

Contactor, AC-3, 22 kW/400 V 110 V AC/50 Hz/120 V AC/60 Hz 4-pole, 2 NO+2 NC, Size S2 Screw terminal 1 NO+1 NC integrated



<b>Product brand name</b>	SIRIUS
<b>Product designation</b>	contactor
<b>Product type designation</b>	3RT25
<b>General technical data</b>	
<b>Size of contactor</b>	S2
<b>Product extension</b>	
• function module for communication	No
• Auxiliary switch	Yes
<b>Insulation voltage</b>	
• of main circuit with degree of pollution 3 rated value	690 V
• of auxiliary circuit with degree of pollution 3 rated value	690 V
<b>Surge voltage resistance</b>	
• of main circuit rated value	6 kV
• of auxiliary circuit rated value	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>	
<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	IP20 IP00
<b>Shock resistance at rectangular impulse</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	11.8g / 5 ms, 7.4g / 10 ms
<b>Shock resistance with sine pulse</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	18.5g / 5 ms, 11.6g / 10 ms
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of contactor typical</li> <li>• of the contactor with added electronics-compatible auxiliary switch block typical</li> <li>• of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000 5 000 000 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> <li>• during storage</li> </ul>	-40 ... +70 °C -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> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> <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>	70 A 60 A 41 A 41 A
<b>Minimum cross-section in main circuit</b>	
<ul style="list-style-type: none"> <li>• at maximum AC-1 rated value</li> </ul>	25 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</li> </ul>	60 A 4.5 A 1 A 0.4 A

— at 24 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
<b>Operating current</b>	
• at 1 current path at DC-3 at DC-5	
— at 24 V per NC contact rated value	35 A
— at 24 V per NO contact rated value	35 A
— at 110 V per NC contact rated value	1.25 A
— at 110 V per NO contact rated value	2.5 A
— at 220 V per NC contact rated value	0.5 A
— at 220 V per NO contact rated value	1 A
— at 440 V per NC contact rated value	0.045 A
— at 440 V per NO contact rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V per NC contact rated value	55 A
— at 24 V per NO contact rated value	55 A
— at 110 V per NC contact rated value	12.5 A
— at 110 V per NO contact rated value	25 A
— at 220 V per NC contact rated value	2.5 A
— at 220 V per NO contact rated value	5 A
— at 440 V per NC contact rated value	0.135 A
— at 440 V per NO contact rated value	0.27 A
<b>Operating power</b>	
• at AC-1	
— at 230 V rated value	26 kW
— at 400 V rated value	46 kW
• at AC-2 at AC-3	
— at 230 V per NC contact rated value	15 kW
— at 230 V per NO contact rated value	15 kW
— at 400 V per NC contact rated value	22 kW
— at 400 V per NO contact rated value	22 kW
<b>Thermal short-time current limited to 10 s</b>	420 A
<b>Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor</b>	4 W
<b>No-load switching frequency</b>	
• at AC	5 000 1/h
<b>Operating frequency</b>	
• at AC-1 maximum	1 000 1/h
<b>Control circuit/ Control</b>	
<b>Type of voltage of the control supply voltage</b>	AC

<b>Control supply voltage at AC</b>	
• at 50 Hz rated value	110 V
• at 60 Hz rated value	120 V
<b>Operating range factor control supply voltage rated value of magnet coil at AC</b>	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
<b>Apparent pick-up power of magnet coil at AC</b>	190 V·A
• at 50 Hz	210 V·A
• at 60 Hz	188 V·A
<b>Inductive power factor with closing power of the coil</b>	0.72
• at 50 Hz	0.69
• at 60 Hz	0.65
<b>Apparent holding power of magnet coil at AC</b>	17.2 V·A
• at 50 Hz	17.2 V·A
• at 60 Hz	16.5 V·A
<b>Inductive power factor with the holding power of the coil</b>	0.36
• at 50 Hz	0.36
• at 60 Hz	0.39
<b>Closing delay</b>	
• at AC	12 ... 22 ms
<b>Opening delay</b>	
• at AC	10 ... 18 ms
<b>Arcing time</b>	10 ... 20 ms
<b>Control version of the switch operating mechanism</b>	AC

#### Auxiliary circuit

<b>Number of NC contacts for auxiliary contacts</b>	
• instantaneous contact	1
<b>Number of NO contacts for auxiliary contacts</b>	
• instantaneous contact	1
<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
• at 500 V rated value	2 A
• at 690 V rated value	1 A
<b>Operating current at DC-12</b>	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A

<ul style="list-style-type: none"> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>	<p>2 A</p> <p>1 A</p> <p>0.15 A</p>
<b>Operating current at DC-13</b> <ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>	<p>10 A</p> <p>2 A</p> <p>2 A</p> <p>1 A</p> <p>0.9 A</p> <p>0.3 A</p> <p>0.1 A</p>
<b>Contact reliability of auxiliary contacts</b>	<p>1 faulty switching per 100 million (17 V, 1 mA)</p>

UL/CSA ratings	
<b>Contact rating of auxiliary contacts according to UL</b>	<p>A600 / P600</p>

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>	<p>gG: 160 A (690 V, 100 kA)</p> <p>gG: 80 A (690 V, 100 kA)</p> <p>fuse gG: 10 A</p>

Installation/ mounting/ dimensions	
<b>Mounting position</b>	<p>+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface</p>
<b>Mounting type</b> <ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>	<p>screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022</p> <p>Yes</p>
<b>Height</b>	<p>114 mm</p>
<b>Width</b>	<p>75 mm</p>
<b>Depth</b>	<p>130 mm</p>
<b>Required spacing</b> <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> </ul> </li> </ul>	<p>0 mm</p>

— upwards	50 mm
— at the side	10 mm
— downwards	50 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	10 mm

## Connections/ Terminals

<b>Type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
• for main contacts	
— solid	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
— single or multi-stranded	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )
• at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
<b>Type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
— single or multi-stranded	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
AWG number as coded connectable conductor cross section for main contacts	18 ... 1

## Safety related data

<b>Product function</b>	
• Mirror contact acc. to IEC 60947-4-1	Yes
• positively driven operation acc. to IEC 60947-5-1	No
<b>Protection against electrical shock</b>	finger-safe when touched vertically from front acc. to IEC 60529

## 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](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other
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[Confirmation](#)

#### Further information

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

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2536-1AK60>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2536-1AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2536-1AK60>

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

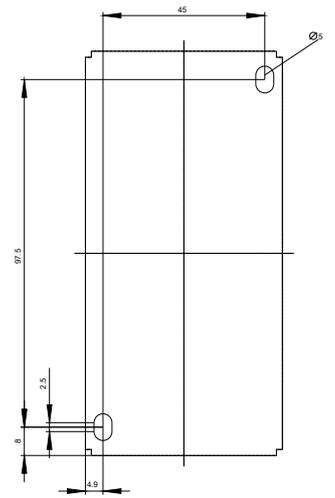
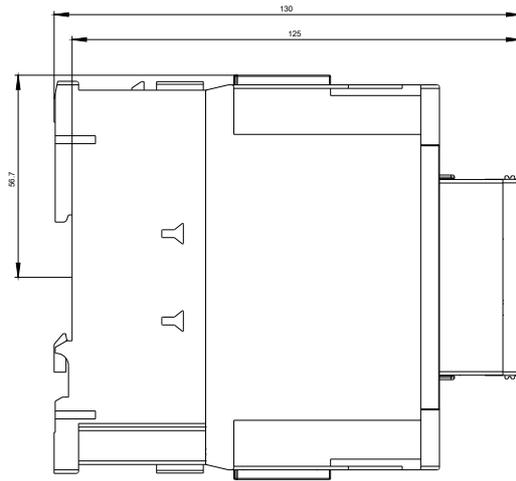
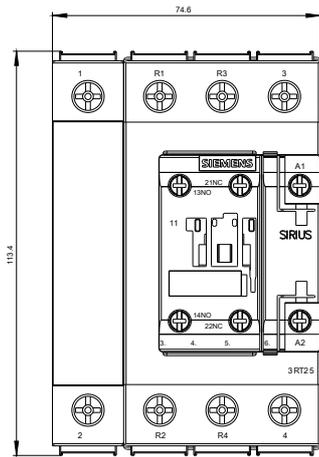
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2536-1AK60&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2536-1AK60&lang=en)

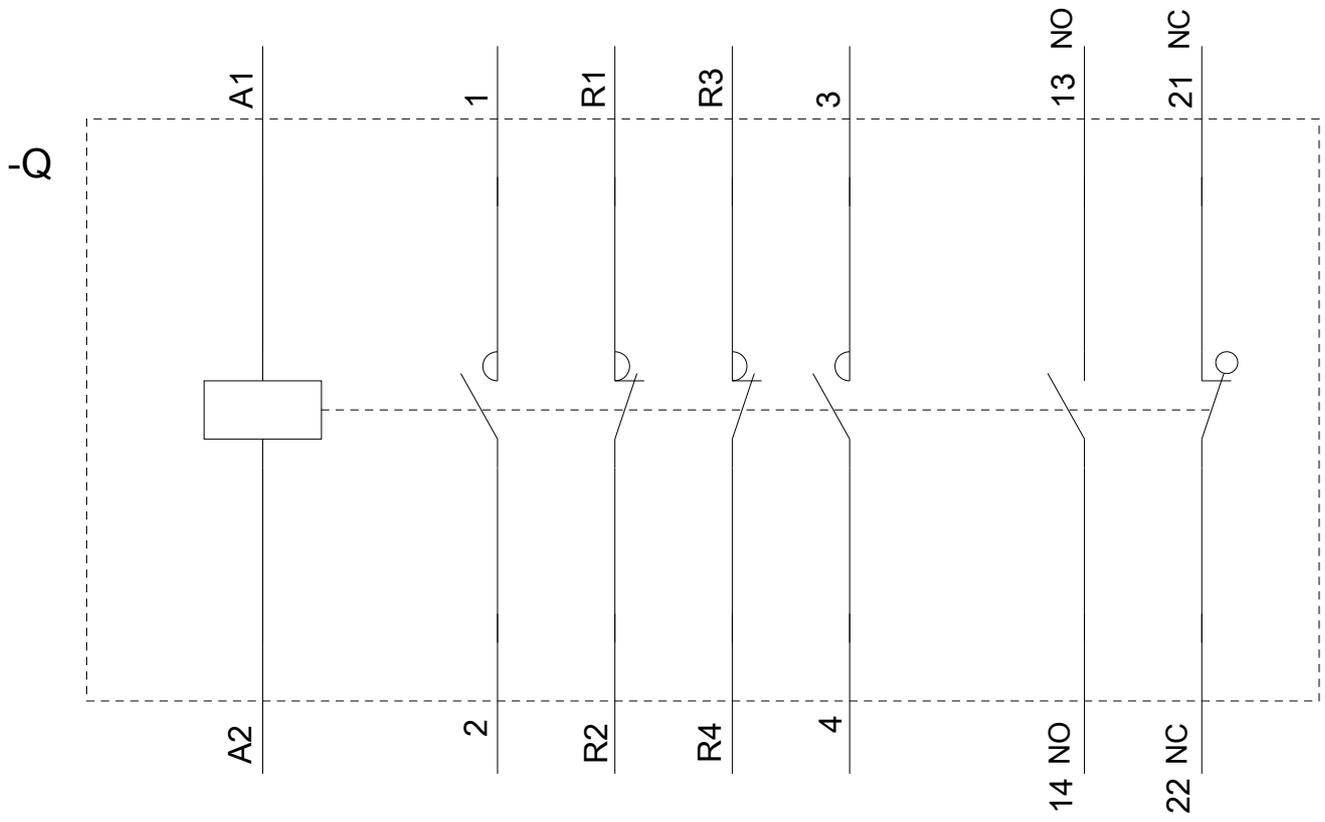
**Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2536-1AK60/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2536-1AK60&objecttype=14&gridview=view1>





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