SIEMENS

Data sheet

3RT2028-2BB40-0CC0



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 24 V DC, auxiliary contacts: 1 NO + 1 NC, spring-loaded terminal, size: S0, communication-capable

product brand name SIRUS product designation Power contactor product type designation SRT2 Genoral tachnical data State of contactor size of contactor S0 product extension Yes • tunction module for communication Yes • auxiliary switch Yes • at AC in hot operating state 9.6 W • at AC in hot operating state propole 3.2 W • without load current share typical 5.9 W insultation voltage 600 V • of main circult with degree of pollution 3 rated value 690 V • of auxiliary circult with degree of pollution 3 rated value 690 V • of auxiliary circult with degree of pollution 3 rated value 64V • of auxiliary circult rated value 64V • at DC 10g / 5 ms, 7.5g / 10 ms • a		
product type designation 3RT2 General tachnical data	product brand name	SIRIUS
Ceneral technical data size of contactor \$0 product extension • function module for communication Yes • auxiliary switch Yes power loss [W] for rated value of the current • at AC in hot operating state 9.6 W • at AC in hot operating state per pole 3.2 W • without load current share typical 59 W • insultation voltage 690 V • of main circuit with degree of pollution 3 rated value 690 V • of main circuit with degree of pollution 3 rated value 690 V • of main circuit with degree of pollution 3 rated value 690 V • of main circuit rated value 64 KV • of main circuit rated value 64 KV • of auxiliary circuit rated value 64 KV • at DC 10g / 5 ms, 7.5g / 10 ms • at DC 10g / 5 ms, 10g / 10 ms • of the contactor with added auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical 10 000 000 • of the contactor with added auxiliary switch block typical 1000 12009 Ambient condition	product designation	Power contactor
size of contactor S0 product extension • function module for communication Yes • auxiliary switch Yes power loss [W] for rated value of the current 9.6 W • at AC in hot operating state per pole 3.2 W • without load current share typical 5.9 W insulation voltage 680 V • of main circuit with degree of pollution 3 rated value 680 V • of auxiliary circuit with degree of pollution 3 rated value 690 V surger voltage resistance 6 kV • of main circuit with degree of pollution 3 rated value 690 V surger voltage resistance 6 kV • of main circuit with degree of pollution 3 rated value 600 V • of auxiliary circuit rated value 6 kV • of the contactor with sine pulse 10 g/ 5 ms, 7.5g / 10 ms shock resistance withs line pulse 15g / 5 ms, 10g / 10 ms mechanical service iffe (operating cycles) 10 000 000 • of the contactor with added electr	product type designation	3RT2
product extension ************************************	General technical data	
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Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature -25 +60 °C • 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	reference code according to IEC 81346-2	Q
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• 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	installation altitude at height above sea level maximum	2 000 m
• during storage -55 +80 °C relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum 95 % Main circuit	ambient temperature	
relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum 95 % Main circuit 10 %	during operation	-25 +60 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 % maximum 95 % Main circuit 95 %	during storage	-55 +80 °C
Main circuit	relative humidity minimum	10 %
		95 %
number of poles for main current circuit 3	Main circuit	
	number of poles for main current circuit	3

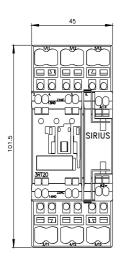
number of NO contacts for main contacts	3
	3
 operating voltage at AC-3 rated value maximum 	690 V
at AC-3 rated value maximum at AC-3e rated value maximum	690 V
operational current	090 V
at AC-1 at 400 V at ambient temperature 40 °C rated	50 A
value	50 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	50 A
value	
— up to 690 V at ambient temperature 60 °C rated value	42 A
• at AC-3	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	2
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 600 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	31.5 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	30.8 A
— up to 690 V for current peak value n=20 rated value	21 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	20.5 A
— up to 400 V for current peak value n=30 rated value	20.5 A
— up to 500 V for current peak value n=30 rated value	21.4 A
— up to 690 V for current peak value n=30 rated value	21 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm ²
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	
— at 24 V rated value	35 A
— at 60 V rated value	20 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	35 A
— at 60 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 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
 at 1 current path at DC-3 at DC-5 	

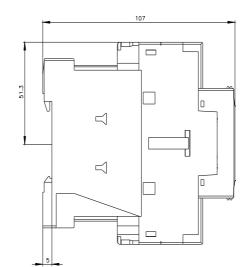
— at 24 V rated value	20 A			
— at 60 V rated value	5 A			
— at 110 V rated value	2.5 A			
— at 220 V rated value	1 A			
— at 440 V rated value	0.09 A			
— at 600 V rated value	0.06 A			
 with 2 current paths in series at DC-3 at DC-5 				
— at 24 V rated value	35 A			
— at 60 V rated value	35 A			
— 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 60 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				
• at AC-2 at 400 V rated value	18.5 kW			
• at AC-3				
— at 230 V rated value	11 kW			
— at 400 V rated value	18.5 kW			
— at 500 V rated value	18.5 kW			
— at 690 V rated value	18.5 kW			
• at AC-3e				
— at 230 V rated value	11 kW			
— at 400 V rated value	18.5 kW			
— at 500 V rated value	18.5 kW			
— at 690 V rated value	18.5 kW			
operating power for approx. 200000 operating cycles at AC-				
4				
at 400 V rated value	6 kW			
at 690 V rated value	10.3 kW			
operating apparent power at AC-6a	12.2 1/1/1			
up to 230 V for current peak value n=20 rated value	12.2 kVA			
up to 400 V for current peak value n=20 rated value	21.3 KVA			
up to 500 V for current peak value n=20 rated value	26.6 kVA			
• up to 690 V for current peak value n=20 rated value	25 kVA			
operating apparent power at AC-6a	8.1 kVA			
 up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value 	6. I KVA 14.2 kVA			
 up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value 	14.2 KVA 18.5 kVA			
	25 kVA			
up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to				
40 °C				
 limited to 1 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 5 s switching at zero current maximum 	341 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 	199 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 60 s switching at zero current maximum 	162 A; Use minimum cross-section acc. to AC-1 rated value			
no-load switching frequency				
● at DC	1 500 1/h			
operating frequency				
• at AC-1 maximum	1 000 1/h			
	750.44			
• at AC-2 maximum	750 1/h			
• at AC-3 maximum	750 1/h			

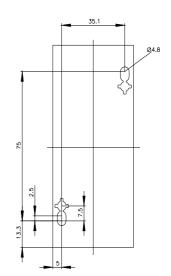
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
rated value	24 V
operating range factor control supply voltage rated value of	
magnet coil at DC	
• initial value	0.8
full-scale value	1.1
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	5.9 W
closing delay	
at DC	50 170 ms
opening delay	
at DC	15 18 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2, optionally via function module
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
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 	1A
 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	34 A
• at 600 V rated value	27 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	10 hp
— at 220/230 V rated value	10 hp
— at 460/480 V rated value	25 hp
— at 575/600 V rated value	25 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 	

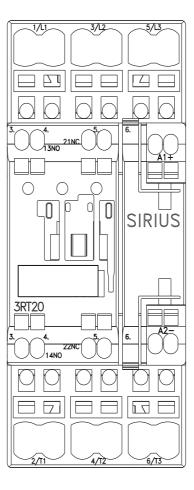
- with type of coordination 1 required	gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)		
— with type of assignment 2 required	gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA)		
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)		
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	102 mm		
width	45 mm		
depth	107 mm		
required spacing			
• with side-by-side mounting	40		
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm 0 mm		
 — at the side for grounded parts 	0 mm		
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	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)		
connectable conductor cross-section for main contacts			
• solid	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			
solid or stranded	0.5 2.5 mm ²		
finely stranded with core end processing	0.5 1.5 mm ²		
finely stranded without core end processing	0.5 2.5 mm²		
type of connectable conductor cross-sections			
for auxiliary contacts	0 (05 05 1)		
— solid or stranded	2x (0.5 2.5 mm ²)		
 finely stranded with core end processing 	2x (0.5 1.5 mm ²)		
— finely stranded without core end processing	2x (0.5 2.5 mm ²)		
for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section	2x (20 14)		
for main contacts	18 8		
for auxiliary contacts	10 0 20 14		
Safety related data	LV 17		
product function			
mirror contact according to IEC 60947-4-1	Yes		
B10 value with high demand rate according to SN 31920	450 000		
	-30 000		

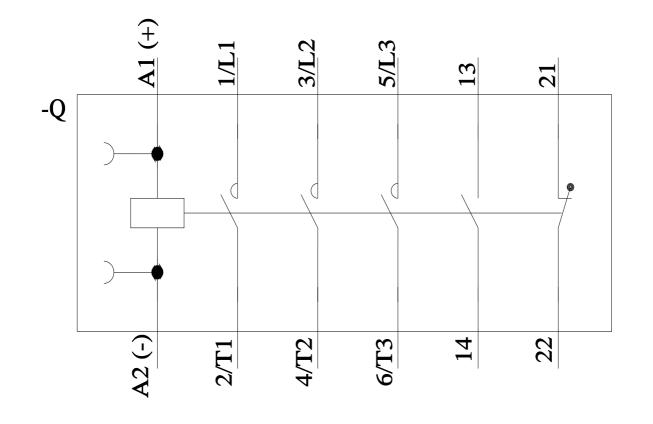
proportion of dama	oue failuree					
proportion of danger			1			
	d rate according to SN 3192					
-	nd rate according to SN 319					
failure rate [FIT] with lo	w demand rate according to	o SN 31920 100	FIT			
T1 value for proof test 61508	interval or service life accor	ding to IEC 20 a	20 a			
protection class IP of	n the front according to IE	C 60529 IP20	IP20			
touch protection on t	he front according to IEC	60529 finge	er-safe, for vertical contact	from the front		
suitability for use						
 safety-related sy 	vitching OFF	Yes				
ertificates/ approvals						
General Product App						
SP S		<u>Confirmation</u>		KC	EHC	
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confo	ormity	Test Certificates		
RCM	<u>Type Examination Cer-</u> tificate	UK CA	CE EG-Konf.	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Certific</u> ates/Test Report	
Marine / Shipping						
ABS	BUREAU VERITAS		Llovd's Register urs	PRS	RINA	
Marine / Shipping	other		Railway	Dangerous Good	Environment	
RAMES	<u>Confirmation</u>	DE	Vibration and Shock	Transport Information	Environmental Cor firmations	
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Characteristic: Trippi	ing characteristics, I ² t, Let	-through current				
	cs (e.g. electrical enduran					











last modified:

2/10/2023 🖸