SIEMENS

product brand name

Data sheet 3RT1055-6LA06



power contactor, AC-3e/AC-3 150 A, 75 kW / 400 V without operating mechanism 3-pole, auxiliary contacts 2 NO + 2 NC without operating mechanism main circuit: busbar control and auxiliary circuit: screw terminal

product designation	Power contactor	
product type designation	3RT1	
General technical data		
size of contactor	S6	
product extension		
 function module for communication 	No	
auxiliary switch	Yes	
power loss [W] for rated value of the current		
 at AC in hot operating state 	27 W	
 at AC in hot operating state per pole 	9 W	
insulation voltage		
 of main circuit with degree of pollution 3 rated value 	1 000 V	
 of auxiliary circuit with degree of pollution 3 rated value 	500 V	
surge voltage resistance		
 of main circuit rated value 	8 kV	
 of auxiliary circuit rated value 	6 kV	
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	690 V	
shock resistance at rectangular impulse		
• at AC	8,5g / 5 ms, 4,2g / 10 ms	
• at DC	8,5g / 5 ms, 4,2g / 10 ms	
shock resistance with sine pulse		
• at AC	13,4g / 5 ms, 6,5g / 10 ms	
• at DC	13,4g / 5 ms, 6,5g / 10 ms	
mechanical service life (operating cycles)		
of contactor typical	10 000 000	
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000	
 of the contactor with added auxiliary switch block typical 	10 000 000	
reference code according to IEC 81346-2	Q	
Substance Prohibitance (Date)	05/01/2012	

SIRIUS

maximum

ambient temperature

during operationduring storage

relative humidity minimum

installation altitude at height above sea level maximum

relative humidity at 55 °C according to IEC 60068-2-30

2 000 m

95 %

-25 ... +60 °C

-55 ... +80 °C 10 %

Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
 at AC-3 rated value maximum 	1 000 V
 at AC-3e rated value maximum 	1 000 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	185 A
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	185 A
— up to 690 V at ambient temperature 60 $^{\circ}\mathrm{C}$ rated value	160 A
 up to 1000 V at ambient temperature 40 °C rated value 	90 A
— up to 1000 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	90 A
• at AC-3	
— at 400 V rated value	150 A
— at 500 V rated value	150 A
— at 690 V rated value	150 A
— at 1000 V rated value	65 A
• at AC-3e	
— at 400 V rated value	150 A
— at 500 V rated value	150 A
— at 690 V rated value	150 A
— at 1000 V rated value	65 A
at AC-4 at 400 V rated value at AC-5 virte COO V rated value	132 A
at AC-5a up to 690 V rated value at AC-5b up to 400 V rated value	162 A
at AC-5b up to 400 V rated value at AC-6a	124 A
at AC-6a up to 230 V for ourrent peak value n=20 rated.	150 A
— up to 230 V for current peak value n=20 rated value	150 A
— up to 400 V for current peak value n=20 rated value	150 A
 up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated 	150 A 150 A
value — up to 1000 V for current peak value n=20 rated — up to 1000 V for current peak value n=20 rated	65 A
value • at AC-6a	
up to 230 V for current peak value n=30 rated value	105 A
— up to 400 V for current peak value n=30 rated value	105 A
— up to 500 V for current peak value n=30 rated value	105 A
— up to 690 V for current peak value n=30 rated value	105 A
— up to 1000 V for current peak value n=30 rated value	65 A
minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating	95 mm²
cycles at AC-4	
at 400 V rated value	68 A
• at 690 V rated value	57 A
operational current	
at 1 current path at DC-1	
— at 24 V rated value	160 A
— at 110 V rated value	18 A
— at 220 V rated value	3.4 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.5 A
 with 2 current paths in series at DC-1 	

at 04 V anta d color	400 A
— at 24 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	20 A
— at 440 V rated value	3.2 A
— at 600 V rated value	1.6 A
with 3 current paths in series at DC-1	400 A
— at 24 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	160 A
— at 440 V rated value	11.5 A
— at 600 V rated value	4 A
at 1 current path at DC-3 at DC-5 — at 24 V rated value	160 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.17 A
— at 600 V rated value	0.12 A
with 2 current paths in series at DC-3 at DC-5	0.12 A
— at 24 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	2.5 A
— at 440 V rated value	0.65 A
— at 600 V rated value	0.37 A
• with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	160 A
— at 110 V rated value	160 A
— at 220 V rated value	160 A
— at 440 V rated value	1.4 A
— at 600 V rated value	0.75 A
operating power	
• at AC-3	
— at 230 V rated value	45 kW
— at 400 V rated value	75 kW
— at 500 V rated value	90 kW
— at 690 V rated value	132 kW
— at 1000 V rated value	90 kW
• at AC-3e	
— at 230 V rated value	45 kW
— at 400 V rated value	75 kW
— at 500 V rated value	90 kW
— at 690 V rated value	132 kW
— at 1000 V rated value	90 kW
operating power for approx. 200000 operating cycles at AC-4	
at 400 V rated value	38 kW
at 690 V rated value	55 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	60 000 kVA
 up to 400 V for current peak value n=20 rated value 	100 000 VA
 up to 500 V for current peak value n=20 rated value 	130 000 VA
• up to 690 V for current peak value n=20 rated value	170 000 VA
up to 1000 V for current peak value n=20 rated value	110 000 VA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	40 000 VA
up to 400 V for current peak value n=30 rated value	70 000 VA
• up to 500 V for current peak value n=30 rated value	90 000 VA
up to 690 V for current peak value n=30 rated value	120 000 VA
• up to 1000 V for current peak value n=30 rated	110 000 VA
value	
short-time withstand current in cold operating state up to 40 °C	
Iimited to 1 s switching at zero current maximum	2 727 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	1 831 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	1 300 A; Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum	850 A; Use minimum cross-section acc. to AC-1 rated value

 limited to 60 s switching at zero current maximum 	703 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	2 000 1/h
• at DC	2 000 1/h
operating frequency	
• at AC-1 maximum	800 1/h
• at AC-2 maximum	300 1/h
• at AC-3 maximum	750 1/h
at AC-3e maximum	750 1/h
at AC-3e maximum at AC-4 maximum	130 1/h
	130 1/11
Control circuit/ Control	
closing delay	
• at AC	20 95 ms
• at DC	20 95 ms
opening delay	
• at AC	40 60 ms
• at DC	40 60 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Without operating mechanism
Auxiliary circuit	
	2
number of NC contacts for auxiliary contacts instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	6 A
at 400 V rated value	3 A
at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
at 24 V rated value	10 A
• at 48 V rated value	6 A
at 60 V rated value	6 A
at 110 V rated value	3 A
 at 125 V rated value 	2 A
at 220 V rated value	1 A
 at 600 V rated value 	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
 at 48 V rated value 	2 A
at 60 V rated value	2 A
at 110 V rated value	1 A
at 125 V rated value	0.9 A
at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	450 A
• at 480 V rated value	156 A
at 600 V rated value	144 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 230 V rated value	30 hp
 for 3-phase AC motor 	
— at 200/208 V rated value	50 hp
 — at 220/230 V rated value 	60 hp
 at 460/480 V rated value 	125 hp
— at 575/600 V rated value	150 hp
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	
- 101 Short Shoult protestion of the main shoult	

— with type of coordination 1 required

— with type of assignment 2 required

gG: 355 A (690 V, 100 kA)

gG: 315 A (690 V, 100 kA), aM: 200 A (690 V, 50 kA), BS88: 315 A (415 V, 50 kA) gG: 10 A (500 V, 1 kA)

• for short-circuit protection of the auxiliary switch	gG: 10 A (500 V, 1 kA)	
required		
Installation/ mounting/ dimensions		
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back	
fastening method	screw fixing	
side-by-side mounting	Yes	
height	172 mm	
width	120 mm	
depth	170 mm	
required spacing		
 with side-by-side mounting 		
— forwards	20 mm	
— upwards	10 mm	
— downwards	10 mm	
— at the side	0 mm	
 for grounded parts 		
— forwards	20 mm	
— upwards	10 mm	
— at the side	10 mm	
— downwards	10 mm	
for live parts		
— forwards	20 mm	
— upwards	10 mm	
— downwards	10 mm	
— at the side	10 mm	
Connections/ Terminals		
type of electrical connection		
for main current circuit	Connection bar	
for auxiliary and control circuit	screw-type terminals	
at contactor for auxiliary contacts	Screw-type terminals	
of magnet coil	Screw-type terminals	
width of connection bar	17 mm	
thickness of connection bar	3 mm	
diameter of holes	9 mm	
number of holes	9 mm 1	
type of connectable conductor cross-sections		
at AWG cables for main contacts	4 250 kcmil	
connectable conductor cross-section for main contacts	4 250 KCMII	
stranded	25 120 mm²	
connectable conductor cross-section for auxiliary contacts	20 120 IIIIII	
solid or stranded	0.5 4 mm²	
finely stranded with core end processing	0.5 2.5 mm²	
type of connectable conductor cross-sections		
for auxiliary contacts		
— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), max. 2x (0.75 4 mm²)	
solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)	
finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 1x 12	
AWG number as coded connectable conductor cross	, , , , , , , , , , , , , , , , , , ,	
section		
 for auxiliary contacts 	18 14	
Safety related data		
product function		
 mirror contact according to IEC 60947-4-1 positively driven operation according to IEC 60947-5-1 	Yes No	
B10 value with high demand rate according to SN 31920	1 000 000	
T1 value for proof test interval or service life according to	20 y	
IEC 61508	20)	
0 01000		

protection class IP on the front according to IEC 60529

touch protection on the front according to IEC 60529 suitability for use

• safety-related switching OFF

IP00; IP20 with box terminal/cover

finger-safe, for vertical contact from the front with box terminal/cover

No

Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



E	EMC	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
	_			



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

Marine / Shipping other









Confirmation

Miscellaneous

other Railway

<u>Miscellaneous</u> <u>Vibration and Shock</u> <u>Special Test Certific-</u>

<u>ate</u>

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=3RT1055-6LA06

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1055-6LA06

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6LA06

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

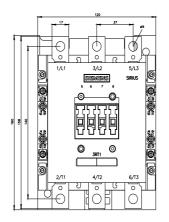
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1055-6LA06&lang=en

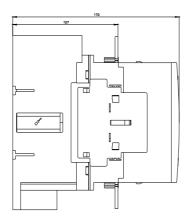
Characteristic: Tripping characteristics, I²t, Let-through current

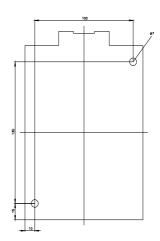
https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6LA06/char

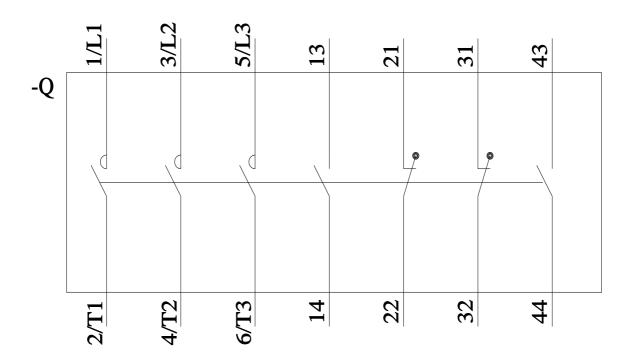
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1055-6LA06&objecttype=14&gridview=view1









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