SIEMENS

Data sheet 3RT1054-2AM36

Power contactor, AC-3 115 A, 55 kW / 400 V AC (50-60 Hz) / DC operation 200-220 V UC Auxiliary contacts 2 NO + 2 NC 3-pole, Size S6 Busbar connections Drive: conventional Spring-type terminal



Figure similar

Product brand name	SIRIUS
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
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 	690 V
60947-1	
Protection class IP	
• on the front	IP00; IP20 on the front with cover / box terminal
• of the terminal	IP00

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 electronics- 	5 000 000
compatible auxiliary switch block typical	
 of the contactor with added auxiliary switch block typical 	10 000 000
Reference code acc. to DIN 40719 extended	К
according to IEC 204-2 acc. to IEC 750	
Reference code acc. to DIN EN 81346-2	Q
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	
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
Operating current	
• at AC-1 at 400 V	
— at ambient temperature 40 °C rated value	160 A
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	160 A
 up to 690 V at ambient temperature 60 °C rated value 	140 A
— up to 1000 V at ambient temperature 40 °C rated value	80 A
— up to 1000 V at ambient temperature 60 °C rated value	80 A
• at AC-2 at 400 V rated value	115 A
• at AC-3	
at AC-3 — at 400 V rated value	115 A
	115 A 115 A

— at 690 V rated value	115 A
— at 1000 V rated value	53 A
• at AC-4 at 400 V rated value	97 A
Connectable conductor cross-section in main circuit	
at AC-1	
 at 60 °C minimum permissible 	50 mm ²
at 40 °C minimum permissible	70 mm²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	54 A
• at 690 V rated value	48 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	A 8.0
— 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-1	
— at 230 V at 60 °C rated value	53 kW
— at 400 V rated value	92 kW
— at 400 V at 60 °C rated value	92 kW
— at 690 V rated value	159 kW
— at 690 V at 60 °C rated value	159 kW
— at 1000 V at 60 °C rated value	131 kW
• at AC-2 at 400 V rated value	55 kW
• at AC-3	
— at 230 V rated value	37 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	110 kW
— at 1000 V rated value	75 kW
Operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	29 kW
• at 690 V rated value	48 kW
Thermal short-time current limited to 10 s	1 100 A
Power loss [W] at AC-3 at 400 V for rated value of	7 W
the operating current per conductor	
No-load switching frequency • at AC	2 000 1/h
	2 000 1/h
• at DC Operating frequency	2 000 1/11
at AC-1 maximum	800 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	1 000 1/h
• at AC-4 maximum	130 1/h
	100 1111
Control circuit/ Control	
Type of voltage of the control supply voltage	AC/DC
Control supply voltage at AC	200 200 V
at 50 Hz rated value	200 220 V

• at 60 Hz rated value	200 220 V
Control supply voltage at DC	
• rated value	200 220 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 V·A
Inductive power factor with closing power of the coil	
● at 50 Hz	0.9
Apparent holding power of magnet coil at AC	
● at 50 Hz	5.8 V·A
Inductive power factor with the holding power of the coil	
● at 50 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	
• 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

Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
• at 600 V rated value	0.1 A
• at 220 V rated value	0.3 A
• at 125 V rated value	0.9 A
• at 110 V rated value	1 A
• at 60 V rated value	2 A
• at 48 V rated value	2 A
• at 24 V rated value	10 A
Operating current at DC-13	
• at 600 V rated value	0.15 A
• at 220 V rated value	1 A
• at 125 V rated value	2 A
• at 110 V rated value	3 A
• at 60 V rated value	6 A
• at 48 V rated value	6 A
• at 24 V rated value	10 A
Operating current at DC-12	

UL/CSA ratings	
Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	124 A
• at 600 V rated value	125 A
Yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 230 V rated value	25 hp
 for three-phase AC motor 	
— at 200/208 V rated value	40 hp
— at 220/230 V rated value	50 hp
— at 460/480 V rated value	100 hp
— at 575/600 V rated value	125 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

- with type of assignment 2 required

gG: 355 A (690 V, 100 kA)

gG: 315 A (690 V, 100 kA), aM: 200 A (690 V, 50 kA), BS88: 250

A (415 V, 50 kA)

• for short-circuit protection of the auxiliary switch required

fuse gG: 10 A

Installation/ mounting/ dimensions

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	
Type of electrical connection	
• for main current circuit	Connection bar
 for auxiliary and control current circuit 	spring-loaded 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	0.25 2.5 mm ²
 finely stranded with core end processing 	0.25 1.5 mm ²
• finally atmosphal without ages and propagation	0.25 2.5 mm ²
finely stranded without core end processing	
Type of connectable conductor cross-sections	
Type of connectable conductor cross-sections	2x (0.25 2.5 mm²) 2x (0,25 2,5 mm²)

processing

— finely stranded with core end processing

— finely stranded without core end

2x (0.25 ... 1.5 mm²)

2x (0.25 ... 2.5 mm²)

• at AWG conductors for auxiliary contacts 2x (24 ... 14)

AWG number as coded connectable conductor cross section

for auxiliary contacts

24 ... 14

No

Safety related data

Product function

• Mirror contact acc. to IEC 60947-4-1 Yes

• positively driven operation acc. to IEC 60947-5-

Protection against electrical shock

finger-safe when touched vertically from front acc. to IEC 60529

Certificates/approvals

General Product Approval Functional Safety/Safety of Machinery Declaration of Conformity









Type Examination
Certificate



Test Certificates

Marine / Shipping

other

Special Test Certificate

Type Test Certificates/Test Report







Confirmation

other

Miscellaneous

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1054-2AM36

Cax online generator

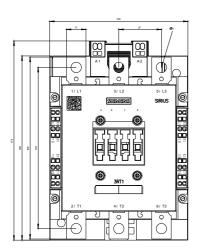
 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT1054-2AM36}$

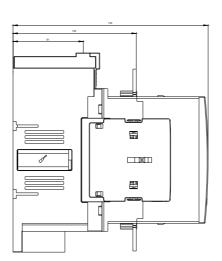
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

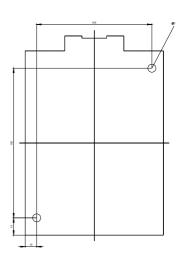
https://support.industry.siemens.com/cs/ww/en/ps/3RT1054-2AM36

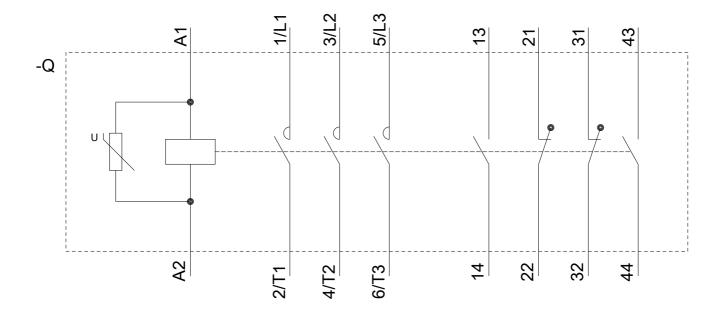
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1054-2AM36&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT1054-2AM36/char









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