

Power contactor, AC-3 50 A, 22 kW / 400 V 42 V AC, 50 / 60 Hz, 3-pole, Size S2, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2



Figure similar

<b>Product brand name</b>	SIRIUS
<b>Product designation</b>	power contactor
<b>General technical data</b>	
<b>Size of contactor</b>	S2
<b>Insulation voltage</b>	
• rated value	690 V
<b>Degree of pollution</b>	3
<b>Surge voltage resistance rated value</b>	6 kV
<b>maximum permissible voltage for safe isolation</b>	
• between coil and main contacts acc. to EN 60947-1	400 V
<b>Protection class IP</b>	
• on the front	IP20
• of the terminal	IP00
<b>Shock resistance at rectangular impulse</b>	
• at AC	10g / 5 ms, 5g / 10 ms
<b>Shock resistance with sine pulse</b>	

• at AC	15g / 5 ms, 8g / 10 ms
<b>Mechanical service life (switching cycles)</b>	
• of contactor typical	10 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	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>	
• maximum	2 000 m
<b>Ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-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>	
• at AC-1 at 400 V	
— at ambient temperature 40 °C rated value	60 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	60 A
— up to 690 V at ambient temperature 60 °C rated value	55 A
• at AC-3	
— at 400 V rated value	50 A
— at 690 V rated value	24 A
• at AC-4 at 400 V rated value	41 A
<b>Connectable conductor cross-section in main circuit at AC-1</b>	
• at 60 °C minimum permissible	16 mm <sup>2</sup>
• at 40 °C minimum permissible	16 mm <sup>2</sup>
<b>Operating current for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	24 A
• at 690 V rated value	12.6 A
<b>Operating current</b>	
• at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A

<ul style="list-style-type: none"> <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> </ul> </li> <li>• with 3 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> </ul> </li> </ul>	<p>55 A</p> <p>25 A</p> <p>55 A</p> <p>55 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 rated value</li> <li>— at 110 V 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 rated value</li> <li>— at 110 V rated value</li> </ul> </li> <li>• with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> </ul>	<p>35 A</p> <p>2.5 A</p> <p>55 A</p> <p>25 A</p> <p>55 A</p> <p>55 A</p>
<b>Operating power</b>	
<ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— at 230 V at 60 °C rated value</li> <li>— at 400 V rated value</li> <li>— at 690 V rated value</li> <li>— at 690 V at 60 °C rated value</li> </ul> </li> <li>• at AC-2 at 400 V rated value</li> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>	<p>22 kW</p> <p>38 kW</p> <p>66 kW</p> <p>66 kW</p> <p>22 kW</p> <p>15 kW</p> <p>22 kW</p> <p>30 kW</p> <p>22 kW</p>
<b>Operating power for approx. 200000 operating cycles at AC-4</b>	
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> <li>• at 690 V rated value</li> </ul>	<p>12.6 kW</p> <p>11.4 kW</p>
<b>Thermal short-time current limited to 10 s</b>	400 A
<b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>	5 W
<b>No-load switching frequency</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	5 000 1/h
<b>Operating frequency</b>	
<ul style="list-style-type: none"> <li>• at AC-1 maximum</li> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-4 maximum</li> </ul>	<p>1 000 1/h</p> <p>400 1/h</p> <p>800 1/h</p> <p>300 1/h</p>

Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	42 V
• at 60 Hz rated value	42 V
Control supply voltage frequency	
• 1 rated value	50 Hz
• 2 rated value	60 Hz
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	170 V·A
Inductive power factor with closing power of the coil	0.76
Apparent holding power of magnet coil at AC	15 V·A
Inductive power factor with the holding power of the coil	0.35
Closing delay	
• at AC	10 ... 24 ms
Opening delay	
• at AC	7 ... 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

<ul style="list-style-type: none"><li>for short-circuit protection of the main circuit<ul style="list-style-type: none"><li>with type of coordination 1 required</li><li>with type of assignment 2 required</li></ul></li><li>for short-circuit protection of the auxiliary switch required</li></ul>	fuse gL/gG: 160 A fuse gL/gG: 80 A fuse gL/gG: 10 A
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## Installation/ mounting/ dimensions

<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
<ul style="list-style-type: none"><li>Side-by-side mounting</li></ul>	Yes
<b>Height</b>	112 mm
<b>Width</b>	55 mm
<b>Depth</b>	115 mm
<b>Required spacing</b>	
<ul style="list-style-type: none"><li>for grounded parts<ul style="list-style-type: none"><li>at the side</li></ul></li></ul>	6 mm

## Connections/Terminals

<b>Type of electrical connection</b>	
<ul style="list-style-type: none"><li>for main current circuit</li><li>for auxiliary and control current circuit</li></ul>	screw-type terminals screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"><li>for main contacts<ul style="list-style-type: none"><li>solid</li><li>stranded</li><li>single or multi-stranded</li><li>finely stranded with core end processing</li><li>finely stranded without core end processing</li></ul></li><li>at AWG conductors for main contacts</li></ul>	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)
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"><li>for auxiliary contacts<ul style="list-style-type: none"><li>solid</li><li>finely stranded with core end processing</li></ul></li><li>at AWG conductors for auxiliary contacts</li></ul>	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

## Certificates/approvals

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



Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)



Marine / Shipping	other
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[Miscellaneous](#)

[Confirmation](#)

## Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1036-1AD20>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1036-1AD20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1036-1AD20>

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

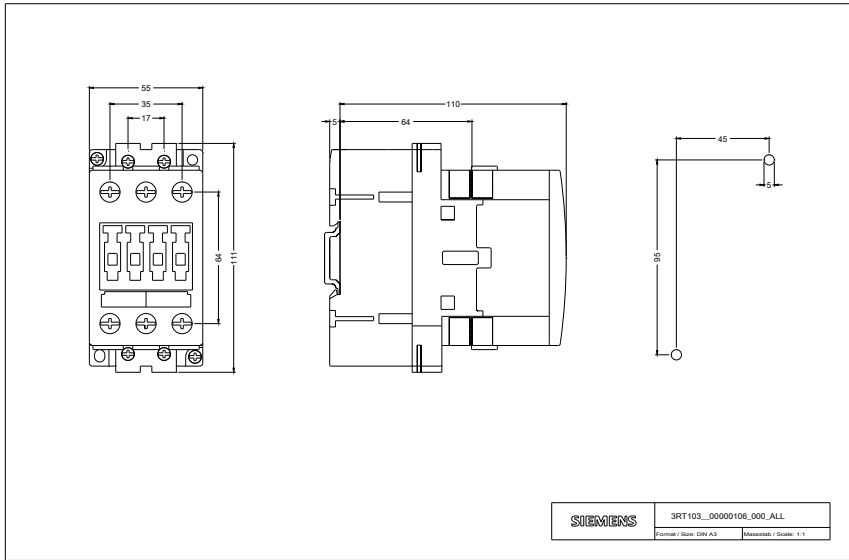
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1036-1AD20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1036-1AD20&lang=en)

### Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

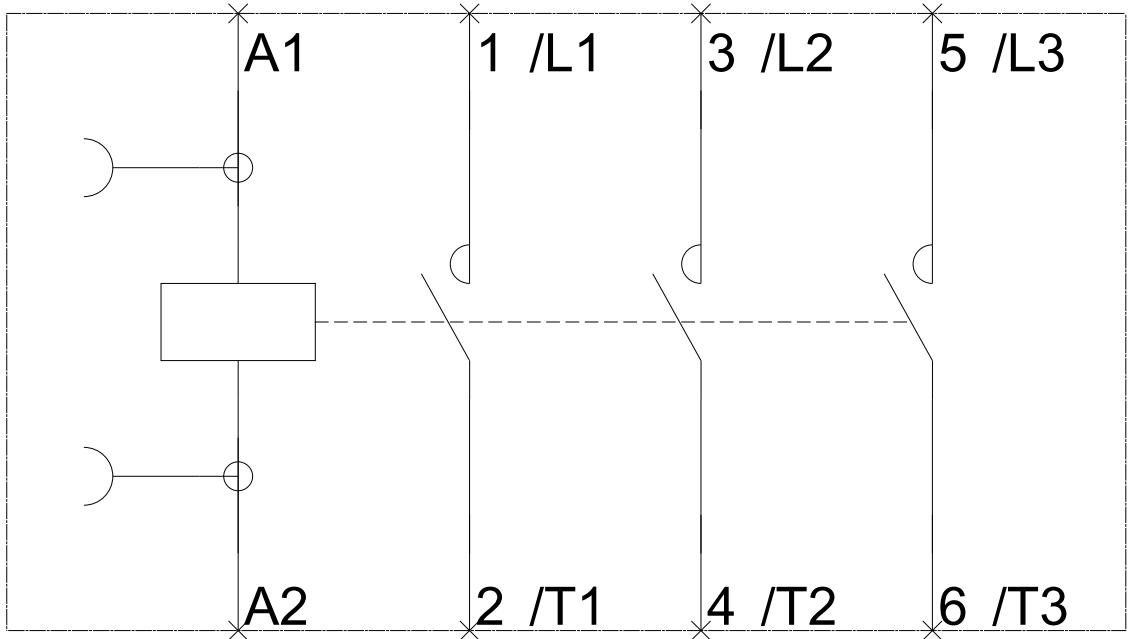
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1036-1AD20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1036-1AD20&objecttype=14&gridview=view1>



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