SIEMENS

Data sheet 3RT1075-2AS36

SIRIUS





power contactor, AC-3e/AC-3 400 A, 200 kW / 400 V AC (50-60 Hz) / DC Uc: 500-550 V 3-pole, auxiliary contacts 2 NO + 2 NC drive: conventional main circuit: busbar control and auxiliary circuit: spring-loaded terminal



product brand name	SINIUS
product designation	Power contactor
product type designation	3RT1
General technical data	
size of contactor	S12
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 	105 W
 at AC in hot operating state per pole 	35 W
without load current share typical	10 W
type of calculation of power loss depending on pole	quadratic
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 protective separation 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)	
SVHC substance name	Lead - 7439-92-1
Weight	10.245 kg
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 according 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
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 at AC-1 	430 A
— up to 690 V at ambient temperature 40 °C rated value	430 A
— up to 690 V at ambient temperature 60 °C rated value	400 A
— up to 1000 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	200 A
 up to 1000 V at ambient temperature 60 °C rated value at AC-3 	200 A
— at 400 V rated value	400 A
— at 500 V rated value	400 A
— at 690 V rated value	400 A
— at 1000 V rated value	180 A
• at AC-3e	
— at 400 V rated value	400 A
— at 500 V rated value	400 A
— at 690 V rated value	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	
— up to 230 V for current peak value n=20 rated value	395 A
— up to 400 V for current peak value n=20 rated value	395 A
— up to 500 V for current peak value n=20 rated value	395 A
— up to 690 V for current peak value n=20 rated value	395 A
 up to 1000 V for current peak value n=20 rated value 	180 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	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 mm ²
operational current for approx. 200000 operating cycles at AC-4	150 A
at 400 V rated valueat 690 V rated value	150 A 135 A
operational current	100 A
at 1 current path at DC-1	
— at 24 V rated value	400 A
— at 60 V rated value	330 A
— at 110 V rated value	33 A
— at 220 V rated value	3.8 A
— at 440 V rated value	0.9 A

1000 1/ 1 1	0.0.4
— at 600 V rated value	0.6 A
with 2 current paths in series at DC-1	400.4
— at 24 V rated value	400 A
— at 60 V rated value	400 A
— at 110 V rated value	400 A
— at 220 V rated value	400 A
— at 440 V rated value	4 A
— at 600 V rated value	2 A
with 3 current paths in series at DC-1	
— at 24 V rated value	400 A
— at 60 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
at 1 current path at DC-3 at DC-5	
— at 24 V rated value	400 A
— at 60 V rated value	11 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
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	400 A
— at 60 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 60 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
• at AC-3e	
— 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-	
	95 MM
at 400 V rated valueat 690 V rated value	85 kW 133 kW
	133 KVV
 operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value 	150 000 kVA
 up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value 	270 000 VA
 up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value 	
 up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value 	340 000 VA 470 000 VA
 up to 690 V for current peak value n=20 rated value up to 1000 V for current peak value n=20 rated value 	310 000 VA
operating apparent power at AC-6a	310 000 VA
 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 400 v for current peak value n=30 rated value	100 000 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 value	310 000 VA
short-time withstand current in cold operating state up to 40 $^{\circ}\text{C}$	
 limited to 1 s switching at zero current maximum 	6 600 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	5 761 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	4 143 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	2 635 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	2 088 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	700 1/h
• at AC-2 maximum	200 1/h
• at AC-3 maximum	500 1/h
at AC-3e maximum	500 1/h
• at AC-3e maximum	130 1/h
	100 1/11
Control circuit/ Control	AOIDO
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
at 50 Hz rated value	500 550 V
at 60 Hz rated value	500 550 V
control supply voltage at DC rated value	500 550 V
operating range factor control supply voltage rated value of magnet coil at DC	
initial value	0.8
full-scale value	1.1
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.8 1.1
design of the surge suppressor	with varistor
apparent pick-up power	
 at minimum rated control supply voltage at AC 	
— at 50 Hz	700 VA
— at 60 Hz	700 VA
 at maximum rated control supply voltage at AC 	
— at 60 Hz	830 VA
— at 50 Hz	830 VA
apparent pick-up power of magnet coil at AC	
• at 50 Hz	830 VA
• at 60 Hz	830 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.9
• at 60 Hz	0.9
apparent holding power	
at minimum rated control supply voltage at DC	8.5 VA
	10 VA
at maximum rated control supply voltage at DC	IU VA
apparent holding power	
at minimum rated control supply voltage at AC	7.0.1/4
— at 50 Hz	7.6 VA
— at 60 Hz	7.6 VA
at maximum rated control supply voltage at AC	
— at 50 Hz	9.2 VA
— at 60 Hz	9.2 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.9
● at 60 Hz	0.9
closing power of magnet coil at DC	920 W

closing delay	
• 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	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	2
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	1A
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	1A
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	risally officering por 100 minor (1.1.1)
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	361 A
at 600 V rated value at 600 V rated value	382 A
	302 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	405 hp
— 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	
for short-circuit protection of the main circuit	
 — with type of coordination 1 required 	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)
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90 $^\circ$ rotatable, with vertical mounting surface +/- 22.5 $^\circ$ tiltable to the front and back
fastening method	screw fixing
height	214 mm
width	160 mm
depth	225 mm
required spacing	

- with aids by side manuation	
with side-by-side mounting	22
— 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	spring-loaded terminals
at contactor for auxiliary contacts	Spring-type terminals
of magnet coil	Spring-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	0/0 500 / 1
for AWG cables for main contacts	2/0 500 kcmil
connectable conductor cross-section for main contacts	70 040 3
• stranded	70 240 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.25 2.5 mm²
 finely stranded with core end processing 	0.25 1.5 mm²
finely stranded without core end processing	0.25 2.5 mm ²
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid	2x (0.25 2.5 mm²)
— solid or stranded	2x (0,25 2,5 mm²)
 finely stranded with core end processing 	2x (0.25 1.5 mm²)
 finely stranded without core end processing 	2x (0.25 2.5 mm²)
 for AWG cables for auxiliary contacts 	2x (24 14)
AWG number as coded connectable conductor cross section	
for auxiliary contacts	24 14
Safety related data	
product function	
mirror contact according to IEC 60947-4-1	Yes
 positively driven operation according to IEC 60947-5-1 	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920 with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	

Type A safety device type according to IEC 61508-2 **Electrical Safety** protection class IP on the front according to IEC 60529 IP00; IP20 with box terminal/cover touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front with box terminal/cover Approvals Certificates **General Product Approval EMV**



Confirmation







Functional Saftey

Test Certificates

Marine / Shipping

Type Examination Cer**tificate**

Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>







Marine / Shipping

other





Miscellaneous

Confirmation

Miscellaneous

Confirmation

Railway

Environment

Special Test Certific-<u>ate</u>







Environmental Confirmations

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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=3RT1075-2AS36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1075-2AS36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-2AS36

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

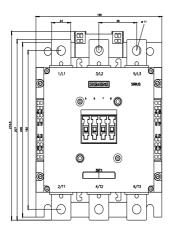
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1075-2AS36&lang=en

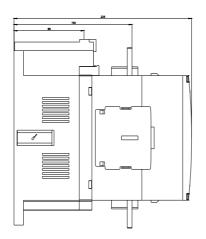
Characteristic: Tripping characteristics, I2t, Let-through current

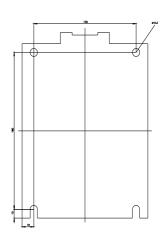
https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-2AS36/char

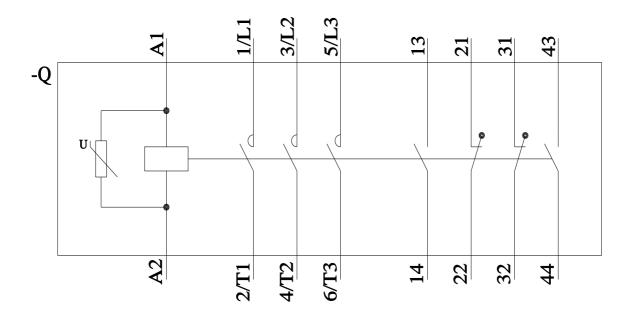
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-2AS36&objecttype=14&gridview=view1









last modified:

