

Contactor, AC-1, 140 A / 400 V, 230 V AC, 50 Hz, 3-pole, Size S3,  
Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2  
Preferred successor type is >>3RT2446-1AP00<<



Product brand name	SIRIUS
Product designation	power contactor
<b>General technical data</b>	
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
• of the terminal	IP00
Shock resistance at rectangular impulse	
• at AC	6,8g / 5 ms, 4g / 10 ms
Shock resistance with sine pulse	
• at AC	10,6g / 5 ms, 6,2g / 10 ms
Mechanical service life (switching cycles)	

<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>	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>	140 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> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul>	140 A 130 A
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>	44 A 44 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> <li>• at 40 °C minimum permissible</li> </ul>	35 mm <sup>2</sup> 50 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> </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> </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>	130 A 12 A 130 A 130 A 130 A 130 A
<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>6 A</p> <p>1.25 A</p> <p>130 A</p> <p>130 A</p> <p>130 A</p> <p>130 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>50 kW</p> <p>86 kW</p> <p>148 kW</p> <p>148 kW</p> <p>22 kW</p> <p>12.7 kW</p> <p>22 kW</p> <p>29.9 kW</p> <p>38.2 kW</p>
<b>Thermal short-time current limited to 10 s</b>	600 A
<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> </ul>	650 1/h

Control circuit/ Control	
<b>Type of voltage of the control supply voltage</b>	AC
<b>Control supply voltage at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>	230 V
<b>Control supply voltage frequency</b>	
<ul style="list-style-type: none"> <li>• 1 rated value</li> </ul>	50 Hz
<b>Operating range factor control supply voltage rated value of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	0.8 ... 1.1
<b>Apparent pick-up power of magnet coil at AC</b>	270 V·A
<b>Inductive power factor with closing power of the coil</b>	0.68
<b>Apparent holding power of magnet coil at AC</b>	22 V·A
<b>Inductive power factor with the holding power of the coil</b>	0.27
<b>Closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	17 ... 90 ms

<b>Opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	10 ... 25 ms
<b>Arcing time</b>	10 ... 15 ms

### Auxiliary circuit

<b>Number of NC contacts for auxiliary contacts</b>	
<ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>	0
<b>Number of NO contacts for auxiliary contacts</b>	
<ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>	0
Operating current at AC-12 maximum	10 A
<b>Operating current at AC-15</b>	
<ul style="list-style-type: none"> <li>• at 230 V rated value</li> <li>• at 400 V rated value</li> </ul>	6 A 3 A
<b>Operating current at DC-12</b>	
<ul style="list-style-type: none"> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 220 V rated value</li> </ul>	6 A 3 A 1 A
<b>Operating current at DC-13</b>	
<ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 220 V rated value</li> </ul>	10 A 2 A 1 A 0.3 A
<b>Contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)

### UL/CSA ratings

<b>Contact rating of auxiliary contacts according to UL</b>	A600 / Q600
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### Short-circuit protection

<b>Design of the fuse link</b>	
<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: 250 A Fuse gR: 250 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
<ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>	Yes
<b>Height</b>	146 mm
<b>Width</b>	70 mm
<b>Depth</b>	139 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>	<p>screw-type terminals</p> <p>screw-type terminals</p>
<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>	<p>2x (2.5 ... 16 mm<sup>2</sup>)</p> <p>2x (10 ... 50 mm<sup>2</sup>)</p> <p>2x (2,5 ... 16 mm<sup>2</sup>)</p> <p>2x (2.5 ... 35 mm<sup>2</sup>)</p> <p>2x (10 ... 35 mm<sup>2</sup>)</p> <p>2x (10 ... 1/0)</p>
<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>	<p>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>)</p> <p>2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</p> <p>2x (20 ... 16), 2x (18 ... 14), 1x 12</p>

## Certificates/ approvals

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

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

[Special Test Certificate](#)



<b>Marine / Shipping</b>	<b>other</b>	<b>Railway</b>
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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?mfb=3RT1446-1AP00>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT1446-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1446-1AP00>

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

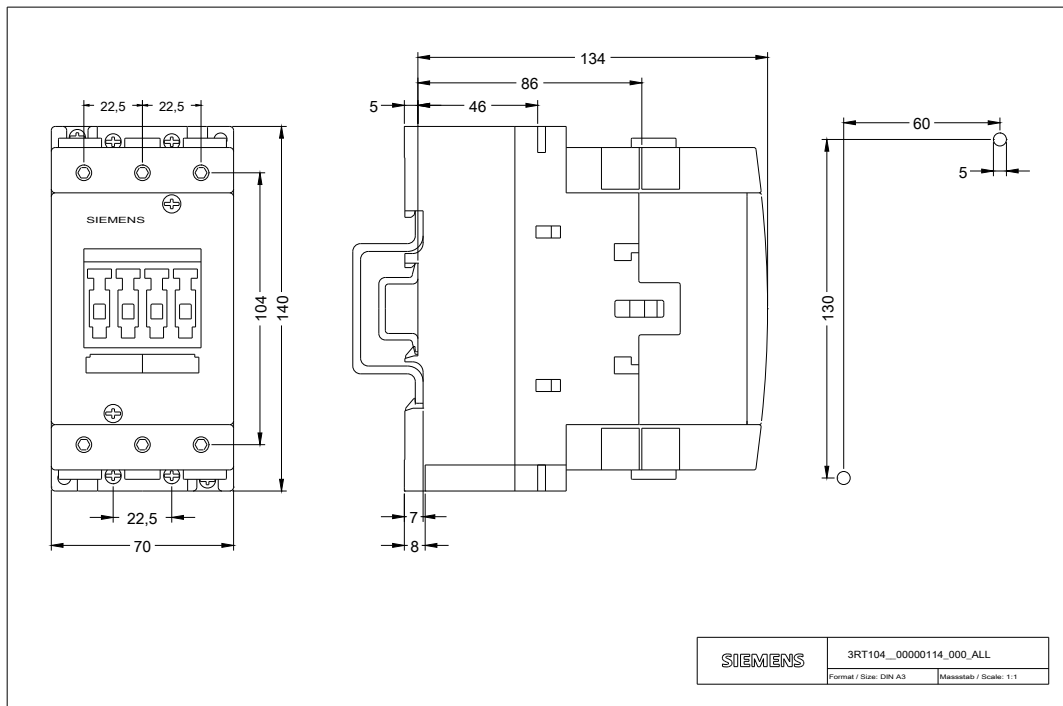
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RT1446-1AP00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT1446-1AP00&lang=en)

### Characteristic: Tripping characteristics, $I^2t$ , Let-through current

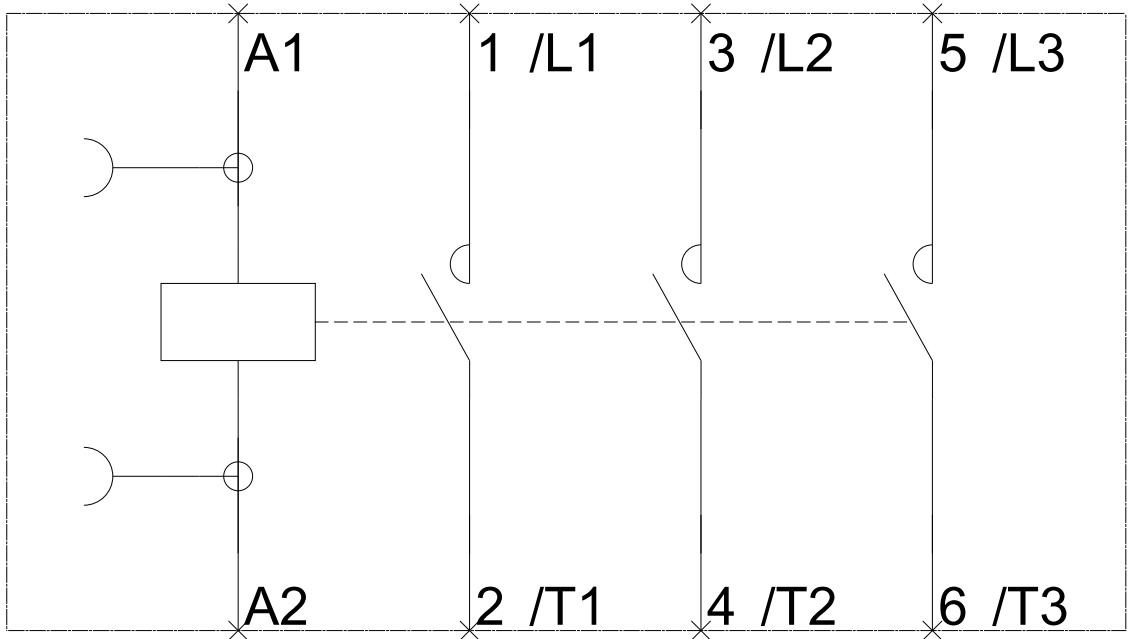
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1446-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mfb=3RT1446-1AP00&objecttype=14&gridview=view1>



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