SIEMENS

Data sheet 3RT1055-7AB36

SIRIUS





power contactor, AC-3e/AC-3 150 A, 75 kW / 400 V AC (50-60 Hz) / DC Uc: 23-26 V 3-pole, auxiliary contacts 2 NO + 2 NC drive: conventional main circuit: box terminal control and auxiliary circuit: screw terminal box terminal up to 70 mm 2



product type designation General technical data size of contactor product extension	Power contactor 3RT1 S6 No
General technical data size of contactor product extension	S6
size of contactor product extension	
product extension	
·	No
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
without load current share typical	5.2 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	3.69 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	379 kg
global warming potential [CO2 eq] during manufacturing	17 kg
global warming potential [CO2 eq] during sales	0.901 kg
global warming potential [CO2 eq] during operation	363 kg
global warming potential [CO2 eq] after end of life	-2.28 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 	185 A
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	185 A
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	160 A
— up to 1000 V at ambient temperature 40 $^{\circ}\text{C}$ 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	132 A
• at AC-5a up to 690 V rated value	162 A
 at AC-5b up to 400 V rated value 	124 A
• at AC-6a	
— 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	150 A
— up to 690 V for current peak value n=20 rated value	150 A
 up to 1000 V for current peak value n=20 rated value 	65 A
• 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
maining and a second se	
minimum cross-section in main circuit at maximum AC-1 rated value	95 mm²
value operational current for approx. 200000 operating cycles at AC-4	
value operational current for approx. 200000 operating cycles at	95 mm ² 68 A 57 A

operational current	
• at 1 current path at DC-1	
— at 24 V rated value	160 A
— at 60 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 24 V rated value	160 A
— at 60 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	
— at 24 V rated value	160 A
— at 60 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 60 V rated value	7.5 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	
— at 24 V rated value	160 A
— at 60 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 60 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-2 at 400 V rated value 	75 kW
• 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-	
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 value	110 000 VA		
short-time with stand current in cold operating state up to 40 $^{\circ}\text{C}$			
 limited 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-4 maximum	130 1/h		
Control circuit/ Control			
type of voltage of the control supply voltage	AC/DC		
control supply voltage at AC			
• at 50 Hz rated value	23 26 V		
at 60 Hz rated value	23 26 V		
control supply voltage at DC rated value	23 26 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	250 VA		
— at 60 Hz	250 VA		
at maximum rated control supply voltage at AC			
— at 60 Hz	300 VA		
— at 50 Hz	300 VA		
apparent pick-up power of magnet coil at AC	200.1/4		
• at 50 Hz	300 VA		
• at 60 Hz	300 VA		
inductive power factor with closing power of the coil	0.0		
• at 50 Hz	0.9		
• at 60 Hz	0.9		
apparent holding power	4.2.1/A		
at minimum rated control supply voltage at DC	4.3 VA		
at maximum rated control supply voltage at DC	5.2 VA		
apparent holding power			
at minimum rated control supply voltage at AC	40.74		
— at 50 Hz	4.8 VA		
— at 60 Hz	4.8 VA		

at maximum rated control supply voltage at AC		
— at 50 Hz	5.8 VA	
— at 60 Hz	5.8 VA	
inductive power factor with the holding power of the coil		
• at 50 Hz	0.8	
• at 60 Hz	0.8	
closing power of magnet coil at DC	360 W	
holding power of magnet coil at DC	5.2 W	
closing delay	0.2 **	
• at AC	20 95 ms	
• at DC	20 95 ms	
opening delay	20 00 1110	
• at AC	40 60 ms	
• at DC	40 60 ms	
arcing time	10 15 ms	
control version of the switch operating mechanism	Standard A1 - A2	
Auxiliary circuit	Standard A1 - A2	
	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		
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		
with type of coordination 1 required	gG: 355 A (690 V, 100 kA)	
**		

— with type of assignment 2 required	gG: 315 A (690 V, 100 kA), aM: 200 A (690 V, 50 kA), BS88: 315 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° 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	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	00	
— forwards	20 mm	
— upwards	10 mm	
— at the side	10 mm	
— downwards	10 mm	
• for live parts	22	
— forwards	20 mm	
— upwards	10 mm	
— downwards	10 mm	
— at the side	10 mm	
Connections/ Terminals		
type of electrical connection		
for main current circuit	box terminal	
for auxiliary and control circuit	screw-type terminals	
at contactor for auxiliary contacts	Screw-type terminals	
• of magnet coil	Screw-type terminals	
type of connectable conductor cross-sections		
• for main contacts	4 FO 4 70	
— stranded	max. 1x 50, 1x 70 mm ²	
— solid or stranded	max. 1x 50, 1x 70 mm²	
— finely stranded with core end processing	max. 1x 50, 1x 70 mm ²	
— finely stranded without core end processing	max. 1x 50, 1x 70 mm ²	
• for AWG cables for main contacts	2x 1/0	
connectable conductor cross-section for main contacts	16 70 mm²	
stranded finally stranded with core and presenting	16 70 mm²	
finely stranded with core end processing finely stranded without core and processing	16 70 mm²	
finely stranded without core end processing	16 70 mm²	
connectable conductor cross-section for auxiliary contacts	0.5 4 mm²	
solid or stranded finely stranded with core and processing.	0.5 4 mm ²	
finely stranded with core end processing type of connectable conductor cross sections	0.5 2.5 mm ²	
type of connectable conductor cross-sections		
for auxiliary contacts solid	2v (0.5 1.5 mm²) 2v (0.75 2.5 mm²) may 2v (0.75 4 mm²)	
— 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 AWG number as coded connectable conductor cross	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	Yes	
 positively driven operation according to IEC 60947-5-1 	No	
suitable for safety function	Yes	
- dutable for dutety fulletion		

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	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Approvals Certificates	

General Product Approval







Confirmation



<u>KC</u>

General Product Approval

EMV

Functional Saftey

Test Certificates

Marine / Shipping





Type Examination Certificate

Type Test Certificates/Test Report

Special Test Certific-



Marine / Shipping









Miscellaneous

other

Confirmation

other Railway Environment

Miscellaneous

Confirmation

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



Siemens **EcoTech**



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=3RT1055-7AB36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1055-7AB36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-7AB36

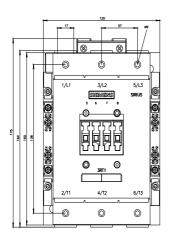
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

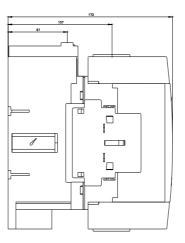
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1055-7AB36&lang=en

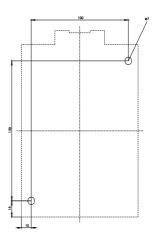
Characteristic: Tripping characteristics, I2t, Let-through current

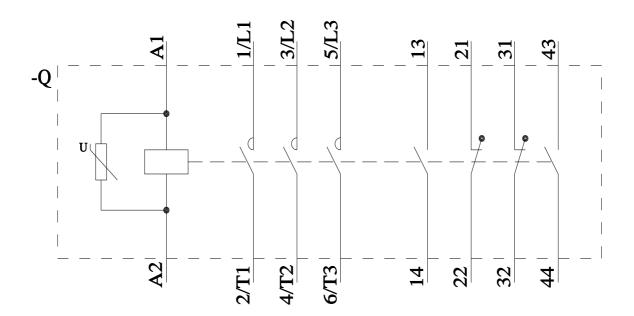
https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-7AB36/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1055-7AB36&objecttype=14&gridview=view1









last modified:

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