SIEMENS

Data sheet 3RT2025-1BB40



power contactor, AC-3 17 A, 7.5 kW / 400 V 1 NO + 1 NC, 24 V 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 	1.8 W
 at AC in hot operating state per pole 	0.6 W
 without load current share typical 	5.9 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated 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 DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• 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 according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %

Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
 at AC-3 rated value maximum 	690 V
at AC-3e rated value maximum	690 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C	40 A
rated value at AC-1	
	40 A
 up to 690 V at ambient temperature 40 °C rated value 	40 A
— up to 690 V at ambient temperature 60 °C	35 A
rated value	
• at AC-3	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
• at AC-3e	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
• at AC-4 at 400 V rated value	15.5 A
• at AC-5a up to 690 V rated value	35.2 A
• at AC-5b up to 400 V rated value	14.1 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated	11.4 A
value — up to 400 V for current peak value n=20 rated value	11.4 A
— up to 500 V for current peak value n=20 rated	11.4 A
value	HAA
— up to 690 V for current peak value n=20 rated value	11.3 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 	7.6 A
— up to 690 V for current peak value n=30 rated value	7.6 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	7.7 A
at 690 V rated value	7.7 A
operational current	
at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 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	2.1
— 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
 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-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
• at AC-3e	
— at 230 V rated value	4 kW
— at 400 V rated value	4.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
operating power for approx. 200000 operating cycles	
at AC-4	0.51111
• at 400 V rated value	3.5 kW
at 690 V rated value	6 kW
operating apparent power at AC-6a	4511/4
• up to 230 V for current peak value n=20 rated value	4.5 kVA
• up to 400 V for current peak value n=20 rated value	7.8 kVA
up to 500 V for current peak value n=20 rated value	9.9 kVA
• up to 690 V for current peak value n=20 rated value	13.6 kVA
operating apparent power at AC-6a	2 14/4
• up to 230 V for current peak value n=30 rated value	3 kVA
• up to 400 V for current peak value n=30 rated value	5.2 kVA
• up to 500 V for current peak value n=30 rated value	6.6 kVA
up to 690 V for current peak value n=30 rated value short time withstand current in cold operating state.	9.1 kVA
short-time withstand current in cold operating state up to 40 °C	
Iimited to 1 s switching at zero current maximum	225 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	225 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	180 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 30 s switching at zero current maximum	115 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	96 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	1 500 1/h
operating frequency	4.000.4//
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	1 000 1/h
at AC-3 maximum	1 000 1/h



• at AC-3e maximum	1 000 1/h
at AC-3e maximum at AC-4 maximum	300 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	DC .
• rated value	24 V
	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
full-scale value	1.1
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	5.9 W
closing delay	
• at DC	50 170 ms
opening delay	
• at DC	15 17.5 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	1
instantaneous contact	
number of NO contacts for auxiliary contacts	1
instantaneous contact	
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	14 A
at 600 V rated value	17 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	1 hp
— at 230 V rated value	3 hp
• for 3-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	15 hp
contact rating of auxiliary contacts according to UL	A600 / P600



design of the fase link * for short-circuit protection of the main circuit - with type of coordination 1 required - with type of cossipment 2 required - with type of assignment 3 required - with side-by-side mounting - with side-b	Short-circuit protection	
of or short circuit protection of the main circuit with type of condination if required with type of condination in required who type of condination is required by the condition is side by-side mounting who side by-side mounting wh		
- with type of coordination 1 required - with type of assignment 2 required 1 or short-circuit protection of the auxiliary switch required. Installation mounting! dimensions mounting position fastening method side-by-side mounting height width depth - forwards - downwards - downwards - downwards - downwards - downwards - if one wards - if one w	_	
	•	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
For short-circuit protection of the auxiliary switch required possible		
required installation/mounting/dimensions mounting position side-by-side mounting estimates side-by-side mounting height side-by-side mounting width depth 107 mm required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side - at the side - downwards - for grounded parts - forwards - at the side - downwards - forwards - forwards - forwards - 10 mm - at the side - downwards - forwards - forwards - forwards - forwards - 10 mm - at the side - downwards - forwards - 10 mm - at the side - forwards		
mounting position fastening method side-by-side mounting with depth side-by-side mounting - with side-by-side mounting - downwards - upwards - at the side - downwards - upwards - the side - downwards - upwards - to file parts - forwards - upwards - at the side - downwards - upwards - to file parts - forwards - to file parts - forwards - to file parts - forwards - to main current clicuit - of main current clicuit - solid or stranded - 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 - 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 stran	required	
forward and backward by +f- 22.5' on vertical mounting surface screw and sage-on mounting on 0.35 mm standard mounting rail according to DIN EN 60715 Yes height 85 mm depth 45 mm depth 107 mm required spacing width 45 mm depth 107 mm - forwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - forwards 10 mm - for live parts 10 mm - for live parts 10 mm - for live parts 10 mm - for filve parts 10 mm - for filve parts 10 mm - for filve parts 10 mm - for main current circuit 10 mm - for main current circuit 20 mm - for auxiliary and control circuit 30 mm - for main contacts 30 mm - filve of connectable conductor cross-sections 20 mm - filve of connectable conductor cross-section for mails contacts 30 mm - filve of connectable conductor cross-section for mails contacts 30 mm - filve of connectable conductor cross-section for mails contacts 30 mm - filve of connectable conductor cross-section for mails contacts 30 mm - filve of connectable conductor cross-section for mails contacts 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for mails 30 mm - filve of connectable conductor cross-section for auxiliary 30 mm - filve of connectable conductor cross-section for auxiliary 30 mm - filve of connectable conductor cross-section for auxiliary 30 mm - filve of connectable conductor cross-section for auxiliary 30 mm - filve of connectable conductor cross-section for auxiliary 30 mm - filve of connectable conductor cross-section for auxiliary	Installation/ mounting/ dimensions	
side-by-side mounting Yes height witch 45 mm depth 107 mm required spacing • with side-by-side mounting — forwards — upwards — ownwards — of main contacts — ownwards — of main current circuit • of or anidary and control circuit • a to contactor for axilliary contacts • solid — solid or stranded — finely stranded • finely stranded — inely stranded with core end processing • it alway coalacts - solid or stranded — inely stranded with core end processing • it alway cables for auxiliary contacts - solid or stranded — inely stranded with core end processing • it alway cables for auxiliary contacts - solid or stranded — inely stranded with core end processing • it alway cables for auxiliary contacts - solid or stranded — inely stranded with core end processing • it alway cables for auxiliary contacts - solid or stranded — inely stranded with core end processing • it alway cables for auxiliary contacts - solid or stranded — inely stranded with core end processing • it alway cables for auxiliary contacts - solid or stranded — inely stranded with core end processing • it alway cables for auxiliary contacts - solid or stranded — inely stranded with core end	mounting position	
helght 85 mm width 45 mm depth 107 mm required spacing • with side-by-side mounting — forwards — upwards — downwards — at the side — downwards — forwards — upwards — upwards — upwards — upwards — upwards — downwards — upwards — downwards — forwards — forwards — downwards — forwards — forwards — upwards — downwards — dow	fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
width depth 107 mm required spacing with side-by-side mounting 107 mm required spacing 2 with side-by-side mounting 107 mm 107 m	side-by-side mounting	Yes
depth required spacing e-with side-by-side mounting -with side -with s	height	85 mm
required spacing with side-by-side mounting -forwards - upwards - downwards - at the side of grounded parts - for grounded parts - for grounded parts - downwards - upwards - at the side of mm - upwards - at the side - downwards - at the side - downwards - for live parts - for live parts - for wards - upwards - for live parts - for live parts - for live parts - downwards - upwards - upwards - upwards - upwards - downwards - upwards - downwards - of man the side - for man urrent circuit - for auxiliary and control circuit - for auxiliary and control circuit - for auxiliary and control circuit - for far auxiliary 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 - 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 strand	width	45 mm
with side-by-side mounting	depth	107 mm
- forwards - upwards - upwards - downwards - at the side • for grounded parts - forwards - upwards - upwards - the side • for grounded parts - forwards - upwards - at the side - downwards - at the side - downwards - to five parts - forwards - upwards - upwards - to five parts - forwards - upwards - at the side - domnwards - upwards - at the side - domnwards - upwards - at the side - domnwards - upwards - at the side - for main current circuit - of for main current circuit - at contactor for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing - standed - finely stranded with core end processing - solid or stranded -	required spacing	
- upwards - downwards - at the side • for grounded parts - forwards - upwards - upwards - at the side - downwards - upwards - at the side - downwards - for live parts - forwards - for live parts - forwards - upwards - for live parts - forwards - upwards - upwards - upwards - upwards - downwards - upwards - downwards - upwards - downwards - downwards - downwards - downwards - at the side Connections/ Torminals type of electrical connection • for main current circuit • at contactor for auxiliary contacts - of auxiliary and control circuit • at contactor for auxiliary contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts - solid • finely stranded with core end processing • solid or stranded • finely stranded with core	with side-by-side mounting	
- downwards - at the side • for grounded parts - forwards - upwards - at the side - downwards - downwards • for live parts - for live parts - forwards - upwards • for live parts - forwards - upwards - downwards - upwards - upwards - downwards - downwards - downwards - at the side - for main current circuit • for auxiliary and control circuit • for auxiliary and control circuit • for auxiliary and control circuit • for main current circuit • for main cortacts • of magnet coil 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 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 • 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 • at AWG cables for auxiliary contacts • solid or stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded wi	— forwards	10 mm
- at the side • for grounded parts - forwards - upwards - at the side - downwards • for live parts - forwards - forwards • for live parts - forwards - upwards - downwards 10 mm • for live parts - forwards - upwards - downwards 10 mm - at the side - downwards - upwards - downwards - downwards - to mm - at the side - formal current circuit • for auxiliary and control circuit • for auxiliary and control circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil 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 connectable conductor cross-section for main contacts • solid • stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - f	— upwards	10 mm
• for grounded parts — forwards — upwards — at the side — downwards • for live parts — forwards — upwards — to main current circuit • for auxiliary and control circuit • for main current circuit • for auxiliary and control circuit • for main contacts • of magnet coil type of electrical connections • for main contacts • of magnet coil type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts • solid • stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-sections • for auxiliary contacts AWG number as coded connectable conductor cross-sections	— downwards	10 mm
- forwards	— at the side	0 mm
- upwards - at the side - downwards • for live parts - forwards - forwards - downwards - downwards - downwards - downwards - downwards - downwards - at the side - downwards - at the side - for main current circuit • for auxiliary and control circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - at AWG cables for main contacts • solid • stranded • finely stranded with core end processing • finely stranded with core end processing • solid or stranded - finely stranded with core end processing • solid or stranded - finely stranded with core end processing • finely stranded with core end processing - solid • solid or stranded - 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 • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-sections * for auxiliary contacts AWG number as coded connectable conductor cross-sections * for auxiliary contacts AWG number as coded connectable conductor cross-sections	 for grounded parts 	
- at the side — downwards 10 mm • for live parts — forwards 10 mm — upwards 10 mm — downwards 10 mm — at the side 6 mm Connections/ Terminals type of electrical connection • for main current circuit screw-type terminals • at contactor for auxiliary and control circuit screw-type terminals • at contactor for auxiliary contacts • of magnet coil screw-type terminals type of connectable conductor cross-sections • for main contacts — solid — solid or stranded 2x (1 2.5 mm²), 2x (2.5 10 mm²) - at AWG cables for main contacts • solid 1 10 mm² • finely stranded with core end processing 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² • finely stranded with core end processing 1 10 mm² • finely stranded with core end processing 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² • finely stranded with core end processing 1 10 mm² • finely stranded with core end processing 2 10 mm² • finely stranded with core end processing 3 10 mm² • finely stranded with core end processing 4 10 mm² • finely stranded with core end processing 5 2.5 mm² type of connectable conductor cross-sections • for auxiliary contacts - solid or stranded 5 2.5 mm² • finely stranded with core end processing 5 2.5 mm² • finely stranded with core end processing 5 2.5 mm² • finely stranded with core end processing 5 2.5 mm² • finely stranded with core end processing 6 2.5 mm² • finely stranded with core end processing 7 2.5 mm² • finely stranded with core end processing 8 2.5 mm² • finely stranded with core end processing 9 2.5 mm² • at AWG cables for auxiliary contacts 9 2.5 mm² • 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) • 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	— forwards	10 mm
- downwards • for live parts - forwards - upwards - upwards - at the side - at the side Connections/ Terminals type of electrical connection • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main currant direction • for main currant direction • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil 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 1 10 mm² • finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing - solid or st	— upwards	10 mm
• for live parts - forwards - upwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • at contactor for auxiliary 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 • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid conductor cross sections	— at the side	6 mm
- forwards - upwards - downwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • at contactor for auxiliary contacts • for main contacts - solid - solid or stranded - finely stranded with core end processing • finely stranded with core end processing • for auxiliary contacts • solid or stranded • finely stranded with core end processing • finely stranded with core end processing • for nectable conductor cross-section for auxiliary contacts • 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 • 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 • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-sections • for auxiliary contacts - AWG number as coded connectable conductor cross-sections • for auxiliary contacts - AWG number as coded connectable conductor cross-sections	— downwards	10 mm
- 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 and control circuit • 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 • stranded • finely stranded with core end processing • solid • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • solid or stranded • finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-sections • for auxiliary contacts AWG number as coded connectable conductor cross-sections • for auxiliary contacts AWG number as coded connectable conductor cross-sections	• for live parts	
- downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet 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 • for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts - solid or stranded - finely stranded with core end processing • at AWG cables for auxiliary contacts	— forwards	10 mm
The side 6 mm Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary 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 • 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 • finely stranded with core end processing • 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 • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts • solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts	— upwards	10 mm
type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary 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 • 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 • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-sections • for auxiliary contacts AWG number as coded connectable conductor cross-sections • for auxiliary contacts AWG number as coded connectable conductor cross-sections	— downwards	10 mm
type of electrical connection	— at the side	6 mm
• for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts — solid — solid — solid connectable stranded — finely stranded with core end processing • at AWG cables for main contacts • solid • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing • solid 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 • 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	Connections/ Terminals	
 for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil type of connectable conductor cross-sections for main contacts — solid — solid or stranded at AWG cables for main contacts stranded at AWG connectable conductor cross-section for main contacts stranded at AWG cables for main contacts at a solid be stranded connectable conductor cross-section for main contacts connectable conductor cross-section for main contacts at a solid at a solid or stranded at a solid or stranded<	type of electrical connection	
 at contactor for auxiliary contacts of magnet coil type of connectable conductor cross-sections for main contacts — solid — solid or stranded at AWG cables for main contacts Solid at AWG cables for main contacts at solid by stranded with core end processing at a finely stranded with core end processing by stranded connectable conductor cross-section for main contacts connectable conductor cross-section for main contacts at a finely stranded with core end processing at a finely stranded with core end processing<td>for main current circuit</td><td>screw-type terminals</td>	for main current circuit	screw-type terminals
of magnet coil type of connectable conductor cross-sections of or main contacts	 for auxiliary and control circuit 	screw-type terminals
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 • stranded • stranded • stranded • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • finely stranded with core end processing • 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 • 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 cross-sections • for auxiliary contacts - at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross-sections • for number as coded connectable	 at contactor for auxiliary contacts 	Screw-type terminals
 for main contacts — solid — solid or stranded — finely stranded with core end processing at AWG cables for main contacts • solid 1 10 mm² • stranded • stranded 1 10 mm² • finely stranded with core end processing • solid • finely stranded with core end processing 1 10 mm² • 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 	of magnet coil	Screw-type terminals
- solid - solid or stranded - finely stranded with core end processing ■ at AWG cables for main contacts ■ solid ■ stranded ■ 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 ■ for auxiliary contacts ■ solid or stranded - finely stranded with core end processing ■ finely stranded with core end processing ■ solid or stranded - finely stranded with core end processing ■ solid or stranded - finely stranded with core end processing ■ at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (14 8) 2x (1 2.5 mm²), 2x (14 8) 1 10 mm² 1 10 mm² 2 10 mm² 2 2.5 mm² 2 2.5 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)	type of connectable conductor cross-sections	
- solid or stranded - finely stranded with core end processing • at AWG cables for main contacts • solid - stranded - stranded - stranded - stranded - finely stranded with core end processing - solid or stranded - finely stranded with core end processing - solid or stranded - solid o	for main contacts	
 finely stranded with core end processing at AWG cables for main contacts connectable conductor cross-section for main contacts solid 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 type of connectable conductor cross-sections for auxiliary contacts solid or stranded for auxiliary contacts for auxiliary contacts finely stranded with core end processing at AWG cables for auxiliary contacts at AWG number as coded connectable conductor cross section 		
 at AWG cables for main contacts connectable conductor cross-section for main contacts 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 finely stranded with core end processing type of connectable conductor cross-sections for auxiliary contacts solid or stranded for auxiliary contacts for all stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) at AWG cables for auxiliary contacts at AWG number as coded connectable conductor cross section 		
connectable conductor cross-section for main contacts • solid • 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 type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded — solid or stranded — finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) — finely stranded with core end processing • at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section		
 contacts solid stranded finely stranded with core end processing 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 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) at AWG cables for auxiliary contacts at AWG number as coded connectable conductor cross section AWG number as coded connectable conductor cross section 		2x (16 12), 2x (14 8)
 stranded finely stranded with core end processing 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 for auxiliary contacts for auxiliary contacts finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) finely stranded with core end processing at AWG cables for auxiliary contacts at AWG number as coded connectable conductor cross section 	contacts	
 finely stranded with core end processing 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 finely stranded with core end processing at AWG cables for auxiliary contacts at AWG number as coded connectable conductor cross section finely stranded connectable conductor cross section 		
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		
 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 finely stranded with core end processing at AWG cables for auxiliary contacts at AWG number as coded connectable conductor cross section AWG number as coded connectable conductor cross section		1 10 mm²
 ◆ 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 0.5 2.5 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) 		
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 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14)	solid or stranded	
 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 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) 		0.5 2.5 mm²
 — solid or stranded — finely stranded with core end processing ■ at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) 		
 — finely stranded with core end processing at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²) 2x (20 16), 2x (18 14) 	for auxiliary contacts	
• at AWG cables for auxiliary contacts 2x (20 16), 2x (18 14) AWG number as coded connectable conductor cross section	— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
AWG number as coded connectable conductor cross section	 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
section		2x (20 16), 2x (18 14)
• for main contacts 16 8		
	for main contacts	16 8



 for auxiliary contacts 	20 14
Safety related data	
product function	
mirror contact according to IEC 60947-4-1	Yes
B10 value with high demand rate according to SN 31920	450 000
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
with high demand rate according to SN 31920	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 y
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
suitability for use	
 safety-related switching OFF 	Yes
Certificates/ approvals	

General Product Approval



Confirmation





<u>KC</u>



Functional

EMC Safety/Safety of Declaration of Conformity Test Certificates

Machinery



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

Test Certificates Marine / Shipping

Miscellaneous











Marine / Shipping other Dangerous Good



Environmental Confirmations Confirmation



Transport Information

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=3RT2025-1BB40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2025-1BB40

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

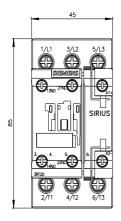
https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1BB40

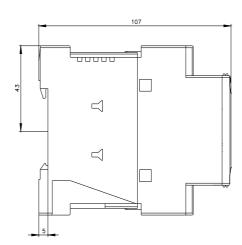
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

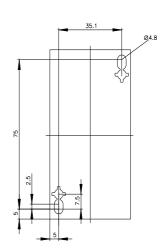
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2025-1BB40\&lang=en}}$

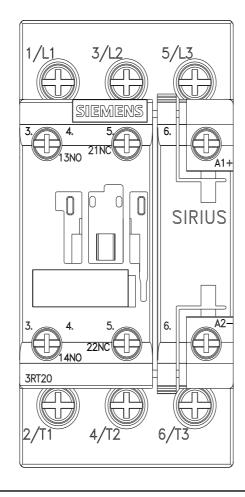
Characteristic: Tripping characteristics, I2t, Let-through current

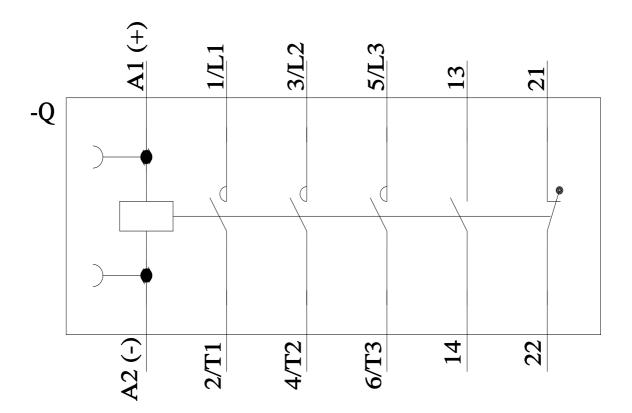












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