## **SIEMENS**

Data sheet 3RT1075-6AP36

SIRIUS





power contactor, AC-3e/AC-3 400 A, 200 kW / 400 V AC (50-60 Hz) / DC Uc: 220-240 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	
<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
<ul> <li>without load current share typical</li> </ul>	10 W
type of calculation of power loss depending on pole	quadratic
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	
<ul> <li>of main circuit rated value</li> </ul>	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
<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 according to IEC 81346-2	Q
Substance Prohibitance (Date)	05/01/2012
SVHC substance name	Lead - 7439-92-1
Weight	10.23 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m

ambient temperature	05
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	
<ul> <li>at AC-3 rated value maximum</li> </ul>	1 000 V
at AC-3e rated value maximum	1 000 V
operational current	
<ul> <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 $^{\circ}\text{C}$ 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 $^{\circ}\text{C}$ 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	400 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-4 at 400 V rated value  at AC-52 up to 600 V rated value  at AC-52 up to 600 V rated value	350 A 378 A
at AC-5a up to 690 V rated value  at AC-5b up to 400 V rated value	3/8 A 332 A
<ul><li>at AC-5b up to 400 V rated value</li><li>at AC-6a</li></ul>	002 A
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 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 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	150 A
at 690 V rated value	135 A

operational current	
at 1 current path at DC-1  At 24 V rate deather.	400 A
— 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
<ul> <li>with 2 current paths in series at DC-1</li> <li>at 24 V rated value</li> </ul>	400 A
— at 60 V rated value	400 A 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	27
— 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
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— 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 kVA

• up to 400 V for current peak value n=20 rated value	270 kVA			
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	340 kVA			
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	470 kVA			
<ul> <li>up to 1000 V for current peak value n=20 rated value</li> </ul>	310 kVA			
operating apparent power at AC-6a				
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	100 kVA			
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	180 kVA			
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	220 kVA			
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	310 kVA			
<ul> <li>up to 1000 V for current peak value n=30 rated value</li> </ul>	310 kVA			
short-time withstand current in cold operating state up to				
40 °C	6 600 At Liga minimum group agation ago to AC 1 retad value			
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     limited to 10 a 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     limited to 20 a 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			
Ilimited to 60 s switching at zero current maximum  Polload switching frequency	2 088 A; Use minimum cross-section acc. to AC-1 rated value			
no-load switching frequency  • at AC	2 000 1/h			
at AC     at DC	2 000 1/h 2 000 1/h			
	2 000 1/11			
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-3e maximum	500 1/h			
at AC-3e maximum     at AC-4 maximum	130 1/h			
Control circuit/ Control	100 1/11			
type of voltage of the control supply voltage	AC/DC			
control supply voltage at AC	AOIDO			
at 50 Hz rated value	220 240 V			
at 60 Hz rated value	220 240 V			
control supply voltage at DC rated value	220 240 V			
operating range factor control supply voltage rated value of	220 240 V			
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				
<ul> <li>at minimum rated control supply voltage at AC</li> </ul>				
— 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	O E VA			
at minimum rated control supply voltage at DC     at maximum rated control supply voltage at DC	8.5 VA			
at maximum rated control supply voltage at DC	10 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  at maximum rated control supply voltage at AC	7.6 VA			
a as may imited southol attends to the act of 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		
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	2		
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	3 A 2 A		
at 220 V rated value     at 220 V rated value			
at 600 V rated value	1 A 0.15 A		
	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			
• 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 miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA		
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		
	(410 v, 00 kA)		
	· · · · · · · · · · · · · · · · · · ·		

for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)		
Installation/ mounting/ dimensions	30.1071(000 0, 110)		
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			
<ul> <li>with side-by-side mounting</li> </ul>			
— forwards	20 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
<ul> <li>for grounded parts</li> </ul>			
— 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			
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 mm <sup>2</sup>		
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	40 44		
for auxiliary contacts	18 14		
Safety related data			
product function	V		
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	40.07		
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %		

<ul> <li>with high demand rate according to SN 31920</li> </ul>	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** 















**Functional Saftey** 

**Test Certificates** 

Marine / Shipping

Type Examination Cer**tificate** 

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

Type Test Certificates/Test Report

**Miscellaneous** 





Marine / Shipping

other









**Miscellaneous** 

Confirmation

Confirmation

**Environment** other Railway

Miscellaneous

Special Test Certific-



Siemens **EcoTech** 



Environmental Con**firmations** 

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=3RT1075-6AP36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1075-6AP36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6AP36

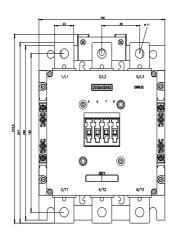
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

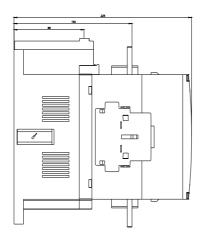
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT1075-6AP36&lang=en

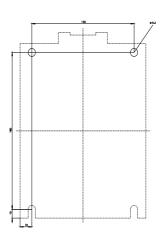
Characteristic: Tripping characteristics, I2t, Let-through current

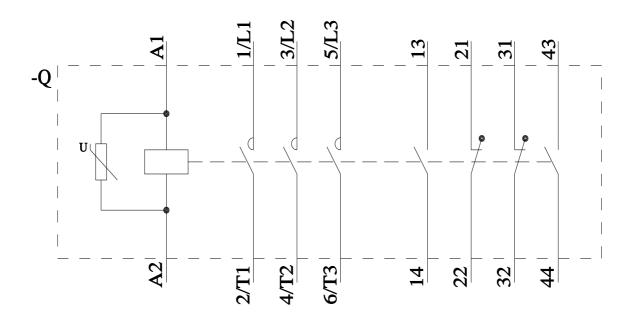
https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6AP

Further characteristics (e.g. electrical endurance, switching frequency)
<a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-6AP36&objecttype=14&gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-6AP36&objecttype=14&gridview=view1</a>









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