SIEMENS

Data sheet 3RT2027-2AP04



Power contactor, AC-3 32 A, 15 kW / 400 V 2 NO + 2 NC, 230 V AC 50 Hz 3-pole, size S0 Spring-type terminals Removable auxiliary switch

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S0
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	8.1 W
• per pole	2.7 W
power loss [W] for rated value of the current without load current share typical	9.8 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	8,3g / 5 ms, 5,3g / 10 ms
shock resistance with sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 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)	01.10.2009 00:00:00
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	690 V

operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	50 A
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	50 A
 up to 690 V at ambient temperature 60 °C rated value 	42 A
• at AC-3	
— at 400 V rated value	32 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
at AC-4 at 400 V rated value	22 A
at AC-5a up to 690 V rated value	44 A
at AC-5b up to 400 V rated value	26.5 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	30.8 A
 up to 400 V for current peak value n=20 rated value 	30.8 A
— up to 500 V for current peak value n=20 rated value	27 A
— up to 690 V for current peak value n=20 rated value	21 A
• at AC-6a	20.5 A
— up to 230 V for current peak value n=30 rated value	
— up to 400 V for current peak value n=30 rated value	20.5 A 18 A
— up to 500 V for current peak value n=30 rated value	18 A
— up to 690 V for current peak value n=30 rated value	
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	12 A
at 690 V rated value	12 A
operational current	
at 1 current path at DC-1	05.4
— at 24 V rated value	35 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value — at 600 V rated value	0.4 A 0.25 A
	0.20 A
with 2 current paths in series at DC-1 at 24 V reted value.	25 A
— at 24 V rated value	35 A
— at 110 V rated value	35 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.	35 A
— at 24 V rated value — at 110 V rated value	35 A 35 A
— at 220 V rated value	35 A 35 A
	2.9 A
— at 440 V rated value	
— at 600 V rated value operational current	1.4 A
•	
at 1 current path at DC-3 at DC-5— at 24 V rated value	20 A
— at 24 v Taleu value	20 A

— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 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	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 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	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	0.071
• at AC-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	15 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles	10.0 KVV
at AC-4	
at 400 V rated value	6 kW
at 690 V rated value	10.3 kW
operating apparent power at AC-6a	
 up to 230 V for current peak value n=20 rated value 	12.2 kV·A
 up to 400 V for current peak value n=20 rated value 	21.3 kV·A
 up to 500 V for current peak value n=20 rated value 	23.3 kV·A
 up to 690 V for current peak value n=20 rated value 	25 kV·A
operating apparent power at AC-6a	
 up to 230 V for current peak value n=30 rated value 	8.1 kV·A
 up to 400 V for current peak value n=30 rated value 	14.2 kV·A
 up to 500 V for current peak value n=30 rated value 	15.5 kV·A
 up to 690 V for current peak value n=30 rated value 	21.5 kV·A
short-time withstand current in cold operating state	
up to 40 °C	
 limited to 1 s switching at zero current maximum 	499 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	395 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	260 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	186 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	152 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	5 000 4/1
• at AC	5 000 1/h
operating frequency	4 000 4 11
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	10
type of voltage of the control supply voltage	AC
control supply voltage at AC	000 1/
at 50 Hz rated value	230 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	77 V·A

industive newer factor with aloning newer of the call	
inductive power factor with closing power of the coil • at 50 Hz	0.82
	0.82
apparent holding power of magnet coil at AC • at 50 Hz	9.8 V·A
inductive power factor with the holding power of the	9.0 V A
coil	
• at 50 Hz	0.25
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 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
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	07.4
• at 480 V rated value	27 A
• at 600 V rated value	27 A
yielded mechanical performance [hp]	
• for single-phase AC motor	2 ha
— at 110/120 V rated value	2 hp
— at 230 V rated value• for 3-phase AC motor	5 hp
at 200/208 V rated value	10 hp
— at 200/200 V rated value — at 220/230 V rated value	10 hp
— at 460/480 V rated value	20 hp
— at 575/600 V rated value	25 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	, 1000 / 1000
design of the fuse link	
for short-circuit protection of the main circuit	
with type of coordination 1 required	gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A
— with type of coordination i required	90. 123A (030V, 100KA), alvi. 30A (030V, 100KA), D300. 123A

(415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, - with type of assignment 2 required 80kA) • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) required 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 standard mounting rail according to DIN EN 60715 • side-by-side mounting Yes height 102 mm width 45 mm depth 144 mm required spacing • with side-by-side mounting 10 mm - forwards 10 mm upwards - 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 10 mm - forwards 10 mm - upwards - downwards 10 mm - at the side 6 mm **Connections/ Terminals** type of electrical connection • for main current circuit spring-loaded terminals • for auxiliary and control circuit spring-loaded terminals • at contactor for auxiliary contacts Spring-type terminals of magnet coil Spring-type terminals type of connectable conductor cross-sections for main contacts solid 2x (1 ... 10 mm²) - solid or stranded 2x (1 ... 10 mm²) - finely stranded with core end processing 2x (1 ... 6 mm²) - finely stranded without core end processing 2x (1 ... 6 mm²) • at AWG cables for main contacts 2x (18 ... 8) connectable conductor cross-section for main contacts 1 ... 10 mm² stranded 1 ... 10 mm² finely stranded with core end processing 1 ... 6 mm² • finely stranded without core end processing 1 ... 6 mm² connectable conductor cross-section for auxiliary contacts 0.5 ... 2.5 mm² solid or stranded • finely stranded with core end processing 0.5 ... 1.5 mm² • finely stranded without core end processing 0.5 ... 2.5 mm² type of connectable conductor cross-sections · for auxiliary contacts - solid or stranded 2x (0.5 ... 2.5 mm²) - finely stranded with core end processing 2x (0.5 ... 1.5 mm²)

- finely stranded without core end processing

2x (0.5 ... 2.5 mm²)

 at AWG cables for auxiliary contacts 	2x (20 14)	
AWG number as coded connectable conductor cross section		
 for main contacts 	18 8	
 for auxiliary contacts 	20 14	
Safety related data		
product function mirror contact acc. to IEC 60947-4-1	Yes	
B10 value with high demand rate acc. to SN 31920	450 000	
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 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		
0 10 1 (4 1		EMO

General Product Approval

EMC













Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

Type Examination Certificate UK Declaration of Conformity



Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping













other

Confirmation



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=3RT2027-2AP04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2027-2AP04

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-2AP04

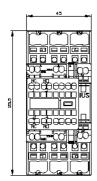
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2027-2AP04&lang=en

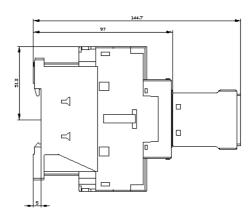
Characteristic: Tripping characteristics, I²t, Let-through current

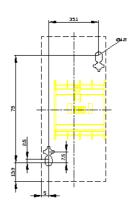
https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-2AP04/char

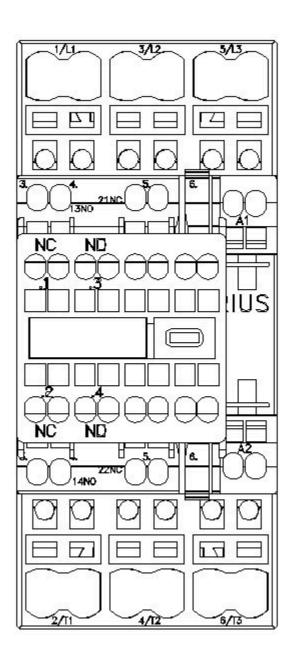
Further characteristics (e.g. electrical endurance, switching frequency)

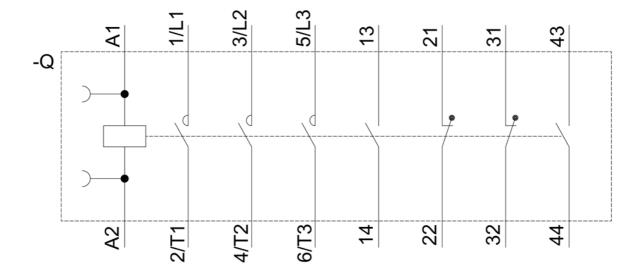
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2027-2AP04&objecttype=14&gridview=view1











last modified: 2/5/2021 🖸