SIEMENS

Data sheet 3RT2023-1NB30



power contactor, AC-3 9 A, 4 kW / 400 V 1 NO + 1 NC, AC (50 / 60 Hz) DC operation 21-28 V AC/DC, 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	1.2 W
• per pole	0.4 W
power loss [W] for rated value of the current without load current share typical	2 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	7,5g / 5 ms, 4,7g / 10 ms
at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at AC	11,8g / 5 ms, 7,4g / 10 ms
• at DC	15g / 5 ms, 10g / 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 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 	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-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 	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	10 mm ²
operational current for approx. 200000 operating 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 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 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
operational current	

14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
• 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	
• at AC-2 at 400 V rated value	4 kW
• at AC-3	
— 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	7.5 kW
operating power for approx. 200000 operating cycles	
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 kV·A
 up to 400 V for current peak value n=20 rated value 	7.8 kV·A
 up to 500 V for current peak value n=20 rated value 	7.8 kV·A
 up to 690 V for current peak value n=20 rated value 	10.7 kV·A
operating apparent power at AC-6a	
 up to 230 V for current peak value n=30 rated value 	3 kV·A
 up to 400 V for current peak value n=30 rated value 	5.2 kV·A
 up to 500 V for current peak value n=30 rated value 	5.2 kV·A
• up to 690 V for current peak value n=30 rated value	7.2 kV·A
short-time withstand current in cold operating state up to 40 $^{\circ}\text{C}$	
 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
limited 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	1 500 1/h
• 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-4 maximum	300 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	21 28 V
at 60 Hz rated value	21 28 V

control supply voltage at DC		
Operating range factor control supply voltage rated value of magnet coil at DC		
value of magnet coil at DC • Initial value • Initial va		21 28 V
• full scale value operating range factor control supply voltage rated value of magnet coil at AC		
Operating range factor control supply voltage rated value of magnet coil at AC	• initial value	0.7
value of magnet coil at AC	full-scale value	1.3
• at 60 Hz 0.7 1.3	_	
design of the surge suppressor with varistor inrush current peak 3 A 3 3 3 3 3 3 3 3	● at 50 Hz	
Inrush current peak 3	● at 60 Hz	0.7 1.3
duration of inrush current peak 10cked-rotor current mean value 0.3 A 10cked-rotor current mean value 0.52 A 180 ms	design of the surge suppressor	with varistor
locked-rotor current mean value 0.3 A locked-rotor current peak 0.52 A duration of locked-rotor current 180 ms holding current man value 45 mA apparent pick-up power of magnet coil at AC 6.6 V-A 6.7 V-A at 60 Hz 0.98 0.98 at 60 Hz 0.86 0.82 0.82 closing power of magnet coil at DC 0.86 0.82 at 60 Hz 0.86 0.82 0.82 closing power of magnet coil at DC 0.99 0.99 at 10 Hz 0.99 0.89 at 10 C 0.98 0.89 at 10 C 0.99 0.89 at 10 C 0.99 0.89 at 10 C 0.99 0.99 at 10 C 0.99 0.99 at 10 C 0.90 0.90 at 10 C 0.90 0.90 0.90 0.90 at 10 C 0.90 0.90 0.90 0.90 0.90 at 10 C 0.90 0.90 0.90 0.90 0.90 0.90 at 10 C 0.90 0.90 0.90 0.90 0.90 0.90 0.90 at 10 C 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.90 0.9	inrush current peak	3 A
Induction of locked-rotor current 180 ms	duration of inrush current peak	30 µs
duration of locked-rotor current 180 ms holding current mean value 45 mA apparent pick-up power of magnet coil at AC e. at 50 Hz e. at 60 Hz 6.6 V-A 6.7 V-A e. at 60 Hz 0.98	locked-rotor current mean value	0.3 A
Abolding current mean value apparent pick-up power of magnet coil at AC e at 50 Hz e at 60 Hz e at	locked-rotor current peak	0.52 A
apparent pick-up power of magnet coil at AC	duration of locked-rotor current	180 ms
■ at 50 Hz ■ at 60 Hz inductive power factor with closing power of the coil ■ at 50 Hz ■ at 60 Hz ■ at 70 Hz ■	holding current mean value	45 mA
• at 60 Hz 6.7 V-A	apparent pick-up power of magnet coil at AC	
Inductive power factor with closing power of the coil e at 50 Hz 0.98 0	● at 50 Hz	6.6 V·A
	• at 60 Hz	6.7 V·A
■ apparent holding power of magnet coil at AC ■ at 50 Hz ■ at 60 Hz ■ at 60 Hz ■ at 60 Hz ■ at 50 Hz ■ at 50 Hz ■ at 60 Hz ■ at AC ■ at DC ■	inductive power factor with closing power of the coil	
apparent holding power of magnet coil at AC	● at 50 Hz	0.98
	• at 60 Hz	0.98
e at 60 Hz 2 V-A	apparent holding power of magnet coil at AC	
Inductive power factor with the holding power of the coil	● at 50 Hz	1.9 V·A
coil	• at 60 Hz	2 V·A
e at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC closing delay e at AC st DC opening delay e at AC at DC 30 50 ms arcing time 10 10 ms 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-15 e at 230 V rated value at 400 V rated value at 600 V rated value at 48 V rated value e at 40 V rated value e at 48 V rated value e at 410 V rated value e at 410 V rated value e at 48 V rated value e at 47 V rated value e at 48 V rated value e at 410 V rated value e 410 V rated value e 410 V rated value		0.86
holding power of magnet coil at DC 1.4 W closing delay at AC at DC opening delay at AC at DC at DC at DC 35 45 ms arcing time 10 10 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 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 10 A • at 230 V rated value 3 A • at 500 V rated value 2 A • at 690 V rated value 1 A operational current at DC-12 10 A • 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 110 V rated value 3 A • at 25 V rated value 6 A • at 110 V rated value 3 A • at 125 V rated value 3 A	• at 60 Hz	0.82
A bolding power of magnet coil at DC	closing power of magnet coil at DC	5.9 W
at AC		1.4 W
● at DC opening delay ● at AC ● at DC 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 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 48 V rated value ● at 60 V rated value ● at 60 V rated value ● at 60 V rated value ● at 110 V rated value ● at 110 V rated value ● at 110 V rated value ● at 125 V rated value		
opening delay • at AC • at DC 35 45 ms arcing time 10 10 ms 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 10 A 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 48 V rated value • at 60 V rated value • at 10 A • at 110 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value	• at AC	50 80 ms
 at AC at DC 35 45 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 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 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 60 V rated value at 10 A at 48 V rated value at 60 V rated value at 10 A at 110 V rated value at 110 V rated value at 110 V rated value at 112 V rated value 3 A at 125 V rated value at 125 V rated value 	• at DC	50 75 ms
■ at DC arcing time 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 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 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 60 V rated value • at 110 V rated value • at 125 V rated value	opening delay	
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 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 24 V rated value • at 48 V rated value • at 48 V rated value • at 60 V rated value • at 70 V rated value • at 80 V rated value • 3 A	• at AC	30 50 ms
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 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 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 110 V rated value • at 110 V rated value • at 125 V rated value • at 24 V rated value • at 125 V rated value	• at DC	35 45 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 24 V rated value • 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 110 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value	arcing time	10 10 ms
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 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 125 V rated value • at 125 V rated value 2 A	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-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 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value • at 60 V rated value • at 48 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 125 V rated value • 2 A	Auxiliary circuit	
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 24 V rated value • at 48 V rated value • at 60 V rated value • at 10 A • at 10 A operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 48 V rated value • at 10 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 24 V rated value • at 125 V rated value • at 125 V rated value • at 125 V rated value		1
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 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 125 V rated value • at 24 V rated value • 2 A	•	1
operational current at AC-15		10 A
 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value 1 A 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 125 V rated value 2 A 		
 at 400 V rated value at 500 V rated value at 690 V rated value 1 A 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 3 A at 125 V rated value 2 A 		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 125 V rated value 2 A 	• at 400 V rated value	3 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 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 125 V rated value 2 A 	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 2 A 	operational current at DC-12	
 at 60 V rated value at 110 V rated value at 125 V rated value 2 A 	at 24 V rated value	10 A
 at 110 V rated value at 125 V rated value 2 A 	at 48 V rated value	6 A
• at 125 V rated value 2 A	at 60 V rated value	6 A
	• at 110 V rated value	3 A
at 220 V rated value 1 A	• at 125 V rated value	2 A
- 5. 225 . (6.00 16.00	• at 220 V rated value	1 A
• at 600 V rated value 0.15 A	• 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	7.6 A
• at 600 V rated value	9 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 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 coordination in required with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
— with type of assignment 2 required	gg. 25A (690V, 100KA), alvi. 20A (690V, 100KA), B366. 25A (415V, 60KA)
• for short circuit protection of the cuvilians switch	aG: 10 A (500 V 1 kA)
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)
for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions	gG: 10 A (500 V, 1 kA)
required	+/-180° rotation possible on vertical mounting surface; can be tilted
required Installation/ mounting/ dimensions	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail
required Installation/ mounting/ dimensions mounting position fastening method	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm 10 mm 10 mm 10 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm 10 mm 10 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — upwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm 10 mm 10 mm 10 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side • at the side • at the side — at the side	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm 10 mm 10 mm 10 mm 10 mm 6 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards — at the side — downwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm 10 mm 10 mm 10 mm 10 mm 6 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards — at the side — forwards — at the side — forwards — at the side — for live parts	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side • for grounded parts — forwards — at the side — downwards — at the side — downwards • for live parts — forwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side • for grounded parts — forwards — at the side — downwards — at the side — downwards • for live parts — forwards — upwards • for live parts — forwards — upwards	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 107 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards • for live parts — forwards — upwards — upwards — downwards • for live parts — forwards — upwards — downwards — downwards — downwards — downwards — at the side — downwards — upwards — downwards — at the side	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side • for live parts — forwards — upwards — downwards — at the side — downwards — upwards — at the side — downwards — at the side Connections/ Terminals	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm
required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting height width depth required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side • for grounded parts — forwards — upwards — at the side — downwards • for live parts — forwards — upwards — upwards — downwards • for live parts — forwards — upwards — downwards — downwards — downwards — downwards — at the side — downwards — upwards — downwards — at the side	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 Yes 85 mm 45 mm 10 mm

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
type of connectable conductor cross-sections	Sciew-type terminals
for main contacts	
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid — 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	
connectable conductor cross-section for main	2x (16 12), 2x (14 8)
contacts	
• solid	1 10 mm²
• stranded	1 10 mm ²
finely stranded with core end processing	1 10 mm²
connectable conductor cross-section for auxiliary contacts	
 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)
 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 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
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	
General Product Approval	EMC

General Product Approval









<u>KC</u>





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













other



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=3RT2023-1NB30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-1NB30

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1NB30

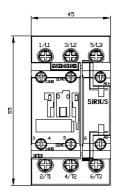
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

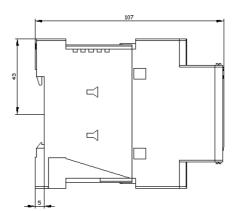
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2023-1NB30&lang=en

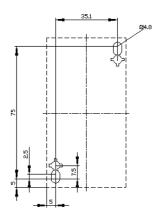
Characteristic: Tripping characteristics, I2t, Let-through current

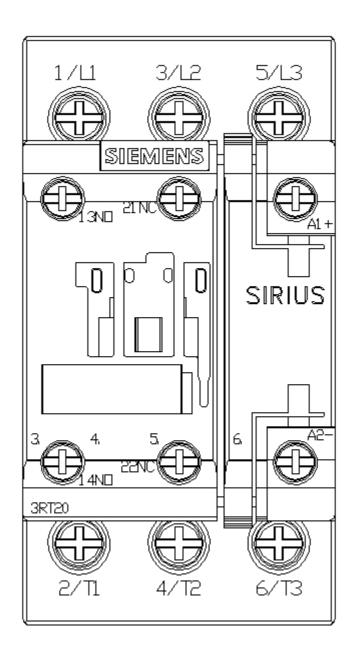
https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1NB30/char

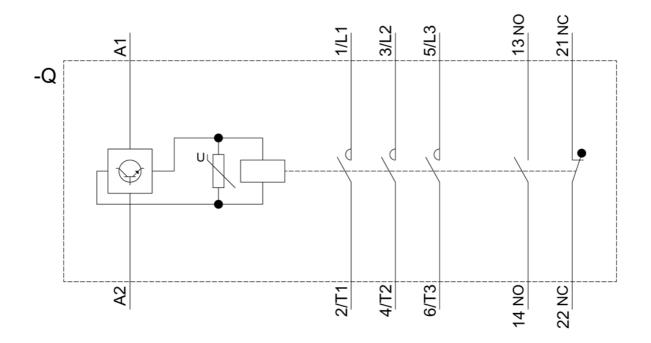
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2023-1NB30&objecttype=14&gridview=view1











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