



contactor AC-1, 35 A, 400 V / 40 °C, 4-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, spring-loaded terminal, size: S0, upright mounting position

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Contacteur
<b>product type designation</b>	3RT23
<b>General technical data</b>	
<b>size of contactor</b>	S0
<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	7.6 W
• at AC in hot operating state per pole	1.9 W
• without load current share typical	2.6 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	6 kV
• of auxiliary circuit rated value	6 kV
<b>shock resistance at rectangular impulse</b>	
• at AC	7,5g / 5 ms, 4,7g / 10 ms
<b>shock resistance with sine pulse</b>	
• at AC	11,8g / 5 ms, 7,4g / 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>	10/01/2009
<b>Weight</b>	0.545 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>Environmental footprint</b>	

Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	166 kg
global warming potential [CO2 eq] during manufacturing	2.26 kg
global warming potential [CO2 eq] during operation	164 kg
global warming potential [CO2 eq] after end of life	-0.152 kg

### Main circuit

<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>	35 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>	35 A 30 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>	15.5 A
<ul style="list-style-type: none"> <li>● at AC-4 at 400 V rated value</li> </ul>	15.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm <sup>2</sup>
<b>operational 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 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>	30 A 20 A 4.5 A 1 A 0.4 A
<ul style="list-style-type: none"> <li>● with 2 current paths in series at DC-1 <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>	30 A 30 A 30 A 1 A 1 A
<ul style="list-style-type: none"> <li>● with 3 current paths in series at DC-1 <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>	30 A 30 A 30 A 30 A 2.9 A
<ul style="list-style-type: none"> <li>● at 1 current path at DC-3 at DC-5 <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 5 A 2.5 A 1 A 0.09 A
<ul style="list-style-type: none"> <li>● with 2 current paths in series at DC-3 at DC-5 <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>	30 A 30 A 15 A 3 A 0.27 A
<ul style="list-style-type: none"> <li>● with 3 current paths in series at DC-3 at DC-5 <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>	30 A 30 A 30 A 10 A 0.6 A
<b>operating power</b>	

<ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> </ul>	7.5 kW
<ul style="list-style-type: none"> <li>• at AC-4 at 400 V rated value</li> </ul>	7.5 kW
<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	1 000 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>	230 V
<ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul>	230 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
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	0.85 ... 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>	81 VA
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	79 VA
<b>inductive power factor with closing power of the coil</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	0.72
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	0.74
<b>apparent holding power of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	10.5 VA
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	8.5 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>	0.25
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	0.28
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	8 ... 40 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	4 ... 16 ms
<b>arcing time</b>	10 ... 10 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>	10 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> </ul>	2 A
<ul style="list-style-type: none"> <li>• at 110 V rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>• at 125 V rated value</li> </ul>	0.9 A

<ul style="list-style-type: none"> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>	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>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
<b>Category Control Number (CCN)</b>	E31519 (NLDX, NLDX7)
<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: 63 A (690 V, 100 kA) gG: 20 A (690 V, 100 kA) gG: 10 A (690 V, 1 kA)
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	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 60715
<b>height</b>	102 mm
<b>width</b>	60 mm
<b>depth</b>	97 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 <ul style="list-style-type: none"> <li>— solid</li> <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 main contacts</li> </ul>	2x (1 ... 10 mm <sup>2</sup> ) 2x (1 ... 10 mm <sup>2</sup> ) 2x (1 ... 6 mm <sup>2</sup> ) 2x (1 ... 6 mm <sup>2</sup> ) 2x (18 ... 8)
<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> <li>• finely stranded without core end processing</li> </ul>	1 ... 10 mm <sup>2</sup> 1 ... 10 mm <sup>2</sup> 1 ... 10 mm <sup>2</sup> 1 ... 6 mm <sup>2</sup> 1 ... 6 mm <sup>2</sup>
<b>connectable conductor cross-section for auxiliary contacts</b> <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>	0.5 ... 2.5 mm <sup>2</sup> 0.5 ... 1.5 mm <sup>2</sup>

<ul style="list-style-type: none"> <li>finely stranded without 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> <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 ... 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)
<b>AWG number as coded connectable conductor cross section for main contacts</b>	18 ... 8
<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

**Communication/ Protocol**

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

<b>General Product Approval</b>	EMV
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**Test Certificates**      **Maritime application**

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



**Maritime application**      **other**



[Miscellaneous](#)



[Confirmation](#)

**Railway**      **Environment**

[Special Test Certificate](#)



[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=3RT2325-2AL20-1AA0>
- Cax online generator  
<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2325-2AL20-1AA0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2325-2AL20-1AA0>

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

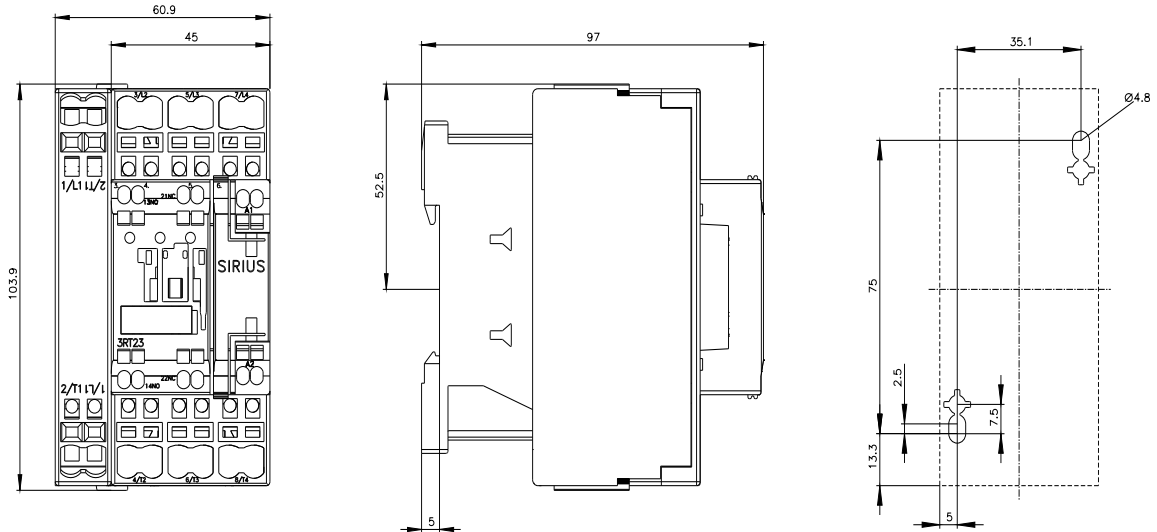
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2325-2AL20-1AA0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2325-2AL20-1AA0&lang=en)

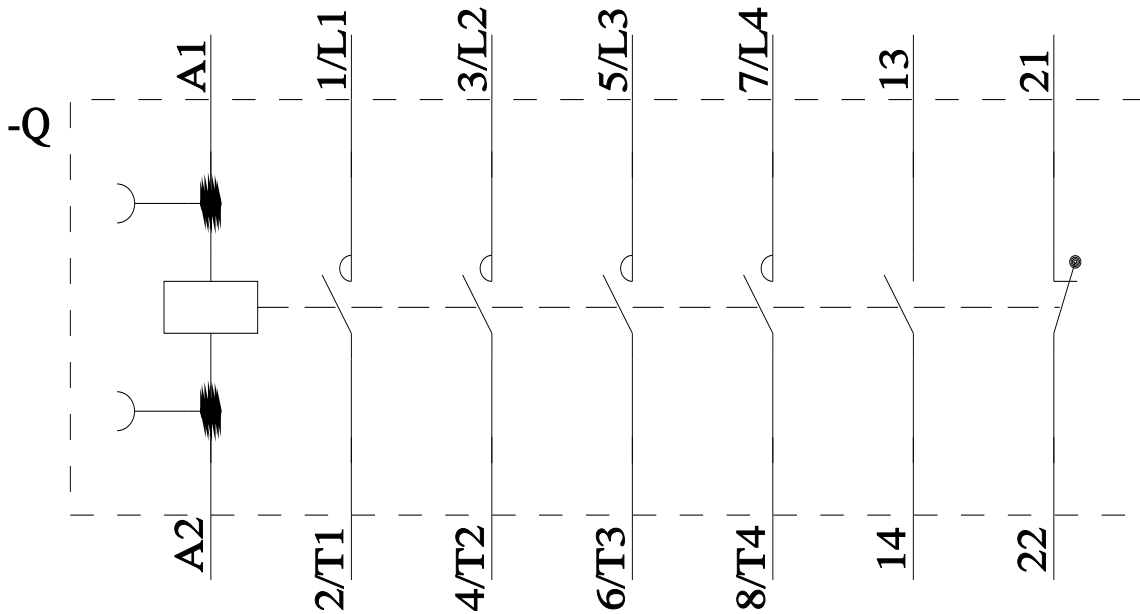
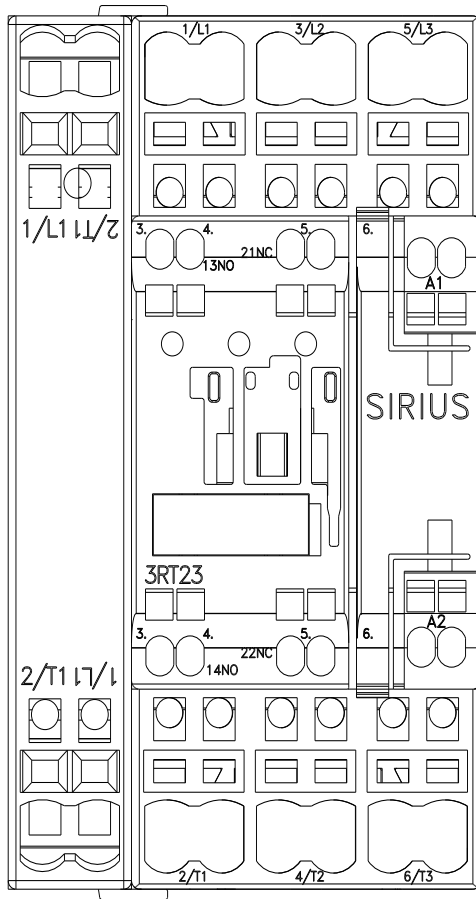
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2325-2AL20-1AA0/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2325-2AL20-1AA0&objecttype=14&gridview=view1>





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