

contactor AC-1, 18 A, 400 V / 40 °C, 4-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, spring-loaded terminal, size: S00

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Contactore
<b>product type designation</b>	3RT23
<b>General technical data</b>	
<b>size of contactor</b>	S00
<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	4.4 W
• at AC in hot operating state per pole	1.1 W
• without load current share typical	1.1 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	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	6,7 g / 5 ms, 4,2 g / 10 ms
<b>shock resistance with sine pulse</b>	
• at AC	10,5 g / 5 ms, 6,6 g / 10 ms
<b>mechanical service life (operating cycles)</b>	
• of contactor typical	30 000 000
• 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 (day/month/year)</b>	10/01/2009
<b>Net Weight</b>	0.253 g
<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>	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	18 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	18 A
— up to 690 V at ambient temperature 60 °C rated value	16 A
• at AC-3	

— at 400 V rated value	9 A
● at AC-4 at 400 V rated value	8.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm <sup>2</sup>
<b>operational current</b>	
● <b>at 1 current path at DC-1</b>	
— at 24 V rated value	16 A
— at 60 V rated value	16 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
● <b>with 2 current paths in series at DC-1</b>	
— at 24 V rated value	16 A
— at 60 V rated value	16 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
● <b>with 3 current paths in series at DC-1</b>	
— at 24 V rated value	16 A
— at 60 V rated value	16 A
— at 110 V rated value	16 A
— at 220 V rated value	16 A
— at 440 V rated value	1.3 A
● <b>at 1 current path at DC-3 at DC-5</b>	
— at 24 V rated value	16 A
— at 60 V rated value	0.5 A
— at 110 V rated value	0.15 A
● <b>with 2 current paths in series at DC-3 at DC-5</b>	
— at 24 V rated value	16 A
— at 60 V rated value	5 A
— at 110 V rated value	0.35 A
● <b>with 3 current paths in series at DC-3 at DC-5</b>	
— at 24 V rated value	16 A
— at 60 V rated value	16 A
— at 110 V rated value	16 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A
<b>operating power</b>	
● at AC-3 at 400 V rated value	4 kW
● at AC-4 at 400 V rated value	4 kW
<b>no-load switching frequency</b>	
● at AC	10 000 1/h
<b>operating frequency</b>	
● 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>	
● at 50 Hz rated value	110 V
● at 60 Hz rated value	120 V
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
● at 50 Hz	0.8 ... 1.1
● at 60 Hz	0.8 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	
● at 50 Hz	26.4 VA
● at 60 Hz	26.4 VA
<b>inductive power factor with closing power of the coil</b>	
● at 50 Hz	0.81

<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	0.81
<b>apparent holding power of magnet coil at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	4.4 VA
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	4.4 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>	0.24
<ul style="list-style-type: none"> <li>• at 60 Hz</li> </ul>	0.24
<b>closing delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	9 ... 35 ms
<b>opening delay</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	7 ... 13 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>	
<ul style="list-style-type: none"> <li>• attachable</li> </ul>	2
<b>number of NO contacts for auxiliary contacts</b>	
<ul style="list-style-type: none"> <li>• attachable</li> </ul>	2
<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
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>	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 <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> </ul>	2x (0.5 ... 4 mm <sup>2</sup> ) 2x (0,5 ... 4 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>for AWG cables for main contacts</li> </ul>	2x (20 ... 16), 2x (18 ... 14), 2x 12
<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>	0.5 ... 4 mm <sup>2</sup> 0.5 ... 4 mm <sup>2</sup> 0.5 ... 4 mm <sup>2</sup> 0.5 ... 2.5 mm <sup>2</sup> 0.5 ... 2.5 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> <li>finely stranded without core end processing</li> </ul>	0.5 ... 4 mm <sup>2</sup> 0.5 ... 2.5 mm <sup>2</sup> 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 ... 4 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (0.5 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14), 2x 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> <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; with 3RH29 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>Environmental Product Declaration</b>	
<ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / during manufacturing</li> <li>global warming potential [CO2 eq] / during operation</li> <li>global warming potential [CO2 eq] / after end of life</li> <li>global warming potential [CO2 eq] / total</li> </ul>	1.15 kg 93.8 kg -0.178 kg 94.8 kg

**Environment      General Product Approval**

[Environmental Confirmations](#)



**General Product Approval      EMV      Test Certificates      Maritime application**



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



**Maritime application**



**other      Railway**

[Confirmation](#)



[Miscellaneous](#)

[Special Test Certificate](#)

#### 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=3RT2316-2AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2316-2AK60>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2316-2AK60&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2316-2AK60&lang=en)

**Cax online generator**

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2316-2AK60>

**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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