SIEMENS

Data sheet 3RT2037-1AF04



power contactor, AC-3e/AC-3, 65 A, 30 kW / 400 V, 3-pole, 110 V AC, 50 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S2, removable auxiliary switch

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	No
power loss [W] for rated value of the current	
at AC in hot operating state	11.4 W
 at AC in hot operating state per pole 	3.8 W
 without load current share typical 	16 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
• of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
of main circuit rated value	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	9.8g / 5 ms, 6.5g / 10 ms
shock resistance with sine pulse	
• at AC	15.3g / 5 ms, 10.1g / 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)	10/01/2014
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 %
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
at AC-3e rated value maximum	690 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C rated value	80 A
value	
• at AC-1	00.4
 up to 690 V at ambient temperature 40 °C rated value 	80 A
— up to 690 V at ambient temperature 60 °C rated	70 A
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-3e	
— 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	
— 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	25 mm²
value	
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 60 V rated value	23 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 rated value	55 A
— at 60 V rated value	45 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 60 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

	— at 24 V rated value	35 A
	— at 60 V rated value	6 A
	— at 220 V rated value	1 A
- with 2 current paths in series at DC-3 at DC-5 - at 24 V raied value - at 200 V raied va	— 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
al 220 V risted value at 600 V risted value 55 A at 24 V risted value 55 A at 27 V risted value 25 A at 600 V risted value 25 A -	— at 60 V rated value	45 A
	— at 110 V rated value	25 A
■ 1800 V rited value 0.16 A	— at 220 V rated value	5 A
* with 3 current paths in series at DC-3 at DC-5	— 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 110 V rated value at 220 V rated value at 800 V rated value 20 rated value	— at 24 V rated value	55 A
	— at 60 V rated value	55 A
	— at 110 V rated value	55 A
operating power • at AC-2 at 40 OV rated value • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 600 V rated value — at 500 V rated value — at 600	— at 220 V rated value	25 A
operating power • at AC-2 at 40 OV rated value • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 600 V rated value — at 500 V rated value — at 600	— at 440 V rated value	0.6 A
at AC-2 at 400 V rated value		
• at AC-2 at 400 V rated value • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 400 V rated value — at 600 V rated value operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 600 V rated value operating apparent power at AC-6a • up to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up t		
- at 230 V rated value		30 kW
at 400 V rated value at 690 V rated value at 690 V rated value at 690 V rated value at 230 V rated value at 230 V rated value at 400 V rated value at 690 V for current peak value n=20 rated value at 690 V for current peak value n=20 rated value at 690 V for current peak value n=20 rated value at 690 V for current peak value n=30 rated value at 690 V for current peak value n=60 rated value at		18.5 kW
- at 500 V rated value - at 690 V rated value - 37 kW * at AC-3e - at 230 V rated value		
at AC-3e — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 500 V rated value — at 690 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • pu to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 500 V for current		
• at AC-3e — at 230 V rated value — at 690 V rated value — at 60-3 maximum — at 60-3 maximum — at 60-3 maximum — at 60-4 ma		
- at 230 V rated value - at 400 V rated value - at 590 V rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak		37 KVV
- at 400 V rated value - at 500 V rated value 37 kW operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • to 500 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak value n=30 rated value • to 600 V for current peak val		40 E IAM
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• limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching frequency • at AC • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-9 maximum •	i	HU. UVM
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 limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum at AC at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum at AC-5 maximum at AC-6 maximum at AC-6 maximum at AC-7 maximum at AC-8 maximum at AC-9 maximum at		1 055 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum no-load switching frequency at AC at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum 	-	
 limited to 30 s switching at zero current maximum limited 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 operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum at AC-4 maximum at AC-4 maximum 	-	
 limited to 60 s switching at zero current maximum no-load switching frequency at AC operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum at AC-4 maximum at AC-4 maximum 		
no-load switching frequency at AC 5 000 1/h operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-3e maximum at AC-4 maximum 700 1/h	-	
 at AC 5 000 1/h operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum 200 1/h 		2. 2, 500 minimum oroso sociion doc. to no mateu value
operating frequency 800 1/h • at AC-1 maximum 800 1/h • at AC-2 maximum 400 1/h • at AC-3 maximum 700 1/h • at AC-3e maximum 700 1/h • at AC-4 maximum 200 1/h		5 000 1/h
 at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum at AC-4 maximum 		0 000 mil
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum 200 1/h 		800 1/h
 at AC-3 maximum at AC-3e maximum at AC-4 maximum 200 1/h 		
 at AC-3e maximum at AC-4 maximum 200 1/h 		
• at AC-4 maximum 200 1/h		
Control Circuit/ Control		200 1/11
	Control circuit/ Control	

type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	110 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	190 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
apparent holding power of magnet coil at AC	
• at 50 Hz	16 VA
inductive power factor with the holding power of the 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 instantaneous	2
contact number of NO contacts for auxiliary contacts instantaneous	2
contact	
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	6 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	
— 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 / Q600
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 required 	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
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 DIN rail according to DIN EN 60715
side-by-side mounting	Yes
height	114 mm
width	55 mm
depth	174 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 Screw-type terminals
of magnet coil	Screw-type terminals Screw-type terminals
	Sciew-type terrilliais
type of connectable conductor cross-sections for main contacts • solid or stranded	2v (1 35 mm²) 1v (1 50 mm²)
	2x (1 35 mm²), 1x (1 50 mm²)
finely stranded with core end processing	2x (1 25 mm²), 1x (1 35 mm²)
connectable conductor cross-section for main contacts	4 0- 0
finely stranded with core end processing	1 35 mm²
connectable conductor cross-section for auxiliary contacts	0.5 0.5
solid or stranded	0.5 2.5 mm²
finely stranded with core end processing	0.5 2.5 mm²
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)
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross section	
for main contacts	18 1
for auxiliary contacts	20 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
 positively driven operation according to IEC 60947-5-1 B10 value with high demand rate according to SN 31920 	1 000 000

 with low demand rate according to SN 31920 	40 %	
 with high demand rate according to SN 31920 	73 %	
failure rate [FIT] with low demand rate according to SN 31920	100 FIT	
T1 value for proof test interval or service life according to IEC 61508	20 a	
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	
suitability for use		
 safety-related switching OFF 	Yes	
Cartificates/ approvals		

Certificates/ approvals

General Product Approval





Confirmation



KC



Functional ЕМС Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination Certificate





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

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

other

Railway

Dangerous Good

Environment



Confirmation

Confirmation

Vibration and Shock

Transport Information

Environmental Confirmations

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2037-1AF04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2037-1AF04

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

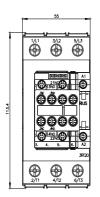
https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AF04

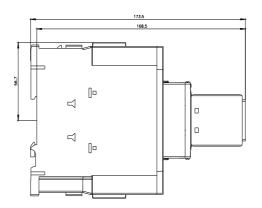
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2037-1AF04&lang=en

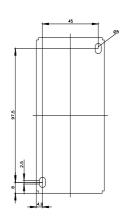
Characteristic: Tripping characteristics, I2t, Let-through current

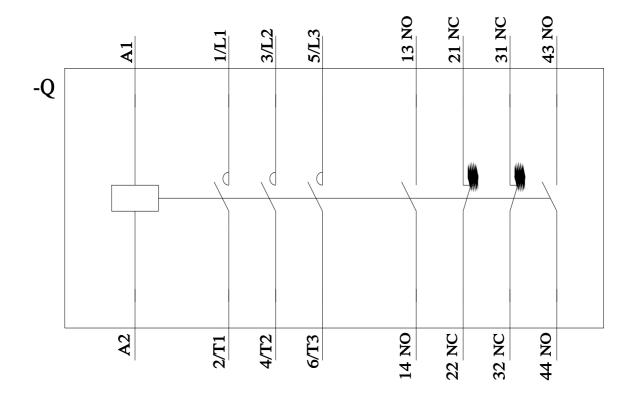
https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AF04/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2037-1AF04&objecttype=14&gridview=view1









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