

Power contactor, AC-3 80 A, 37 kW / 400 V 48 V DC, 3-pole, Size S3
Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2
Preferred successor type is >>3RT2038-1NE30<<



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	IP20; IP20 on the front with cover / box terminal
• of the terminal	IP00
Shock resistance at rectangular impulse	
• at DC	6,8g / 5 ms, 4g / 10 ms
Shock resistance with sine pulse	
• at DC	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 DC	1 000 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	DC
Control supply voltage at DC	
• rated value	48 V
Operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• Full-scale value	1.1
Closing power of magnet coil at DC	15 W
Holding power of magnet coil at DC	15 W
Closing delay	
• at DC	90 ... 230 ms
Opening delay	
• at DC	14 ... 20 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
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Short-circuit protection

Design of the fuse link	
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- 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	152 mm
Required spacing	
• for grounded parts — at the side	6 mm

Connections/ Terminals

Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	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	2x (2.5 ... 16 mm ²) 2x (10 ... 50 mm ²) 2x (2,5 ... 16 mm ²) 2x (2.5 ... 35 mm ²) 2x (10 ... 35 mm ²)
• at AWG conductors for main contacts	2x (10 ... 1/0)
Type of connectable conductor cross-sections	
• for auxiliary contacts — solid — finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), max. 2x (0.75 ... 4 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	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=3RT1045-1BW40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1045-1BW40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1BW40>

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

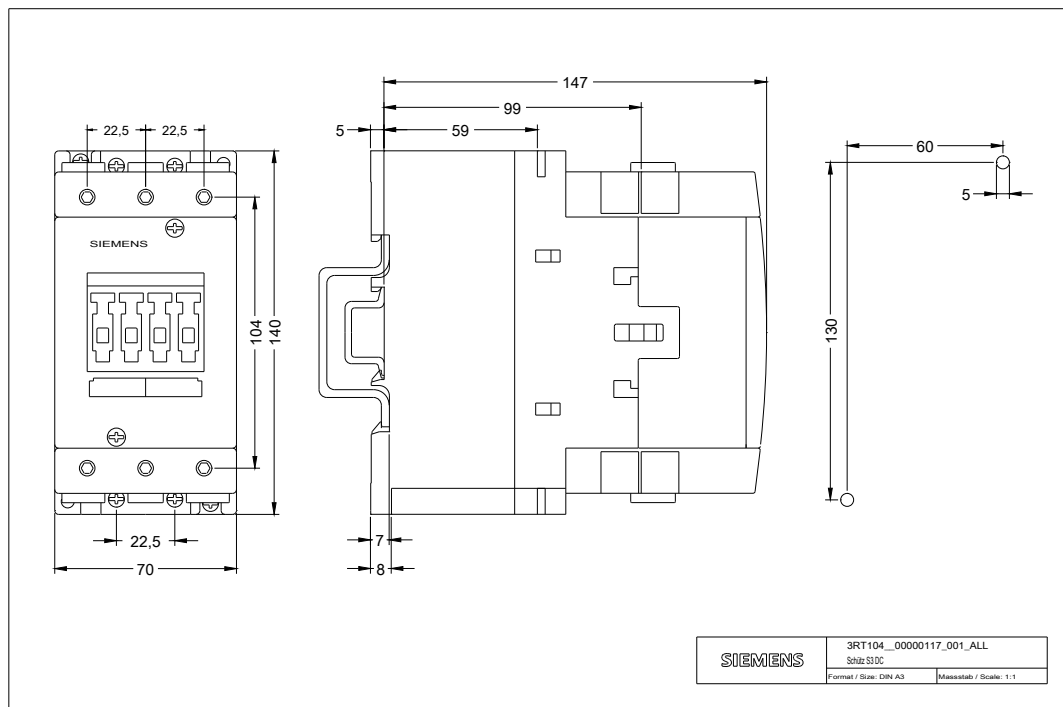
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1045-1BW40&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

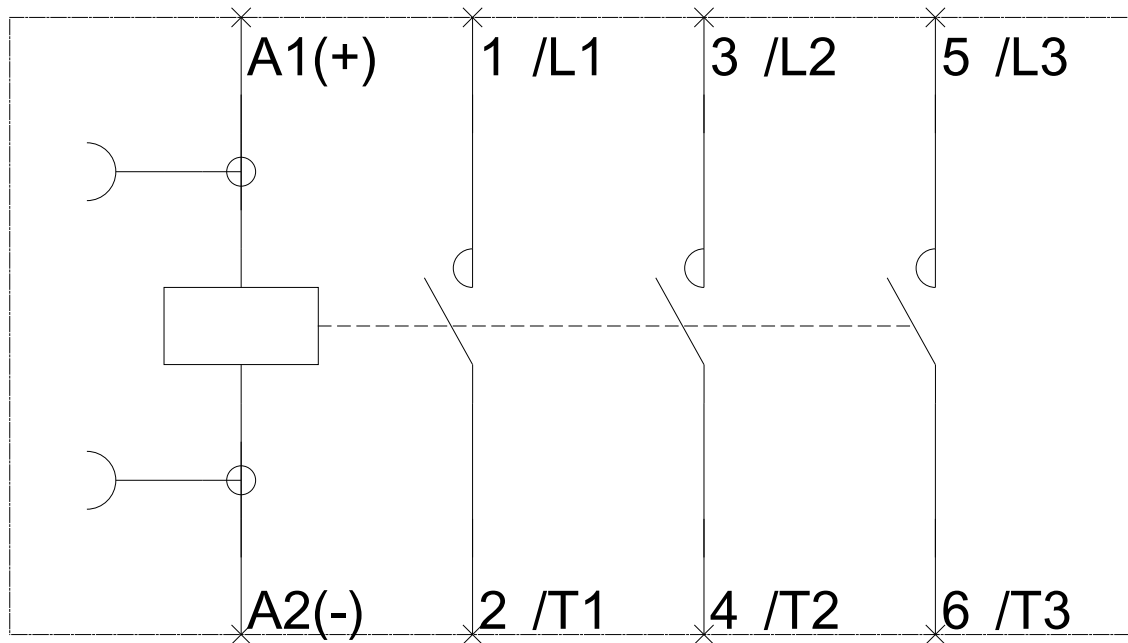
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1BW40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1045-1BW40&objecttype=14&gridview=view1>



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04/27/2020