## **SIEMENS**

Data sheet 3RT1075-6LA06



Power contactor, AC-3 400 A, 200 kW / 400 V without coil Auxiliary contacts 2 NO + 2 NC 3-pole, Size S12 Main conductor: Busbar connections Drive: conventional Auxiliary conductor: Screw terminals

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S12
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	105 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	35 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	1 000 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	500 V
surge voltage resistance	
of main circuit rated value	8 kV
<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. 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 (switching cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.05.2012
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
relative humidity minimum	10 %

relative humidity at 55 °C acc. to IEC 60068-2-30 maximum	95 %
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
	3
operating voltage  ● at AC-3 rated value maximum	1 000 V
<ul> <li>operational current</li> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	430 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	430 A
<ul> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul>	400 A
<ul> <li>up to 1000 V at ambient temperature 40 °C rated value</li> </ul>	200 A
<ul> <li>up to 1000 V at ambient temperature 60 °C rated value</li> <li>at AC-3</li> </ul>	200 A
— at 400 V rated value	400 A
— at 400 V rated value  — at 500 V rated value	400 A 400 A
— at 500 V rated value  — at 690 V rated value	400 A 400 A
— at 1000 V rated value	180 A
at AC-4 at 400 V rated value	350 A
• at AC-5a up to 690 V rated value	378 A
• at AC-5b up to 400 V rated value	332 A
• at AC-6a	00271
up to 230 V for current peak value n=20 rated value	395 A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	395 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	395 A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	395 A
<ul> <li>up to 1000 V for current peak value n=20 rated value</li> </ul>	180 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	264 A
— up to 400 V for current peak value n=30 rated value	264 A
— up to 500 V for current peak value n=30 rated value	264 A
— up to 690 V for current peak value n=30 rated value	264 A
— up to 1000 V for current peak value n=30 rated value	180 A
minimum cross-section in main circuit at maximum AC-1 rated value	300 mm²
operational current for approx. 200000 operating cycles at AC-4	450 A
at 400 V rated value	150 A
at 690 V rated value	135 A
operational current	
• at 1 current path at DC-1	400 A
— at 24 V rated value	400 A
— at 110 V rated value	33 A
— at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A
— at 600 V rated value	0.6 A
<ul> <li>with 2 current paths in series at DC-1</li> <li>— at 24 V rated value</li> </ul>	400 A

— at 110 V rated value	400 A
<ul><li>— at 220 V rated value</li></ul>	400 A
— at 440 V rated value	4 A
— at 600 V rated value	2 A
<ul><li>with 3 current paths in series at DC-1</li></ul>	
— at 24 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	11 A
— at 600 V rated value	5.2 A
<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	400 A
— at 110 V rated value	3 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.18 A
— at 600 V rated value	0.125 A
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	400 A
— at 110 V rated value	400 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	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 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	132 kW
— at 400 V rated value	200 kW
— at 500 V rated value	250 kW
— at 690 V rated value	400 kW
— at 1000 V rated value	250 kW
operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	85 kW
at 690 V rated value	133 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	150 000 kVA
• up to 400 V for current peak value n=20 rated value	270 000 VA
• up to 500 V for current peak value n=20 rated value	340 000 VA
• up to 690 V for current peak value n=20 rated value	470 000 VA
up to 1000 V for current peak value n=20 rated value	310 000 VA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	100 000 VA
up to 400 V for current peak value n=30 rated value	180 000 VA
up to 500 V for current peak value n=30 rated value	220 000 VA
• up to 690 V for current peak value n=30 rated value	310 000 VA
• up to 1000 V for current peak value n=30 rated	310 000 VA
value	
short-time withstand current in cold operating state up to 40 °C	
limited to 1 s switching at zero current maximum	6 600 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	5 761 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 10 s switching at zero current maximum	4 143 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum	2 635 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	2 088 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	

a at AC	2 000 4/h
• at AC	2 000 1/h
at DC     appraising frequency	2 000 1/h
operating frequency  ● at AC-1 maximum	700 1/h
at AC-1 maximum     at AC-2 maximum	200 1/h
at AC-2 maximum     at AC-3 maximum	500 1/h
at AC-3 maximum     at AC-4 maximum	130 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
closing delay	NOIDO
• at AC	45 100 ms
• at DC	45 100 ms
opening delay	
• at AC	60 100 ms
• at DC	60 100 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Without operating mechanism
Auxiliary circuit	
number of NC contacts for auxiliary contacts	2
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	40.4
• at 24 V rated value	10 A
at 48 V rated value     at 60 V rated value	2 A 2 A
<ul><li>at 60 V rated value</li><li>at 110 V rated value</li></ul>	2 A 1 A
at 125 V rated value     at 125 V rated value	0.9 A
at 125 V rated value     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	
• at 480 V rated value	361 A
at 600 V rated value	382 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 200/208 V rated value	125 hp
— at 220/230 V rated value	150 hp
— at 460/480 V rated value	300 hp
— at 575/600 V rated value	400 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 630 A (690 V, 100 kA)

— with type of assignment 2 required	gG: 500 A (690 V, 100 kA), aM: 400 A (690 V, 50 kA), BS88: 450 A (415 V, 50 kA)
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)
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	214 mm
width	160 mm
depth	225 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
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals
of magnet coil	Screw-type terminals
width of connection bar	25 mm
thickness of connection bar	6 mm
diameter of holes	11 mm
number of holes	1
type of connectable conductor cross-sections	0/0 5001 1
at AWG cables for main contacts	2/0 500 kcmil
connectable conductor cross-section for main contacts	
• stranded	70 240 mm²
connectable conductor cross-section for auxiliary	
contacts	
<ul> <li>solid or stranded</li> </ul>	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	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)
<ul><li>— solid or stranded</li></ul>	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), max. 2x (0,75 4 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	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	
<ul> <li>mirror contact acc. to IEC 60947-4-1</li> </ul>	Yes
• positively driven operation acc. to IEC 60947-5-1	No
P10 value with high demand rate age to SN 21020	1,000,000

B10 value with high demand rate acc. to SN 31920

1 000 000

protection class IP on the front acc. to IEC 60529

touch protection on the front acc. 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** 

**EMC** 





Confirmation







Functional Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping

Type Examination Certificate



UK Declaration of Conformity Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping

other







Confirmation

**Miscellaneous** 

**Miscellaneous** 

Railway

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=3RT1075-6LA06

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1075-6LA06

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6LA06

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

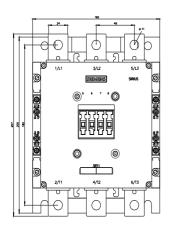
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT1075-6LA06&lang=en

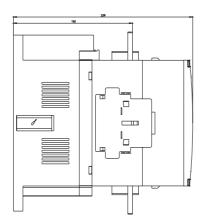
Characteristic: Tripping characteristics, I2t, Let-through current

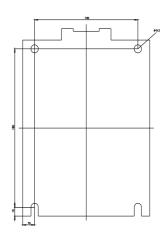
https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6LA06/char

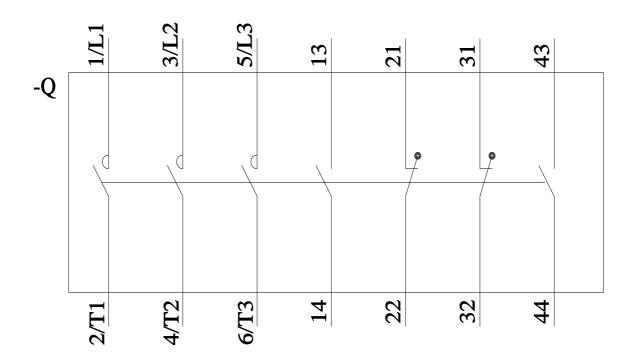
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-6LA06&objecttype=14&gridview=view1









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