



traction contactor, AC-1, 110 A, 400 V / 40 °C, 4-pole, 110 V DC, 0.7-1.25\* Uc, solid-state operating mechanism, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, frame size: S2

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Power contactor
<b>design of the product</b>	With extended operating range
<b>product type designation</b>	3RT23
<b>General technical data</b>	
<b>size of contactor</b>	S2
<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	15.2 W
• at AC in hot operating state per pole	3.8 W
• without load current share typical	1 W
<b>type of calculation of power loss depending on pole</b>	quadratic
<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
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
<b>shock resistance at rectangular impulse</b>	
• at DC	7.7g / 5 ms, 4.5g / 10 ms
<b>shock resistance with sine pulse</b>	
• at DC	12g / 5 ms, 7g / 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 Prohibition (Date)</b>	10/01/2014
<b>SVHC substance name</b>	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
<b>Net Weight</b>	1.271 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• during operation	-40 ... +70 °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>	4
<b>operating voltage</b>	
• at AC-3 rated value maximum	400 V
<b>operational current</b>	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	110 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	110 A
— up to 690 V at ambient temperature 60 °C rated value	95 A
• at AC-3	
— at 400 V rated value	35 A
• at AC-4 at 400 V rated value	55 A
<b>minimum cross-section in main circuit</b>	
• at maximum AC-1 rated value	35 mm <sup>2</sup>
<b>operational current for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	28 A
• at 690 V rated value	22 A
<b>operational current</b>	
• <b>at 1 current path at DC-1</b>	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
• <b>with 2 current paths in series at DC-1</b>	
— 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>with 3 current paths in series at DC-1</b>	
— at 24 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
• <b>at 1 current path at DC-3 at DC-5</b>	
— at 24 V rated value	20 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.1 A
• <b>with 2 current paths in series at DC-3 at DC-5</b>	
— at 24 V rated value	45 A
— at 110 V rated value	25 A
— at 220 V rated value	5 A
— at 440 V rated value	0.27 A
• <b>with 3 current paths in series at DC-3 at DC-5</b>	
— at 24 V rated value	45 A
— at 110 V rated value	45 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
<b>operating power for approx. 200000 operating cycles at AC-4</b>	
• at 400 V rated value	14.7 kW
• at 690 V rated value	20 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>	1 055 A; Use minimum cross-section acc. to AC-1 rated value 730 A; Use minimum cross-section acc. to AC-1 rated value 520 A; Use minimum cross-section acc. to AC-1 rated value 336 A; Use minimum cross-section acc. to AC-1 rated value 272 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>	1 500 1/h
<b>operating frequency</b>	
<ul style="list-style-type: none"> <li>• at AC-4 maximum</li> </ul>	200 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>	110 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>	3 A
<b>duration of inrush current peak</b>	50 µs
<b>pickup current mean value</b>	1 A
<b>pickup current peak</b>	2.6 A
<b>duration of pickup current</b>	230 ms
<b>closing power of magnet coil at DC</b>	23 W
<b>holding power of magnet coil at DC</b>	1 W
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	35 ... 110 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at DC</li> </ul>	30 ... 55 ms
<b>arcing time</b>	10 ... 20 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>	1
<ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>	1
<b>number of NO contacts for auxiliary contacts</b>	1
<ul style="list-style-type: none"> <li>• instantaneous contact</li> </ul>	1
<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> </ul>	10 A 2 A 2 A 1 A 0.9 A 0.3 A

<ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul>	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 600 V rated value</li> </ul>	27 A
<b>yielded mechanical performance [hp]</b> <ul style="list-style-type: none"> <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 575/600 V rated value</li> </ul> </li> </ul>	7.5 hp 10 hp 25 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: 160 A (690 V, 100 kA) gG: 80 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>	114 mm
<b>width</b>	75 mm
<b>depth</b>	130 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 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>	screw-type 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 <ul style="list-style-type: none"> <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 (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> ) 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> ) 2x (18 ... 2), 1x (18 ... 1)
<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 or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 14)

AWG number as coded connectable conductor cross section for main contacts	18 ... 1
AWG number as coded connectable conductor cross section for auxiliary contacts	20 ... 14

### Safety related data

product function	
<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>	<p>Yes</p> <p>No</p>

### Electrical Safety

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

### Communication/ Protocol

product function bus communication	No
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### Approvals Certificates

General Product Approval	EMV	Maritime application
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Maritime application	other
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[Confirmation](#)

### Environment

[Environmental Confirmations](#)

### 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=3RT2337-3XF40-0LA2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2337-3XF40-0LA2>

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

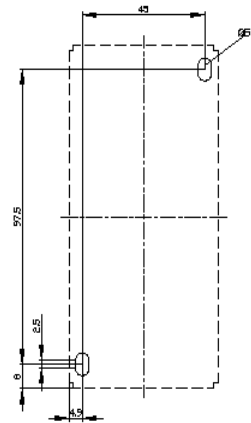
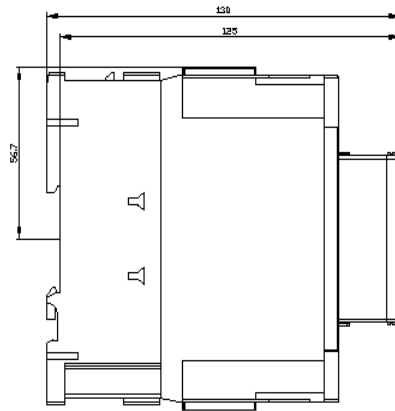
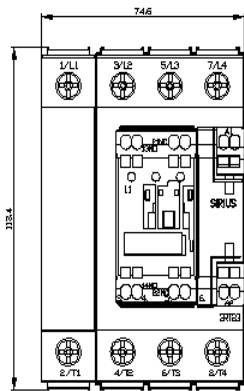
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2337-3XF40-0LA2&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2337-3XF40-0LA2&lang=en)

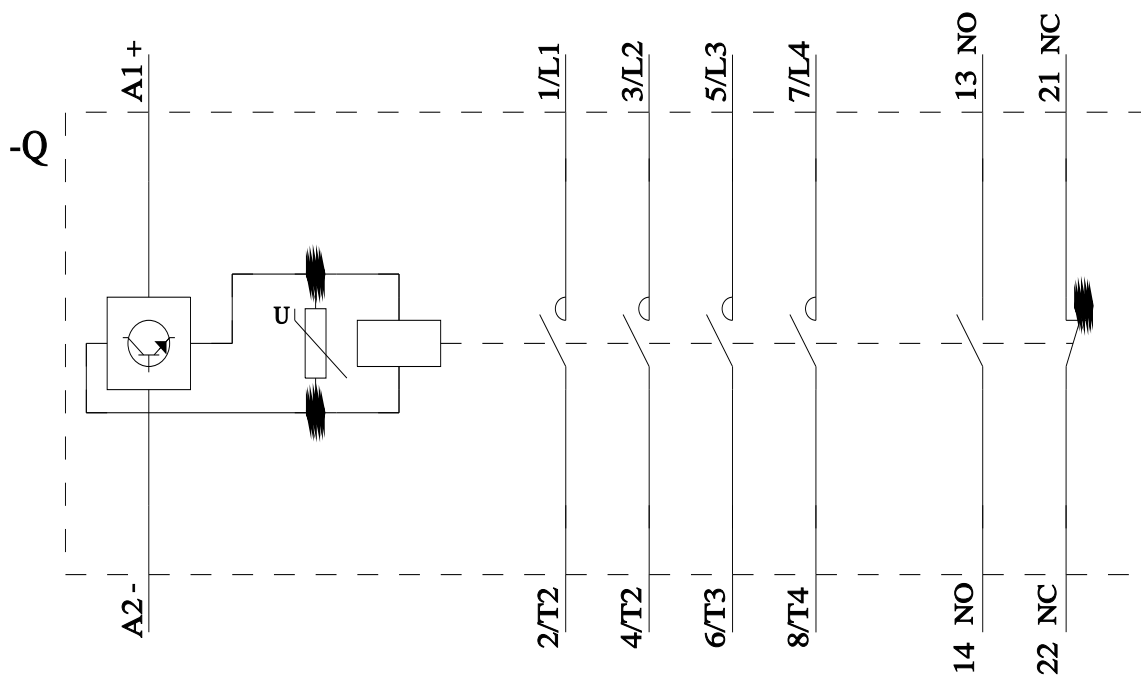
#### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2337-3XF40-0LA2>

#### Characteristic curves

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





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