



Power contactor, AC-3 80 A, 37 kW / 400 V 230 V AC, 50 Hz 3-pole, Size S3 Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2 Preferred successor type is >>3RT2038-1AP00<<

<b>product brand name</b>	SIRIUS
<b>product designation</b>	power contactor
<b>General technical data</b>	
<b>size of contactor</b>	S3
<b>insulation voltage rated value</b>	1 000 V
<b>degree of pollution</b>	3
<b>surge voltage resistance rated value</b>	6 kV
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	690 V
protection class IP	
<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	IP20; IP20 on the front with cover / box terminal IP00
<b>shock resistance at rectangular impulse</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	6.8g / 5 ms, 4g / 10 ms
<b>shock resistance with sine pulse</b>	
<ul style="list-style-type: none"> <li>• at AC</li> </ul>	10.6g / 5 ms, 6.2g / 10 ms
<b>mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of contactor typical</li> <li>• of the contactor with added electronically optimized auxiliary switch block typical</li> <li>• of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000 5 000 000 10 000 000
<b>reference code according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	05/01/2012
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> </ul>	-25 ... +60 °C -55 ... +80 °C
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<b>number of NO contacts for main contacts</b>	3
<b>number of NC contacts for main contacts</b>	0
<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> <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>	120 A 120 A 100 A

— up to 1000 V at ambient temperature 40 °C rated value	60 A
— up to 1000 V at ambient temperature 60 °C rated value	50 A
● at AC-3	
— at 400 V rated value	80 A
— at 690 V rated value	58 A
— at 1000 V rated value	30 A
● at AC-4 at 400 V rated value	66 A
<b>connectable conductor cross-section in main circuit at AC-1</b>	
● at 60 °C minimum permissible	35 mm <sup>2</sup>
● at 40 °C minimum permissible	50 mm <sup>2</sup>
<b>operational current for approx. 200000 operating cycles at AC-4</b>	
● at 400 V rated value	34 A
● at 690 V rated value	22 A
<b>operating power</b>	
● at AC-1	
— at 230 V at 60 °C rated value	38 kW
— at 400 V rated value	66 kW
— at 690 V rated value	114 kW
— at 690 V at 60 °C rated value	114 kW
— at 1000 V at 60 °C rated value	82 W
● at AC-2 at 400 V rated value	37 kW
● at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
— at 1000 V rated value	37 W
<b>operating power for approx. 200000 operating cycles at AC-4</b>	
● at 400 V rated value	17.9 kW
● at 690 V rated value	21.1 kW
<b>thermal short-time current limited to 10 s</b>	760 A
<b>no-load switching frequency</b>	
● at AC	5 000 1/h
<b>operating frequency</b>	
● at AC-1 maximum	900 1/h
● at AC-2 maximum	400 1/h
● at AC-3 maximum	1 000 1/h
● at AC-4 maximum	300 1/h
<b>Control circuit/ Control</b>	
<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
<b>control supply voltage frequency</b>	
● 1 rated value	50 Hz
<b>operating range factor control supply voltage rated value of magnet coil at AC</b>	
● at 50 Hz	0.8 ... 1.1
<b>apparent pick-up power of magnet coil at AC</b>	270 VA
<b>inductive power factor with closing power of the coil</b>	0.68
<b>apparent holding power of magnet coil at AC</b>	22 VA
<b>inductive power factor with the holding power of the coil</b>	0.27
<b>closing delay</b>	
● at AC	17 ... 90 ms
<b>opening delay</b>	
● at AC	10 ... 25 ms
<b>arcing time</b>	10 ... 15 ms

Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	0
number of NO contacts for auxiliary contacts instantaneous contact	0
operational current at AC-12 maximum	10 A
<b>operational current at AC-15</b>	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
<b>operational current at DC-12</b>	
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
<b>operational current at DC-13</b>	
• at 24 V rated value	10 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 220 V rated value	0.3 A
<b>contact reliability of auxiliary contacts</b>	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
<b>contact rating of auxiliary contacts according to UL</b>	A600 / Q600
Short-circuit protection	
<b>design of the fuse link</b>	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	fuse gL/gG: 250 A
— with type of assignment 2 required	fuse gL/gG: 160 A
• for short-circuit protection of the auxiliary switch required	fuse gL/gG: 10 A
Installation/ mounting/ dimensions	
<b>fastening method</b>	screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail
• side-by-side mounting	Yes
<b>height</b>	146 mm
<b>width</b>	70 mm
<b>depth</b>	139 mm
required spacing for grounded parts 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
<b>type of connectable conductor cross-sections</b>	
• for main contacts	
— solid	2x (2.5 ... 16 mm <sup>2</sup> )
— stranded	2x (10 ... 50 mm <sup>2</sup> )
— solid or stranded	2x (2.5 ... 16 mm <sup>2</sup> )
— finely stranded with core end processing	2x (2.5 ... 35 mm <sup>2</sup> )
— finely stranded without core end processing	2x (10 ... 35 mm <sup>2</sup> )
• at AWG cables for main contacts	2x (10 ... 1/0)
<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> ), max. 2x (0.75 ... 4 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> )
• at AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14), 1x 12
Certificates/ approvals	
<b>General Product Approval</b>	EMC



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### Further information

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=3RT1045-1AP00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1045-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1AP00>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1045-1AP00&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1045-1AP00&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1045-1AP00&objecttype=14&gridview=view1>



