

Power contactor, AC-3 80 A, 37 kW / 400 V 42 V DC, 3-pole, Size S3
Spring-type terminal !!! Phased-out product !!! Successor is SIRIUS
3RT2



product brand name	SIRIUS
Product designation	power contactor

General technical data	
Size of contactor	S3
<ul style="list-style-type: none"> Insulation voltage rated value 	1 000 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
<ul style="list-style-type: none"> between coil and main contacts acc. to EN 60947-1 	690 V
<ul style="list-style-type: none"> protection class IP on the front 	IP20; IP20 on the front with cover / box terminal
<ul style="list-style-type: none"> Protection class IP of the terminal 	IP00
Shock resistance at rectangular impulse	
<ul style="list-style-type: none"> at DC 	6,8g / 5 ms, 4g / 10 ms
Shock resistance with sine pulse	
<ul style="list-style-type: none"> at DC 	10,6g / 5 ms, 6,2g / 10 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> of contactor typical 	10 000 000

<ul style="list-style-type: none"> • of the contactor with added electronics-compatible auxiliary switch block typical 	5 000 000
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value 	120 A
<ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — up to 1000 V at ambient temperature 40 °C rated value — up to 1000 V at ambient temperature 60 °C rated value 	120 A 100 A 60 A 50 A
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 690 V rated value — at 1000 V rated value 	80 A 58 A 30 A
<ul style="list-style-type: none"> • at AC-4 at 400 V rated value 	66 A
Connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> • at 60 °C minimum permissible • at 40 °C minimum permissible 	35 mm ² 50 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> • at 400 V rated value • at 690 V rated value 	34 A 22 A
Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-1 	

<ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value 	100 A 9 A 100 A 100 A 100 A 100 A
Operating current <ul style="list-style-type: none"> • at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — 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 <ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — 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 <ul style="list-style-type: none"> — 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 <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • at DC 	1 000 1/h
Operating frequency <ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 maximum 	900 1/h 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	42 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	
• 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
• Type of electrical connection for auxiliary and control current circuit	spring-loaded terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (2.5 ... 16 mm ²)
— stranded	2x (10 ... 50 mm ²)
— single or multi-stranded	2x (2,5 ... 16 mm ²)
— finely stranded with core end processing	2x (2.5 ... 35 mm ²)
— finely stranded without core end processing	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	2x (0.25 ... 2.5 mm ²)
— finely stranded with core end processing	2x (0.25 ... 1.5 mm ²)
— finely stranded without core end processing	2x (0.25 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (24 ... 14)

Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery
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[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other	Railway
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[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=3RT1045-3BD40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1045-3BD40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-3BD40>

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

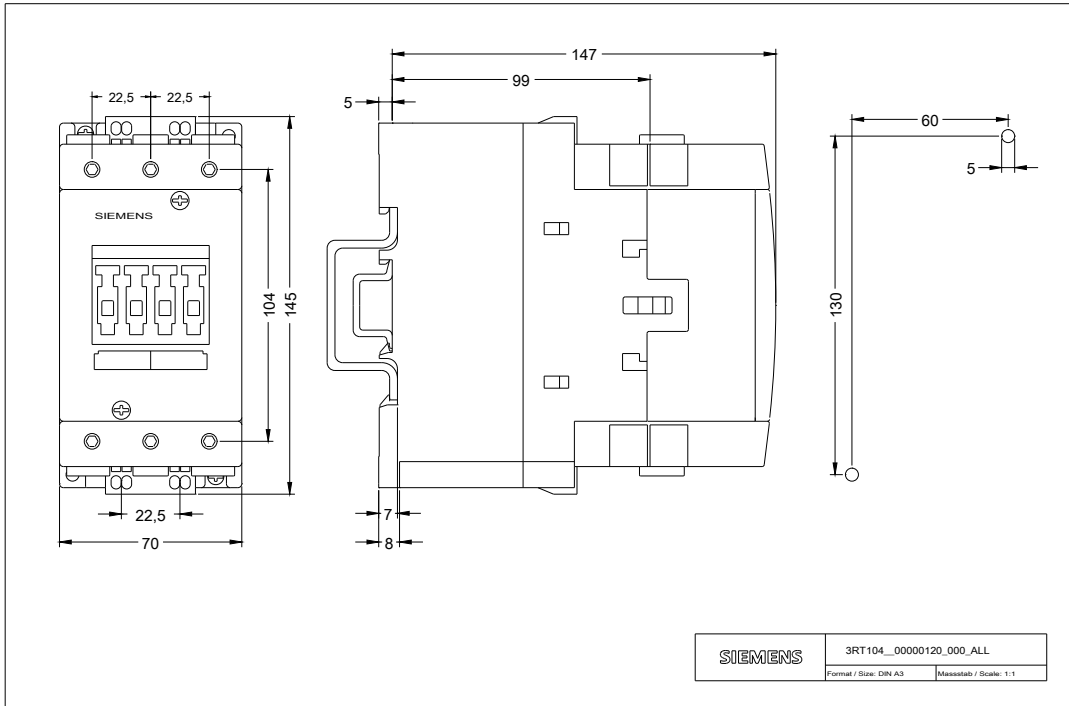
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1045-3BD40&lang=en

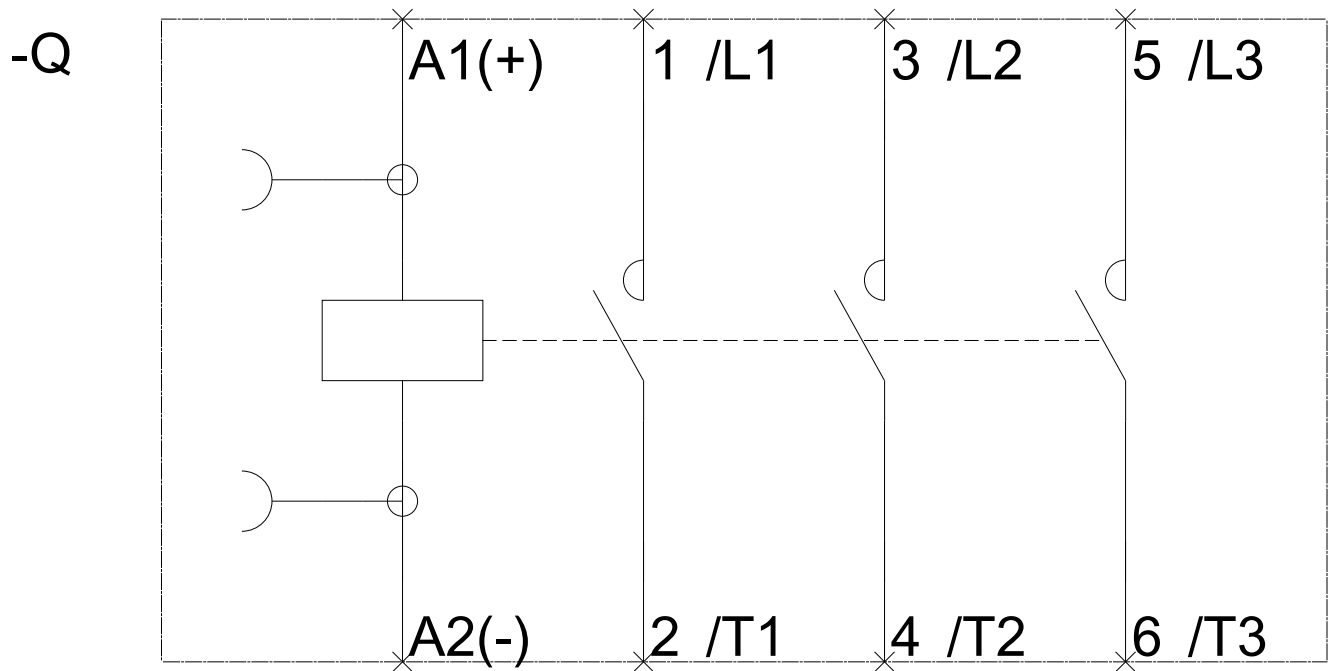
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-3BD40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1045-3BD40&objecttype=14&gridview=view1>





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