SIEMENS

Data sheet 3RT2023-1AM20



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 208 V AC, 50 / 60 Hz, auxiliary contacts: 1 NO + 1 NC, 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 	7.9 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated 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 (operating 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	2
number of poles for main current circuit number of NO contacts for main contacts	3 3
operating voltage	3
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	000 V
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 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 	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 mm²
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	1.4.0
— at 600 V rated value	1.4 A
• at 1 current path at DC-3 at DC-5	00.4
— at 24 V rated value	20 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 24 V rated value — at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 440 V rated value — at 600 V rated value	0.16 A
with 3 current paths in series at DC-3 at DC-5	0.10 A
— 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
• at AC-3e	
— 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	O IAM
at 400 V rated value at 600 V rated value	2 kW
at 690 V rated value	2.5 kW
operating apparent power at AC-6aup 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	10.7 KV/K
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 690 V for current peak value n=30 rated value	7.2 kVA
short-time withstand current in cold operating state	
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	140 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum	104 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	88 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	5 000 4 lb
• at AC	5 000 1/h
operating frequency	1,000,1/b
at AC-1 maximumat AC-2 maximum	1 000 1/h
	1 000 1/h 1 000 1/h
at AC-3 maximumat AC-3e maximum	1 000 1/h 1 000 1/h
at AC-3e maximum at AC-4 maximum	300 1/h
	000 1/11
Control circuit/ Control	10
type of voltage of the control supply voltage	AC
control supply voltage at AC	200 1/
at 50 Hz rated value at 60 Hz rated value	208 V
at 60 Hz rated value	208 V

and the second s	
operating range factor control supply voltage rated	
value of magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	68 VA
● at 60 Hz	67 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.72
● at 60 Hz	0.74
apparent holding power of magnet coil at AC	
● at 50 Hz	7.9 VA
● at 60 Hz	6.5 VA
inductive power factor with the holding power of the	
coil	
● at 50 Hz	0.25
● at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
	Standard AT - AZ
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
•	10 A
operational current at AC-15	10.4
• 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 	1 A
at 600 V rated value	0.15 A
operational current at DC-13	
operational current at DO-10	
• at 24 V rated value	10 A
·	10 A 2 A
at 24 V rated value	
at 24 V rated valueat 48 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 	2 A 2 A 1 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 2 A 1 A 0.9 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 	2 A 2 A 1 A 0.9 A 0.3 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 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 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 	2 A 2 A 1 A 0.9 A 0.3 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 600 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 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 600 V rated value tontact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
 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 contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
 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 600 V rated value at 600 V rated value Contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
 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 600 V rated value Contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 600 V rated value yielded mechanical performance [hp]	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
 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 600 V rated value at 600 V rated value Contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
 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 600 V rated value Contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 600 V rated value yielded mechanical performance [hp]	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
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 600 V rated value at 600 V rated value contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for single-phase AC motor	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A 9 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 600 V rated value contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for 3-phase AC motor at 600 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A 9 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 600 V rated value contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for single-phase AC motor at 110/120 V rated value at 230 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A 9 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 contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A 9 A 1 hp 1 hp
 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 contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 200/208 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A 9 A 1 hp 1 hp 2 hp 3 hp
 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 contact reliability of auxiliary contacts UL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value 	2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA) 7.6 A 9 A 1 hp 1 hp 2 hp

decisjon of the five link • for short-circult protection of the main circuit — with type of assignment 2 required • for short-circult protection of the auxiliary switch required — with type of assignment 2 required • for short-circult protection of the auxiliary switch required — with type of assignment 2 required • for short-circult protection of the auxiliary switch required specified of the auxiliary switch required specified specif	contact rating of auxiliary contacts according to UL	A600 / P600
• for short-direction of the main circuit with type of assignment 2 required with type of assignment 2 required with type of assignment 2 required for short-direction protection of the auxiliary switch required with type of assignment 2 required for short-direction protection of the auxiliary switch required and according to the formation of the auxiliary switch required and according to the formation of the auxiliary switch required assignment of the auxiliary switch assignmen	Short-circuit protection	
with type of assignment 12 required	design of the fuse link	
with type of assignment 2 required for short-directival protection of the auxiliary switch required staliation mounting/ dimensions mounting position fastening method sole-by-side mounting full side-by-side mounting with depth side-by-side mounting with side-by-side mo		
• for short-circuit protection of the auxiliary switch required mounting dimensions ***stallation** mounting dimensions** **mounting position** **side-by-side mounting** **side-by-side mounting surface screw-by-side screw-by-side mounting surface screw-by-side screw-by-side screw-by-side screw-by-side screw-by-side screw-by-side screw-by-side screw-by-side screw-by-side		
required sizellation mounting idmensions mounting position	 — with type of assignment 2 required 	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
mounting position fastening method side-by-side mounting height side-by-side mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled forward and backward by +/-22.5 or overtical mounting surface; can be titled formation on the soft manual part and surface and su		gG: 10 A (500 V, 1 kA)
	·	
forward and backward by ***.2.5° on vertical mounting surface side-by-side mounting helght width depth 97 mm required spacing - with side-by-side mounting - forwards - quowards - quowards - at the side - for grounded parts - forwards - quowards - at the side - for grounded parts - forwards - quowards - the side - for grounded parts - forwards - quowards - the side - for grounded parts - forwards - the side - for grounded parts - for words - the side - for grounded parts - for words - the side - downwards - the side - for man current circuit sorew-type terminals sorew-type terminals - for auxiliary and control circuit - a tontactor for auxiliary contacts - for side or stranded - finely stranded with core end processing - at AWG cables for main contacts - solid or stranded - finely stranded with core end processing - for auxiliary contacts -		
Solid-by-side mounting Yes	mounting position	forward and backward by +/- 22.5° on vertical mounting surface
Meditable	fastening method	
width depth 45 mm depth 97 mm required spacing * with side-by-side mounting - forwards 10 mm - upwards 10 mm - downwards 10 mm - for grounded parts * or grounded parts - for verards 10 mm - at the side 6 mm - downwards 10 mm • for live parts * or man upwards - forwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - for wards 10 mm - downwards 10 mm - downwards 10 mm - for man current circuit screw-type terminals * for manilary and control circuit screw-type terminals * of magnet coil screw-type terminals * to magnet coil screw-type terminals * of main contacts <td> side-by-side mounting </td> <td>Yes</td>	 side-by-side mounting 	Yes
depth vertical pacing ve	height	85 mm
with side-by-side mounting	width	45 mm
with side-by-side mounting	depth	97 mm
forwards upwards upwards downwards 10 mm 10 mm	required spacing	
- upwards - downwards - at the side • for grounded parts - forwards - upwards - upwards - at the side - downwards - downwards - downwards - downwards - downwards - forive parts - forwards - forwards - downwards - downwards - downwards - downwards - downwards - downwards - at the side - downwards - downwards - downwards - at the side - downwards - downwards - downwards - downwards - at the side - downwards	with side-by-side mounting	
- downwards - at the side		10 mm
downwards at the side or mm • for grounded parts (prowards or wards or		10 mm
● for grounded parts - forwards - upwards - upwards - at the side - downwards • for live parts - forwards - upwards - forwards - upwards - forwards - upwards - upwards - downwards - upwards - at the side - downwards - upwards - downwards - upwards - at the side - formain correct icrouit • for auxiliary and control circuit • for auxiliary and control circuit • for auxiliary and control circuit • for main contacts - solid - solid - solid or stranded • finely stranded with core end processing • at AWG cables for for auxiliary contacts - solid or stranded • finely stranded with core end processing • at AWG cables for for auxiliary contacts - solid or stranded • finely stranded with core end processing • at AWG cables for for auxiliary contacts - solid or stranded • finely stranded with core end processing • at AWG cables for for auxiliary contacts - solid or stranded • finely stranded with core end processing • at AWG cables for for auxiliary contacts - solid or stranded • finely stranded with core end processing • at AWG cables for for auxiliary contacts - solid or stranded • finely stranded with core end processing • at AWG cables for for auxiliary contacts - solid or stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or st	•	10 mm
• for grounded parts - forwards - upwards - at the side - downwards - forwards - upwards - downwards - downwards - downwards - at the side - formain current circuit - for main current circuit - for auxillary and control circuit - solid - solid or stranded - finely stranded with core end processing - solid - stranded - finely stranded with core end processing - solid - solid - stranded - finely stranded with core end processing - solid - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded		
forwards		
- upwards - at the side - downwards • for live parts - forwards - upwards - downwards - upwards - downwards - downwards - at the side - for main current circuit • for main current circuit • for main current circuit • at contactor for auxiliary and control circuit • at contactor for auxiliary contacts • for main contacts - solid - solid or stranded - finely stranded with core end processing • solid • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • forlow stranded • finely stranded with core end processing • solid 1 10 mm² • solid or stranded • finely stranded with core end processing • for usxiliary contacts • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxiliary contacts - for auxilia		10 mm
- at the side		
• for live parts - forwards - upwards - upwards - downwards - at the side - for main current circuit • for main contacts • for main contacts - solid - solid or stranded - finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for main contacts - for main contacts - for main contacts - for main contacts - for main contacts - for main contacts - for main contacts - for main contacts - for main contacts - for main contacts - for main contacts - for auxiliary contacts - for main contacts - for auxiliary contacts -	•	
• for live parts - forwards - upwards - downwards - downwards - at the side Connections/ Torminals type of electrical connection • for main current circuit • for auxiliary and control circuit • for famin contacts • of magnet coil type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-sections • for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-sections • for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-sections • for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-sections • for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-sections • for auxiliary contacts • for auxiliary contacts AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts AWG number as coded connectable conductor cross-section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts		
forwards upwards upwards downwards at the side downwards		10 111111
- upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • at contactor for auxiliary and control circuit • at contactor for auxiliary contacts • of majnet coil type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for for auxiliary contacts - solid or stranded - finely stranded with core end processing • for multiple conductor cross-sections • for multiple conductor cross-sections • for multiple conductor cross-sections • for multiple conductor conductor cross-sections • for mu	•	10 mm
- downwards — at the side 6 mm Connections/ Terminals type of electrical connection • for main current circuit screw-type terminals • for nawiliary and control circuit screw-type terminals • at contactor for auxiliary contacts of magnet coil screw-type terminals • for main contacts • solid 2x (1 2.5 mm²), 2x (2.5 10 mm²) - at AWG cables for main contacts • solid 1 10 mm² • stranded 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 10 mm² 1 10 mm² 1 10 mm² 1 10 mm² • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded 0.5 2.5 mm² • for auxiliary contacts - solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 1.5 mm²), 2x (0.75 2.5 mm²)		
Type of electrical connection of or main current circuit of rauxiliary and control circuit screw-type terminals of main contacts of main contacts - solid - solid or stranded of inely stranded with core end processing of inely stranded with core end processing of inely stranded with core end processing of onnectable conductor cross-sections of or auxiliary contacts AWG cables for auxiliary contacts osolid of stranded of inely stranded with core end processing other of connectable conductor cross-sections of or auxiliary contacts AWG cables for auxiliary contacts osolid or stranded of inely stranded with core end processing other of connectable conductor cross-sections of or auxiliary contacts AWG cables for auxiliary contacts AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-section of or main contacts of or main contacts of or main contacts of or auxiliary contacts 16 8 of or auxiliary contacts 16 8 of or auxiliary contacts 16 8 of or auxiliary contacts	•	
type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of majnet coil type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts • solid or stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts • for main contacts • for main contacts • for auxiliary contacts • for main contacts • for main contacts • for auxiliary contacts • for main contacts • for auxiliary contacts • for main contacts • for main contacts • for auxiliary contacts • for main contacts • for main contacts • for		
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of magnet coil type of connectable conductor cross-sections	,	· · · · · · · · · · · · · · · · · · ·
type of connectable conductor cross-sections	•	
 • for main contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts • solid • at AWG cables for main contacts • solid • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • solid or stranded with core end processing • solid or stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts • solid or stranded • for auxiliary contacts • solid or stranded • for auxiliary contacts • solid or stranded with core end processing • for auxiliary contacts • solid or stranded with core end processing • for auxiliary contacts • for auxiliary contacts • at AWG cables for auxiliary contacts AWG number as coded connectable conductor crosssection • for main contacts • for main contacts • for auxiliary contacts • for auxiliary contacts 	_	Screw-type terminals
- solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts • solid • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded • finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor crosssection • for main contacts • for auxiliary contacts - for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - for auxiliary contacts		
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connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 20 14	stranded	1 10 mm²
connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 16 8 • for auxiliary contacts 20 14	 finely stranded with core end processing 	1 10 mm²
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AWG number as coded connectable conductor cross section • for main contacts • for auxiliary contacts 20 14		
 • for main contacts • for auxiliary contacts 16 8 20 14 	AWG number as coded connectable conductor cross	2A (20 10), 2A (10 14)
• for auxiliary contacts 20 14	0000011	
·	for main contacts	16 8

product function

mirror contact according to IEC 60947-4-1

B10 value with high demand rate according to SN 31920 proportion of dangerous failures

with low demand rate according to SN 31920

• with high demand rate according to SN 31920

failure rate [FIT] with low demand rate according to SN 31920

T1 value for proof test interval or service life according to IEC 61508

protection class IP on the front according to IEC 60529

touch protection on the front according to IEC 60529 suitability for use

· safety-related switching OFF

Yes

450 000

40 %

73 % 100 FIT

20 a

IP20

finger-safe, for vertical contact from the front

Yes

Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



EMC

Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













other

Railway

Confirmation



Vibration and Shock

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=3RT2023-1AM20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-1AM20

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1AM20

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

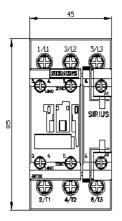
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2023-1AM20&lang=en

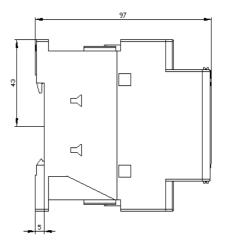
 $Characteristic: Tripping\ characteristics,\ l^2t,\ Let\text{-through}\ current$

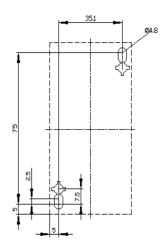
https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1AM20/char

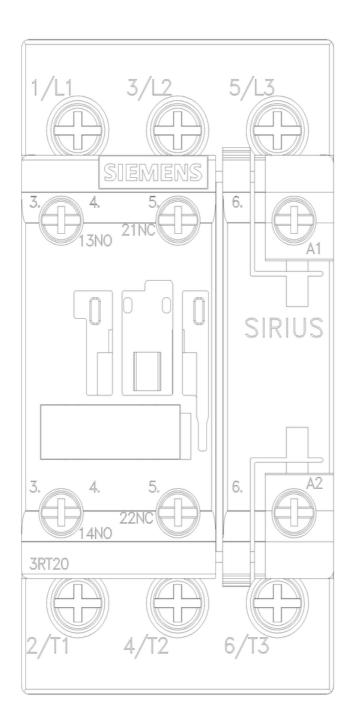
Further characteristics (e.g. electrical endurance, switching frequency)

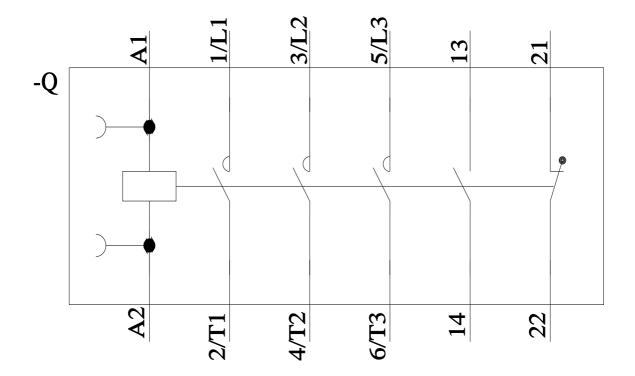
 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RT2023-1AM20\&objecttype=14\&gridview=view1}$











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