SIEMENS

Data sheet

3RT2025-1BF44



power contactor, AC-3e/AC-3, 17 A, 7.5 kW / 400 V, 3-pole, 110 V DC, auxiliary contacts: 2 NO + 2 NC, screw terminal, removable auxiliary switch

product brand nameSIRIUSproduct designationPower contactorproduct type designation3RT2	
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 1.8 W	
at AC in hot operating state per pole 0.6 W	
• without load current share typical 5.9 W	
insulation voltage	
of main circuit with degree of pollution 3 rated value 690 V	
of auxiliary circuit with degree of pollution 3 rated 690 V value	
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 according to EN 60947-1400 V	
shock resistance at rectangular impulse	
• at DC 10g / 5 ms, 7,5g / 10 ms	
shock resistance with sine pulse	
• at DC 15g / 5 ms, 10g / 10 ms	
mechanical service life (operating cycles)	
of contactor typical 10 000 000	
of the contactor with added electronically optimized 5 000 000 auxiliary switch block typical	
of the contactor with added auxiliary switch block typical 10 000 000	
reference code according to IEC 81346-2 Q	
Substance Prohibitance (Date) 10/01/2009	
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 95 % maximum	
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 	40 A
rated value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C	40 A
rated value	
— up to 690 V at ambient temperature 60 °C	35 A
rated value • at AC-3	
	47 0
— at 400 V rated value	17 A 17 A
— at 500 V rated value	
— at 690 V rated value	13 A
• at AC-3e	47.0
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
• at AC-4 at 400 V rated value	15.5 A
• at AC-5a up to 690 V rated value	35.2 A
• at AC-5b up to 400 V rated value	14.1 A
• at AC-6a	
 — up to 230 V for current peak value n=20 rated value 	11.4 A
 — up to 400 V for current peak value n=20 rated value 	11.4 A
— up to 500 V for current peak value n=20 rated	11.4 A
value	11.47
— up to 690 V for current peak value n=20 rated	11.3 A
value	
● at AC-6a	
 up to 230 V for current peak value n=30 rated 	7.6 A
value	
 — up to 400 V for current peak value n=30 rated 	7.6 A
value	
 up to 500 V for current peak value n=30 rated 	7.6 A
Value	7.6 A
 — up to 690 V for current peak value n=30 rated value 	7.0 A
minimum cross-section in main circuit at maximum AC-1	10 mm²
rated value	
operational current for approx. 200000 operating	
cycles at AC-4	
 at 400 V rated value 	7.7 A
 at 690 V rated value 	7.7 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	0.0 A
• at AC-3	
- at 230 V rated value	4 kW
— at 200 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
• at AC-3e	4.134
— at 230 V rated value	4 kW
— at 400 V rated value	4.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
operating power for approx. 200000 operating cycles at AC-4	
at 400 V rated value	3.5 kW
• at 690 V rated value	6 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	4.5 kVA
 up to 400 V for current peak value n=20 rated value 	7.8 kVA
 up to 500 V for current peak value n=20 rated value 	9.9 kVA
 up to 690 V for current peak value n=20 rated value 	13.6 kVA
operating apparent power at AC-6a	
 up to 230 V for current peak value n=30 rated value 	3 kVA
 up to 400 V for current peak value n=30 rated value 	5.2 kVA
 up to 500 V for current peak value n=30 rated value 	6.6 kVA
 up to 690 V for current peak value n=30 rated value 	9.1 kVA
short-time withstand current in cold operating state	
up to 40 °C	
 limited to 1 s switching at zero current maximum 	225 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	225 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	189 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	140 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	115 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
• at AC-2 maximum	1 000 1/h
• at AC-3 maximum	1 000 1/h
• at AC-3e maximum	1 000 1/h

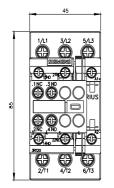
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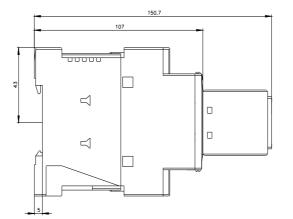
 at AC-4 maximum 	300 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
• rated value	110 V
operating range factor control supply voltage rated	
value of magnet coil at DC	
initial value	0.8
• full-scale value	1.1
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	5.9 W
elosing delay • at DC	50 170 ms
opening delay	50 170 mb
• at DC	15 18 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	2
instantaneous contact	
number of NO contacts for auxiliary contacts	2
instantaneous contact operational current at AC-12 maximum	10 A
operational current at AC-12 maximum	
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 operational current at DC-13 	0.15 A
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	14 A
at 600 V rated value	17 A
yielded mechanical performance [hp]	
 for single-phase AC motor — at 110/120 V rated value 	1 hp
— at 230 V rated value	3 hp
• for 3-phase AC motor	
- at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	15 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: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)

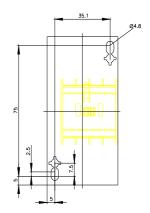
• for short-circuit protection of the auxiliary switch required

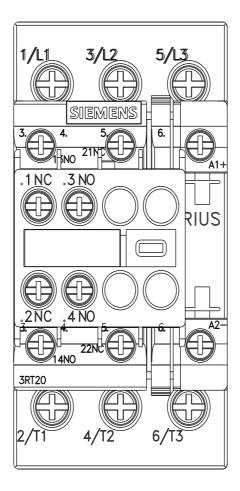
mounting position +*.160 "rotative possition vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and backward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed forward and subceward by +*.25 or vertical mounting surface: can be billed formation of the billed formation of the billed formation - downwards • of or grounded parts - forwards 10 mm - upwords • of or grounded parts - forwards 10 mm - upwords • of or grounded parts - forwards 10 mm - upwords • of or grounded parts - forwards 10 mm - upwords • of or grounded parts - forwards 10 mm - upwords • of or cauliancy contacts • of main cortracts • of magnet coll Vppe of contectable conductor cross-sections for main cortacts screw-type terminals Screw-type terminals • exil di di stranded • forma under with core and processing • all AVC calce to for sublication for stranded • forma under vortacts 1 10 mm ² 1 10 mm ² 2	Installation/ mounting/ dimensions			
forward and backward by +/ 22.5" on vertical mounting surface satening method screw and sape on mounting onto 35 mm DIN rail according to DIN EN 00715 height 95 mm height 95 mm width 45 mm depth 151 mm - upwards 10 mm - upwards 10 mm - upwards 10 mm - upwards 10 mm - dorwards 10 mm - for run current cruut screw-type terminals sold screw-type terminals or auditary and contol circuit screw-type terminals soid screw-type terminals ordid or stranded 110 mm ² - soid or stranded 110 mm ² - soid or stranded 110 mm ² - soid or stranded		+/-180° rotation possible on vertical mounting surface; can be tilted		
e side-by-side mounting Yes height 85 mm width 45 mm deph 151 mm required spacing 10 mm - with side-by-side mounting - - workards 10 mm - downwards 50 mm of ra autourent cruat <td></td> <td>forward and backward by +/- 22.5° on vertical mounting surface</td>		forward and backward by +/- 22.5° on vertical mounting surface		
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• for grounded parts - forwards 10 mm forwards 10 mm at the side 6 mm downwards 10 mm downwards 10 mm forwards 10 mm downwards 0 mm downwards 10 mm downwards 0 mm - downwards screw-type terminals - of main cornet.cite Screw-type terminals - downet.cold cornect.cite Screw-type terminals - solid 2x (1 2.5 mm ²), 2x (2.5 1				
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		10 mm		
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 for live parts forwards forwards downwards downwards downwards for main current circuit screw-type terminals type of connectable conductor cross-section for auxiliary contacts screw-type terminals screw-type terminals screw-type terminals torauxiliary contacts<				
	•	10 mm		
	— upwards			
Connections/Terminals type of electrical connection • for main current circuit screw-type terminals • or auxiliary and control circuit screw-type terminals • at contactor for auxiliary contacts Screw-type terminals • of magnet coil Screw-type terminals • of magnet coil Screw-type terminals • of magnet coil Screw-type terminals • solid 2x (1 2.5 mm²), 2x (2.5 10 mm²) • solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) • solid 1 10 mm² • finely stranded with core end processing 1 10 mm² • solid or stranded 0.5 2.5 mm²) • solid or stranded 0.5 2.5 mm² • for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • for auxiliary contacts 20 1.5 mm²), 2x (0.75 2.5 mm²) • for auxiliary contacts 20 1.5 mm²), 2x (0.75 2.5 mm²) • for auxiliary contacts 10 8 • for auxiliary contacts 20 14<	•	10 mm		
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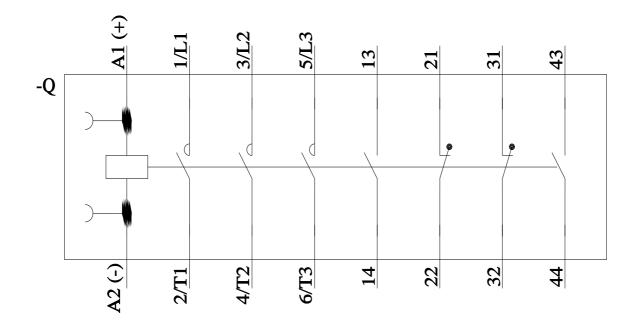
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Further information Siemens has decide	ed to exit the Russian	market (see here).				
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