SIEMENS

Data sheet 3RT2037-1AD00



Power contactor, AC-3 65 A, 30 kW / 400 V 1 NO + 1 NC, 42 V AC, 50 Hz 3-pole, size S2 screw terminals

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S2
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	11.4 W
• per pole	3.8 W
power loss [W] for rated value of the current without load current share typical	16 W
surge voltage resistance	
 of main circuit rated value 	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	11.8g / 5 ms, 7.4g / 10 ms
shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2014 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature during operation	-25 +60 °C
ambient temperature 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	690 V

operational current	
 at AC-1 at 400 V at ambient temperature 40 °C 	80 A
rated value	
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	80 A
— up to 690 V at ambient temperature 60 °C	70 A
rated value	
• at AC-3	
— at 400 V rated value	65 A
— at 500 V rated value	65 A
— at 690 V rated value	47 A
• at AC-4 at 400 V rated value	55 A
 at AC-5a up to 690 V rated value 	70.4 A
 at AC-5b up to 400 V rated value 	53.9 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	56.9 A
 up to 400 V for current peak value n=20 rated value 	56.9 A
— up to 500 V for current peak value n=20 rated value	56.9 A
— up to 690 V for current peak value n=20 rated value	47 A
• at AC-6a	20 A
— up to 230 V for current peak value n=30 rated value	38 A
— up to 400 V for current peak value n=30 rated value	38 A
— up to 500 V for current peak value n=30 rated value	38 A
— up to 690 V for current peak value n=30 rated value	38 A
minimum cross-section in main circuit at maximum AC-1 rated value	25 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	28 A
at 690 V rated value	22 A
operational current	
 at 1 current path at DC-1 	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
with 2 current paths in series at DC-1 at 24 V reted value.	EE A
— at 24 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
 with 3 current paths in series at DC-1 — at 24 V rated value 	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
operational current	
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	35 A
at E i v iatoa valao	

— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.1 A
— at 600 V rated value	0.06 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	55 A
— at 110 V rated value	25 A
— at 220 V rated value	5 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.35 A
operating power	
• at AC-2 at 400 V rated value	30 kW
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	37 kW
operating power for approx. 200000 operating cycles	
at AC-4 • at 400 V rated value	14.7 kW
at 400 V rated value at 690 V rated value	20 kW
operating apparent power at AC-6a	ZORVV
• up to 230 V for current peak value n=20 rated value	22.6 kV·A
 up to 400 V for current peak value n=20 rated value 	39.4 kV·A
up to 500 V for current peak value n=20 rated value	49.2 kV·A
• up to 690 V for current peak value n=20 rated value	56.1 kV·A
operating apparent power at AC-6a	00.1 KV //
• up to 230 V for current peak value n=30 rated value	15.1 kV·A
• up to 400 V for current peak value n=30 rated value	26.2 kV·A
• up to 500 V for current peak value n=30 rated value	32.8 kV·A
• up to 690 V for current peak value n=30 rated value	45.3 kV·A
short-time withstand current in cold operating state	
up to 40 °C	
 limited to 1 s switching at zero current maximum 	1 055 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	730 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	520 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	336 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	272 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
• at AC-1 maximum	800 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	700 1/h
• at AC-4 maximum	200 1/h
Control circuit/ Control	40
type of voltage of the control supply voltage	AC
control supply voltage at AC	42.1/
at 50 Hz rated value	42 V
operating range factor control supply voltage rated value of magnet coil at AC	0.0 4.4
• at 50 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	

● at 50 Hz	190 V·A
inductive power factor with closing power of the coil	100 V /\
at 50 Hz	0.72
apparent holding power of magnet coil at AC	0.72
• at 50 Hz	16 V·A
inductive power factor with the holding power of the	10 VA
coil	
● at 50 Hz	0.37
closing delay	
• at AC	10 80 ms
opening delay	
• at AC	10 18 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
 at 230 V rated value 	10 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	65 A
at 600 V rated value	52 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
• for 3-phase AC motor	00 ha
— at 200/208 V rated value	20 hp
— at 220/230 V rated value	20 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	50 hp
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the fuse link	
 for short-circuit protection of the main circuit 	

— with type of coordination 1 required	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
— with type of assignment 2 required	gG: 125A (690V,100kA), aM: 63A (690V,100kA), BS88: 100A (415V,80kA)
• for short-circuit protection of the auxiliary switch	gG: 10 A (500 V, 1 kA)
required	
Installation/ mounting/ dimensions	±/ 180° rotation possible on vertical mounting surface; can be tilted
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
side-by-side mounting	Yes
height	114 mm
width	55 mm
depth	130 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
 for live parts 	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
 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 	
— solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)
 finely stranded with core end processing 	2x (1 25 mm²), 1x (1 35 mm²)
at AWG cables for main contacts	2x (18 2), 1x (18 1)
connectable conductor cross-section for main contacts	
finely stranded with core end processing	1 35 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 2.5 mm ²
finely stranded with core end processing	0.5 2.5 mm ²
type of connectable conductor cross-sections	
for auxiliary contacts	
 — solid or stranded 	
	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) 18 1
— finely stranded with core end processing • at AWG cables for auxiliary contacts • AWG number as coded connectable conductor	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)
— finely stranded with core end processing • at AWG cables for auxiliary contacts • AWG number as coded connectable conductor cross section for main contacts • AWG number as coded connectable conductor	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) 18 1

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proportion of dangerous failures	
 with low demand rate acc. to SN 31920 	40 %
 with high demand rate acc. to SN 31920 	73 %
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT
product function	
 mirror contact acc. to IEC 60947-4-1 	Yes
 positively driven operation acc. to IEC 60947-5-1 	No
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
suitability for use safety-related switching OFF	Yes

Certificates/ approvals

General Product Approval















Declaration of Conformity

Test Certificates

Marine / Shipping



Miscellaneous

Type Test Certificates/Test Report Special Test Certificate





Marine / Shipping













Confirmation

other

Confirmation

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=3RT2037-1AD00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2037-1AD00

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AD00

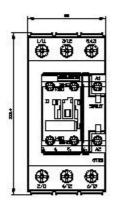
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax de.aspx?mlfb=3RT2037-1AD00&lang=en

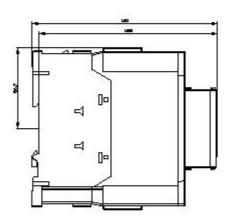
Characteristic: Tripping characteristics, I2t, Let-through current

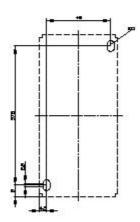
https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AD00/char

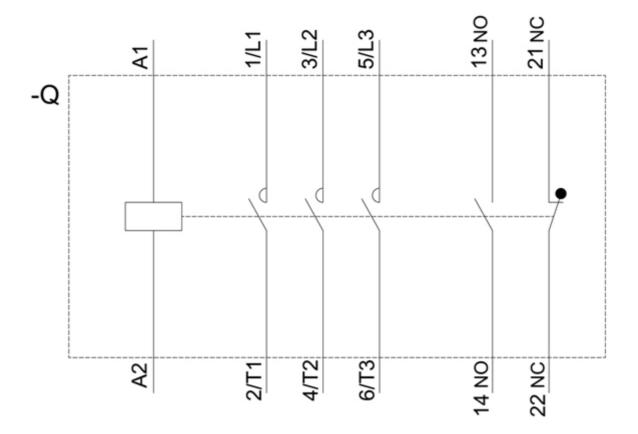
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2037-1AD00&objecttype=14&gridview=view1









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