



traction contactor, AC-3, 16 A, 7.5 kW / 400 V, 4-pole, 24 V DC, 0.7-1.25\* U<sub>c</sub>, solid-state operating mechanism, with integrated varistor, main contacts: 2 NO + 2 NC, spring-loaded terminal, frame size: S00

product brand name	SIRIUS
product designation	Non-reversing contactor
product type designation	3RT25
<b>General technical data</b>	
size of contactor	S00
product extension	
• function module for communication	No
• auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	4.4 W
• at AC in hot operating state per pole	2.2 W
• without load current share typical	0.7 W
type of calculation of power loss current-dependent	quadratic
insulation voltage	
• of main circuit with degree of pollution 3 rated value	690 V
• of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
• of main circuit rated value	6 kV
• of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	6,7 g / 5 ms, 4,2 g / 10 ms
shock resistance with sine pulse	
• at DC	10,5 g / 5 ms, 6,6 g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	30 000 000
• 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
reference code according to IEC 81346-2	Q
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	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
Net Weight	0.317 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	

<ul style="list-style-type: none"> <li>during operation</li> </ul>	-40 ... +70 °C
<ul style="list-style-type: none"> <li>during storage</li> </ul>	-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>operating voltage</b>	
<ul style="list-style-type: none"> <li>at AC-3 rated value maximum</li> </ul>	400 V
<b>operational current</b>	
<ul style="list-style-type: none"> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	22 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>	22 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 60 °C rated value</li> </ul> </li> </ul>	20 A
<ul style="list-style-type: none"> <li>at AC-2 at 400 V rated value</li> </ul>	16 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>	16 A
<ul style="list-style-type: none"> <li>at AC-4 at 400 V rated value</li> </ul>	11.5 A
<b>minimum cross-section in main circuit</b>	
<ul style="list-style-type: none"> <li>at maximum AC-1 rated value</li> </ul>	4 mm <sup>2</sup>
<b>operational current for approx. 200000 operating cycles at AC-4</b>	
<ul style="list-style-type: none"> <li>at 400 V rated value</li> </ul>	5.5 A
<ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul>	4.4 A
<b>operational current</b>	
<ul style="list-style-type: none"> <li><b>at 1 current path at DC-1</b> <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> </ul>	20 A 2.1 A 0.8 A 0.6 A
<ul style="list-style-type: none"> <li><b>with 2 current paths in series at DC-1</b> <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> <li>at 600 V rated value</li> </ul> </li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A
<ul style="list-style-type: none"> <li><b>with 3 current paths in series at DC-1</b> <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> <li>at 600 V rated value</li> </ul> </li> </ul>	20 A 20 A 20 A 1.3 A 1 A
<ul style="list-style-type: none"> <li><b>at 1 current path at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>at 24 V rated value</li> <li>at 110 V rated value</li> </ul> </li> </ul>	20 A 0.1 A
<ul style="list-style-type: none"> <li><b>with 2 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>at 24 V rated value</li> <li>at 110 V rated value</li> </ul> </li> </ul>	20 A 0.35 A
<ul style="list-style-type: none"> <li><b>with 3 current paths in series at DC-3 at DC-5</b> <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> <li>at 600 V rated value</li> </ul> </li> </ul>	20 A 20 A 1.5 A 0.2 A 0.2 A
<b>operating power</b>	

<ul style="list-style-type: none"> <li>• at AC-2 at 400 V rated value</li> </ul>	7.5 kW
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> </ul> </li> </ul>	4 kW 7.5 kW
<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>	2.5 kW 3.5 kW
<b>short-time withstand current in cold operating state up to 40 °C</b>	
<ul style="list-style-type: none"> <li>• limited to 1 s switching at zero current maximum</li> <li>• limited to 5 s switching at zero current maximum</li> <li>• limited to 10 s switching at zero current maximum</li> <li>• limited to 30 s switching at zero current maximum</li> <li>• limited to 60 s switching at zero current maximum</li> </ul>	300 A; Use minimum cross-section acc. to AC-1 rated value 169 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value 92 A; Use minimum cross-section acc. to AC-1 rated value 74 A; Use minimum cross-section acc. to AC-1 rated value
<b>no-load switching frequency</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	10 000 1/h
<b>operating frequency</b>	
<ul style="list-style-type: none"> <li>• at AC-4 maximum</li> </ul>	250 1/h
<b>Control circuit/ Control</b>	
<b>type of voltage</b>	DC
<b>type of voltage of the control supply voltage</b>	DC
<b>control supply voltage at DC rated value</b>	24 ... 34 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>	0.7 1.25
<b>design of the surge suppressor</b>	with varistor
<b>inrush current peak</b>	2.3 A
<b>duration of inrush current peak</b>	50 µs
<b>pickup current mean value</b>	0.18 A
<b>pickup current peak</b>	0.18 A
<b>duration of pickup current</b>	250 ms
<b>closing power of magnet coil at DC</b>	4 W
<b>holding power of magnet coil at DC</b>	0.9 W
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	30 ... 70 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	25 ... 45 ms
<b>arcing time</b>	10 ... 15 ms
<b>control version of the switch operating mechanism</b>	Standard A1 - A2
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	0
<b>number of NO contacts for auxiliary contacts</b>	0
<ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>	0
<b>operational current at AC-12 maximum</b>	10 A
<b>operational 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> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>	10 A 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>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
<ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>	14 A 11 A
<b>yielded mechanical performance [hp]</b>	
<ul style="list-style-type: none"> <li>• for single-phase AC motor               <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> <li>• for 3-phase AC motor               <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul>	1 hp 2 hp 3 hp 5 hp 10 hp 10 hp
<b>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
<b>Short-circuit protection</b>	
<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> </ul>	gG: 35 A (690 V, 100 kA) gG: 20 A (690 V, 100 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, standing, on horizontal 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 50022
<b>height</b>	70 mm
<b>width</b>	45 mm
<b>depth</b>	73 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>— 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>— 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>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm 6 mm
<b>Connections/ Terminals</b>	
<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>	spring-loaded terminals spring-loaded terminals Spring-type terminals Spring-type terminals
<b>type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• for main contacts</li> </ul>	

— solid	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>
— solid or stranded	2x (0,5 ... 4 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0.5 ... 2.5 mm <sup>2</sup> )
• for AWG cables for main contacts	2x (20 ... 12)
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid or stranded	2x (0,5 ... 4 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0.5 ... 2.5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (20 ... 12)
<b>AWG number as coded connectable conductor cross section for main contacts</b>	20 ... 12
<b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>	20 ... 12

### Safety related data

<b>product function</b>	
• mirror contact according to IEC 60947-4-1	Yes
• positively driven operation according to IEC 60947-5-1	No

### 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

### Communication/ Protocol

<b>product function bus communication</b>	No
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### Approvals Certificates

<b>Environment</b>	<b>General Product Approval</b>
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[Environmental Confirmations](#)



<b>EMV</b>	<b>Test Certificates</b>	<b>Maritime application</b>
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



<b>Maritime application</b>	<b>other</b>	<b>Railway</b>
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[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

### Dangerous goods

[Transport Information](#)

### 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=3RT2518-2XB40-0LA2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2518-2XB40-0LA2>

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

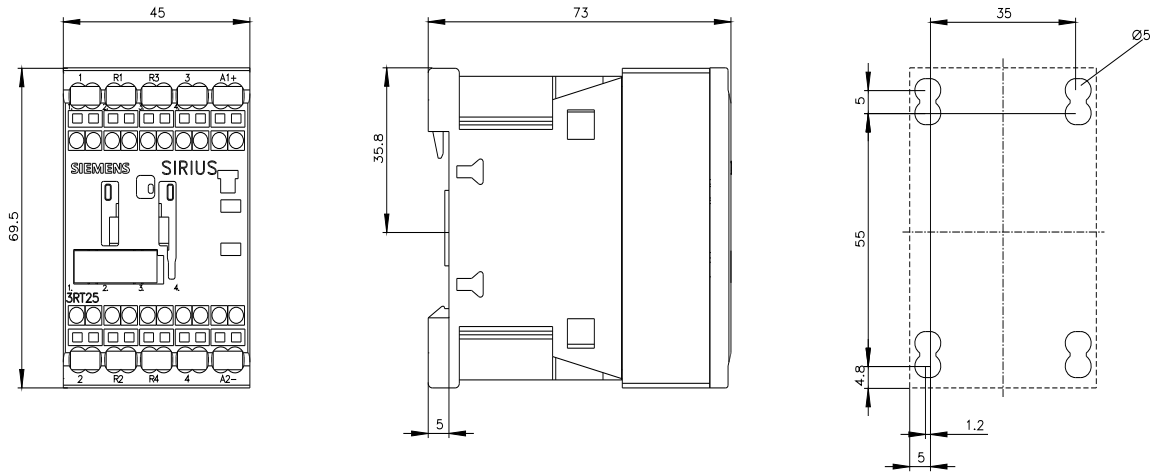
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2518-2XB40-0LA2&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2518-2XB40-0LA2&lang=en)

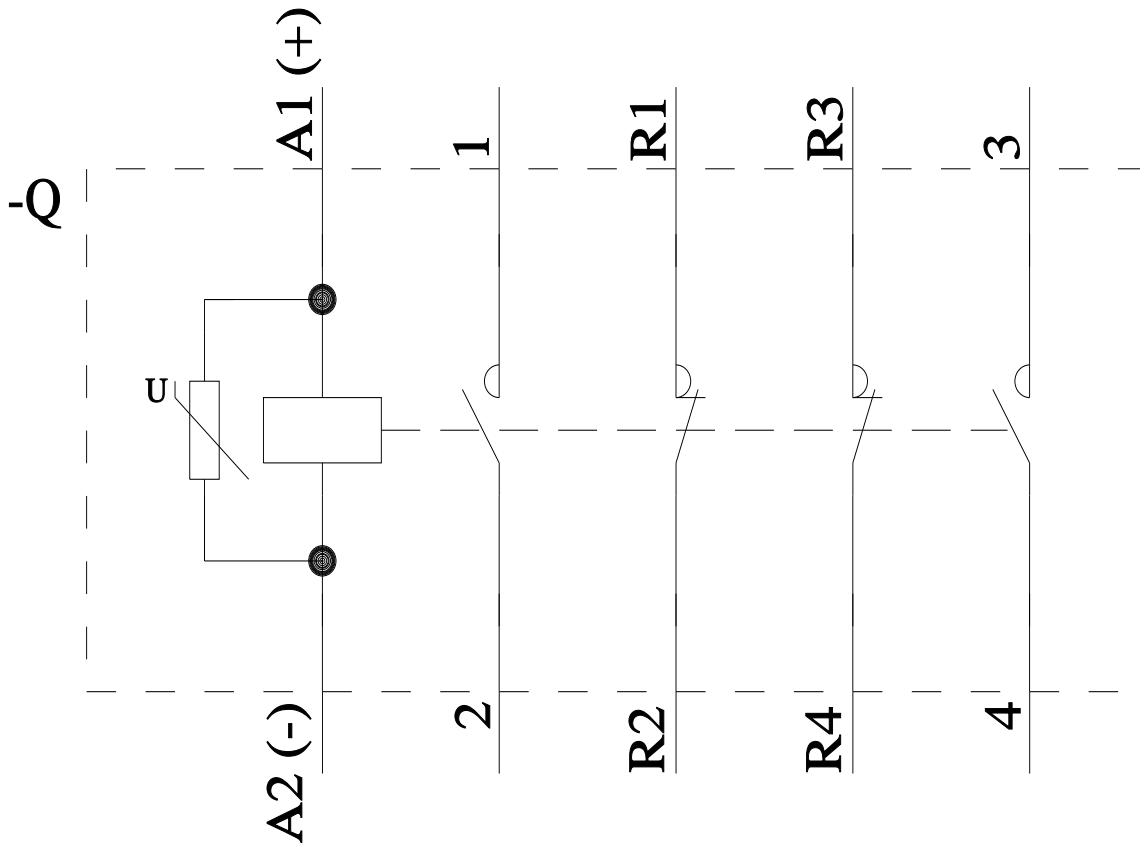
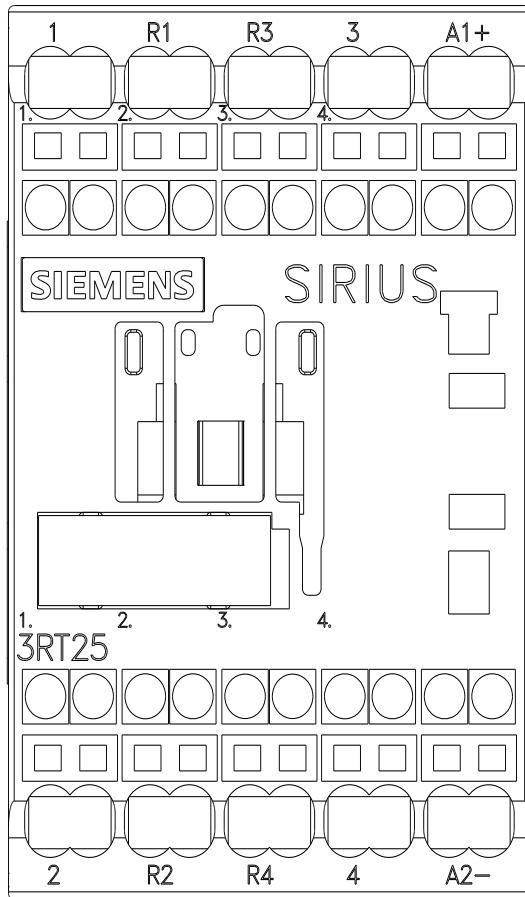
Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2518-2XB40-0LA2>

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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