# **SIEMENS**

Data sheet 3RT2047-3AL20



power contactor, AC-3e/AC-3, 110 A, 55 kW / 400 V, 3-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, size: S3

Figure similar

nuadicat brand name	CIDILIC
product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	\$3
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	23.7 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	7.9 W
without load current share typical	19 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	1 000 V
of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
of main circuit rated value	8 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	10.3g / 5 ms, 6,.g / 10 ms
shock resistance with sine pulse	
• at AC	16.3g / 5 ms, 10.g / 10 ms
mechanical service life (operating cycles)	
of contactor typical	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	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)	12/12/2018
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	
<ul> <li>at AC-3 rated value maximum</li> </ul>	1 000 V
at AC-3e rated value maximum	1 000 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	130 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	130 A
value	100 A
— up to 690 V at ambient temperature 60 °C rated	110 A
value	
• at AC-3	
— at 400 V rated value	110 A
— at 500 V rated value	110 A
— at 690 V rated value	98 A
— at 1000 V rated value	30 A
• at AC-3e	
— at 400 V rated value	110 A
— at 500 V rated value	110 A
— at 690 V rated value	98 A
— at 1000 V rated value	30 A
• at AC-4 at 400 V rated value	97 A
• at AC-5a up to 690 V rated value	120 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	110 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	98 A
— up to 400 V for current peak value n=20 rated value	98 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	98 A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	98 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	65.3 A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	65.3 A
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	65.3 A
— up to 690 V for current peak value n=30 rated value	65.3 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm <sup>2</sup>
operational current for approx. 200000 operating cycles at	
AC-4	AG A
at 400 V rated value	46 A
at 690 V rated value	36 A
operational current	
at 1 current path at DC-1      at 24 V rest desplay.	400.4
— at 24 V rated value	100 A
— at 60 V rated value	60 A
— at 110 V rated value	9 A
— at 220 V rated value	2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.4 A
with 2 current paths in series at DC-1	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	10 A
— at 440 V rated value	1.8 A
— at 600 V rated value	1 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	80 A

— at 440 V rated value	4.5 A
— at 600 V rated value	2.6 A
<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	40 A
— at 60 V rated value	6 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1A
— at 440 V rated value	0.15 A
— at 600 V rated value	0.06 A
with 2 current paths in series at DC-3 at DC-5	0.00 A
•	400 A
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	7.4
— at 440 V rated value	0.42 A
— at 600 V rated value	0.16 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	100 A
— at 60 V rated value	100 A
— at 110 V rated value	100 A
— at 220 V rated value	35 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.35 A
operating power	
<ul> <li>at AC-2 at 400 V rated value</li> </ul>	55 kW
• at AC-3	
— at 230 V rated value	30 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	90 kW
— at 1000 V rated value	37 kW
• at AC-3e	
— at 230 V rated value	30 kW
— at 400 V rated value	55 kW
— at 500 V rated value	75 kW
— at 690 V rated value	90 kW
— at 1000 V rated value	37 kW
	37 KVV
operating power for approx. 200000 operating cycles at AC-	
at 400 V rated value	24.3 kW
at 690 V rated value	32.9 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	39 kVA
• up to 400 V for current peak value n=20 rated value	67 kVA
• up to 500 V for current peak value n=20 rated value	84 kVA
	117 kVA
up to 690 V for current peak value n=20 rated value	TH NVA
operating apparent power at AC-6a	26 N/A
• up to 230 V for current peak value n=30 rated value	26 kVA
• up to 400 V for current peak value n=30 rated value	45.2 KVA
• up to 500 V for current peak value n=30 rated value	56.5 kVA
• up to 690 V for current peak value n=30 rated value	78 kVA
short-time withstand current in cold operating state up to 40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	1 960 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	1 502 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	1 095 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	707 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	562 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	

<ul><li>at AC-1 maximum</li></ul>	900 1/h
• at AC-2 maximum	350 1/h
• at AC-3 maximum	850 1/h
• at AC-3e maximum	850 1/h
• at AC-4 maximum	200 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	230 V
• at 60 Hz rated value	230 V
operating range factor control supply voltage rated value of	
magnet coil at AC	
● at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	296 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.61
apparent holding power of magnet coil at AC	
● at 50 Hz	19 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.38
closing delay	
• at AC	13 50 ms
opening delay	
• at AC	10 21 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 contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	6 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	96 A
at 600 V rated value	99 A
yielded mechanical performance [hp]	

• In the standard value			
al 230 V rated value for 3-phase AC motor at 200/208 V rated value at 400/208 V rated value at 400/208 V rated value at 400/208 V rated value at 575/600 V rated value with type of coordination accust with type of coordination accust with type of assignment 2 required with type	for single-phase AC motor		
		·	
at 200208 of rated value 40 hp 40	— at 230 V rated value	20 hp	
at 220,230 V roted value 775 hp 75 hp 75 hp 100 hp 200 V roted value 200 V roted 200 V roted value 200 V roted value 200 V roted 200 V rot	• for 3-phase AC motor		
— at 875/800 V rated value — at 875/800 V rated value contact rating of auxiliary contacts according to UL Short-Circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of cooxidination 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  • side-by-side mounting dimensions  mounting position  +/-180* rotation possible on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mounting surface: can be titled forward and backward by +/-2.2° on vertical mount	— at 200/208 V rated value	30 hp	
	<ul> <li>— at 220/230 V rated value</li> </ul>	40 hp	
contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link	<ul> <li>at 460/480 V rated value</li> </ul>	75 hp	
design of the fuse link  - with type of coordination 1 required - with type of assignment 2 required - or short-circult protection of the auxiliary switch required installation/ mounting/ dimensions  mounting position  fastening method - side-by-side mounting height - side-by-side mounting - forwards - upwards - downwards - at the side - for rouzillary contacts - for five parts - contactor for auxillary contacts - for main current circuit - for auxillary and control circuit - for auxillary and control circuit - at the side - for supplied to the suppl	— at 575/600 V rated value	100 hp	
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of assignment 2 required  — with assignment 2 required  — side-by-side mounting  — with side-by-side mounting  — with side-by-side mounting  — on-wards — upwards — on-wards	contact rating of auxiliary contacts according to UL	A600 / P600	
• 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 switch and the sole on the sole on the short of the switch and the sole on the sole o	Short-circuit protection		
with type of coordination 1 required kA) with type of assignment 2 required for short-circuit protection of the auxiliary switch required fastening method side-by-side mounting side-by-side mounting side-by-side mounting side-by-side mounting side-by-side mounting forwards upwards upwards ownwards	design of the fuse link		
- with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  mounting position  **** **Indiana **In	<ul> <li>for short-circuit protection of the main circuit</li> </ul>		
Installation/mounting/dimensions  mounting position  fastening method  side-by-side mounting  side by-side mounting  width  70 mm  depth  required spacing  with side-by-side mounting  - forwards  - upwards  - forwards  - forwards  - forwards  - the side  - forwards  - upwards  - forwards  - upwards  - forwards  - the side  - forwards  - upwards  - the side  - for grounded parts  - forwards  - upwards  - the side  - for grounded parts  - forwards  - uthe side  - the side	— with type of coordination 1 required		
mounting position ### 180° rotation possible on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on vertical mounting surface; can be titled forward and backward by ### 22.5° on the fill of the fi			
mounting position  #-1480* rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5" on vertical mounting surface; can be tilted forward and backward by +/- 22.5" on vertical mounting surface; can be tilted forward and backward by +/- 22.5" on vertical mounting surface; can be tilted forward and backward by +/- 22.5" on vertical mounting surface; can be tilted forward and backward by +/- 22.5" on vertical mounting surface; can be tilted forward by 4 22.5" on vertical mounting surface; can be tilted forward by 4 22.5" on vertical mounting surface; can be tilted forward by 4 22.5" on vertical mounting surface; can be tilted forward and backward by 4 22.5" on vertical mounting surface; can be tilted forward backward by 4 22.5" on vertical mounting surface; can be tilted forward backward by 4 22.5" on vertical mounting surface; can be tilted forward and backward by 4 22.5" on vertical mounting surface; can be tilted forward backward by 4 22.5" on vertical mounting surface; can be tilted forward backward by 4 22.5" on vertical mounting surface; can be tilted forward by 4 40 mm the state of specifical connects  ### of width ### or vertical for manuface; can be tilted forward by 4 25.0" on vertical mounting surface; can be tilted forward by 4 40 mm the state of specifical formal surface; can be tilted forward by 4 40 mm the state of the minute of the formal surface; can be tilted forward by 4 40 mm the state of the minute of the mi		30.1071(000 1, 1101)	
backward by +- 22.5" on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 yes height width 70 mm depth 152 mm required spacing with side-by-side mounting — forwards — upwards — downwards — at the side — on mm — to grounded parts — for grounded parts — forwards — upwards — 10 mm — at the side — downwards — on mm — at the side — downwards — to many and some side of the parts — forwards — to grounded parts — forwards — upwards — 10 mm — at the side — downwards — 10 mm — at the side — downwards — upwards — for low parts — forwards — upwards — to many and control circuit so of raily and control circuit so of magnet coil type of electrical connection  • for main current circuit • for auxiliary and control circuit • of or auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-section for main contacts • finely stranded with core end processing connectable conductor cross-section for main contacts • solid • intely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing class of the parts  • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing class of the part of the p		±/ 100° rotation possible on vertical mounting surface; can be tilted forward and	
height 140 mm width 270 mm depth 152 mm required spacing  • with side-by-side mounting  — forwards 20 mm — downwards 10 mm — downwards 10 mm — the side 0 mm — for grounded parts — for grounded parts — for grounded parts — the side 10 mm — at the side 10 mm — at the side 10 mm  • for live parts — forwards 20 mm — upwards 10 mm — at the side 10 mm — downwards 10 mm  • for live parts — forwards 20 mm — upwards 10 mm  • for live parts — forwards 20 mm — upwards 10 mm  • for live parts — forwards 20 mm — upwards 10 mm  • for live parts — forwards 10 mm — at the side 10 mm — odomwards 10 mm — at the side 10 mm — odomwards 50 mm — at the side 50		backward by +/- 22.5° on vertical mounting surface	
height width 70 mm depth 152 mm  required spacing  • with side-by-side mounting  — forwards 20 mm — downwards 10 mm — d ownwards 10 mm — at the side 0 mm — forwards 20 mm — upwards 10 mm — at the side 10 mm — at the side 10 mm — at the side 10 mm — downwards 10 mm — at the side 10 mm — at the side 10 mm — downwards 10 mm — downwards 10 mm — downwards 10 mm — to rowards 10 mm — for live parts 10 mm — for main current circuit 20 mm — at the side 20 mm — the side 20 mm — the side 30 mm — th	-		
width 70 mm  depth 152 mm  required spacing  • with side-by-side mounting  — forwards 20 mm — downwards 10 mm — at the side 0 mm  • for grounded parts — forwards 20 mm — upwards 10 mm — at the side 10 mm  • for live parts — forwards 10 mm  • for live parts — forwards 10 mm  • for man current circuit 50 mm — at the side 10 mm  Connections/ Terminals  type of electrical connection 50 spring-type terminals 50 spring-type			
required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — to five parts — forwards — of live parts — forwards — upwards — upwards — to five parts — forwards — upwards — of mma — at the side — upwards — of mma — at the side — upwards — of mma — at the side — of mma — at the side — to 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-section for main contacts • finely stranded with core end processing connectable conductor cross-section for main contacts • solid • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing			
required spacing  with side-by-side mounting  — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — upwards — upwards — upwards — upwards — of the side — downwards — upwards — of the side — downwards — upwards — upwards — upwards — upwards — of wormards — upwards — of wormards — upwards — of or min curent circuit — of or main current circuit — of or auxiliary and control circuit — of or auxiliary and control circuit — of magnet coil  type of econnectable conductor cross-sections for main contacts — finely stranded with core end processing connectable conductor cross-section for main contacts — sinely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing connectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing  contectable conductor cross-section for auxiliary contacts — solid or stranded — finely stranded with core end processing  contectable conductor cross-section for auxiliary contacts — solid contectable conductor cross-section for auxiliary contacts — solid contectable conductor cross-s			
with side-by-side mounting —forwards — upwards — downwards — at the side of or grounded parts —forwards — upwards — upwards — upwards — upwards — upwards — at the side — downwards — to mm — at the side — downwards — to mm — ownwards — of for live parts — forwards — upwards — 10 mm — ownwards — upwards — to mm — at the side — to mm — to mm — at the side — to mm — at the side — to mm — at the side — to mm — to mm — at the side — to mm — to main corrent circuit — to rauxillary and control circuit — to rauxillary contacts — to finely stranded with core end processing — to meetable conductor cross-section for main contacts — solid — tinely stranded with core end processing — tinely stranded without core end processing — tinely stranded with core end processing — tinely stranded witho	<u> </u>	152 mm	
forwards			
- upwards - downwards - at the side 0 mm  - at the side 0 mm  • for grounded parts - forwards 20 mm  - upwards 10 mm  - at the side 10 mm  - at the side 10 mm  - at the side 10 mm  • for live parts 20 mm  - upwards 10 mm  • for live parts 10 mm  - downwards 10 mm  - at the side 10 mm  - downwards 50 mm  - at the side 50 mm  - at the side 50 m	•		
- downwards - at the side  • for grounded parts forwards upwards upwards at the side downwards at the side downwards downwards for live parts forwards forwards forwards forwards upwards forwards upwards downwards upwards downwards for main current circuit street-upward terminals street-upward			
- at the side  • for grounded parts  - forwards  - upwards  - at the side  - downwards  • for live parts  - forwards  - upwards  - upwards  - upwards  - for live parts  - forwards  - upwards  - upwards  - upwards  - upwards  - downwards  - at the side  10 mm  - downwards  - upwards  - up mm  - downwards  - at the side  10 mm  - downwards  - at the side  10 mm  - or min current circuit  • for auxiliary and control circuit  • for auxiliary and control circuit  • of magnet coil  type of connectable conductor cross-sections for main contacts  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  connectable conductor cross-sections  • solid or stranded  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing	— upwards		
• for grounded parts  — forwards — upwards — at the side — downwards — for live parts — forwards — upwards — to for live parts — forwards — upwards — upwards — upwards — upwards — downwards — to mm — at the side — downwards — at the side — to mm — at the side — to mm  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 • finely stranded with core end processing • finely stranded without core end processing • finely stranded with core end processing	— downwards	10 mm	
forwards 20 mm upwards 10 mm at the side 10 mm downwards 10 mm for live parts forwards 20 mm forwards 20 mm upwards 10 mm downwards 10 mm downwards 10 mm downwards 10 mm at the side 10 mm downwards 10 mm at the side 10 mm at the side 50 mm	— at the side	0 mm	
- upwards 10 mm 10	<ul> <li>for grounded parts</li> </ul>		
- at the side	— forwards	20 mm	
<ul> <li>downwards</li> <li>for live parts</li> <li>forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— downwards</li> <li>— at the side</li> <li>10 mm</li> </ul> Connections/ Terminals type of electrical connection <ul> <li>for main current circuit</li> <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>type of connectable conductor cross-sections for main contacts</li> <li>finely stranded with core end processing</li> <li>e stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded conductor cross-sections</li> </ul>	— upwards	10 mm	
• for live parts  - forwards - upwards - 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-section for main contacts • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid of stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • finely stranded with core end processing • finely stranded without core end processing • finely stranded conductor cross-sections	— at the side	10 mm	
forwards 20 mm upwards 10 mm downwards 10 mm at the side 10 mm  Connections/ Terminals  type of electrical connection • for main current circuit spring-loaded terminals • at contactor for auxiliary contacts Spring-type terminals • of magnet coil Spring-type terminals  • of magnet coil Spring-type terminals  • of inely stranded with core end processing 2x (2.5 35 mm²), 1x (2.5 50 mm²)  connectable conductor cross-section for main contacts • solid 2.5 16 mm² • stranded 6 70 mm² • finely stranded with core end processing 2.5 50 mm²  connectable conductor cross-section for auxiliary contacts • solid 0 70 mm² • finely stranded with core end processing 2.5 50 mm²  connectable conductor cross-section for auxiliary contacts • solid or stranded 0.5 2.5 mm² • finely stranded with core end processing 0.5 2.5 mm² • finely stranded with core end processing 0.5 2.5 mm² • finely stranded without core end processing 0.5 2.5 mm² • finely stranded without core end processing 0.5 2.5 mm²	— downwards	10 mm	
- upwards - downwards - at the side 10 mm  - at the side 10 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 • finely stranded with core end processing • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid • stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid of inely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid of stranded • finely stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • finely stranded without core end processing	<ul> <li>for live parts</li> </ul>		
- downwards - at the side 10 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 • finely stranded with core end processing • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts • solid • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing • finely stranded without core end processing	— forwards	20 mm	
- at the side 10 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  • finely stranded with core end processing 2x (2.5 35 mm²), 1x (2.5 50 mm²)  connectable conductor cross-section for main contacts  • solid 2.5 16 mm²  • stranded 6 70 mm²  • finely stranded with core end processing 2.5 50 mm²  connectable conductor cross-section for auxiliary contacts  • solid 0.5 2.5 mm²  • finely stranded with core end processing 0.5 2.5 mm²  • finely stranded with core end processing 0.5 2.5 mm²  • finely stranded without core end processing 0.5 2.5 mm²  • finely stranded without core end processing 0.5 2.5 mm²  • finely stranded without core end processing 0.5 2.5 mm²	— 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  • finely stranded with core end processing  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary 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  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • finely stranded without core end processing  • finely connectable conductor cross-sections	— downwards	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  • 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  • finely stranded with core end processing  • solid or stranded  • finely stranded  • finely stranded with core end processing  • solid or stranded  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • finely stranded word core end processing	— at the side	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  • 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  • finely stranded with core end processing  • solid or stranded  • finely stranded  • finely stranded with core end processing  • solid or stranded  • finely stranded with core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • finely stranded without core end processing  • finely stranded word core end processing	Connections/ Terminals		
<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>type of connectable conductor cross-sections for main contacts</li> <li>finely stranded with core end processing</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded conductor cross-sections</li> </ul>			
<ul> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>type of connectable conductor cross-sections for main contacts</li> <li>finely stranded with core end processing</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>2.5 16 mm²</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>solid or stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded conductor cross-sections</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 for main contacts</li> <li>finely stranded with core end processing</li> <li>solid</li> <li>stranded</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>finely connectable conductor cross-sections</li> </ul>			
<ul> <li>◆ of magnet coil</li> <li>Spring-type terminals</li> <li>type of connectable conductor cross-sections for main contacts</li> <li>◆ finely stranded with core end processing</li> <li>2x (2.5 35 mm²), 1x (2.5 50 mm²)</li> <li>connectable conductor cross-section for main contacts</li> <li>◆ solid</li> <li>◆ stranded</li> <li>◆ stranded</li> <li>◆ finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>◆ solid or stranded</li> <li>◆ solid or stranded</li> <li>◆ finely stranded with core end processing</li> <li>◆ finely stranded with core end processing</li> <li>◆ finely stranded without core end processing</li> <li>◆ finely connectable conductor cross-sections</li> </ul>	•		
type of connectable conductor cross-sections for main contacts  • finely stranded with core end processing  connectable conductor cross-section for main contacts  • solid  • stranded  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • solid or stranded  • finely stranded with core end processing  • finely stranded without core end processing  • finely connectable conductor cross-sections	·		
<ul> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for main contacts</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely connectable conductor cross-sections</li> </ul>		oping type terrimale	
connectable conductor cross-section for main contacts  • solid  • stranded  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • finely stranded with core end processing  • finely stranded without core end processing  • finely connectable conductor cross-sections	**	2v (2.5 35 mm²) 1v (2.5 50 mm²)	
<ul> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely connectable conductor cross-sections</li> </ul>		2A (2.0 00 IIIIII ), 1A (2.0 00 IIIIII )	
<ul> <li>stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>2.5 mm²</li> <li>finely connectable conductor cross-sections</li> </ul>		2.5 16 mm <sup>2</sup>	
• finely stranded with core end processing     connectable conductor cross-section for auxiliary contacts     • solid or stranded     • finely stranded with core end processing     • finely stranded without core end processing     • finely stranded without core end processing     type of connectable conductor cross-sections			
connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • finely stranded without core end processing  • type of connectable conductor cross-sections  0.5 2.5 mm²  0.5 2.5 mm²  1.5 2.5 mm²			
<ul> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>finely stranded without core end processing</li> <li>2.5 mm²</li> <li>type of connectable conductor cross-sections</li> </ul>		2.5 50 IIIII'	
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> <li>type of connectable conductor cross-sections</li> </ul>	· · · · · · · · · · · · · · · · · · ·	0.5 2.5 mm <sup>2</sup>	
• finely stranded without core end processing  type of connectable conductor cross-sections  0.5 2.5 mm²			
type of connectable conductor cross-sections			
		0.5 2.5 mm²	
for auxiliary contacts			
	•		
— solid or stranded 2x (0.5 2.5 mm²)		2x (0.5 2.5 mm²)	
— finely stranded with core end processing 2x (0.5 1.5 mm²)	finally stranded with core and processing		
— finely stranded without core end processing 2x (0.5 2.5 mm²)			

<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 16)
AWG number as coded connectable conductor cross section	
<ul> <li>for main contacts</li> </ul>	10 2
<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
B10 value with high demand rate according to SN 31920	1 000 000
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 %
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 a
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	
<ul> <li>safety-related switching on</li> </ul>	Yes
<ul> <li>safety-related switching OFF</li> </ul>	Yes
Certificates/ approvals	

Certificates/ approvals

## **General Product Approval**





Confirmation



<u>KC</u>



Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

## Marine / Shipping











**firmations** 





other	Railway	Dangerous Good	Environment
Confirmation	Vibration and Shock	Transport Information	Environmental Con-

### Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RT2047-3AL20

### Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2047-3AL20

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

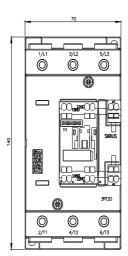
https://support.industry.siemens.com/cs/ww/en/ps/3RT2047-3AL20

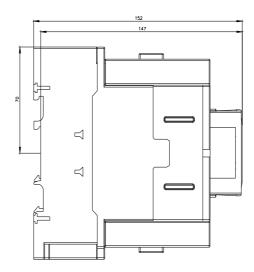
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2047-3AL20&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2047-3AL20&lang=en</a>

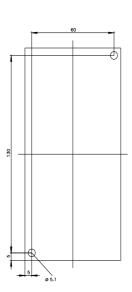
Characteristic: Tripping characteristics, I2t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2047-3AL20/char

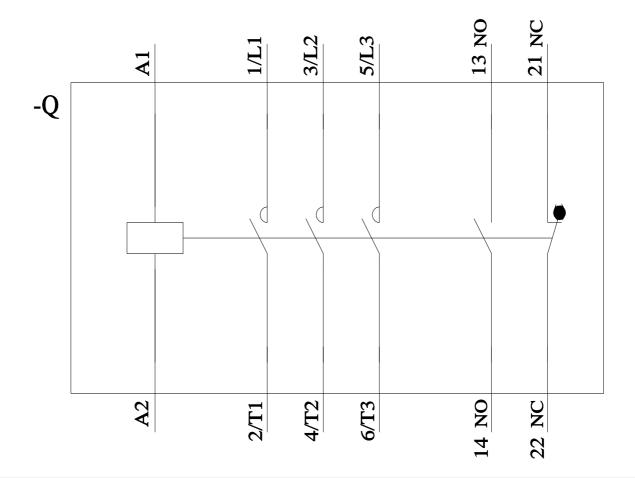
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2047-3AL20&objecttype=14&gridview=view1









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