

Data sheet

3RT1035-1AC20

CONTACTOR, AC-3 18.5 KW/400 V, AC 24V 50/60HZ, 3-POLE,
SIZE S2, SCREW CONNECTION



Figure similar

Product brand name	SIRIUS
Product designation	power contactor
General technical data	
Size of contactor	S2
Insulation voltage <ul style="list-style-type: none"> • rated value 	690 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 	400 V
Protection class IP <ul style="list-style-type: none"> • on the front • of the terminal 	IP20 IP00
Shock resistance at rectangular impulse <ul style="list-style-type: none"> • at AC 	10g / 5 ms, 5g / 10 ms
Shock resistance with sine pulse	

<ul style="list-style-type: none"> • at AC 	15g / 5 ms, 8g / 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
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 	60 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 	60 A
<ul style="list-style-type: none"> — up to 690 V at ambient temperature 60 °C rated value 	55 A
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	40 A
<ul style="list-style-type: none"> — at 690 V rated value 	24 A
<ul style="list-style-type: none"> • at AC-4 at 400 V rated value 	35 A
Connectable conductor cross-section in main circuit at AC-1	
<ul style="list-style-type: none"> • at 60 °C minimum permissible 	16 mm ²
<ul style="list-style-type: none"> • at 40 °C minimum permissible 	16 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> • at 400 V rated value 	18.5 A
<ul style="list-style-type: none"> • at 690 V rated value 	12.6 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 	55 A
<ul style="list-style-type: none"> — at 110 V rated value 	4.5 A
<ul style="list-style-type: none"> • 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 	55 A 25 A 55 A 55 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 	35 A 2.5 A 55 A 25 A 55 A 55 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 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 	22 kW 38 kW 66 kW 66 kW 18.5 kW 11 kW 18.5 kW 22 kW 22 kW
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 	9.5 kW 11.4 kW
Thermal short-time current limited to 10 s	400 A
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	2.6 W
No-load switching frequency <ul style="list-style-type: none"> • at AC 	5 000 1/h
Operating frequency <ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum 	1 200 1/h 600 1/h 1 000 1/h 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	24 V
• at 60 Hz rated value	24 V
Control supply voltage frequency	50 Hz, 60 Hz
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	170 V·A
Inductive power factor with closing power of the coil	0.76
Apparent holding power of magnet coil at AC	15 V·A
Inductive power factor with the holding power of the coil	0.35
Closing delay	
• at AC	10 ... 24 ms
Opening delay	
• at AC	7 ... 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
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 	fuse gL/gG: 125 A fuse gL/gG: 63 A fuse gL/gG: 10 A
Installation/ mounting/ dimensions	
Mounting type <ul style="list-style-type: none"> Side-by-side mounting 	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 Yes
Height	112 mm
Width	55 mm
Depth	115 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 	screw-type terminals screw-type terminals
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 	2x (0.75 ... 16 mm ²) 2x (0.75 ... 25 mm ²) 2x (0,75 ... 16 mm ²) 2x (0.75 ... 16 mm ²) 2x (0.75 ... 16 mm ²) 2x (18 ... 2)
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 	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) 2x (20 ... 16), 2x (18 ... 14), 1x 12
Certificates/approvals	

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



CSA



[Type Examination Certificate](#)



EG-Konf.

[Special Test Certificate](#)

Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)



ABS



LRS



RINA



RMRS



DNV

Marine / Shipping	other
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DNVGL.COM/AF

[Miscellaneous](#)

[Confirmation](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1035-1AC20>

Cax online generator

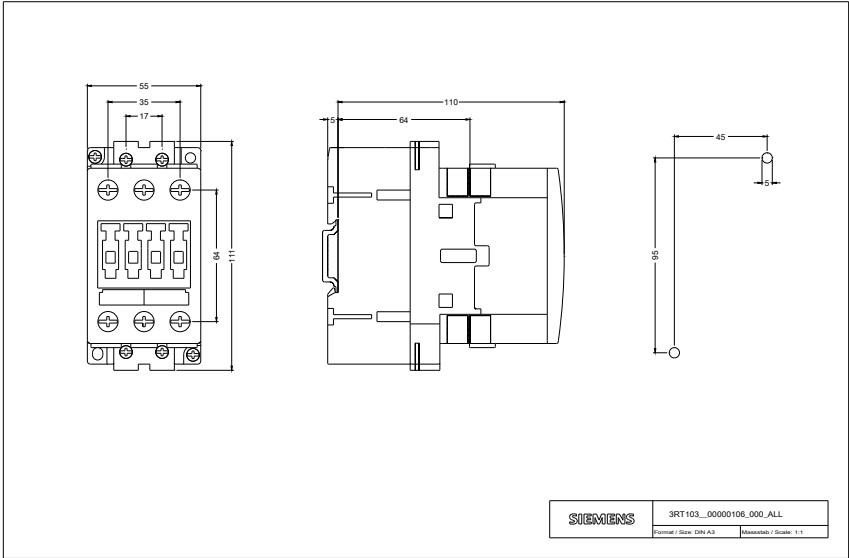
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1035-1AC20>

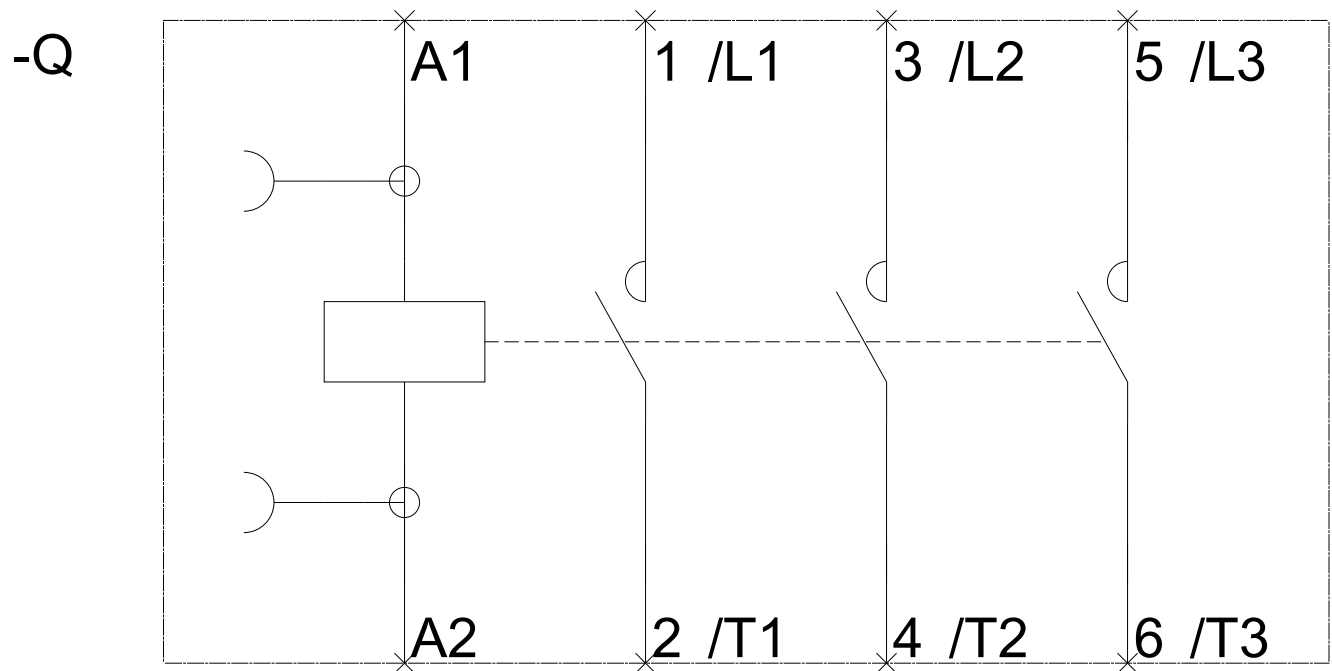
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT1035-1AC20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1035-1AC20&lang=en





last modified:

10/13/2017