SIEMENS

Data sheet

3RT2028-1AV00-0JA0



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 400 V AC, 50 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0, India 40 A, Tu max. 50 $^\circ\text{C}$

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	9.6 W
 at AC in hot operating state per pole 	3.2 W
 without load current share typical 	2.5 W
type of calculation of power loss depending on pole	quadratic
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 protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	8,3g / 5 ms, 5,3g / 10 ms
shock resistance with sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 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)	
Weight	0.42 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-25 +50 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %

lain 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 	50 A	
• at AC-1		
— up to 690 V at ambient temperature 40 °C rated value	50 A	
— up to 690 V at ambient temperature 60 °C rated value	42 A	
• at AC-3		
— at 400 V rated value	38 A	
— at 500 V rated value	32 A	
— at 690 V rated value	21 A	
• at AC-3e		
— at 400 V rated value	38 A	
— at 500 V rated value	32 A	
— at 690 V rated value	21 A	
• at AC-4 at 400 V rated value	22 A	
 at AC-5a up to 690 V rated value 	44 A	
• at AC-5b up to 400 V rated value	31.5 A	
• at AC-6a		
— up to 230 V for current peak value n=20 rated value	30.8 A	
— up to 400 V for current peak value n=20 rated value	30.8 A	
— up to 500 V for current peak value n=20 rated value	30.8 A	
— up to 690 V for current peak value n=20 rated value	21 A	
• at AC-6a		
— up to 230 V for current peak value n=30 rated value	20.5 A	
— up to 400 V for current peak value n=30 rated value	20.5 A	
— up to 500 V for current peak value n=30 rated value	21.4 A	
— up to 690 V for current peak value n=30 rated value	21 A	
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²	
operational current for approx. 200000 operating cycles at AC-4		
• at 400 V rated value	12 A	
• at 690 V rated value	12 A	
operational current		
 at 1 current path at DC-1 		
— at 24 V rated value	35 A	
— at 60 V rated value	20 A	
— at 110 V rated value	4.5 A	
— at 220 V rated value	1 A	
— at 440 V rated value	0.4 A	
— at 600 V rated value	0.25 A	
 with 2 current paths in series at DC-1 		
— at 24 V rated value	35 A	
— at 60 V rated value	35 A	
— at 110 V rated value	35 A	
— at 220 V rated value	5 A	
— at 440 V rated value	1 A	
— at 600 V rated value	0.8 A	
 with 3 current paths in series at DC-1 		
•		
— at 24 V rated value	35 A	
-	35 A 35 A	
— at 24 V rated value		
— at 24 V rated value — at 60 V rated value	35 A	

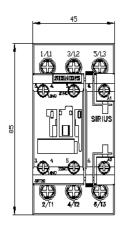
— at 600 V rated value	1.4 A
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
• at AC-2 at 400 V rated value	18.5 kW
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
• at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles at AC- 4	
at 400 V rated value	6 kW
at 690 V rated value	10.3 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	12.2 kVA
• up to 400 V for current peak value n=20 rated value	21.3 kVA
• up to 500 V for current peak value n=20 rated value	26.6 kVA
• up to 690 V for current peak value n=20 rated value	25 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	8.1 kVA
• up to 400 V for current peak value n=30 rated value	14.2 kVA
• up to 500 V for current peak value n=30 rated value	18.5 kVA
• up to 690 V for current peak value n=30 rated value	25 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	341 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	260 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	199 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	162 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
● at AC-1 maximum	1 000 1/h
● at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
 at AC-3e maximum 	750 1/h

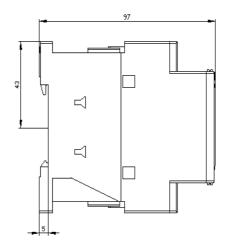
• at AC-4 maximum	250 1/h
Control circuit/ Control	
	10
type of voltage of the control supply voltage	AC
control supply voltage at AC	100.1/
at 50 Hz rated value	400 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	77 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.82
apparent holding power of magnet coil at AC	
• at 50 Hz	9.8 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
closing delay	0.20
• 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
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous	1
contact	'
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
• at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 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	34 A
• at 600 V rated value	27 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	10 hp
— at 220/230 V rated value	10 hp

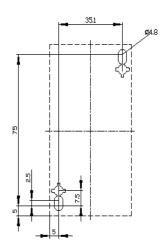
at 575/600 V rated value 25 hp contact rating of auxiliary contacts according to UL A600 / P600 Short-circuit protection	— at 460/480 V rated value	25 hp
contact rating of auxiliary contacts according to UL A600 / P600 Short-chrout protection of the main circuit		
Short-circuit protection design of the fues link - with type of coordination of the main circuit - with type of coordination is required - with type of coordination is required - with type of coordination is required for short-circuit protection of the auxiliary switch required for short-circuit protection of the auxiliary switch required fastening method fastening method fastening method - with ade-by-side mounting outfores can be titled floward by the safet mounting surface can be titled floward by the safet mounting onto 35 nm DIN rail according to DIN EN 60 height with ade-by-side mounting - forwards 10 mm - downwards 10 mm - of mailing curine loricuit screw-type terminals <td></td> <td>· ·</td>		· ·
design of the fuse link • for short-circul protection of the main circuit - with type of coordination 1 required of short-circul protection of the auxiliary switch required mounting position ************************************		
for short dicult protection of the main iccuit		
- with type of assignment 2 required with type of assignment 2 required if a short-carl protection of the auxiliary witch required so (4150, 4000, 1000A), aM: 20A (6900, 1000A), BSB8: 50A (415V, 80A) gS: 10A (6900, 1000A), aM: 20A (6900, 1000A), BSB8: 50A (415V, 80A) if attaining position witch appendix and appendix appendix and appendix app	0	
- with type of assignment 2 required g3: 50A (800V, 100A), abt. 25A (690V, 100A), BS88. 50A (415V, 80A) g2: 10 A (600 V, 1 IA) Treatment of means and the auxiliary switch required g3: 10 A (600 V, 1 IA) Treatment of means and the auxiliary switch required the advectory of 22 C or vertical amounting surface: can be tilted forward balght width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsmm width dsm	-	gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)
Installation/ mounting dimensions -4/-180° rotation possible on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backward by -1/-22 5° on vertical mounting surface, can be titled forware backware by -1/-22 5° on vertical mounting surface, can be titled forware backware by -1/-22 5° on vertical mounting surface, can be titled forware backware by -1/-22 5° on vertical mounting surface, can be titled forware backware by -1/-22 5° on vertical mounting surface, can be titled forware backware by -1/-22 5° on vertical mounting surface, can be titled forware backware by -1/-22 5° on main can be -100° mm -100° mm		
backward by +/-22.5' on vertical mounting surface fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60 height 65 mm with 45 mm depth 97 mm required spacing 97 mm • with add-by-side mounting - - (pwards 10 mm - upwards 10 mm - downwards 10 mm - of main current circuit </td <td></td> <td></td>		
fastening methodscrew and snap-on mounting onto 35 mm DIN rail according to DIN EN 60height85 mmdepth97 mmrequired spacing97 mm- forwards10 mm- upwards10 mm- downwards10 mm- onnectloar/ toricuitscrew-type terminalsstrate-collscrew-type terminalsstrate-collconnectloar• for auxilary and control circuitscrew-type terminals• of anget collScrew-type terminals• of anget collScrew-type terminals• for auxilary and control circuitscrew-type t	mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
height 85 mm width 45 mm depth 97 mm required spacing 97 mm • with side-by-side mounting 10 mm - gowwards 10 mm - gowwards 10 mm - dowwards 10 mm - dowrwards 10 mm <td></td> <td>, , , , , , , , , , , , , , , , , , ,</td>		, , , , , , , , , , , , , , , , , , ,
width 45 mm dopth 97 mm required spacing 97 mm - forwards 10 mm - upwards 10 mm - downwards 10 mm - upwards 10 mm - downwards 10 mm - upwards 10 mm - downwards 10 mm - of or auxiliary and control circuit screw-type terminals tor auxiliary and control circuit screw-type terminals for auxiliary cont		screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
depth 97 mm required spacing 97 mm • with side-by-side mounting 10 mm - upwards 10 mm - upwards 10 mm - upwards 10 mm - dorwards 10 mm - at the side 0 mm - forwards 10 mm - at the side 0 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm - of main curent		
required spacing • with side-by-side mounting forwards 10 mm upwards 10 mm downwards 10 mm forwards 10 mm downwards 10 mm downwards 10 mm forwards 10 mm forwards 10 mm downwards 10 m		
• with side-by-side mounting 10 mm - forwards 10 mm - downwards 10 mm - downwards 10 mm - at the side 0 mm - forwards 10 mm - at the side 0 mm - upwards 10 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm	•	97 IIIII
forwards10 mm upwards00 mm downwards00 mm at the side0 mm for wards10 mm forwards10 mm upwards10 mm upwards10 mm at the side6 mm downwards10 mm downwardsScrew-type terminals for auxiliary contactsScrew-type terminals of main contacts2x (1 25 mm ²), 2x (25 10 mm ²) solid2x (1 25 mm ²), 2x (25 10 mm ²) solid2x (1 25 mm ²), 2x (25 10 mm ²) solid1 10 mm ² solid1 10 mm ² finely stranded with core end processing2x (1 25 mm ²), 2		
		10 mm
downwards 10 mm at the side 0 mm • for grounded parts 10 mm powards 10 mm upwards 10 mm at the side 6 mm downwards 10 mm downwards 50 mm at the side 6 mm oontectable conductor cross-sections 5 crew-type terminals solid 2x (1 2.5 mm ²), 2x (2.5 10 mm ²) <		
at the side 0 mm • for grounded parts forwards forwards 10 mm upwards 10 mm at the side 6 mm downwards 10 mm downwards 10 mm downwards 10 mm forwards 10 mm downwards 10 mm at the side 6 mm Connections 5 crew-type terminals • for main current circuit screw-type terminals • of magnet coll 2 crew-type terminals type of connectable conductor cross-sections 5 crew-type terminals • of or auxiliary and contol circuit screw-type terminals • of or auxiliary contacts 2 cr (1 25 mm ²), 2 x (2 5 10 mm ²) • olid 1 10 mm ² • for MWG cables for main contacts 2 cr (1 25 mm ²	•	
• for grounded parts - forwards 10 mm - upwards 10 mm - upwards 6 mm - downwards 10 mm - downwards 10 mm - forwards 10 mm - forwards 10 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 6 mm - downwards 10 mm - downwards 6 mm - downwards 5 mm - at the side 6 mm - at the side 6 mm • for auxillary and control circuit screw-type terminals • for main contracts 5 crew-type terminals • for auxillary contacts Screw-type terminals • for auxillary contacts Screw-type terminals • for auxillary contacts 2 x (1 25 mm?), 2x (2.5 10 mm?) - nolid <		
- forwards 10 mm - upwards 10 mm - at the side 6 mm - downwards 10 mm • for live parts 10 mm - forwards 10 mm - upwards 10 mm - downwards 10 mm - upwards 10 mm - downwards 10 mm - domneations// Terminals 10 mm Connections// Terminals 6 mm Connections// Terminals 5 crew-type terminals of maginget coil Screw-type terminals of maginget coil Screw-type terminals • of rausiliary and control circuit screw-type terminals • of main contacts 2x (1 25 mm²), 2x (2.5 10 mm²) • of adjonest conductor cross-sections 5 connectable conductor cross-sections • for Alvi Cables for main contacts 2x (1 25 mm²), 2x (2.5 10 mm²) - solid 2x (1 25 mm²), 2x (2.5 10 mm²) - solid or stranded 1 10 mm² • of advitor cross-section for main contacts 2x (1 25 mm²), 2x (2.5 6 mm²), 1x 10 mm² • solid or stranded 1 10 mm² • of a auxiliary contacts 2x (1 2		
upwards10 mm at the side6 mm downwards10 mmof like parts10 mm forwards10 mm upwards10 mm upwards10 mm downwards6 mm at the side6 mmConnections/TerminalsVery of electrical connectionof main current circuitscrew-type terminalsof nami current circuitscrew-type terminalsof nami current circuitscrew-type terminalsof or auxiliary contactsScrew-type terminalsof mapie coil2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid1 10 mm²- finely stranded with core end processing1 10 mm²- solid or stranded1 10 mm²- solid or stranded1 10 mm²- finely stranded with core end processing1 10 mm²- solid or stranded1 10 mm²- finely stranded with core end processing0.5 2.5 mm²)- solid or stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)<		10 mm
downwards10 mm• for live parts10 mm forwards10 mm upwards10 mm downwards10 mm downwards10 mm at the side6 mmConnectionstype of electrical connection• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of main contractsScrew-type terminals• of main contactsScrew-type terminals• of auxiliary contactsScrew-type terminals• of auxiliary contactsScrew-type terminals• of main contactsScrew-type terminals• of auxiliary contactsScrew-type terminals• of AWG cables for main contactsZx (1 2.5 mm²), 2x (2.5 10 mm²)• of AWG cables for main contactsZx (1 2.5 mm²), 2x (2.5 10 mm²)• of auxiliary contactsI 10 mm²• of auxiliary contactsScrew-type terminals• solid or stranded0.5 2.5 mm²• solid or strandedScrew-type terminals• for auxiliary contactsScrew-type terminals• for auxiliary contacts <td></td> <td></td>		
• for live parts I0 mm - forwards 10 mm - upwards 10 mm - downwards 0 mm - at the side 6 mm Connections/ Terminals type of electrical connection • for auxiliary and control circuit screw-type terminals • of rauxiliary and control circuit screw-type terminals • at contactor for auxiliary contacts Screw-type terminals • of magnet coil Screw-type terminals • of main contacts - solid - solid or stranded 2x (1 2.5 mm³), 2x (2.5 10 mm³) - solid or stranded 2x (1 2.5 mm³), 2x (2.5 10 mm³) - solid or stranded 2x (1 2.5 mm³), 2x (2.5 10 mm³) - solid or stranded 2x (1 2.5 mm³), 2x (2.5 10 mm³) - solid or stranded 2x (1 2.5 mm³), 2x (2.5 10 mm³) - solid or stranded 2x (1 2.5 mm³), 2x (2.5 10 mm³) - solid or stranded 1 10 mm² • solid or stranded 1 10 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm² • finely stranded with core end processing 0.5		
forwards10 mm upwards10 mm downwards10 mm at the side6 mm at the side6 mmconnection[Streminals]type of electrical connection• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of magnet coilScrew-type terminals• of main contactsScrew-type terminals• of main contactsScrew-type terminals• of main contactsScrew-type terminals• for avxiliary and control circuitScrew-type terminals• of main contactsScrew-type terminals• for anin contactsScrew-type terminals• for awarded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)• for AWG cables for main contacts2x (16 12), 2x (14 8)connectable conductor cross-section for main contacts2x (1 2.5 mm²), 2x (2.5 10 mm²)• solid or stranded1 10 mm²• finely stranded with core end processing1 10 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• for awardedyex (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
- downwards 10 mm - at the side 6 mm Connections/ Terminals type of electrical connection • 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 - 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 10 mm²) - finely stranded with core end processing 2x (1 2.5 mm²), 2x (2.5 10 mm²) • solid 1 10 mm² • solid 1 10 mm² • stranded 1 10 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm²), 2x (0.75 2.5 mm²) • finely stranded with core end processing 1 10 mm² • finely stranded with core end processing 2 2.5 mm² • finely stranded with core end processing 0.5 2.5 mm² • finely stranded with core end processin		10 mm
at the side 6 mm Connections/ Terminals type of electrical connection • for main current circuit screw-type terminals • at contactor for auxiliary contacts Screw-type terminals • of magnet coil Screw-type terminals type of connectable conductor cross-sections Screw-type terminals • for main contacts Screw-type terminals - solid 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) • for AWG cables for main contacts 2x (1 2.5 mm²), 2x (2.5 10 mm²) • solid 1 10 mm² • solid 1 10 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm² • for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • for auxiliary contacts 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) • for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) <t< td=""><td>— upwards</td><td>10 mm</td></t<>	— upwards	10 mm
Connections/ Terminals type of electrical connection • for main current circuit screw-type terminals • at contactor for auxiliary contacts 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 - solid 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 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 10 mm²) - solid or stranded 1 10 mm² • solid 1 10 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm²) • solid or stranded 0.5 2.5 mm²) • finely stranded with core end processing 0.5 2.5 mm²) • for auxiliary contacts 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	— downwards	10 mm
type of electrical connection for main current circuit for auxiliary and control circuit screw-type terminals at contactor for auxiliary contacts of magnet coli screw-type terminals • of magnet coli Screw-type terminals type of connectable conductor cross-sections of main contacts solid solid or stranded for AWG cables for main contacts solid they stranded with core end processing a solid they stranded they stranded with core end processing solid they stranded with core end processing they stranded they stranded with core end processing they stranded with co	— at the side	6 mm
• for main current 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 Screw-type terminals • for main contacts Screw-type terminals - solid Screw-type terminals - solid or stranded 2x (1 2.5 mm ²), 2x (2.5 10 mm ²) - solid or stranded 2x (1 2.5 mm ²), 2x (2.5 10 mm ²) - finely stranded with core end processing 2x (1 2.5 mm ²), 2x (2.5 6 mm ²), 1x 10 mm ² • for AWG cables for main contacts 2x (1 2.5 mm ²), 2x (2.5 6 mm ²), 1x 10 mm ² • solid 1 10 mm ² • stranded 1 10 mm ² • stranded 1 10 mm ² • finely stranded with core end processing 1 10 mm ² • solid or stranded 0.5 2.5 mm ² • for auxiliary contacts 2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²) • for auxiliary contacts 2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²) • ofinely stranded with core end processing 2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²) • finely stranded w	Connections/ Terminals	
 for auxiliary and control circuit screw-type terminals at contactor for auxiliary contacts of magnet coil Screw-type terminals for main contacts solid a solid or stranded for AWG cables for main contacts a solid for AWG cables for auxiliary contacts a solid timely stranded with core end processing finely stranded finely stranded finely stranded finely stranded finely stranded finely stranded with core end processing finely stranded finely stranded for auxiliary contacts solid or stranded for auxiliary contacts a solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) finely stranded with core end processing for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) 	type of electrical connection	
• at contactor for auxiliary contacts Screw-type terminals • of magnet coil Screw-type terminals type of connectable conductor cross-sections - • for main contacts 2x (1 2.5 mm²), 2x (2.5 10 mm²) - solid or stranded 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 • for AWG cables for main contacts 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² • solid 1 10 mm² • finely stranded with core end processing 2x (1 2.5 mm²) • solid 1 10 mm² • stranded 1 10 mm² • finely stranded with core end processing 1 10 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm² • solid or stranded 0.5 2.5 mm² • finely stranded with core end processing 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) • finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • finely stranded with core e	for main current circuit	screw-type terminals
• of magnet coilScrew-type terminalstype of connectable conductor cross-sections-• for main contacts solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• for AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• solid1 10 mm²• solid1 10 mm²• stranded1 10 mm²• finely stranded with core end processing1 10 mm²• solid or stranded0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• for auxiliary contacts-• solid or stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5	 for auxiliary and control circuit 	screw-type terminals
type of connectable conductor cross-sections• for main contacts- solid- solid or stranded- solid or stranded- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• for AWG cables for main contacts• solid1 10 mm²• solid• stranded• stranded• finely stranded with core end processing1 10 mm²• finely stranded with core end processing1 10 mm²• solid or stranded0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• for auxiliary contacts• for auxiliary contacts- solid or stranded- solid or stranded- solid or stranded- solid or stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)	 at contactor for auxiliary contacts 	Screw-type terminals
 for main contacts solid solid or stranded solid or stranded with core end processing for AWG cables for main contacts for AWG cables for main contacts solid for AWG cables for main contacts solid solid solid solid solid solid solid or stranded solid solid or stranded <li< td=""><td>of magnet coil</td><td>Screw-type terminals</td></li<>	of magnet coil	Screw-type terminals
solid2x (1 2.5 mm²), 2x (2.5 10 mm²) solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²) finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• for AWG cables for main contacts2x (1 6 12), 2x (14 8)connectable conductor cross-section for main contacts1 10 mm²• solid1 10 mm²• stranded1 10 mm²• finely stranded with core end processing1 10 mm²connectable conductor cross-section for auxiliary contacts5 2.5 mm²• solid or stranded0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross2x (20 16), 2x (18 14)	type of connectable conductor cross-sections	
solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²) finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• for AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• solid2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• solid1 10 mm²• stranded1 10 mm²• finely stranded with core end processing1 10 mm²• finely stranded with core end processing1 10 mm²• solid or stranded0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• solid or stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for auxiliary contacts2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross2x (20 16), 2x (18 14)	for main contacts	
finely stranded with core end processing $2x (1 2.5 mm^2), 2x (2.5 6 mm^2), 1x 10 mm^2$ • for AWG cables for main contacts $2x (16 12), 2x (14 8)$ connectable conductor cross-section for main contacts $1 10 mm^2$ • solid $1 10 mm^2$ • stranded $1 10 mm^2$ • finely stranded with core end processing $1 10 mm^2$ connectable conductor cross-section for auxiliary contacts $0.5 2.5 mm^2$ • solid or stranded $0.5 2.5 mm^2$ • finely stranded with core end processing $0.5 2.5 mm^2$ • for auxiliary contacts $0.5 2.5 mm^2$ • for auxiliary contacts $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ - solid or stranded $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for AWG cables for auxiliary contacts $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for AWG cables for auxiliary contacts $2x (20 16), 2x (18 14)$		
• for AWG cables for main contacts2x (16 12), 2x (14 8)connectable conductor cross-section for main contacts1 10 mm²• solid1 10 mm²• stranded1 10 mm²• finely stranded with core end processing1 10 mm²connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• for auxiliary contacts0.5 2.5 mm²• for auxiliary contacts2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross2x (20 16), 2x (18 14)		
connectable conductor cross-section for main contacts• solid1 10 mm²• stranded1 10 mm²• finely stranded with core end processing1 10 mm²connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• for auxiliary contacts0.5 2.5 mm²• for auxiliary contacts2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross2x (20 16), 2x (18 14)		
• solid1 10 mm²• stranded1 10 mm²• finely stranded with core end processing1 10 mm²connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²type of connectable conductor cross-sections0.5 2.5 mm²• for auxiliary contacts2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- solid or stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross4		2x (16 12), 2x (14 8)
• stranded1 10 mm²• finely stranded with core end processing1 10 mm²connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²• solid or stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²type of connectable conductor cross-sections0.5 2.5 mm²• for auxiliary contacts- solid or stranded- solid or stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• for AWG cables for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross		
 finely stranded with core end processing finely stranded with core end processing solid or stranded finely stranded with core end processing finely stranded with core end processing for auxiliary contacts solid or stranded for auxiliary contacts solid or stranded for auxiliary contacts for auxiliary contacts for auxiliary contacts for auxiliary contacts for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross 		
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 0.5 2.5 mm² • for auxiliary contacts - solid or stranded - 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) • for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross		
 solid or stranded finely stranded with core end processing 0.5 2.5 mm² 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) for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross 		1 10 MM*
• finely stranded with core end processing 0.5 2.5 mm² type of connectable conductor cross-sections • for auxiliary contacts • for auxiliary contacts - solid or stranded - 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) • for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross	-	0.5 2.5 mm ²
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) • for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14)		
 for auxiliary contacts — solid or stranded — finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross 		0.0 2.0 mm
— 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) • for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross 2x (20 16), 2x (18 14)		
 finely stranded with core end processing for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross 	-	$2x (0.5 \pm 1.5 \text{ mm}^2) 2x (0.75 \pm 2.5 \text{ mm}^2)$
• for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross		
AWG number as coded connectable conductor cross		
	AWG number as coded connectable conductor cross	
• for main contacts 16 8	• for main contacts	16 8
• for auxiliary contacts 20 14	 for auxiliary contacts 	20 14
Safety related data	Safety related data	

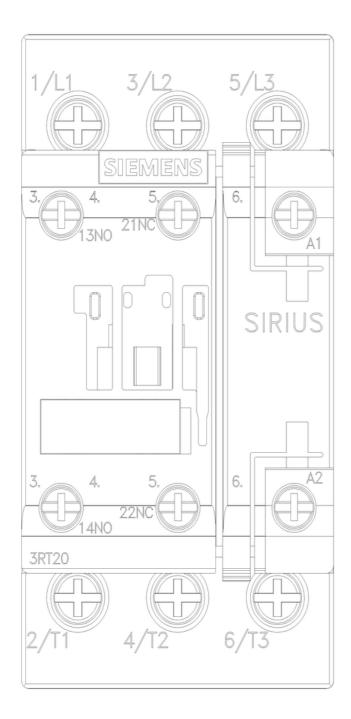
product function	
 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947-5-1 	No
 suitable for safety function 	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Туре А
Electrical Safety	
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
Further information	
Information on the packaging https://support.industry.siemens.com/cs/ww/en/view/109813875 Information- and Downloadcenter (Catalogs, Brochures,) https://www.siemens.com/ic10 Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/catalog/product?ml Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.as	lfb=3RT2028-1AV00-0JA0
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-1AV00-0JA0 Service&Support (Manuals, Certificates, Characteristics, FAQs,)	
https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AV00-0JA0	
Image database (product images, 2D dimension drawings, 3I http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3I	RT2028-1AV00-0JA0⟨=en
Characteristic: Tripping characteristics, I ² t, Let-through curro https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AV	
The strategy of the strategy o	

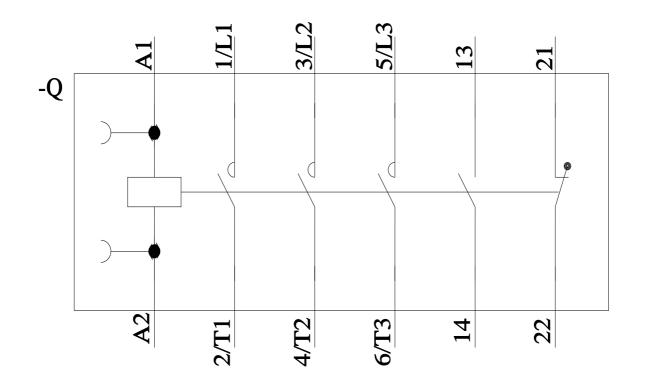
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1AV00-0JA0&objecttype=14&gridview=view1











last modified:

C