



power contactor, AC-3, 95 A, 45 kW / 400 V, 4-pole, 400 V AC, 50 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S3

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Power contactor
<b>product type designation</b>	3RT23
<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	27.2 W
• at AC in hot operating state per pole	6.8 W
• without load current share typical	7.2 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 the auxiliary and control 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
<b>shock resistance at rectangular impulse</b>	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
<b>shock resistance with sine pulse</b>	
• at AC	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 auxiliary switch block typical	10 000 000
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibition (Date)</b>	09/01/2017
<b>Net Weight</b>	2.057 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>	4
<b>type of voltage for main current circuit</b>	AC
<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>	110 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>	110 A 100 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> <li>— at 750 V rated value</li> </ul> </li> </ul>	95 A 58 A 53 A; minimum Electrical Lifetime -50% according to 690V
<ul style="list-style-type: none"> <li>● at AC-4 at 400 V rated value</li> </ul>	80 A
<b>operational current at AC-6a up to 750 V</b>	
<ul style="list-style-type: none"> <li>● for current peak value n=20 rated value</li> </ul>	58 A
<ul style="list-style-type: none"> <li>● for current peak value n=30 rated value</li> </ul>	56.3 A
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm <sup>2</sup>
<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 60 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>	80 A 60 A 9 A 2 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 60 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>	80 A 80 A 80 A 10 A 1.8 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 60 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>	80 A 80 A 80 A 80 A 4.5 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 60 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 6.5 A 2.5 A 1 A 0.15 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 60 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>	80 A 80 A 80 A 7 A 0.42 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 60 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>	80 A 80 A 80 A 35 A 0.8 A
<b>operating power</b>	
<ul style="list-style-type: none"> <li>● at AC-3 at 400 V rated value</li> </ul>	45 kW

<ul style="list-style-type: none"> <li>at AC-4 at 400 V rated value</li> </ul>	45 kW
operating apparent power at AC-6a up to 750 V for current peak value n=20 rated value	75 kVA
operating apparent power at AC-6a up to 750 V for current peak value n=30 rated value	73.1 kVA
<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> </ul>	1 511 A; Use minimum cross-section acc. to AC-1 rated value
<ul style="list-style-type: none"> <li>limited to 5 s switching at zero current maximum</li> </ul>	1 511 A; Use minimum cross-section acc. to AC-1 rated value
<ul style="list-style-type: none"> <li>limited to 10 s switching at zero current maximum</li> </ul>	1 511 A; Use minimum cross-section acc. to AC-1 rated value
<ul style="list-style-type: none"> <li>limited to 30 s switching at zero current maximum</li> </ul>	610 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>	486 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 AC</li> </ul>	5 000 1/h
operating frequency at AC-1 maximum	900 1/h
<b>Control circuit/ Control</b>	
<b>type of voltage</b>	AC
<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>	400 V
<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>	
<ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	296 VA
<b>inductive power factor with closing power of the coil</b>	
<ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	0.61
<b>apparent holding power of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	19 VA
<b>inductive power factor with the holding power of the coil</b>	
<ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	0.38
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>at AC</li> </ul>	13 ... 50 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>at AC</li> </ul>	10 ... 21 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>attachable</li> </ul>	2
<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>attachable</li> </ul>	2
<ul style="list-style-type: none"> <li>instantaneous contact</li> </ul>	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> </ul>	3 A
<ul style="list-style-type: none"> <li>at 500 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul>	1 A
<b>operational current at DC-12</b>	
<ul style="list-style-type: none"> <li>at 24 V rated value</li> </ul>	10 A
<ul style="list-style-type: none"> <li>at 48 V rated value</li> </ul>	6 A
<ul style="list-style-type: none"> <li>at 60 V rated value</li> </ul>	6 A
<ul style="list-style-type: none"> <li>at 110 V rated value</li> </ul>	3 A
<ul style="list-style-type: none"> <li>at 125 V rated value</li> </ul>	2 A
<ul style="list-style-type: none"> <li>at 220 V rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul>	0.15 A
<b>operational current at DC-13</b>	
<ul style="list-style-type: none"> <li>at 24 V rated value</li> </ul>	10 A

<ul style="list-style-type: none"> <li>• at 48 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>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>	1 faulty switching per 100 million (17 V, 1 mA)
<b>UL/CSA ratings</b>	
<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>	<p>gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)</p> <p>gG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, 80 kA)</p> <p>gG: 10 A (690 V, 1 kA)</p>
<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>— 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>	<p>20 mm</p> <p>10 mm</p> <p>10 mm</p> <p>0 mm</p> <p>20 mm</p> <p>10 mm</p> <p>10 mm</p> <p>10 mm</p> <p>20 mm</p> <p>10 mm</p> <p>10 mm</p> <p>10 mm</p>
<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>	<p>screw-type terminals</p> <p>screw-type terminals</p> <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>— 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>	<p>2x (6 ... 16 mm<sup>2</sup>), 2x (10 ... 50 mm<sup>2</sup>), 1x (10 ... 70 mm<sup>2</sup>)</p> <p>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>)</p> <p>2x (2.5 ... 35 mm<sup>2</sup>), 1x (2.5 ... 50 mm<sup>2</sup>)</p> <p>2x (10 ... 1/0), 1x (10 ... 2/0)</p>
<b>connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>• solid</li> <li>• solid or stranded</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> </ul>	<p>2.5 ... 16 mm<sup>2</sup></p> <p>4 ... 70 mm<sup>2</sup></p> <p>6 ... 70 mm<sup>2</sup></p> <p>2.5 ... 50 mm<sup>2</sup></p>
<b>connectable conductor cross-section for auxiliary contacts</b>	

<ul style="list-style-type: none"> <li>• solid or stranded</li> </ul>	0.5 ... 2.5 mm <sup>2</sup>
<ul style="list-style-type: none"> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup>
<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






### 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>General Product Approval</b>	<b>EMV</b>	<b>Test Certificates</b>	<b>Maritime application</b>
 EG-Konf.			 RCM
		<a href="#">Special Test Certificate</a>	 ABS

### Maritime application

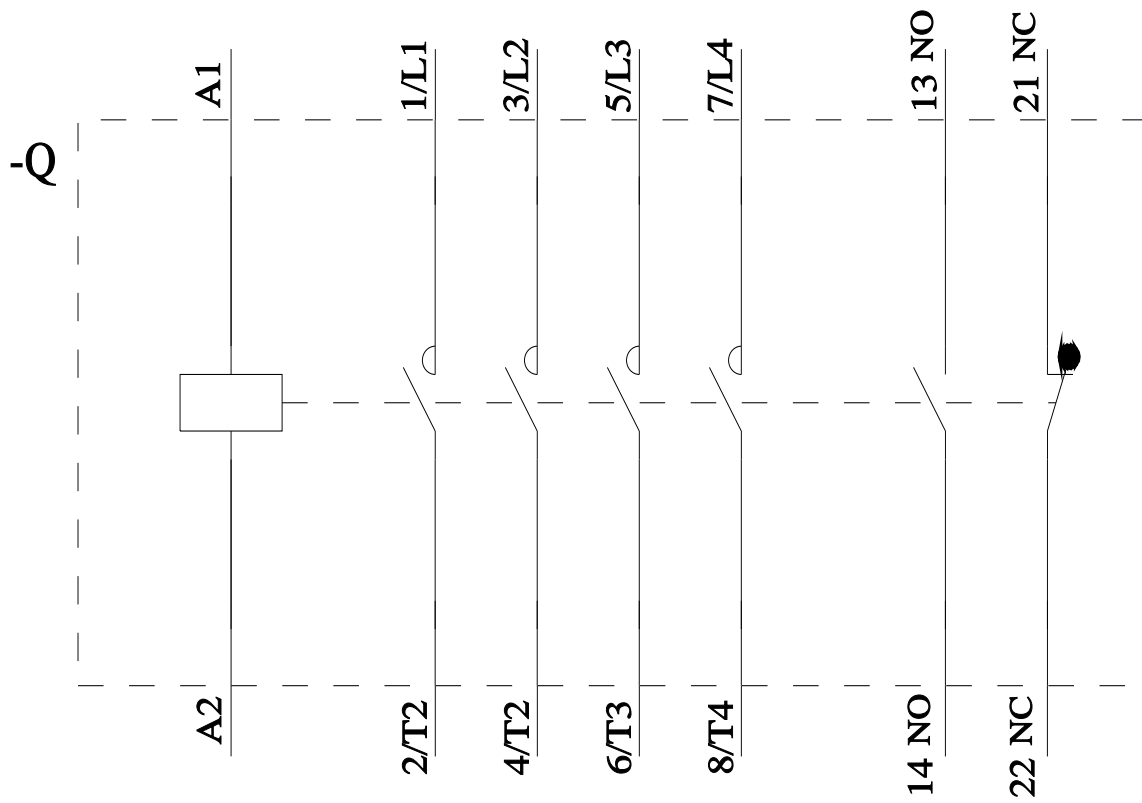
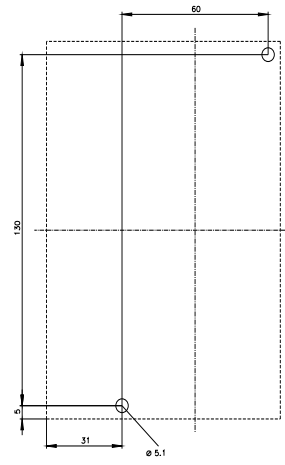
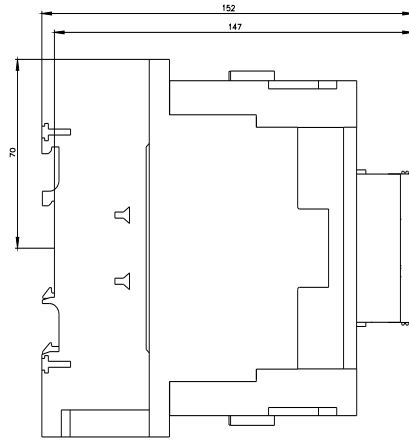
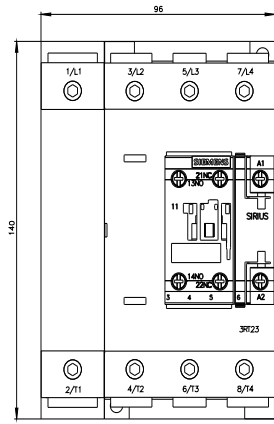
<b>Maritime application</b>	<b>other</b>
 DNV	 LRS
 RINA	 RMRS
	<a href="#">Confirmation</a>
	 产品合格 QC PASS

### Environment

[Environmental Conformations](#)

### 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=3RT2346-1AV00-4AA0>  
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2346-1AV00-4AA0>  
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2346-1AV00-4AA0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2346-1AV00-4AA0&lang=en)  
**Cax online generator**  
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2346-1AV00-4AA0>  
**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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