

Power contactor, AC-3 80 A, 37 kW / 400 V 230 V AC, 50 Hz 2 NO + 2 NC, 3-pole, Size S3, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2 Preferred successor type is >>3RT2038-1AP04<<



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 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 mm ²
• at 40 °C minimum permissible	50 mm ²
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	

<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
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	7.7 W
No-load switching frequency	
<ul style="list-style-type: none"> • 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	230 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	2
Number of NO contacts for auxiliary contacts	
• instantaneous contact	2
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	
Short-circuit protection	
Design of the fuse link	
<ul style="list-style-type: none"> for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of coordination 1 required — with type of assignment 2 required for short-circuit protection of the auxiliary switch required 	<p>fuse gL/gG: 250 A fuse gL/gG: 160 A fuse gL/gG: 10 A</p>
Installation/ mounting/ dimensions	
Mounting type	screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail Yes
Height	146 mm
Width	70 mm
Depth	188 mm
Required spacing	
<ul style="list-style-type: none"> for grounded parts <ul style="list-style-type: none"> — at the side 	6 mm
Connections/ Terminals	
Type of electrical connection	
<ul style="list-style-type: none"> for main current circuit for auxiliary and control current circuit 	<p>screw-type terminals screw-type terminals</p>
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> — solid — stranded — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing at AWG conductors for main contacts 	<p>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)</p>
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> — solid — finely stranded with core end processing at AWG conductors for auxiliary contacts 	<p>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</p>
Certificates/ approvals	

General Product Approval	Functional Safety/Safety of Machinery	Declaration of Conformity
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CCC



CSA



UL



[Type Examination Certificate](#)



EG-Konf.

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

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



LRS



RINA

Marine / Shipping	other	Railway
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RMRS

[Confirmation](#)

[Miscellaneous](#)

[Special Test Certificate](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)
www.siemens.com/sirius/catalogs

Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1045-1AP04>

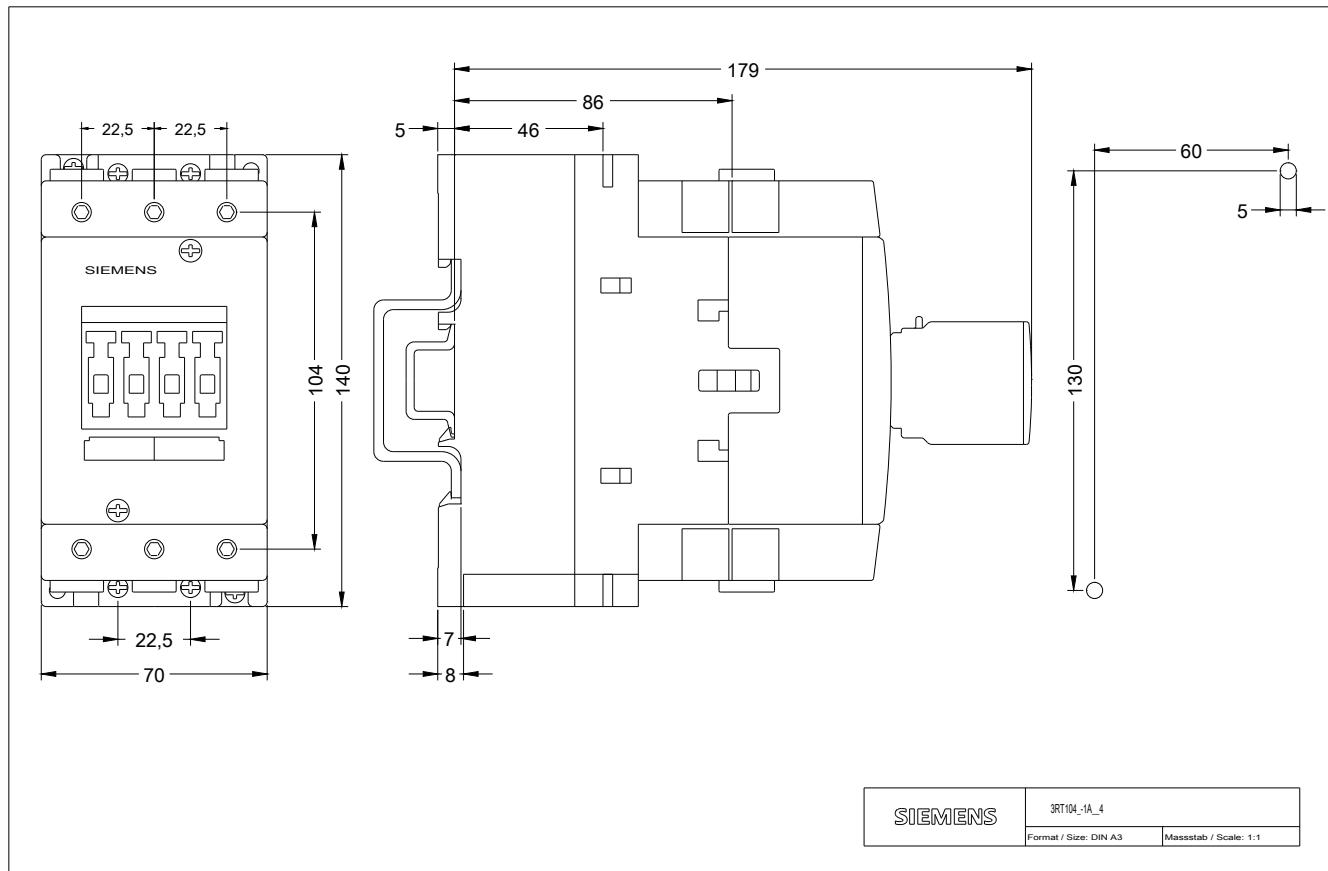
Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1045-1AP04>

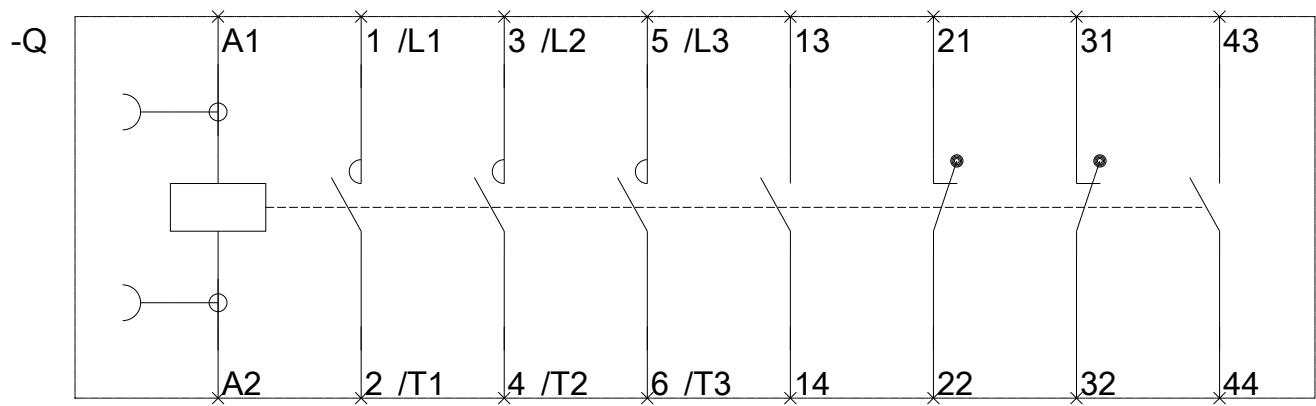
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1AP04>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1045-1AP04&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1045-1AP04/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1045-1AP04&objecttype=14&gridview=view1>





last modified:

08/01/2019