



contactor AC-1, 60 A, 400 V / 40 °C, 4-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
<b>General technical data</b>	
size of contactor	S2
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	12.8 W
• at AC in hot operating state per pole	3.2 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
• 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
surge voltage resistance	
• of main circuit rated value	6 kV
• of auxiliary circuit rated value	6 kV
shock resistance at rectangular impulse	
• at AC	11.8g / 5 ms, 7.4g / 10 ms
shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2014
Weight	1.138 kg
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
<b>Environmental footprint</b>	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	302 kg
global warming potential [CO2 eq] during manufacturing	4.83 kg

global warming potential [CO <sub>2</sub> eq] during operation	297 kg
global warming potential [CO <sub>2</sub> eq] after end of life	-0.64 kg
<b>Main circuit</b>	
number of poles for main current circuit	4
number of NO contacts for main contacts	4
<b>operational current</b>	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	60 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	60 A
— up to 690 V at ambient temperature 60 °C rated value	55 A
• at AC-3	
— at 400 V rated value	38 A
minimum cross-section in main circuit at maximum AC-1 rated value	16 mm <sup>2</sup>
<b>operational current</b>	
• <b>at 1 current path at DC-1</b>	
— at 24 V rated value	55 A
— at 60 V rated value	23 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 60 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 60 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 60 V rated value	5 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 60 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 60 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>no-load switching frequency</b>	
• at AC	5 000 1/h
operating frequency at AC-1 maximum	700 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	230 V

• at 60 Hz rated value	230 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	0.85 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	
• at 50 Hz	210 VA
• at 60 Hz	188 VA
<b>inductive power factor with closing power of the coil</b>	
• at 50 Hz	0.69
• at 60 Hz	0.65
<b>apparent holding power of magnet coil at AC</b>	
• at 50 Hz	17.2 VA
• at 60 Hz	16.5 VA
<b>inductive power factor with the holding power of the coil</b>	
• at 50 Hz	0.36
• at 60 Hz	0.39
<b>closing delay</b>	
• at AC	10 ... 80 ms
<b>opening delay</b>	
• at AC	10 ... 18 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
• attachable	2
• instantaneous contact	1
<b>number of NO contacts for auxiliary contacts</b>	1
• attachable	2
• instantaneous contact	1
<b>operational current at AC-12 maximum</b>	10 A
<b>operational current at AC-15</b>	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
<b>operational current at DC-12</b>	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
• at 600 V rated value	0.15 A
<b>operational current at DC-13</b>	
• at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
• at 600 V rated value	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 / P600
<b>Short-circuit protection</b>	
<b>product function short circuit protection</b>	No
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required	gG: 10 A (230 V, 400 A)
<b>design of the fuse link</b>	
• for short-circuit protection of the main circuit — with type of coordination 1 required	gG: 160 A (690 V, 100 kA)

- with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

gG: 63 A (690 V, 100 kA)  
gG: 10 A (690 V, 1 kA)

#### Installation/ mounting/ dimensions

<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>	
• with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
• for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm

#### Connections/ Terminals

<b>type of electrical connection</b>	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
• at contactor for auxiliary contacts	Screw-type terminals
• of magnet coil	Screw-type terminals
<b>type of connectable conductor cross-sections for main contacts</b>	
• solid or stranded	2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
• finely stranded with core end processing	2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )
<b>connectable conductor cross-section for main contacts</b>	
• solid or stranded	1 ... 50 mm <sup>2</sup>
• finely stranded with core end processing	1 ... 35 mm <sup>2</sup>
<b>connectable conductor cross-section for auxiliary contacts</b>	
• solid or stranded	0.5 ... 2.5 mm <sup>2</sup>
• finely stranded with core end processing	0.5 ... 2.5 mm <sup>2</sup>
• finely stranded without core end processing	0.5 ... 2.5 mm <sup>2</sup>
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
— solid or stranded	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )
• for AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
<b>AWG number as coded connectable conductor cross section</b>	
• for main contacts	18 ... 1
• for auxiliary contacts	20 ... 14

#### 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
<b>Electrical Safety</b>	
<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
<b>Communication/ Protocol</b>	
<b>product function bus communication</b>	No

## Approvals Certificates

### General Product Approval



CCC



EG-Konf.



[Confirmation](#)



UL

[KC](#)

General Product Approval	EMV	Test Certificates	Marine / Shipping
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



Marine / Shipping

other



DNV



LRS



PRIS



RINA



RMRS

[Confirmation](#)

Railway	Dangerous goods	Environment
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[Special Test Certificate](#)

[Transport Information](#)



[Environmental Confirmations](#)

### Further information

#### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

#### 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=3RT2336-1AL20>

#### Cax online generator

<http://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&mlfb=3RT2336-1AL20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2336-1AL20>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2336-1AL20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2336-1AL20&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2336-1AL20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2336-1AL20&objecttype=14&gridview=view1>



