



power contactor, AC-3, 80 A, 37 kW / 400 V, 4-pole, 48-80 V AC/DC, 50/60 Hz, with integrated varistor, main contacts: 2 NO + 2 NC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S3

<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>	S3
<b>product extension</b>	
• function module for communication	No
• auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state per pole	5.3 W
• without load current share typical	3 W
<b>type of calculation of power loss current-dependent</b>	quadratic
<b>insulation voltage</b>	
• of main circuit with degree of pollution 3 rated value	1 000 V
• of auxiliary circuit with degree of pollution 3 rated value	690 V
<b>surge voltage resistance</b>	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
<b>shock resistance at rectangular impulse</b>	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
• at DC	6.7 g / 5 ms, 4 g / 10 ms
<b>shock resistance with sine pulse</b>	
• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
• at DC	10.6 g / 5 ms, 6.3 g / 10 ms
<b>mechanical service life (operating cycles)</b>	
• of contactor typical	10 000 000
• of the contactor with added electronically optimized auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (day/month/year)</b>	09/01/2017
<b>SVHC substance name</b>	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
<b>Net Weight</b>	2.13 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m

<b>ambient temperature</b>	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
<b>relative humidity minimum</b>	10 %
<b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>	95 %
<b>Main circuit</b>	
<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>operational current</b>	
• at AC-1 up to 690 V	
— at ambient temperature 40 °C rated value	125 A
— at ambient temperature 60 °C rated value	105 A
• at AC-2 at AC-3 at 400 V	
— per NO contact rated value	80 A
— per NC contact rated value	80 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm <sup>2</sup>
<b>operational current</b>	
• <b>at 1 current path at DC-1</b>	
— at 24 V rated value	100 A
— at 110 V rated value	9 A
— at 220 V rated value	2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.4 A
• <b>with 2 current paths in series at DC-1</b>	
— at 24 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	10 A
— at 440 V rated value	1.8 A
• <b>at 1 current path at DC-3 at DC-5</b>	
— at 24 V per NC contact rated value	40 A
— at 24 V per NO contact rated value	40 A
— at 110 V per NC contact rated value	2.5 A
— at 110 V per NO contact rated value	2.5 A
— at 220 V per NC contact rated value	1 A
— at 220 V per NO contact rated value	1 A
— at 440 V per NC contact rated value	0.15 A
— at 440 V per NO contact rated value	0.15 A
• <b>with 2 current paths in series at DC-3 at DC-5</b>	
— at 24 V per NC contact rated value	100 A
— at 24 V per NO contact rated value	100 A
— at 110 V per NC contact rated value	100 A
— at 110 V per NO contact rated value	100 A
— at 220 V per NC contact rated value	7 A
— at 220 V per NO contact rated value	7 A
— at 440 V per NC contact rated value	0.42 A
— at 440 V per NO contact rated value	0.42 A
operating power at AC-2 at AC-3	
• at 230 V per NC contact rated value	22 kW
• at 230 V per NO contact rated value	22 kW
• at 400 V per NC contact rated value	37 kW
• at 400 V per NO contact rated value	37 kW
<b>short-time withstand current in cold operating state up to 40 °C</b>	
• limited to 1 s switching at zero current maximum	1 080 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 5 s switching at zero current maximum	1 080 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 10 s switching at zero current maximum	851 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 30 s switching at zero current maximum	538 A; Use minimum cross-section acc. to AC-1 rated value

<ul style="list-style-type: none"> <li>limited to 60 s switching at zero current maximum</li> </ul>	423 A; Use minimum cross-section acc. to AC-1 rated value
<b>power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor</b>	5.3 W
<b>power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor</b>	5.3 W
<b>no-load switching frequency</b>	
<ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>	1 000 1/h 1 000 1/h
<b>operating frequency</b>	
<ul style="list-style-type: none"> <li>at AC-1 maximum</li> </ul>	900 1/h
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC/DC
<b>control supply voltage at AC</b>	
<ul style="list-style-type: none"> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> </ul>	48 ... 80 V 48 ... 80 V
<b>control supply voltage at DC rated value</b>	48 ... 80 V
<b>operating range factor control supply voltage rated value of magnet coil at DC</b>	
<ul style="list-style-type: none"> <li>initial value</li> <li>full-scale value</li> </ul>	0.8 1.1
<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> <li>at 60 Hz</li> </ul>	0.8 ... 1.1 0.8 ... 1.1
<b>design of the surge suppressor</b>	with varistor
<b>inrush current peak</b>	65 A
<b>duration of inrush current peak</b>	5 µs
<b>pickup current mean value</b>	0.44 A
<b>pickup current peak</b>	1.2 A
<b>duration of pickup current</b>	150 ms
<b>holding current mean value</b>	10 mA
<b>apparent pick-up power of magnet coil at AC</b>	163 VA
<ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	163 VA 163 VA
<b>inductive power factor with closing power of the coil</b>	0.95
<ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	0.95 0.95
<b>apparent holding power of magnet coil at AC</b>	3.1 VA
<ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	3.1 VA 3.1 VA
<b>inductive power factor with the holding power of the coil</b>	0.95
<ul style="list-style-type: none"> <li>at 50 Hz</li> <li>at 60 Hz</li> </ul>	0.95 0.95
<b>closing power of magnet coil at DC</b>	76 W
<b>holding power of magnet coil at DC</b>	1.8 W
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>	50 ... 70 ms 50 ... 70 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>at AC</li> <li>at DC</li> </ul>	38 ... 57 ms 38 ... 57 ms
<b>arcing time</b>	10 ... 20 ms
<b>control version of the switch operating mechanism</b>	UC
<b>Auxiliary circuit</b>	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
<b>operational current at AC-15</b>	
<ul style="list-style-type: none"> <li>at 230 V rated value</li> </ul>	6 A

<ul style="list-style-type: none"> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>	3 A 2 A 1 A
<b>operational current at DC-12</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>	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
<b>operational 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>	10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
<b>UL/CSA ratings</b>	
<b>yielded mechanical performance [hp]</b>	
<ul style="list-style-type: none"> <li>• for 3-phase AC motor at 460/480 V rated value</li> </ul>	30 hp
<b>contact rating of auxiliary contacts according to UL</b>	A600 / P600
<b>Short-circuit protection</b>	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
<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 coordination 2 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 250 A (690 V, 100 kA) gR: 250 A (690 V, 100 kA) gG: 10 A (690 V, 1 kA)
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method side-by-side mounting	Yes
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
<b>height</b>	140 mm
<b>width</b>	70 mm
<b>depth</b>	152 mm
<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> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts               <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> </ul>	0 mm 0 mm 0 mm 0 mm 0 mm  0 mm 0 mm 10 mm 10 mm 10 mm  0 mm 0 mm 10 mm 10 mm 10 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 circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>	screw-type terminals screw-type terminals 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>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for main contacts</li> </ul>	2x (2.5 ... 16 mm <sup>2</sup> ) 2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> ) 2x (2.5 ... 16 mm <sup>2</sup> ); [2x (6 ... 16 mm <sup>2</sup> ), 2x (10 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> )] 2x (2.5 ... 35 mm <sup>2</sup> ), 1x (2.5 ... 50 mm <sup>2</sup> ) 2x (10 ... 1/0), 1x (10 ... 2/0)
<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>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 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)
<b>AWG number extended as coded connectable conductor cross section for main contacts</b>	10 ... 2/0
<b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>	20 ... 14

## Safety related data

<b>product function</b> <ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> </ul>	Yes No
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## Electrical Safety

<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front

## Approvals Certificates

Environment	General Product Approval	EMV
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[Environmental Conformations](#)



## Test Certificates

<a href="#">Special Test Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>				
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## Maritime application

	<a href="#">Confirmation</a>	<a href="#">Special Test Certificate</a>
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## Further information

**Information on the packaging**  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>  
**Information for data generation and storage**  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>  
**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=3RT2545-1NE30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2545-1NE30>

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

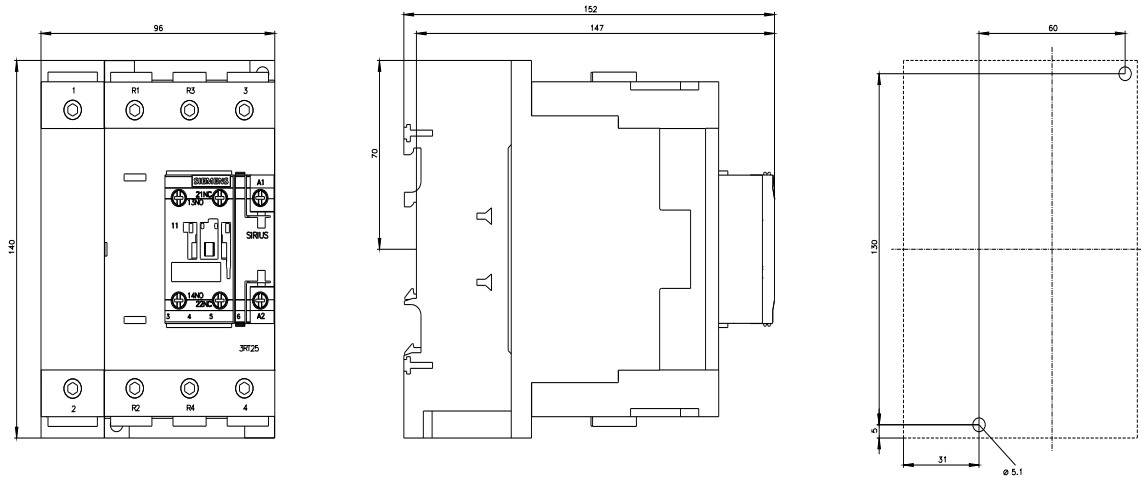
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2545-1NE30&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2545-1NE30&lang=en)

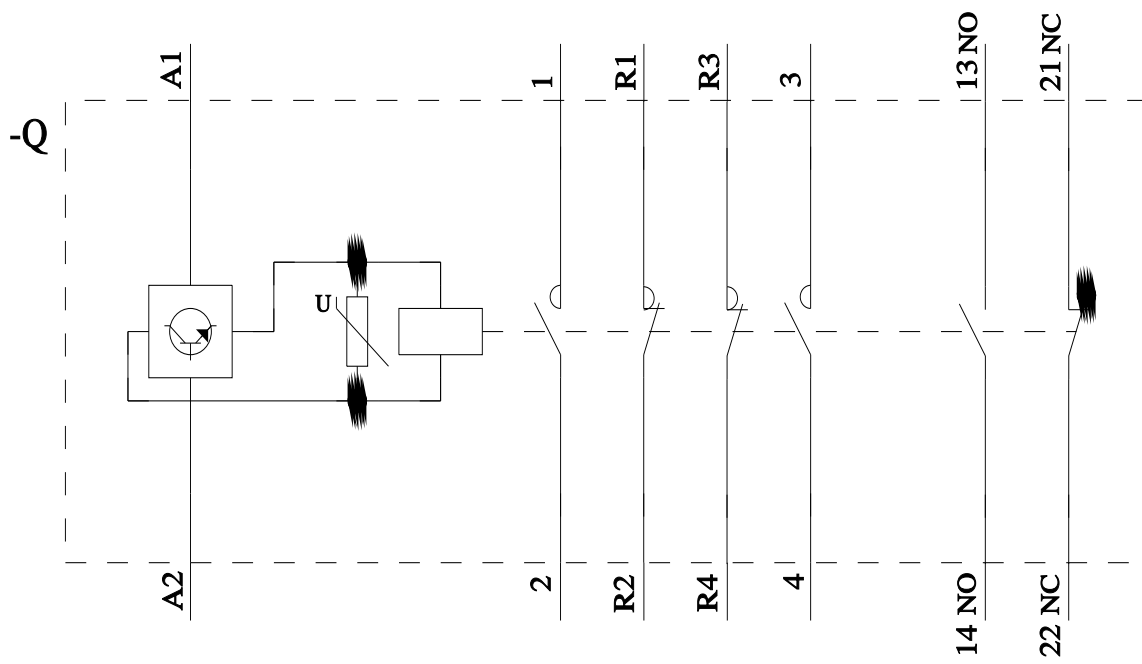
Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2545-1NE30>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP='HAUPT'></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)





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