
<b>Type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid	2x (0.25 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.25 ... 1.5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0.25 ... 2.5 mm <sup>2</sup> )
• at AWG conductors for auxiliary contacts	2x (24 ... 14)

## Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery
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CCC



CSA



UL



RCM

[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)



ABS

Marine / Shipping	other	Railway
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LRS



RINA



RMRS

[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=3RT1045-3BB40>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1045-3BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-3BB40>

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

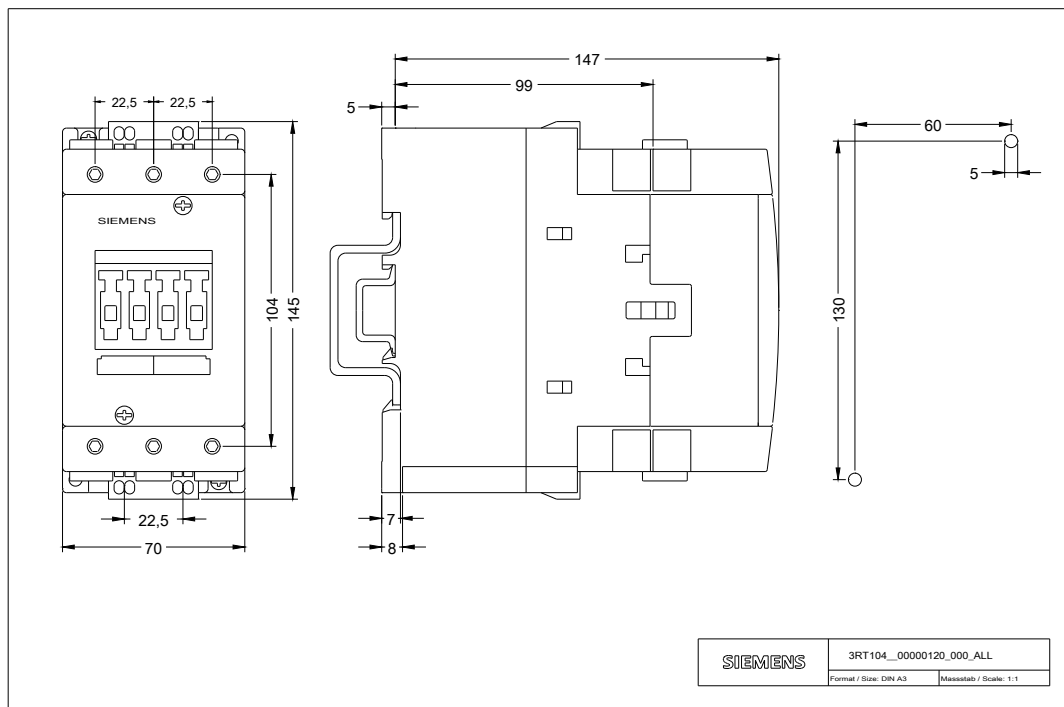
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1045-3BB40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1045-3BB40&lang=en)

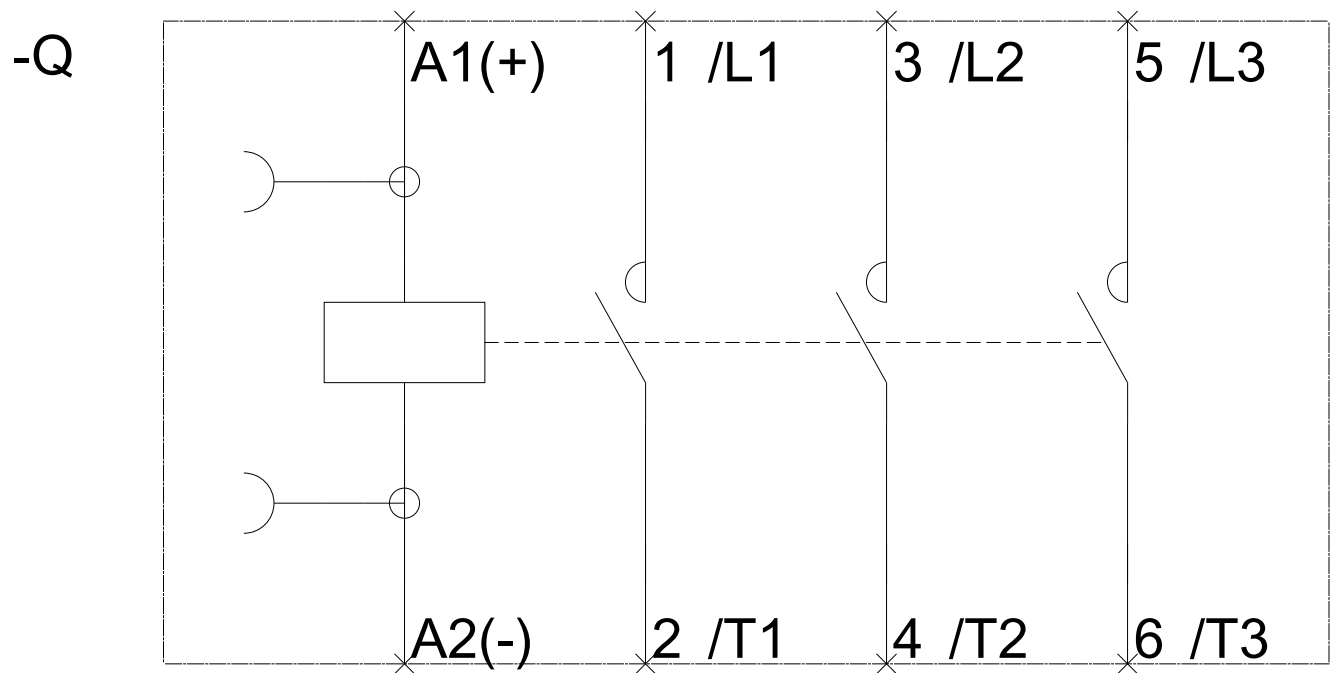
**Characteristic: Tripping characteristics, I<sub>Δt</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-3BB40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1045-3BB40&objecttype=14&gridview=view1>





last modified:

08/13/2020