## **SIEMENS**

Data sheet 3RT2038-3AH00



power contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 48 V AC, 50 Hz, auxiliary contacts: 1 NO + 1 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, size: S2

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S2
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	17.1 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	5.7 W
<ul> <li>without load current share typical</li> </ul>	6 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	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	11.8g / 5 ms, 7.4g / 10 ms
shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2014
Weight	0.987 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-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 %

Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	236 kg
global warming potential [CO2 eq] during manufacturing	4.11 kg
global warming potential [CO2 eq] during operation	233 kg
global warming potential [CO2 eq] after end of life	-0.635 kg
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	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>at AC-1</li> </ul>	90 A
— up to 690 V at ambient temperature 40 °C rated value	90 A
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	80 A
• at AC-3	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
• at AC-3e	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
at AC-4 at 400 V rated value     at AC Fa ya to 600 V rated value	55 A
<ul><li>at AC-5a up to 690 V rated value</li><li>at AC-5b up to 400 V rated value</li></ul>	79.2 A 66.4 A
• at AC-3b up to 400 V fated Value	00.4 A
— up to 230 V for current peak value n=20 rated value	70 A
— up to 400 V for current peak value n=20 rated value	70 A
— up to 500 V for current peak value n=20 rated value	70 A
— up to 690 V for current peak value n=20 rated value	58 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	46.7 A
— up to 400 V for current peak value n=30 rated value	46.7 A
— up to 500 V for current peak value n=30 rated value	46.7 A
— up to 690 V for current peak value n=30 rated value	46.7 A
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	30 A
at 690 V rated value	24 A
operational current	
at 1 current path at DC-1      at 24 V rated value.	SE A
— at 24 V rated value — at 60 V rated value	55 A 23 A
— at 100 V rated value  — 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	55 A
— at 60 V rated value	45 A
— at 110 V rated value	45 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	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 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	1.4 A
— at 24 V rated value	35 A
— at 60 V rated value	6 A
— at 220 V rated value	1.4
— at 440 V rated value	0.1 A
— at 600 V rated value	0.06 A
	0.06 A
with 2 current paths in series at DC-3 at DC-5     at 24 V reted value.	EE A
— at 24 V rated value	55 A
— at 60 V rated value	45 A
— at 110 V rated value	25 A
— at 220 V rated value	5 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 reted value.	EF A
— at 24 V rated value	55 A
— at 60 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.35 A
operating power	
• at AC-2 at 400 V rated value	37 kW
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	37 kW
— at 690 V rated value	45 kW
• at AC-3e	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	37 kW
— at 690 V rated value	45 kW
operating power for approx. 200000 operating cycles at AC-	
at 400 V rated value	15.8 kW
at 690 V rated value	21.8 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	27.8 kVA
up to 400 V for current peak value n=20 rated value  up to 400 V for current peak value n=20 rated value	48.4 kVA
up to 500 V for current peak value n=20 rated value  up to 500 V for current peak value n=20 rated value	60.6 kVA
up to 690 V for current peak value n=20 rated value  up to 690 V for current peak value n=20 rated value	69.3 kVA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	18.6 kVA
up to 400 V for current peak value n=30 rated value  up to 400 V for current peak value n=30 rated value	32.3 kVA
up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value	40.4 kVA
up to 690 V for current peak value n=30 rated value  up to 690 V for current peak value n=30 rated value	55.8 kVA
short-time withstand current in cold operating state up to 40 °C	
limited to 1 s switching at zero current maximum	1 298 A; Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum	898 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	640 A; Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum	414 A; Use minimum cross-section acc. to AC-1 rated value
limited to 60 s switching at zero current maximum	333 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	,

• at AC	5 000 1/h
operating frequency	0 000 1/11
at AC-1 maximum	700 1/h
• at AC-2 maximum	350 1/h
• at AC-3 maximum	500 1/h
at AC-3e maximum	500 1/h
at AC-4 maximum	150 1/h
Control circuit/ Control	130 1/11
	AC
type of voltage of the control supply voltage	AC
control supply voltage at AC	40.17
at 50 Hz rated value	48 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	190 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
apparent holding power of magnet coil at AC	
• at 50 Hz	16 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.37
closing delay	
• at AC	10 80 ms
opening delay	
• at AC	10 18 ms
arcing time	10 20 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	65 A
• at 600 V rated value	62 A
yielded mechanical performance [hp]	

	for single-phase AC motor	
		5 hp
for 3-phase AC motor		
		10 110
- at 220/230 V rated value - at 450/480 V rated value - 50 hp	·	20 hp
- at 460/480 V rated value 50 hp 60		
- at 575/600 V rated value 600 hp 600 / 800 / 900 / 800 / 900 / 800 / 900 / 800 / 900 / 800 / 900 / 800 / 90		·
contact rating of auxiliary contacts according to UL Short-Cricuit protection design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V design of the fuse link  • for short-circuit protection of the main circuit  — with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for stord-circuit protection of the auxiliary switch required  • for switch stord of the switch swi		·
C characteristic: 10 A; 0.4 kA		·
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • fastening method side-by-side mounting  • fastening method  • for short-circuit protection of the auxiliary switch required  • fastening method side-by-side mounting  • fastening method  • for short-circuit protection of the auxiliary switch required  • fastening method  • for short-circuit protection of the auxiliary switch required  • fastening method  • for short-circuit protection of the auxiliary switch required  • fastening method  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the substitution of the subst		7,000 / 1 000
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit specified on the auxiliary switch required  • for short-circuit specified on the auxiliary switch required  • for short-circuit specified on the auxiliary and control circuit on the auxiliary and control circuit specified at expecified at the side of mm  • for main correct circuit specified at contacts  • for main contacts  • for fall protection contacts  • for main contacts  • for main contacts  • for main contacts  • for fall protection contacts  • for main contacts  • for fall protection contacts  • for main contacts  •	design of the miniature circuit breaker for short-circuit protection	C characteristic: 10 A; 0.4 kA
of or short-circuit protection of the main circuit         — with type of coordination 1 required         — with type of assignment 2 required         — for short-circuit protection of the auxiliary switch required         — for short-circuit protection of the auxiliary switch required         — for short-circuit protection of the auxiliary switch required         Installation/mounting/dimensions  mounting position  #/-180* rotation possible on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on vertical mounting surface; can be tilted forward an abackward by +/- 22.5* on mounting onto 35 mm DIN rail according to DIN EN 60715	of the auxiliary circuit up to 230 V	
with type of coordination 1 required		
- with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required    Installation mounting joint mounting of the auxiliary switch required   Installation mounting joint mounting of the auxiliary switch required   Fastening method   Side-by-side mounting   Yes	<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
• for short-direction of the auxiliary switch required installation mounting (dimensions)  mounting position	with type of coordination 1 required	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
mounting position  ##-180° rotation possible on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted forward an backward by +f- 22.5° on vertical mounting surface; can be tilted for vertical mounting onto 10 mm  1 on m  1 on m  2 on m  1 on m  2 on m  3 on m  2 on m  3 on m  3 on m  3 on m  4	— with type of assignment 2 required	gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)
mounting position  #i-180* rotation possible on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted forward an backward by 9i- 22.5* on vertical mounting surface; can be tilted for 9i-	• for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
backward by +/- 22.5° on vertical mounting surface fastening method side-by-side mounting height strength for main current circuit of romain contacts  backward by +/- 22.5° on vertical mounting surface fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height fastening method screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 height fastening method fastening faste	nstallation/ mounting/ dimensions	
fastening method  height  114 mm  width  55 mm  depth  130 mm  required spacing  • with side-by-side mounting  — forwards — upwards — at the side  • for grounded parts — forwards — upwards — to main contacts — of magine coil  • for rawiliary and control circuit • of magine coil • for main contacts — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts  • for main contacts — for ma	mounting position	+/-180 $^\circ$ rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5 $^\circ$ on vertical mounting surface
height width 55 mm  depth 130 mm  required spacing  • with side-by-side mounting  — forwards 10 mm  — downwards 10 mm  — at the side 0 nm  — for grounded parts  — forwards 10 mm  — at the side 0 nm  — at the side 6 mm  — downwards 10 mm  — at the side 6 mm  — downwards 10 mm  — at the side 6 mm  — downwards 10 mm  — at the side 6 mm  — downwards 10 mm  • for live parts  — forwards 10 mm  • for main current circuit spring-loaded terminals  • of main current circuit spring-loaded terminals  • of magnet coil spring-type terminals  • of main contacts  • for main contacts  • for awiliary and conductor cross-sections  • for main contacts  • for main contacts  • for AWG cables for main contacts  connectable conductor cross-section for main contacts	fastening method side-by-side mounting	Yes
width 55 mm depth 130 mm  required spacing  • with side-by-side mounting  — forwards 10 mm  — downwards 10 mm  — at the side 0 mm  — orwards 10 mm  — orwards 10 mm  — orwards 10 mm  — orwards 10 mm  — at the side 6 mm  — ownwards 10 mm  — at the side 6 mm  — ownwards 10 mm  • for live parts  — forwards 10 mm  • for live parts  — upwards 10 mm  • for min current circuit screw-type terminals  type of electrical connection  • for main current circuit spring-loaded terminals  • of magnet coil Spring-type terminals  type of connectable conductor cross-sections  • for main contacts  — solid or stranded 2x (1 35 mm²), 1x (1 35 mm²)  • for AWG cables for main contacts  connectable conductor cross-section for main contacts	fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
depth  required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side  • for grounded parts — forwards — upwards — 10 mm  • for grounded parts — forwards — upwards — 10 mm  — at the side — downwards — 10 mm  — at the side — downwards — 10 mm  • for live parts — forwards — upwards — 10 mm  • for live parts — forwards — upwards — 10 mm  • for live parts — forwards — upwards — upwards — 10 mm  • for live parts — forwards — upwards — upwards — the side  Connections/ Terminals  type of electrical connection • 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 or stranded — finely stranded with core end processing • for AWG cables for main contacts  connectable conductor cross-section for main contacts	height	114 mm
required spacing  • with side-by-side mounting  — forwards — upwards — at the side • for grounded parts — forwards — 10 mm  • for grounded parts — forwards — 10 mm  — at the side • form — upwards — 10 mm — upwards — 10 mm — at the side — downwards — 10 mm  — at the side — downwards — 10 mm  • for live parts — forwards — 10 mm  • for live parts — forwards — 10 mm — upwards — 10 mm  • for live parts — forwards — 10 mm  — at the side — formards — to man current circuit — for auxiliary and control circuit — spring-loaded 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 contacts — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts  connectable conductor cross-section for main contacts	width	55 mm
with side-by-side mounting     — forwards     — upwards     — downwards     — at the side     of grounded parts     — forwards     — in the side     of grounded parts     — forwards     — upwards     — upwards     — upwards     — at the side     — downwards     — at the side     — downwards     — in the side     — downwards     of or live parts     — forwards     — upwards     — upwards     — upwards     — upwards     — downwards     — upwards     — at the side     — downwards     — at the side     — formal current circuit     — for auxiliary and control circuit     of or auxiliary and control circuit     of magnet coil     type of connectable conductor cross-sections     of main contacts     — solid or stranded     — finely stranded with core end processing     of or AWG cables for main contacts     connectable conductor cross-section for main contacts	depth	130 mm
forwards	required spacing	
- upwards	with side-by-side mounting	
- downwards - at the side - for grounded parts - forwards - upwards - at the side - downwards - at the side - downwards - to five parts - forwards - upwards - for live parts - forwards - upwards - for live parts - forwards - upwards - upwards - upwards - to mm - upwards - downwards - at the side - downwards - at the side - downwards - at the side - formain current circuit - for main current circuit - for main current circuit - for auxiliary and control circuit - at contactor for auxiliary contacts - for magnet coil - for magnet coil - spring-type terminals - spring-type terminals - for magnet coil - spring-type terminals - spring-type terminals - for main contacts - solid or stranded - finely stranded with core end processing - for AWG cables for main contacts - connectable conductor cross-section for main contacts	— 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  - forwards  - forwards  - to mm  - upwards  - downwards  - downwards  - downwards  - downwards  - downwards  - 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 or stranded  - finely stranded with core end processing  • for AWG cables for main contacts  connectable conductor cross-section for main contacts  - for AWG cables for main contacts  2x (1 25 mm²), 1x (1 50 mm²)  - finely stranded with core end processing  • for AWG cables for main contacts  connectable conductor cross-section for main contacts  - connectable conductor cross-section for main contacts  - solid or stranded  2x (1 25 mm²), 1x (1 50 mm²)  - finely stranded with core end processing  • for AWG cables for main contacts  - connectable conductor cross-section for main contacts  - connectable conductor cross-section for main contacts	— upwards	10 mm
• for grounded parts  - forwards  - upwards  - at the side  - downwards  • for live parts  - forwards  - forwards  - forwards  - forwards  - forwards  - upwards  - upwards  - downwards  - downwards  - at the side  - formain current circuit  • for auxiliary and control circuit  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main current circuit  - solid or stranded  - solid or stranded  - finely stranded with core end processing  • for AWG cables for main contacts  - connectable conductor cross-section for main contacts  - for AWG cables for main contacts  - connectable conductor cross-section for main contacts	— downwards	10 mm
- forwards 10 mm - upwards 10 mm - at the side 6 mm - downwards 10 mm  • for live parts - forwards 10 mm - upwards 10 mm - upwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - at the side 6 mm  Connections/ Terminals  type of electrical connection • for main current circuit screw-type terminals • for auxiliary and control circuit spring-loaded terminals • at contactor for auxiliary contacts • of magnet coil Spring-type terminals  type of connectable conductor cross-sections • for main contacts - solid or stranded 2x (1 35 mm²), 1x (1 50 mm²) - finely stranded with core end processing 2x (1 25 mm²), 1x (1 35 mm²) • for AWG cables for main contacts  connectable conductor cross-section for main contacts	— at the side	0 mm
- forwards 10 mm - upwards 6 mm - at the side 6 mm - downwards 10 mm  • for live parts - forwards 10 mm - upwards 10 mm - downwards 10 mm - downwards 10 mm - downwards 10 mm - at the side 6 mm  Connections/ Terminals  type of electrical connection • for main current circuit screw-type terminals • for auxiliary and control circuit spring-loaded terminals • at contactor for auxiliary contacts • of magnet coil Spring-type terminals  type of connectable conductor cross-sections • for main contacts - solid or stranded 2x (1 35 mm²), 1x (1 50 mm²) - finely stranded with core end processing 2x (1 25 mm²), 1x (1 35 mm²) • for AWG cables for main contacts  connectable conductor cross-section for main contacts	for grounded parts	
- at the side    - downwards    - for live parts    - forwards    - forwards    - upwards    - upwards    - downwards    - at the side    - downwards    - at the side    - formals   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    - solid or stranded    - finely stranded with core end processing    - for AWG cables for main contacts  connectable conductor cross-section for main contacts	— forwards	10 mm
- 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 • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for main contacts - solid or stranded - finely stranded with core end processing • for AWG cables for main contacts  connectable conductor cross-section for main contacts	— upwards	10 mm
for live parts         — forwards         — upwards         — 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 or stranded         — finely stranded with core end processing         • for AWG cables for main contacts  connectable conductor cross-section for main contacts	·	6 mm
for live parts         — forwards         — upwards         — 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 or stranded         — finely stranded with core end processing         • for AWG cables for main contacts  connectable conductor cross-section for main contacts	— downwards	10 mm
- 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 • for auxiliary and control circuit spring-loaded terminals • at contactor for auxiliary contacts Spring-type terminals • of magnet coil Spring-type terminals  type of connectable conductor cross-sections • for main contacts - solid or stranded 2x (1 35 mm²), 1x (1 50 mm²) - finely stranded with core end processing 2x (1 25 mm²), 1x (1 35 mm²) • for AWG cables for main contacts  connectable conductor cross-section for main contacts		
- upwards - 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 or stranded - finely stranded with core end processing • for AWG cables for main contacts  connectable conductor cross-section for main contacts  2x (1 35 mm²), 1x (1 50 mm²) 2x (1 25 mm²), 1x (1 35 mm²) 2x (18 2), 1x (18 1)	·	10 mm
- 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 or stranded - finely stranded with core end processing • for AWG cables for main contacts  connectable conductor cross-section for main contacts  2x (1 35 mm²), 1x (1 50 mm²)  2x (1 25 mm²), 1x (1 35 mm²)  2x (1 25 mm²), 1x (1 35 mm²)  2x (1 25 mm²), 1x (1 35 mm²)		
- at the side  Connections/ Terminals  type of electrical connection  • for main current circuit screw-type terminals  • for auxiliary and control circuit spring-loaded terminals  • at contactor for auxiliary contacts Spring-type terminals  • of magnet coil Spring-type terminals  type of connectable conductor cross-sections  • for main contacts  - solid or stranded 2x (1 35 mm²), 1x (1 50 mm²)  - finely stranded with core end processing 2x (1 25 mm²), 1x (1 35 mm²)  • for AWG cables for main contacts 2x (18 2), 1x (18 1)  connectable conductor cross-section for main contacts	·	
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 or stranded — finely stranded with core end processing • for AWG cables for main contacts  connectable conductor cross-section for main contacts  2x (1 35 mm²), 1x (1 50 mm²)  2x (1 25 mm²), 1x (1 35 mm²)  2x (1 25 mm²), 1x (1 35 mm²)		
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 or stranded — finely stranded with core end processing • for AWG cables for main contacts  connectable conductor cross-section for main contacts  2x (1 35 mm²), 1x (1 50 mm²)  2x (1 25 mm²), 1x (1 35 mm²)  2x (1 25 mm²), 1x (1 35 mm²)	51 115 5155	V IIIII
<ul> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Spring-type terminals</li> <li>type of connectable conductor cross-sections</li> <li>for main contacts</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>for AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> <li>2x (1 35 mm²), 1x (1 50 mm²)</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> <li>for AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> </ul>		
<ul> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Spring-type terminals</li> <li>type of connectable conductor cross-sections</li> <li>for main contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>for AWG cables for main contacts</li> <li>for AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> <li>spring-loaded terminals</li> <li>Spring-type terminals</li> <li>2x (1 35 mm²), 1x (1 50 mm²)</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> <li>2x (18 2), 1x (18 1)</li> </ul>		screw-type terminals
<ul> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Spring-type terminals</li> <li>type of connectable conductor cross-sections</li> <li>for main contacts</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>for AWG cables for main contacts</li> <li>2x (1 35 mm²), 1x (1 50 mm²)</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> <li>connectable conductor cross-section for main contacts</li> </ul>		
● of magnet coil  type of connectable conductor cross-sections  ● for main contacts  — solid or stranded — finely stranded with core end processing ● for AWG cables for main contacts  2x (1 35 mm²), 1x (1 50 mm²) 2x (1 25 mm²), 1x (1 35 mm²) 2x (1 25 mm²), 1x (1 35 mm²) 2x (18 2), 1x (18 1)		
type of connectable conductor cross-sections	•	
<ul> <li>for main contacts         <ul> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>for AWG cables for main contacts</li> </ul> </li> <li>of or AWG cables for main contacts</li> <li>2x (1 35 mm²), 1x (1 50 mm²)</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> </ul> <li>connectable conductor cross-section for main contacts</li>	·	
<ul> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>● for AWG cables for main contacts</li> <li>2x (1 35 mm²), 1x (1 50 mm²)</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> <li>2x (18 2), 1x (18 1)</li> </ul> connectable conductor cross-section for main contacts	• •	
<ul> <li>— finely stranded with core end processing</li> <li>● for AWG cables for main contacts</li> <li>2x (1 25 mm²), 1x (1 35 mm²)</li> <li>2x (18 2), 1x (18 1)</li> <li>connectable conductor cross-section for main contacts</li> </ul>		2x (1 35 mm²). 1x (1 50 mm²)
◆ for AWG cables for main contacts     2x (18 2), 1x (18 1)  connectable conductor cross-section for main contacts		
connectable conductor cross-section for main contacts		
		Z. (10 Z), 1. (10 1)
	finely stranded with core end processing	1 35 mm²
connectable conductor cross-section for auxiliary contacts		00 mm
• solid or stranded  • solid or stranded  0.5 2.5 mm²	-	0.5 2.5 mm²
• finely stranded with core end processing  0.5 1.5 mm²		
• finely stranded without core end processing  0.5 2.5 mm <sup>2</sup>		U.U Z.O IIIIII
type of connectable conductor cross-sections  • for auxiliary contacts		

<ul> <li>solid or stranded</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 14)
AWG number as coded connectable conductor cross section	
<ul> <li>for main contacts</li> </ul>	18 1
<ul> <li>for auxiliary contacts</li> </ul>	20 14
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	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	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	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	Type A
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
Approvals Certificates	
Conord Draduct Approval	

## General Product Approval







Confirmation



<u>KC</u>

General Product Approval

EMV

**Test Certificates** 

Marine / Shipping





Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping











Confirmation

other

other Railway

Dangerous goods

Environment

Confirmation

Special Test Certificate

Transport Information



Environmental Confirmations

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/en/Catalog/product?mlfb=3RT2038-3AH00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2038-3AH00

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-3AH00

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

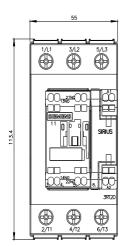
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2038-3AH00&lang=en

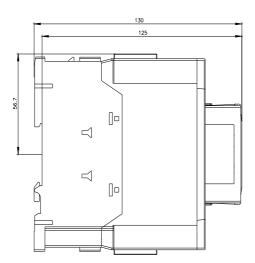
Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

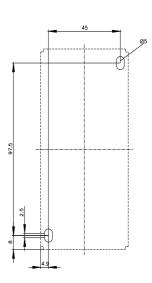
https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-3AH00/char

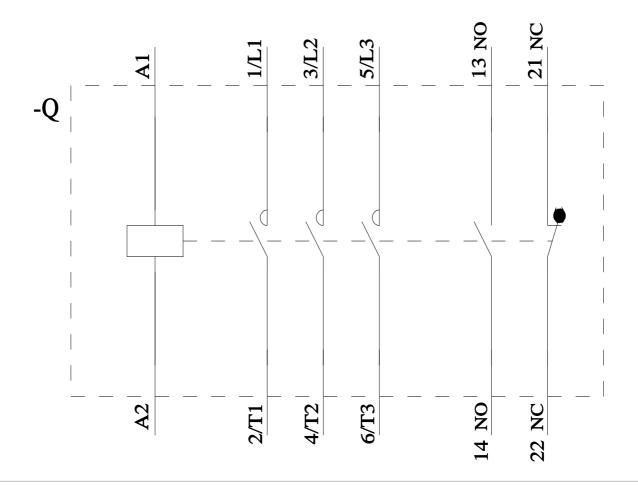
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2038-3AH00&objecttype=14&gridview=view1









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