SIEMENS

Data sheet 3RT1055-6AF36



power contactor, AC-3 150 A, 75 kW / 400 V AC (50-60 Hz) / DC operation 110-127 V AC/DC auxiliary contacts 2 NO + 2 NC 3-pole, frame size S6 busbar connections drive: conventional screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT1
Seneral 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
 without load current share typical 	5.2 W
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 safe isolation 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 (switching 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
mbient 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 %
lain circuit	
	3
number of poles for main current circuit number of NO contacts for main contacts	3
operating voltage	3
	4.000 \/
at AC-3 rated value maximum at AC-3 rated value maximum	1 000 V
at AC-3e rated value maximum	1 000 V
operational current	40F A
 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 °C	185 A
rated value	100 A
— up to 690 V at ambient temperature 60 °C	160 A
rated value	
up to 1000 V at ambient temperature 40 °C	90 A
rated value	
— up to 1000 V at ambient temperature 60 °C	90 A
rated value	
• at AC-3	4F0 A
— 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 	150 A
value	
 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	150 A
value	150 A
— up to 690 V for current peak value n=20 rated	150 A
value	
— up to 1000 V for current peak value n=20 rated	65 A
value	
• at AC-6a	
— up to 230 V for current peak value n=30 rated	105 A
value	405.4
 up to 400 V for current peak value n=30 rated value 	105 A
	105 A
 up to 500 V for current peak value n=30 rated value 	100 A
— up to 690 V for current peak value n=30 rated	105 A
value	
— up to 1000 V for current peak value n=30 rated	65 A
value	
minimum cross-section in main circuit at maximum AC-1	95 mm ²
rated value	
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	68 A
at 400 V rated value at 690 V rated value	57 A
operational current	
ODOLGEOUGH CHILDIN	

— 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
at 1 current path at DC-3 at DC-5	400.4
— at 24 V rated value	160 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	400.4
— 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 roted value.	160 A
— at 24 V rated value	
— at 110 V rated value	160 A
— at 220 V rated value	160 A 1.4 A
— at 440 V rated value — at 600 V rated value	0.75 A
operating power	0.75 A
• 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-4	
• 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
The state of the s	

 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 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	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	110 127 V
• at 60 Hz rated value	110 127 V
control supply voltage at DC	
rated value	110 127 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 of magnet coil at AC	
● at 50 Hz	300 VA
● at 60 Hz	300 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.9
● at 60 Hz	0.9
apparent holding power of magnet coil 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	
• at AC	20 95 ms
• at DC	20 95 ms
opening delay	
• 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	
number of NC contacts for auxiliary contacts	2

instantaneous contact			
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	07.		
at 230 V rated value	6 A		
at 400 V rated value	3 A		
at 500 V rated value at 500 V rated value			
	2 A		
at 690 V rated value	1 A		
operational current at DC-12	40.4		
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	A0007 Q000		
design of the fuse link			
•			
for short-circuit protection of the main circuit with type of coordination 1 required.	CC: 255 A (COO)/ 400 kA)		
— 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	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		
	10 mm		
— Unwards			
— upwards — downwards			
— upwards— at the side	10 mm 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 	screw-type terminals
 at contactor for auxiliary contacts 	Screw-type terminals
 of magnet coil 	Screw-type terminals
width of connection bar	17 mm
thickness of connection bar	3 mm
diameter of holes	9 mm
number of holes	1
type of connectable conductor cross-sections	
at AWG cables for main contacts	4 250 kcmil
connectable conductor cross-section for main contacts	
stranded	25 120 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)
at 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
Safety related data	
product function	
 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947- 5-1 	No
B10 value with high demand rate according to SN 31920	1 000 000
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
suitability for use	
 safety-related switching OFF 	Yes
Certificates/ approvals	
General Product Approval	



Confirmation





<u>KC</u>



Functional EMC Safety/Safety of Declaration of Conformity Machinery	Test Certificates
---	-------------------



Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

Test Certificates

Marine / Shipping

Miscellaneous











other				Railway	
Confirmation	<u>Miscellaneous</u>	Confirmation	<u>Miscellaneous</u>	Special Test Certificate	Vibration and Shock

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=3RT1055-6AF36

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1055-6AF36

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6AF36

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

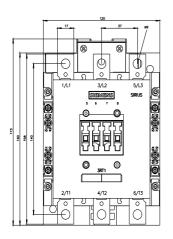
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1055-6AF36&lang=en

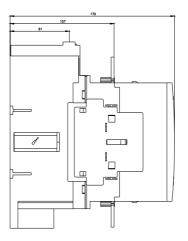
Characteristic: Tripping characteristics, I2t, Let-through current

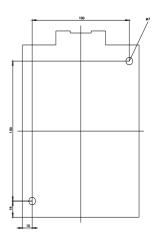
https://support.industry.siemens.com/cs/ww/en/ps/3RT1055-6AF36/char

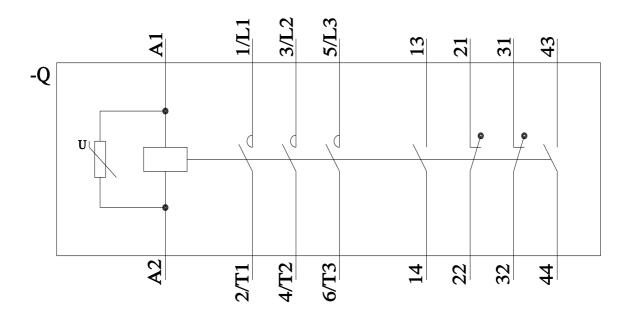
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1055-6AF36&objecttype=14&gridview=view1









last modified: 3/24/2022 🖸