

Power contactor, AC-3 80 A, 37 kW / 400 V 48 V AC, 50 Hz, 3-pole
Size S3, Screw terminal !!! Phased-out product !!! Successor is
SIRIUS 3RT2 Preferred successor type is >>3RT2038-1AH00<<



Product brand name	SIRIUS
Product designation	power contactor
General technical data	
Size of contactor	S3
Insulation voltage • rated value	1 000 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation • between coil and main contacts acc. to EN 60947-1	690 V
Protection class IP • on the front • of the terminal	IP20; IP20 on the front with cover / box terminal IP00
Shock resistance at rectangular impulse • at AC	6,8g / 5 ms, 4g / 10 ms
Shock resistance with sine pulse • at AC	10,6g / 5 ms, 6,2g / 10 ms
Mechanical service life (switching cycles)	

• of contactor typical	10 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Reference code acc. to DIN EN 81346-2	Q

Ambient conditions

Installation altitude at height above sea level	
• maximum	2 000 m
Ambient temperature	
• during operation	-25 ... +60 °C
• during storage	-55 ... +80 °C

Main circuit

Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Number of NC contacts for main contacts	0
Operating current	
• at AC-1 at 400 V	
— at ambient temperature 40 °C rated value	120 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	120 A
— up to 690 V at ambient temperature 60 °C rated value	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
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	35 mm²
• at 40 °C minimum permissible	50 mm²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	34 A
• at 690 V rated value	22 A
Operating current	

• at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value	100 A 9 A 100 A 100 A 100 A 100 A
Operating current • at 1 current path at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value	 40 A 2.5 A 100 A 100 A 100 A 100 A
Operating power • at AC-1 — at 230 V at 60 °C rated value — at 400 V rated value — at 690 V rated value — at 690 V at 60 °C rated value — at 1000 V at 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 1000 V rated value	 38 kW 66 kW 114 kW 114 kW 82 W 37 kW 22 kW 37 kW 45 kW 55 kW 37 W
Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value	 17.9 kW 21.1 kW
Thermal short-time current limited to 10 s	760 A
No-load switching frequency • at AC	5 000 1/h
Operating frequency • 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

Control circuit/ Control

Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	48 V
Control supply voltage frequency	
• 1 rated value	50 Hz
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
Apparent pick-up power of magnet coil at AC	270 V·A
Inductive power factor with closing power of the coil	0.68
Apparent holding power of magnet coil at AC	22 V·A
Inductive power factor with the holding power of the coil	0.27
Closing delay	
• at AC	17 ... 90 ms
Opening delay	
• at AC	10 ... 25 ms
Arcing time	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
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
Operating current at DC-12	
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
Operating current at DC-13	
• 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
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings

Contact rating of auxiliary contacts according to UL

A600 / Q600

Short-circuit protection

Design of the fuse link

- for short-circuit protection of the main circuit
 - with type of coordination 1 required
 - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

fuse gL/gG: 250 A

fuse gL/gG: 160 A

fuse gL/gG: 10 A

Installation/ mounting/ dimensions

Mounting type

screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail

- Side-by-side mounting

Yes

Height

146 mm

Width

70 mm

Depth

139 mm

Required spacing

- for grounded parts
 - at the side

6 mm

Connections/ Terminals

Type of electrical connection

- for main current circuit
- for auxiliary and control current circuit

screw-type terminals

screw-type terminals

Type of connectable conductor cross-sections

- for main contacts
 - solid
 - stranded
 - single or multi-stranded
 - finely stranded with core end processing
 - finely stranded without core end processing
- at AWG conductors for main contacts

2x (2.5 ... 16 mm²)

2x (10 ... 50 mm²)

2x (2,5 ... 16 mm²)

2x (2.5 ... 35 mm²)

2x (10 ... 35 mm²)

2x (10 ... 1/0)

Type of connectable conductor cross-sections

- for auxiliary contacts
 - solid
 - finely stranded with core end processing
- at AWG conductors for auxiliary contacts

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (20 ... 16), 2x (18 ... 14), 1x 12

Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery
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CCC



CSA



UL



RCM

[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



LRS

Marine / Shipping	other	Railway
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RINA



RMRS

[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

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=3RT1045-1AH00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1045-1AH00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1AH00>

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

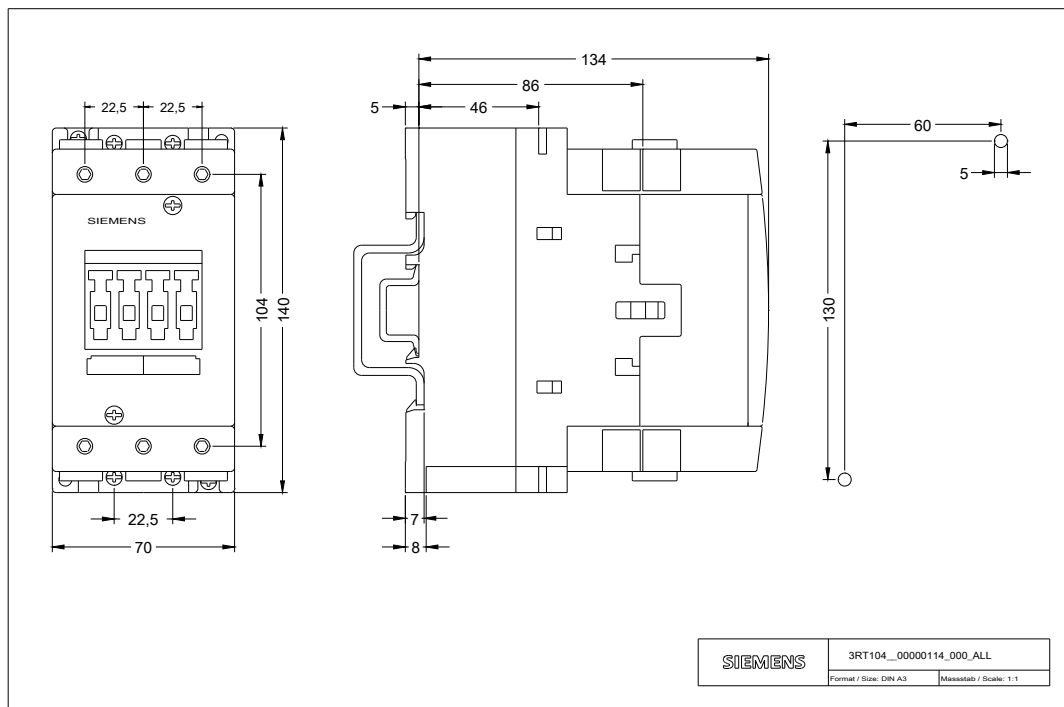
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1045-1AH00&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

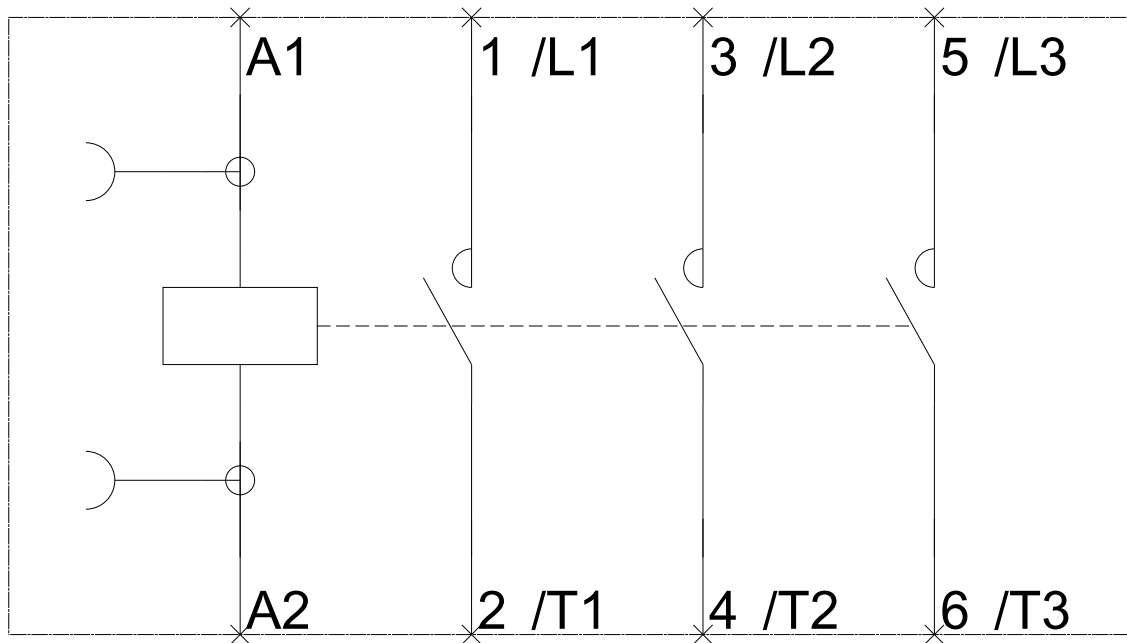
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1AH00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1045-1AH00&objecttype=14&gridview=view1>



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03/19/2020