SIEMENS

Data sheet

Product brand name

3RT1055-6NB36



Power contactor, AC-3 150 A, 75 kW / 400 V AC (50-60 Hz) / DC operation 21-27 UC, 3 V Auxiliary contacts 2 NO + 2 NC 3-pole, Size S6 Busbar connections Drive: electronic with PLC interface 24 V DC screw terminal

Product designation	Power contactor
Product type designation	3RT1
General technical data	
Size of contactor	S6
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 	27 W
 at AC in hot operating state per pole 	9 W
Power loss [W] for rated value of the current without load current share typical	2.8 W
Surge voltage resistance	
 of main circuit rated value 	8 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for safe isolation	
 between coil and main contacts acc. to EN 60947-1 	690 V

SIRIUS

 on the front P00: IP20 on the front with cover / box terminal P00 P00<th>Protection class IP</th><th></th>	Protection class IP	
• of the terminalIP00Shock resistance at rectangular impulse		IP00: IP20 on the front with cover / box terminal
Shock resistance at rectangular impulse AC • 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 13,4g / 5 ms, 6,5g / 10 ms • at DC 13,4g / 5 ms, 6,5g / 10 ms • at DC 13,4g / 5 ms, 6,5g / 10 ms Mechanical service life (witching cycles) 0 000 000 • of contactor with added alcetronics- 5000 000 • of the contactor with added auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical 10 000 000 • of the contactor with addeed auxiliary switch block typical 0 000 m Ambient conditions 2000 m Installation attitude at theight above sea level -25 +60 °C • during operation -25 +60 °C • during storage 3 • at AC-3 rated value maximum 1000 V • operating outrage 1000 V • at AC-1 at 400 V 185 A • at AC-1 190 A • at AC-3 180 A • at AC-3		
• at AC8,5g / 5 ms, 4,2g / 10 ms• at DC8,5g / 5 ms, 4,2g / 10 msShock resistance with sine pulse13,4g / 5 ms, 6,5g / 10 ms• at AC13,4g / 5 ms, 6,5g / 10 ms• at AC13,4g / 5 ms, 6,5g / 10 ms• at AC10,000,000• of contactor typical10,000,000• of the contactor with adde electronics- compatible auxiliary switch block typical10,000,000• of the contactor with adde electronics- compatible auxiliary switch block typical0• of the contactor with added auxiliary switch block typical10,000,000• of the contactor with added auxiliary switch block typical0• at MC2000 mAmbient conditions2,000 mInstallation attifue at height above sea level • maximum2,000 m• during operation • during storage2,5 +60 °C• during storage3• at AC-3 rate value maximum3• at AC-3 rate value maximum10,000 V• operating uotage10,000 V• at AC-1 • at ambient temperature 40 °C rated value185 A• at AC-1 • at uo 1000 V at ambient temperature 40 °C rated value185 A• at AC-2 rated value100 A• at AC-2 at 400 V at ambient temperature 60 °C rated value185 A• at AC-2 at 400 V at ambient temperature 60 °C rated value90 A• at AC-2 at 400 V at ambient temperature 60 °C rated value90 A• at AC-2 at 400 V at ambient temperature 60 °C rated value90 A• at AC-2 at 400 V at ambient temperature 60 °C rated value		
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• at DC13,4 / 5 ms, 6,5 / 10 msMechanical service life (switching cycles) • of contactor typical10 000 000• of contactor with added electronics- compatible auxiliary switch block typical • of the contactor with added auxiliary switch block typical10 000 000Reference code acc. to DIN EN 81346-2QReference code acc. to DIN EN 81346-2QAmbient conditions2 000 mAmbient condition altitude at height above sea level • maximum2 000 mAmbient temperature • during operation • during storage2 000 mMumber of poles for main current circuit • during storage3Number of NO contacts for main contacts • Operating current • at AC-3 rated value maximum1000 VOperating current • at AC-1 • up to 690 V at ambient temperature 40 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • up to 1000 V at ambient temperature 60 °C rated value • at AC-3 at 400 V rated value90 A• at AC-2 at 400 V rated value • at AC-390 A	•	134a/5ms 65a/10ms
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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 Main circuit 3 Number of poles for main current circuit 3 Number of NO contacts for main contracts 3 Operating voltage - • at AC-3 rated value maximum 1 000 V Operating 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 60 °C rated value 160 A - up to 1000 V at ambient temperature 40 °C rated value - - up to 1000 V at ambient temperature 60 °C rated value 90 A - up to 1000 V at ambient temperature 60 °C rated value 90 A - up to 1000 V at ambient temperature 60 °C rated value 90 A - up to 1000 V at ambient temperature 60 °C rated value 150 A - at AC-3 - -	•••	
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Operating current 185 A • at AC-1 at 400 V 185 A - at ambient temperature 40 °C rated value 185 A • at AC-1 185 A - up to 690 V at ambient temperature 40 °C 185 A - up to 690 V at ambient temperature 60 °C 160 A rated value 90 A - up to 1000 V at ambient temperature 60 °C 90 A rated value 90 A - up to 1000 V at ambient temperature 60 °C 90 A rated value 150 A • at AC-3 150 A	Operating voltage	
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 up to 1000 V at ambient temperature 40 °C rated value up to 1000 V at ambient temperature 60 °C 90 A 90 A 90 A 90 A 150 A 150 A 	— up to 690 V at ambient temperature 60 °C	160 A
 up to 1000 V at ambient temperature 60 °C rated value at AC-2 at 400 V rated value at AC-3 	— up to 1000 V at ambient temperature 40 °C	90 A
 at AC-2 at 400 V rated value at AC-3 	— up to 1000 V at ambient temperature 60 $^\circ ext{C}$	90 A
• at AC-3		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
Minimum cross-section in main circuit	
 at maximum AC-1 rated value 	95 mm ²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	68 A
• at 690 V rated value	57 A
Operating current	
 at 1 current path at DC-1 	
— at 24 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 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 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
Operating current	
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	160 A
— at 110 V rated value	2.5 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 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 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
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	38 kW
• at 690 V rated value	55 kW

Operating apparent output at AC-6a	
• up to 230 V for current peak value n=20 rated	60 000 kV·A
value	
 up to 400 V for current peak value n=20 rated value 	100 000 V·A
 up to 500 V for current peak value n=20 rated value 	130 000 V·A
 up to 690 V for current peak value n=20 rated value 	170 000 V·A
 up to 1000 V for current peak value n=20 rated value 	110 000 V·A
Operating apparent output at AC-6a	
 up to 230 V for current peak value n=30 rated value 	40 000 V·A
 up to 400 V for current peak value n=30 rated value 	70 000 V·A
 up to 500 V for current peak value n=30 rated value 	90 000 V·A
 up to 690 V for current peak value n=30 rated value 	120 000 V·A
 up to 1000 V for current peak value n=30 rated value 	110 000 V·A
Short-time withstand current in cold operating state up to 40 °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	1 000 1/h
• at DC	1 000 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-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	21 27.3 V
• at 60 Hz rated value	21 27.3 V
Control supply voltage at DC	
● rated value	21 27.3 V
Type of PLC-control input acc. to IEC 60947-1	Туре 2
Consumed current at PLC-control input acc. to IEC 60947-1 maximum	20 mA
Voltage at PLC-control input rated value	24 V
Operating range factor of the voltage at PLC-control input	0.8 1.1
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 of magnet coil at AC	
● at 50 Hz	280 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.8
Apparent holding power of magnet coil at AC	
• at 50 Hz	4.4 V·A
Inductive power factor with the holding power of the	
coil	
• at 50 Hz	0.5
Closing power of magnet coil at DC	320 W
Holding power of magnet coil at DC	2.8 W
Closing delay	
• at AC	35 75 ms
• at DC	35 75 ms
Opening delay	
• at AC	80 90 ms
• at DC	80 90 ms
Arcing time	10 15 ms
Control version of the switch operating mechanism	PLC-IN or Standard A1 - A2 (adjustable)
Auxiliary circuit	
Number of NC contacts for auxiliary contacts	
 instantaneous contact 	2
Number of NO contacts for auxiliary contacts	
-	

 instantaneous contact 	2
Operating current at AC-12 maximum	10 A
Operating 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
Operating 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
Operating 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)

OL/OSA rallings	
Full-load current (FLA) for three-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 three-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

• for short-circuit protection of the auxiliary switch required

gG: 315 A (690 V, 100 kA), aM: 200 A (690 V, 50 kA), BS88: 315 A (415 V, 50 kA) gG: 10 A (500 V, 1 kA)

Mounting position	with vertical mounting surface +/-90° rotatable, with vertical
	mounting surface +/- 22.5° tiltable to the front and back
Mounting type	screw fixing
 Side-by-side mounting 	Yes
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 	
— 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	
Width of connection bar	17 mm
Thickness of connection bar	3 mm
Diameter of holes	9 mm
Number of holes	1
Type of electrical connection	
 for main current circuit 	Connection bar
 for auxiliary and control current circuit 	screw-type terminals
 at contactor for auxiliary contacts 	Screw-type terminals
• of magnet coil	Screw-type terminals
Type of connectable conductor cross-sections	
 at AWG conductors for main contacts 	4 250 kcmil
Connectable conductor cross-section for main	
contacts	

• stranded	25 120 mm²
Connectable conductor cross-section for auxiliary contacts	
 single or multi-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)
— single or multi-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)
 at AWG conductors 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	
B10 value	
 with high demand rate acc. to SN 31920 	1 000 000
Product function	
 Mirror contact acc. to IEC 60947-4-1 	Yes
 positively driven operation acc. to IEC 60947-5- 1 	No
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
Suitability for use safety-related switching OFF	Yes
Certificates/ approvals	

General Produ	ict Approval	EMC	Functional Safety/Safety of Machinery		
	CSA		EAC	RCM	Type Examination Certificate

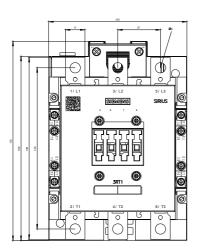
Declaration of Conformity		Test Certificates		Marine / Shipping	
EG-Konf.	<u>Miscellaneous</u>	Special Test Certi- ficate	Type Test Certific- ates/Test Report	ABS	RMRS

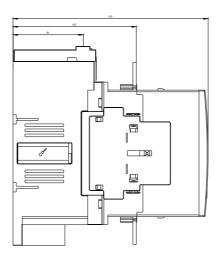
Marine / Ship- ping	other		Railway	
DNV-GL DNVGLCOM/AF	Miscellaneous	Confirmation	Special Test Certi- ficate	

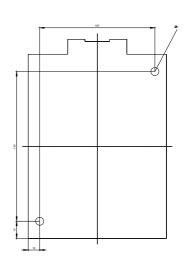
Further information Information- and Downloadcenter (Catalogs, Brochures,...) https://www.siemens.com/ic10 Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1055-6NB36 Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1055-6NB36 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6NB36 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1055-6NB36&lang=en

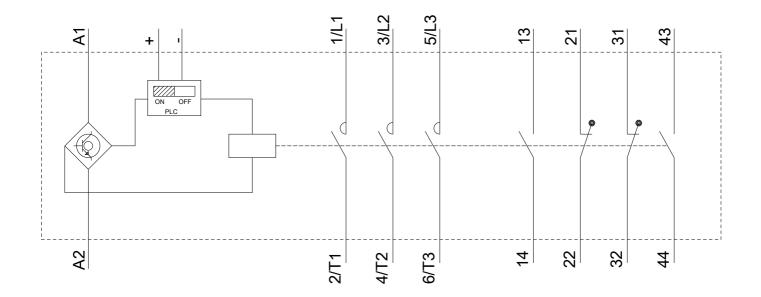
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6NB36/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1055-6NB36&objecttype=14&gridview=view1









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06/10/2020