SIEMENS

Data sheet 3RT1075-6AR36

SIRIUS





power contactor, AC-3e/AC-3 400 A, 200 kW / 400 V AC (50-60 Hz) / DC Uc: 440-480 V 3-pole, auxiliary contacts 2 NO + 2 NC drive: conventional main circuit: busbar control and auxiliary circuit: screw terminal



product brand name	SIRIUS
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)	05/01/2012
SVHC substance name	Lead - 7439-92-1
Weight	10.33 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 %
Environmental footprint	
global warming potential [CO2 eq] total	769 kg
global warming potential [CO2 eq] during manufacturing	55.8 kg
global warming potential [CO2 eq] during sales	2.54 kg
global warming potential [CO2 eq] during operation	718 kg
global warming potential [CO2 eq] after end of life	-7.03 kg
Siemens Eco Profile (SEP)	Siemens EcoTech
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 	430 A
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	430 A
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ 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 	200 A
• at AC-3	
— 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	005.4
— 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	2011
— 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	450 A
at 400 V rated value at 600 V rated value	150 A
at 690 V rated value	135 A

operational current	
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
— at 600 V rated value	0.6 A
with 2 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	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-	
• 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 value	310 000 VA
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
Iimited to 5 s switching at zero current maximum	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
limited to 30 s switching at zero current maximum	2 635 A; Use minimum cross-section acc. to AC-1 rated value
Iimited 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	2,000,4/b
• at AC	2 000 1/h
• at DC	2 000 1/h
operating frequency	700 4/1-
• 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-4 maximum Control circuit/ Control	130 1/h
Control circuit/ Control	40/00
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
at 50 Hz rated value	440 480 V
at 60 Hz rated value	440 480 V
control supply voltage at DC rated value	440 480 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 830 VA
at 60 Hz inductive power factor with closing power of the coil	
inductive power factor with closing power of the coil	830 VA
inductive power factor with closing power of the coil • at 50 Hz	830 VA 0.9
inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz	830 VA 0.9
inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power	0.9 0.9
inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power • at minimum rated control supply voltage at DC	830 VA 0.9 0.9 8.5 VA
inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC	830 VA 0.9 0.9 8.5 VA
inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC apparent holding power	830 VA 0.9 0.9 8.5 VA
inductive power factor with closing power of the coil • at 50 Hz • at 60 Hz apparent holding power • at minimum rated control supply voltage at DC • at maximum rated control supply voltage at DC apparent holding power • at minimum rated control supply voltage at AC	830 VA 0.9 0.9 8.5 VA 10 VA

ct 50 H-	0.2.1/4
— 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
holding power of magnet coil at DC	10 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 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 100 V rated value at 110 V rated value	3 A
at 110 V lated value 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	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	
• 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	
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
for short-circuit protection of the auxiliary switch required	kA) gG: 10 A (500 V, 1 kA)
- 10. Onote of our protocolors of the duvillary Switch required	30(000 1, 110.)

nstallation/ mounting/ dimensions	
mounting position	with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back
fastening method side-by-side mounting	Yes
fastening method	screw fixing
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
onnections/ 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	25 mm
thickness of connection bar	6 mm
diameter of holes	11 mm
number of holes	1
type of connectable conductor cross-sections	
for 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	
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)
for 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
afety 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 	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	
safety device type according to IEC 61508-2	Type A
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







Confirmation





EMV Functional Saftey Test Certificates Marine / Shipping



Type Examination Certificate Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping other







Miscellaneous

Confirmation

Miscellaneous

other Railway Environment

Confirmation

Special Test Certificate





Environmental Confirmations

Further information

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=3RT1075-6AR36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1075-6AR36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6AR36

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

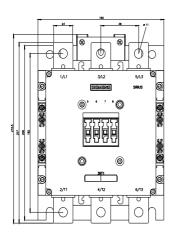
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1075-6AR36&lang=en

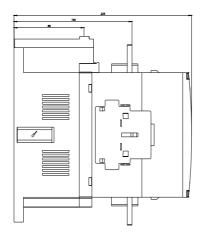
Characteristic: Tripping characteristics, I2t, Let-through current

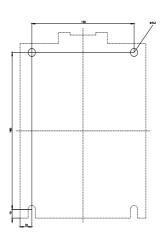
https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6AR36/char

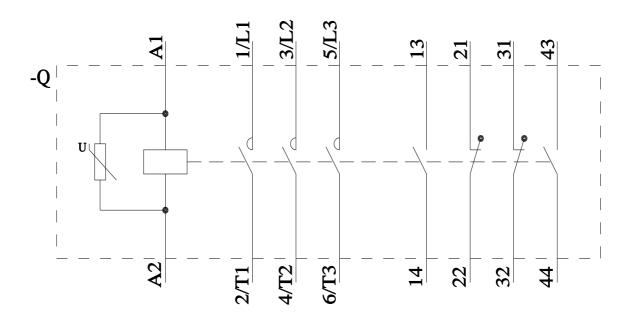
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-6AR36&objecttype=14&gridview=view1









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3RT10756AR: Page 9/9	36