SIEMENS

Data sheet 3RT2023-1AH00



power contactor, AC-3 9 A, 4 kW / 400 V 1 NO + 1 NC, 48 V AC, 50 Hz 3-pole, Size S0 screw terminal

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	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	0.6 W
 at AC in hot operating state per pole 	0.2 W
 without load current share typical 	7.6 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 safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,5g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,8g / 5 ms, 7,4g / 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 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 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	40 A
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	40 A
— up to 690 V at ambient temperature 60 °C rated value	35 A
• at AC-3	
— at 400 V rated value	9 A
— at 500 V rated value	9 A
— at 690 V rated value	9 A
• at AC-3e	
— at 400 V rated value	9 A
— at 500 V rated value	9 A
— at 690 V rated value	9 A
 at AC-4 at 400 V rated value 	8.5 A
• at AC-5a up to 690 V rated value	35.2 A
at AC-5b up to 400 V rated value	7.4 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 value 	9.1 A
— up to 690 V for current peak value n=20 rated value value	9 A
 at AC-6a up to 230 V for current peak value n=30 rated value 	7.6 A
— up to 400 V for current peak value n=30 rated value	7.6 A
 up to 500 V for current peak value n=30 rated value 	6.1 A
— up to 690 V for current peak value n=30 rated value	6.1 A
minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating	10 mm ²
cycles at AC-4	
at 400 V rated value	4.1 A
• at 690 V rated value	3.3 A
operational current	
• at 1 current path at DC-1	
— 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	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 24 V rated value — at 110 V rated value	35 A
— at 110 V rated value — 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 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 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	5.071
at AC-2 at 400 V rated value	4 kW
• at AC-3	TIVV
— at 230 V rated value	2.2 kW
— at 250 V rated value — at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	7.5 kW
• at AC-3e	2.2 k/M
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value operating power for approx. 200000 operating cycles	7.5 kW
at AC-4	
• at 400 V rated value	2 kW
at 690 V rated value	2.5 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	7.8 kVA
• up to 690 V for current peak value n=20 rated value	10.7 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	5.2 kVA
 up to 500 V for current peak value n=30 rated value 	7.2 kVA
short-time withstand current in cold operating state	7.12 X77 X
up to 40 °C	
 limited to 1 s switching at zero current maximum 	170 A; Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum	170 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	122 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	78 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	68 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	1 000 1/h
• at AC-2 maximum	1 000 1/h
→ at no ∠ maximum	1 000 1/11

* at AC-9 maximum 300 1/h Control incruit/ Control type of voltage of the control supply voltage control supply voltage at AC * at 50 Hz rated value 0 at 50 Hz rated value 0 at 50 Hz 2 apparent pick-up power of magnet coil at AC * at 50 Hz 2 apparent pick-up power of magnet coil at AC * at 50 Hz 150 Hz 150 Hz 2 apparent pick-up power of magnet coil at AC * at 50 Hz 150	-t A O Oin	4 000 4 11-
at AC 4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz apparent pick-up power of magnet coil at AC at 50 Hz inductive power factor with closing power of the coil at 50 Hz apparent holding power of magnet coil at AC at 50 Hz inductive power factor with closing power of the coil at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz at 50 Hz 0.25 closing delay at AC at A	• at AC-3 maximum	1 000 1/h
Security Control Type of voltage of the control supply voltage at AC at 50 Hz rated value 48 V 48 V		
type of voltage of the control supply voltage control supply voltage at AC		300 1/h
control supply voltage at AC at 50 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz apparent pick-up power of magnet coil at AC at 50 Hz sparent pick-up power of magnet coil at AC at 50 Hz cost 50 Hz apparent holding power of magnet coil at AC at 50 Hz inductive power factor with closing power of the coil at 50 Hz closing delay at AC at 50 Hz control version of the switch operating mechanism control version of the switch operating mechanism Awillary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 60 V rated value at		
a at 50 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz apparent pick-up power of magnet coil at AC at 50 Hz at 50 Hz apparent pick-up power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz at 50 Hz coliniductive power factor with the holding power of the coil at 50 Hz at 50 Hz opering delay at AC at A		AC
operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz apparent pick-up power of magnet coil at AC at 50 Hz sha 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz apparent holding power of magnet coil at AC at 50 Hz at 50 Hz closing delay at AC opening delay at AC		
val 50 Hz 0.81.1 apparent pick-up power of magnet coil at AC at 50 Hz at 50 Hz 0.82 apparent holding power of magnet coil at AC at 50 Hz a paparent holding power of magnet coil at AC 3.82 apparent holding power of magnet coil at AC 7.6 VA at 50 Hz 0.82 inductive power factor with the holding power of the coil 0.25 closing delay 8 40 ms at AC 8 40 ms arcing time 10 10 ms control version of the switch operating mechanism Slandard A1 - A2 Auxillary circuit 10 10 ms 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-12 maximum 10 A operational current at DC-12 3 A at 600 V rated value 1 A at 600 V rated value 1 A at 110 V rated value 3 A at 24 V rated value 1 A at 220 V rated value<		48 V
* at 50 Hz		
apparent pick-up power of magnet coil at AC • at 50 Hz inductive power factor with closing power of the coil • at 50 Hz apparent holding power of magnet coil at AC • at 50 Hz inductive power factor with the holding power of the coil • at 50 Hz closing delay • at AC • at 50 Hz coparing delay • at AC arcing time control version of the switch operating mechanism Auxillary circuit number of NC contacts for auxillary contacts instantaneous contact number of NC contacts for auxillary contacts instantaneous contact number of NO contacts for auxillary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 600 V rated value • at 600 V rated value • at 64 V rated value • at 69 V rated value • at 60 V rated value • at 10 V rated value • at 10 V rated value • at 220 V rated value • at 220 V rated value • at 60 V rated value • at 220 V rated value • at 10 V rated value • at 10 V rated value • at 220 V rated value • at 24 V rated value • at 25 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 30 V rated value • at 30 V rated value • at 48 V rated value • at 480 V rated		0.9 1.1
and to the color with closing power of the coil a to to the color apparent holding power of magnet coil at AC a to the color apparent holding power of magnet coil at AC a to the color a to the col		0.0 1.1
inductive power factor with closing power of the coil a 150 Hz apparent holding power of magnet coil at AC a 150 Hz Inductive power factor with the holding power of the coil at 50 Hz closing delay at AC acing delay at AC acing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 630 V rated value at 630 V rated value at 640 V rate		65 VA
apparent holding power of magnet coll at AC		03 VA
apparent holding power of magnet coil at AC		0.82
at 50 Hz		0.02
inductive power factor with the holding power of the coll at 50 Hz closing delay at AC pening delay at AC opening delay at AC opening delay at AC opening delay at AC at AC opening delay at AC at AC opening me control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contact for auxiliary contacts instantaneous contact number of NO contact value at 80 V rated value 10 A 4 at 400 V rated value 10 A 4 at 600 V rated value 10 A 4 at 600 V rated value 10 A 4 at 12 V rated value 10 A 4 at 600 V rated value 11 A 12 A 12 A 12 A 12 A 14 A 17 A 16 MB 18 A 18		7 6 VA
coil		7.0 VA
closing delay	•	
e at AC opening delay e at AC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 4500 V rated value • at 500 V rated value • at 500 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 120 V rated value • at 220 V rated value • at 220 V rated value • at 360 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 500 V rated value • at 500 V rated value • at 60 V rated value	• at 50 Hz	0.25
opening delay ■ at AC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 ■ at 230 V rated value ■ at 400 V rated value ■ at 400 V rated value ■ at 500 V rated value ■ at 600 V rated value ■ at 48 V rated value ■ at 48 V rated value ■ at 10 V rated value ■ at 110 V rated value ■ at 120 V rated value ■ at 125 V rated value ■ at 20 V rated value ■ at 600 V rat	closing delay	
arcing time 10 10 ms Standard A1 - A2 Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-15 at 230 V rated value 10 A at 400 V rated value 2A at 500 V rated value 1A operational current at DC-12 at 24 V rated value 6A at 110 V rated value 6A at 110 V rated value 6A at 110 V rated value 1A at 220 V rated value 6A at 110 V rated value 1A at 125 V rated value 1A at 24 V rated value 1A operational current at DC-13 at 24 V rated value 1A at 600 V rated value 2A at 10 V rated value 1A at 600 V rated value 2A at 10 V rated value 1A at 600 V rated value 1A	• at AC	8 40 ms
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 60 V rated value • at 60 V rated value • at 60 V rated value • at 10 V rated value • at 60 V rated value • at 22 V rated value • at 22 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 28 V rated value • at 20 V rated value • at 22 V rated value • at 20 V rated v	opening delay	
Control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value • at 690 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 110 V rated value • at 122 V vrated value • at 1220 V rated value • at 125 V rated value • at 120 V rated value • at 125 V rated value • at 24 V rated value • at 120 V rated value • at 220 V rated value • at 220 V rated value • at 220 V rated value • at 3A • at 220 V rated value • at 3A • at 220 V rated value • at 3A • at 24 V rated value • at 48 V rated value • at 250 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 48 V r	• at AC	4 16 ms
Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value • at 690 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 110 V rated value • at 122 V rated value • at 122 V rated value • at 125 V rated value • at 24 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 29 V rated value • at 20 V	arcing time	10 10 ms
number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact of NO contacts for auxiliary contacts instantaneous contact operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 48 V rated value • at 48 V rated value • at 10 A • at 48 V rated value • at 48 V rated value • at 10 V rated value • at 10 A • at 24 V rated value • at 25 V rated value • at 10 V rated value • at 125 V rated value • at 20 V rated value • at 24 V rated value • at 600 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 10 V rated value • at 20 V rated value • at 20 V rated value • at 20 V rated value • at 10 V rated value • at 20 V rated value	control version of the switch operating mechanism	Standard A1 - A2
instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 10 A operational current at DC-12 • at 24 V rated value • at 60 V rated value • at 60 V rated value • at 10 A • at 24 V rated value • at 25 V rated value • at 10 V rated value • at 20 V rated value • at 20 V rated value • at 20 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value • at 25 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 29 V rated value • at 20 V rated value • at 30 V rated value • at 60 V rated value • at 10 V rated value • at 100 V rated value • at 400 V rated value •	Auxiliary circuit	
instantaneous contact operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 690 V rated value • at 24 V rated value • at 24 V rated value • at 48 V rated value • at 100 V rated value • at 600 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 220 V rated value • at 25 V rated value • at 26 V rated value • at 125 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 20 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 24 V rated value • at 48 V rated value • at 20 V rated value • at 30 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 20 V rated value • at 125 V rated value • at 125 V rated value • at 126 V rated value • at 127 V rated value • at 128 V rated value • at 128 V rated value • at 129 V rated value • at 200 V rated value • at 30 V rated value • at 480 V rated value • 7.6 A		1
operational current at AC-15 • at 230 V rated value		1
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value at 690 V rated value at 24 V rated value at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 24 V rated value at 25 V rated value at 27 V rated value at 48 V rated value at 20 V rated value at 20 V rated value at 22 V rated value at 20 V rated value at 20 V rated value at 20 V rated value at 3 A at 20 V rated value at 20 V rated value at 3 A at 20 V rated value at 3 A at 3 A at 3 A at 48 V rated value at 60 V rated value at 7.6 A 	operational current at AC-12 maximum	10 A
• at 400 V rated value 2 A • at 500 V rated value 1 A operational current at DC-12 • at 24 V rated value 10 A • at 60 V rated value 6 A • at 60 V rated value 6 A • at 110 V rated value 3 A • at 125 V rated value 1 A • at 220 V rated value 1 A • at 60 V rated value 2 A • at 220 V rated value 1 A • at 60 V rated value 1 A • at 60 V rated value 2 A • at 125 V rated value 1 A • at 60 V rated value 2 A • at 100 V rated value 1 A • at 600 V rated value 1 A • at 220 V rated value 1 A • at 24 V rated value 2 A • at 110 V rated value 2 A • at 110 V rated value 2 A • at 110 V rated value 1 A • at 125 V rated value 1 A • at 126 V rated value 1 A • at 127 V rated value 1 A • at 128 V rated value 1 A • at 129 V rated value 1 A • at 120 V rated value 1 A • at 200 V rated value 1 A • at 200 V rated value 1 A • at 200 V rated value 1 A • at 480 V rated value 1 A	operational current at AC-15	
• at 500 V rated value 2 A • at 690 V rated value 1 A operational current at DC-12 • at 24 V rated value 6 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 2 A • at 220 V rated value 2 A • at 220 V rated value 10 A • at 24 V rated value 2 A • at 25 V rated value 10 A • at 24 V rated value 2 A • at 25 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 1 A • at 125 V rated value 1 A • at 125 V rated value 1 A • at 125 V rated value 1 A • at 120 V rated value 1 A • at 200 V rated value 1 A • at 600 V rated value 1	 at 230 V rated value 	10 A
• at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 24 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 120 V rated value • at 200 V rated value • at 600 V rated val	 at 400 V rated value 	3 A
operational current at DC-12 • at 24 V rated value	 at 500 V rated value 	2 A
 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 24 V rated value at 24 V rated value at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 120 V rated value at 20 V rated value at 20 V rated value at 600 V rated value at 6	at 690 V rated value	1 A
 at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 10 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 125 V rated value at 200 V rated value at 200 V rated value at 300 V rated value at 300 V rated value at 300 V rated value at 480 V rated value at 480 V rated value 7.6 A 	operational current at DC-12	
 at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 10 V rated value at 10 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 200 V rated value at 200 V rated value at 600 V rated value at 7.6 A 	 at 24 V rated value 	10 A
 at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value 0.15 A operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value 7.6 A 	at 48 V rated value	6 A
 at 125 V rated value at 220 V rated value at 600 V rated value 0.15 A Operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 4600 V rated value 7.6 A 	 at 60 V rated value 	6 A
 at 220 V rated value at 600 V rated value 0.15 A Operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 600 V rated value 7.6 A UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value 7.6 A 	• at 110 V rated value	3 A
at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 10 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 220 V rated value at 600 V rated value 7.6 A	• at 125 V rated value	2 A
operational current at DC-13 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value Tontact reliability of auxiliary contacts Total value 10 A 1 A 0.9 A 0.9 A 1 A 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 7.6 A		
 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 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 7.6 A 		0.15 A
 at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 600 V rated value 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 7.6 A 	•	
 at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value 1 A at 600 V rated value 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 7.6 A 	at 24 V rated value	
 at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at at 250 V rated value at 480 V rated value 7.6 A 	 at 48 V rated value 	
 at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 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 7.6 A 		
 at 220 V rated value 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 7.6 A 	 at 110 V rated value 	
 at 600 V rated value 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 7.6 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 7.6 A		
UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value 7.6 A		
full-load current (FLA) for 3-phase AC motor • at 480 V rated value 7.6 A		1 faulty switching per 100 million (17 V, 1 mA)
• at 480 V rated value 7.6 A		
	full-load current (FLA) for 3-phase AC motor	
at 600 V rated value	 at 480 V rated value 	
	at 600 V rated value	9 A
yielded mechanical performance [hp]	yielded mechanical performance [hp]	
• for single-phase AC motor		
— at 110/120 V rated value 1 hp		
— at 230 V rated value 1 hp	— at 230 V rated value	1 hp

• for 3-phase AC motor	
— at 200/208 V rated value	2 hp
 at 220/230 V rated value 	3 hp
 — at 460/480 V rated value 	5 hp
— at 575/600 V rated value	7.5 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: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
 — with type of assignment 2 required 	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (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 standard mounting rail according to DIN EN 60715
• side-by-side mounting	Yes
height	85 mm
width	45 mm
depth	97 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	10 111111
— forwards	10 mm
	10 mm
— upwards — downwards	10 mm
— at the side	
	6 mm
Connections/ Terminals	
type of electrical connection	corous typo terminals
for main current circuit for auxiliant and control 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	0 (4 05 2) 0 (05 42 2)
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
at AWG cables for main contacts	2x (16 12), 2x (14 8)
connectable conductor cross-section for main contacts	
• solid	1 10 mm²
• stranded	1 10 mm²
• finely stranded with core end processing connectable conductor cross-section for auxiliary	1 10 mm²
contacts	
solid or stranded	0.5 2.5 mm ²
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)
 at AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross section	
 for main contacts 	16 8
 for auxiliary contacts 	20 14
Safety related data	
product function	
 mirror contact according to IEC 60947-4-1 	Yes
B10 value with high demand rate according to SN 31920	450 000
proportion of dangerous failures	
 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 y
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

Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



Functional
EMC Safety/Safety of Machinery Declaration of Conformity Test Certificates



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

Marine / Shipping













other

Confirmation



Confirmation

urther 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=3RT2023-1AH00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-1AH00

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

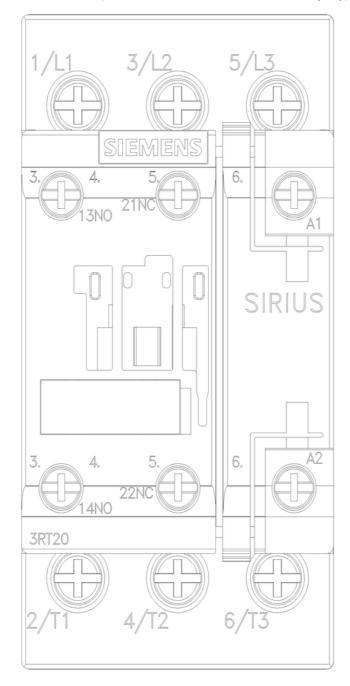
https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1AH00

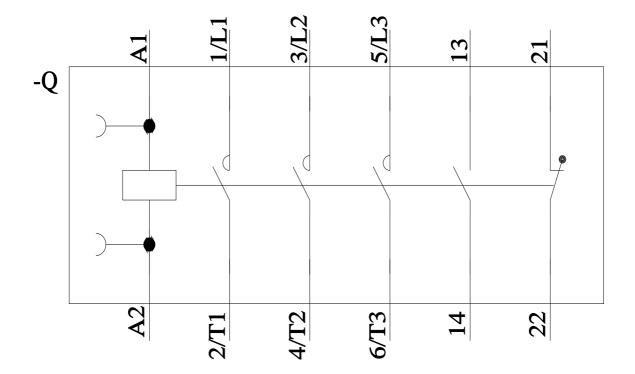
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2023-1AH00&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1AH00/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2023-1AH00&objecttype=14&gridview=view1





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