



Contactor, AC-1, 140 A/400 V/40 °C, S3, 4-pole, 230 V AC/50 Hz, 1 NO+1 NC, screw terminal

product brand name	SIRIUS
product designation	Contactor
product type designation	3RT23
<b>General technical data</b>	
size of contactor	S3
product extension	
• function module for communication	No
• auxiliary switch	Yes
surge voltage resistance	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
shock resistance at rectangular impulse	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
• at DC	6.7 g / 5 ms, 4.0 g / 10 ms
shock resistance with sine pulse	
• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
• at DC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (switching cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	100 000 000
reference code acc. to IEC 81346-2	Q
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
• ambient temperature during operation	-25 ... +60 °C
• ambient temperature during storage	-55 ... +80 °C
relative humidity during operation	95 %
<b>Main circuit</b>	
number of poles for main current circuit	4
number of NO contacts for main contacts	4
• operating voltage at AC	
— at 50 Hz rated value	690 V
— at 60 Hz rated value	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	140 A
• at AC-1	

— up to 690 V at ambient temperature 40 °C rated value	140 A
— up to 690 V at ambient temperature 60 °C rated value	130 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm <sup>2</sup>
<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>	Use minimum cross-section acc. to AC-1 rated value Use minimum cross-section acc. to AC-1 rated value Use minimum cross-section acc. to AC-1 rated value Use minimum cross-section acc. to AC-1 rated value 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	1 000 1/s
<b>Control circuit/ Control</b>	
<b>type of voltage</b>	AC
<b>type of voltage of the control supply voltage</b>	AC
<ul style="list-style-type: none"> <li>control supply voltage at AC at 50 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
<b>apparent pick-up power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>	296 V·A
<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 V·A
<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> <ul style="list-style-type: none"> <li>attachable</li> <li>instantaneous contact</li> </ul>	1 2 1
<b>number of NO contacts for auxiliary contacts</b> <ul style="list-style-type: none"> <li>attachable</li> <li>instantaneous contact</li> </ul>	1 2 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> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul>	6 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 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 2 A 1 A 0.9 A 0.3 A 0.1 A
design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required	gG: 10 A (230 V, 400 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
<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 assignment 2 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 250 A (690 V, 100 kA) gR: 250 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
<b>fastening method</b>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
<ul style="list-style-type: none"> <li>• side-by-side mounting</li> </ul>	Yes
<b>height</b>	140 mm
<b>width</b>	96 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>	20 mm 10 mm 10 mm 0 mm  20 mm 10 mm 10 mm 10 mm  20 mm 10 mm 10 mm 10 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> </ul>	screw-type terminals screw-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>— stranded</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG cables for main contacts</li> </ul>	2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 16 mm²), 2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²) 2x (10 ... 1/0), 1x (10 ... 2)
<b>connectable conductor cross-section for main contacts</b> <ul style="list-style-type: none"> <li>• solid</li> </ul>	2.5 ... 16 mm²

<ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• stranded</li> <li>• finely stranded with core end processing</li> </ul>	4 ... 70 mm <sup>2</sup> 6 ... 70 mm <sup>2</sup> 2.5 ... 50 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 ... 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>• at 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)
<ul style="list-style-type: none"> <li>• AWG number as coded connectable conductor cross section for main contacts</li> <li>• AWG number as coded connectable conductor cross section for auxiliary contacts</li> </ul>	10 ... 2 20 ... 14

Safety related data	
<b>product function</b> <ul style="list-style-type: none"> <li>• mirror contact acc. to IEC 60947-4-1</li> <li>• positively driven operation acc. to IEC 60947-5-1</li> </ul>	Yes No
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	20 y
<b>protection class IP on the front acc. to IEC 60529</b>	IP20
<b>touch protection on the front acc. to IEC 60529</b>	finger-safe, for vertical contact from the front
Communication/ Protocol	
<b>product function bus communication</b>	No
Certificates/ approvals	
<b>General Product Approval</b>	EMC



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Declaration of Conformity	Test Certificates	Marine / Shipping
 EG-Konf.	<a href="#">Miscellaneous</a> <a href="#">Special Test Certificate</a> <a href="#">Type Test Certificates/Test Report</a>	 ABS  LRS

Marine / Shipping	other
 PRS  RINA  RMRS  DNV GL <a href="#">Confirmation</a>	

Further information
Information- and Downloadcenter (Catalogs, Brochures,...) <a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a> Industry Mall (Online ordering system) <a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2346-1AP00">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2346-1AP00</a> Cax online generator <a href="http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RT2346-1AP00">http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&amp;mlfb=3RT2346-1AP00</a> Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2346-1AP00>

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

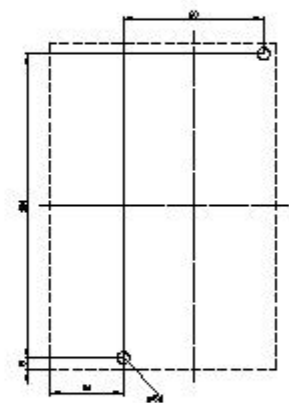
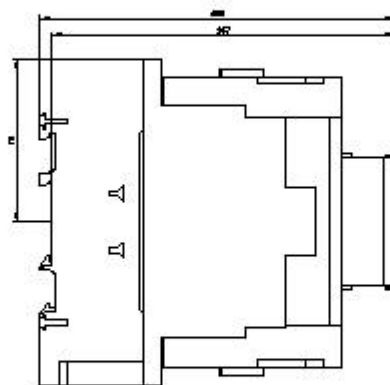
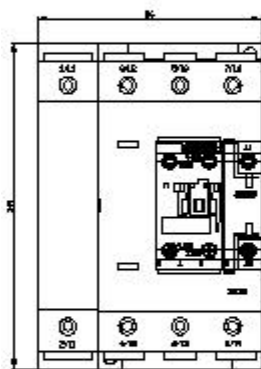
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2346-1AP00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2346-1AP00&lang=en)

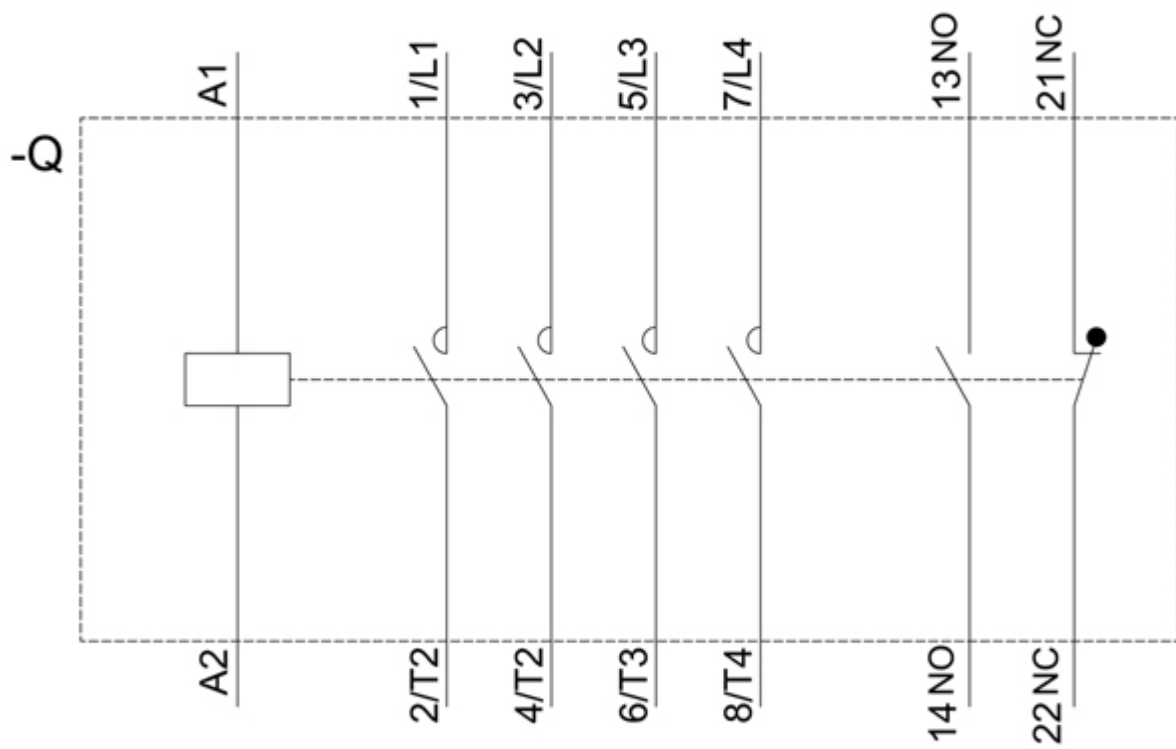
Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2346-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2346-1AP00&objecttype=14&gridview=view1>





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