## SIEMENS

## Data sheet

## 3RT2027-1AM20-0UA0



Contactor, 10 hp, 460 / 575 V, 1 NO + 1 NC, 208 V AC, 50 / 60 Hz, 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	
<ul> <li>at AC in hot operating state</li> </ul>	6.3 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	2.3 W
<ul> <li>without load current share typical</li> </ul>	10.5 W
insulation voltage	
• of main circuit with degree of pollution 3 rated value	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
<ul> <li>of auxiliary circuit rated value</li> </ul>	6 kV
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	8,3g / 5 ms, 5,3g / 10 ms
shock resistance with sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 10 ms
mechanical service life (switching 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)	10/01/2009
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 %

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>	690 V
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	50 A
• at AC-1	
<ul> <li>— up to 690 V at ambient temperature 40 °C rated value</li> </ul>	50 A
— up to 690 V at ambient temperature 60 °C rated value	42 A
• at AC-3	
— at 400 V rated value	27 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	32 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	22 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	44 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	26.5 A
● at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	30.8 A
<ul> <li>— up to 400 V for current peak value n=20 rated value</li> </ul>	30.8 A
<ul> <li>— up to 500 V for current peak value n=20 rated value</li> </ul>	27 A
— up to 690 V for current peak value n=20 rated value	21 A
<ul> <li>at AC-6a         <ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul> </li> </ul>	20.5 A
<ul> <li>— up to 400 V for current peak value n=30 rated value</li> </ul>	20.5 A
<ul> <li>— up to 500 V for current peak value n=30 rated value</li> </ul>	18 A
— up to 690 V for current peak value n=30 rated value	18 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	12 A
at 690 V rated value	12 A
operational current	
<ul> <li>at 1 current path at DC-1</li> </ul>	
— 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
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— 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
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	

— 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
<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	
— 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
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— 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
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
at AC-2 at 400 V rated value	15 kW
● at AC-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	15 kW
— at 690 V rated value	18.5 kW
• at AC-3e	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	15 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles	
at AC-4	
• at 400 V rated value	6 kW
• at 690 V rated value	10.3 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	12.2 kVA
• up to 400 V for current peak value n=20 rated value	21.3 kVA
• up to 500 V for current peak value n=20 rated value	23.3 kVA
• up to 690 V for current peak value n=20 rated value	25 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	8.1 kVA
• up to 400 V for current peak value n=30 rated value	14.2 kVA
• up to 500 V for current peak value n=30 rated value	15.5 kVA
• up to 690 V for current peak value n=30 rated value	21.5 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>	499 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	395 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	260 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	186 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	152 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h

● at AC-3 maximum	750 1/h
• at AC-3 maximum • at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	208 V
at 60 Hz rated value	208 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	81 VA
• at 60 Hz	79 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	
• at 50 Hz	10.5 VA
• at 60 Hz	8.5 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
• at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit number of NC contacts for auxiliary contacts	1
instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul> <li>at 230 V rated value</li> </ul>	10 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
<ul> <li>at 500 V rated value</li> </ul>	2 A
• at 690 V rated value	1 A
operational current at DC-12	
<ul> <li>at 24 V rated value</li> </ul>	10 A
<ul> <li>at 48 V rated value</li> </ul>	6 A
<ul> <li>at 60 V rated value</li> </ul>	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
<ul> <li>at 48 V rated value</li> </ul>	2 A
• at 60 V rated value	2 A
• at 110 V rated value	1 A
<ul><li>at 110 V rated value</li><li>at 125 V rated value</li></ul>	1 A 0.9 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> </ul>	1 A 0.9 A 0.3 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	1 A 0.9 A 0.3 A 0.1 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>contact reliability of auxiliary contacts</li> </ul>	1 A 0.9 A 0.3 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	1 A 0.9 A 0.3 A 0.1 A

	• at 480 V rated value	27 A
yielded mechanical performance (hp) <ul> <li>I for single phase AC motor</li> <li>at 230 V rated value</li> <li>T S hp</li> <li>at 230 V rated value</li> <li>T S hp</li> <li>at 200208 V rated value</li> <li>T S hp</li> <li>at 200408 V rate</li></ul>		
• for single-phase AC motor         2 bp		211
		2 hn
• for 3-phase AC motor             — at 200/280 Y rated value             — at 400/480 Y rated value             10 hp             — at 400/480 Y rated value             10 hp             Contact rating of auxiliary contacts according to UL             X600 / P600             X		
		7.5 hp
contact rating of auxiliary contacts according to UL         A600 / F600           Short-circuit protection of the main circuit	— at 575/600 V rated value	
design of the fuse link <ul> <li>for short-circuit protection of the main circuit</li> <li>with type of coordination 1 required</li> <li>gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V, 80kA)</li> <li>for short-circuit protection of the auxiliary switch required</li> <li>for all backward by the 22.5° on vertical mounting surface; can be tilted forward and backward by the 22.5° on vertical mounting rail according to DIN EN 60715</li> <li>for short-circuit protection</li> <li>for wards</li> <li>for main</li> <li>depth</li> <li>of maxing</li> <li>for all backwards</li> <li>for and backwards</li> <li>for main depth</li> <li>for all backwards</li> <li>for main depth</li> <li>for all backwards</li>         &lt;</ul>	contact rating of auxiliary contacts according to UL	
for short-circuit protection of the main circuit         with type of coordination 1 required         with type of coordination 1 required         with type of assignment 2 required         with side of the auxiliary switch         forwards	Short-circuit protection	
with type of coordination 1 required with type of assignment 2 re	design of the fuse link	
- with type of assignment 2 required     (415/.300A)       • for short-circuit protection of the auxiliary switch required     gG: 50A (890V, 100KA), aM: 25A (890V, 100KA), BS88: 50A (415V, 80KA)       Installatori mounting of the auxiliary switch required     gG: 10 A (500 V, 1 KA)       mounting position     +/180° rotation possible on vertical mounting surface; can be tilled       fastening method     screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715       • side-by-side mounting     Yes       height     85 mm       width     45 mm       - upwards     10 mm       - upwards     10 mm       - upwards     10 mm       - at the side     0 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       - at the side     6 mm       - downwards     10 mm       - downwards     10 mm       - at the side     6 mm       - downwards     10 mm       - for wards     10 mm       - other subliary and contoch circuit     screw-type terminals       - for wards     10 mm       - other subliary and contoch circuit     screw-type terminals	<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
• for short-circuit protection of the auxiliary switch required     gG: 10 A (500 V, 1 kA)       Installation/ mounting dimensions     +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/-22.5° on vertical mounting surface       fastening method     screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715       • side-by-side mounting     Yes       height     85 mm       • width     45 mm       depth     97 mm       required spacing     97 mm       • with side-by-side mounting     0 mm       - upwards     10 mm       - upwards     0 mm       - downwards     0 mm       - downwards     10 mm       - otherwards     10 mm <t< td=""><td>- with type of coordination 1 required</td><td></td></t<>	- with type of coordination 1 required	
required         Installation/ mounting/ dimensions           mounting position         +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/-22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715           • side-by-side mounting         Yes           height         85 mm           width         45 mm           depth         97 mm           required spacing         97 mm           • with side-by-side mounting         10 mm           - forwards         10 mm           - upwards         10 mm           - dorwards         10 mm           - at the side         6 mm           - dorwards         10 mm           - at the side         6 mm           - dorwards         10 mm           - upwards         10 mm           - at the side         6 mm           - forwards         10 mm           - dorwards         10 mm           - dorwards         10 mm           - dorwards         10 mm           - dorwards         10 mm           - forwards         10 mm           - dorwards         10 mm           - forevards         10 mm	— with type of assignment 2 required	
mounting position         +f-190' rotation possible on vertical mounting surface; can be tilted forward and backward by +f-22.5" on vertical mounting surface carew and snap-on mounting gond 35 mm standard mounting rail according to DIN EN 60715           • side-by-side mounting         Yes           height         85 mm           width         45 mm           depth         97 mm           required spacing         97 mm           • with side-by-side mounting         10 mm           - upwards         10 mm           - upwards         10 mm           - downwards         10 mm           - the side         6 mm           - forwards         10 mm           - downwards         10 mm           - of wards         10 mm           - of wards         10 mm           - of ore waitlary conta		gG: 10 A (500 V, 1 kA)
forward and backward by +/- 22.5° 03 5 m standard mounting surface       fastening method     screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715       • side-by-side mounting     Yes       height     85 mm       width     45 mm       depth     97 mm       required spacing     • with side-by-side mounting       • with side-by-side mounting     10 mm       - forwards     10 mm       - upwards     10 mm       - downwards     10 mm       - at the side     0 mm       • for grounded parts     10 mm       - at the side     0 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       - at the side     6 mm       - downwards     10 mm       - forwards     10 mm       - at the side     6 mm       - forwards     10 mm       - at the side     6 mm       - forwards     10 mm <td>Installation/ mounting/ dimensions</td> <td></td>	Installation/ mounting/ dimensions	
fastening method       screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715         height       85 mm         width       46 mm         depth       97 mm         required spacing       with side-by-side mounting         • with side-by-side mounting       - forwards         - forwards       10 mm         - upwards       10 mm         - downwards       10 mm         - downwards       10 mm         - forwards       10 mm         - downwards       10 mm         - forwards       10 mm         - downwards       10 mm         - at the side       6 mm         Connections/Terminals       screw-type terminals         s	mounting position	
height       85 mm         width       45 mm         depth       97 mm         required spacing       97 mm         • with side-by-side mounting       97 mm         - upwards       10 mm         - upwards       10 mm         - downwards       10 mm         - downwards       10 mm         - forwards       10 mm         - at the side       0 mm         - forwards       10 mm         - at the side       6 mm         - downwards       10 mm         - of	fastening method	
width         45 mm           depth         97 mm           required spacing         97 mm           • with side-by-side mounting         97 mm           - forwards         10 mm           - upwards         10 mm           - downwards         10 mm           - downwards         10 mm           - at the side         0 mm           • for grounded parts         0 mm           - forwards         10 mm           - upwards         10 mm           - downwards         10 mm           - forwards         10 mm           - downwards         10 mm           - downwards         10 mm           - downwards         10 mm           - at the side         6 mm           Connections/ Terminals         5 crew-type terminals           is of rauxiliary and control circuit         screw-type terminals           is of magnet coil         5 x (1 25 mm <sup>2</sup> ), 2x (2.5 10 mm <sup>2</sup> )           - solid         2x (1 25 mm <sup>2</sup> ), 2x (2.5 10 mm <sup>2</sup> )           - solid or stranded<	side-by-side mounting	Yes
depth       97 mm         required spacing       • with side-by-side mounting         - forwards       10 mm         - upwards       10 mm         - downwards       10 mm         - downwards       0 mm         - at the side       0 mm         • for grounded parts       0 mm         - forwards       10 mm         - at the side       6 mm         - downwards       10 mm         - at the side       6 mm         - downwards       10 mm         - downwards       5 mm <td>height</td> <td>85 mm</td>	height	85 mm
required spacing         • with side-by-side mounting         - forwards       10 mm         - upwards       10 mm         - downwards       10 mm         - at the side       0 mm         • for grounded parts       0 mm         - forwards       10 mm         - upwards       10 mm         - downwards       10 mm         - forwards       10 mm         - forwards       10 mm         - downwards       10 mm         - forwards       10 mm         - forwards       10 mm         - downwards       10 mm         - forwards       10 mm         - downwards       10 mm         - downwards       10 mm         - for auxiliary contacts       Screw-type terminals <td< td=""><td>width</td><td>45 mm</td></td<>	width	45 mm
• with side-by-side mounting     10 mm       - forwards     10 mm       - upwards     10 mm       - at the side     0 mm       • at the side     0 mm       • for grounded parts     0 mm       - forwards     10 mm       - upwards     10 mm       - at the side     6 mm       - at the side     6 mm       - at the side     6 mm       - downwards     10 mm       - at the side     6 mm       - downwards     10 mm       - forwards     10 mm       - downwards     10 mm       - at the side     6 mm       - odwnwards     10 mm       - of rauxiliary contacts     Screw-type terminal	depth	97 mm
forwards10 mm upwards10 mm downwards10 mm at the side0 mm at the side0 mm forwards10 mm forwards10 mm upwards10 mm at the side6 mm downwards10 mm at the side6 mmConnections/ Terminals10 mm at the side6 mmConnections/ Terminalsscrew-type terminals• for auxiliary and control circuitscrew-type terminals• of magnet coilScrew-type terminals• of magnet coilScrew-type terminals• of or auxiliary contactsScrew-type terminals• of or auxiliary contactsScrew-type terminals• of magnet coil2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)• at AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 10 mm²)• at AWG cables for main contacts2x (16 12), 2x (14 8)connactalle conductor cross-section for main2x (16 12), 2x (14 8)	required spacing	
	<ul> <li>with side-by-side mounting</li> </ul>	
- downwards     10 mm       - at the side     0 mm       • for grounded parts     0 mm       - upwards     10 mm       - upwards     10 mm       - at the side     6 mm       - downwards     10 mm       - upwards     10 mm       - upwards     10 mm       - downwards     10 mm       - upwards     10 mm       - downwards     10 mm       - at the side     6 mm       Connections/Terminals     5 crew-type terminals       for auxiliary and control circuit     screw-type terminals       i at contactor for auxiliary contacts     Screw-type terminals       i at contactor for auxiliary contacts     Screw-type terminals       i of magnet coil     Screw-type terminals       i of main contacts     Screw-type terminals       - solid     2x (1 2.5 mm²), 2x (2.5 10 mm²)       - solid or stranded     2x (1 2.5 mm²), 2x (2.5 10 mm²) <td< td=""><td>— forwards</td><td>10 mm</td></td<>	— forwards	10 mm
at the side       0 mm         • for grounded parts       -         forwards       10 mm         upwards       10 mm         at the side       6 mm         at the side       6 mm         downwards       10 mm         forwards       10 mm         downwards       10 mm         forwards       10 mm         forwards       10 mm         upwards       10 mm         downwards       10 mm         at the side       6 mm         Connections       6 mm         for main current circuit       screw-type terminals         vipe of electrical connection       screw-type terminals         • for main current circuit       screw-type terminals         • of magnet coil       Screw-type terminals         • of magnet coil       Screw-type terminals         • of magnet coil       Screw-type terminals         - solid       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm	— upwards	10 mm
• for grounded parts       -         - forwards       10 mm         - upwards       10 mm         - at the side       6 mm         - downwards       10 mm         - downwards       10 mm         - forwards       10 mm         - downwards       10 mm         - upwards       10 mm         - upwards       10 mm         - downwards       10 mm         - at the side       6 mm         Connections/       6 mm         • for main current circuit       screw-type terminals         • for auxiliary and control circuit       screw-type terminals         • of magnet coll       Screw-type terminals         • of magnet coll       Screw-type terminals         • of magnet coll       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - solid or stranded       2x (1 2.5 mm²), 2x (		10 mm
- forwards       10 mm         - upwards       10 mm         - at the side       6 mm         - downwards       10 mm         • for live parts       10 mm         - forwards       10 mm         - upwards       10 mm         - upwards       10 mm         - upwards       10 mm         - upwards       10 mm         - downwards       10 mm         - at the side       6 mm         Connections/ Terminals       6 mm         connections/ Terminals       5 crew-type terminals         • for main current circuit       screw-type terminals         • at contactor for auxiliary contacts       Screw-type terminals         • of magnet coil       Screw-type terminals         type of connectable conductor cross-sections       • for main contacts         - solid       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - solid or stranded       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         - at AWG cables for main contacts       2x (1 2.5 mm²), 2x (1.1 8)         connectable conductor cross-section for main contacts       2x (1 2.5 mm²), 2x (1.1 8)		0 mm
upwards10 mm at the side6 mm downwards10 mm downwards10 mm for vards10 mm upwards10 mm upwards10 mm downwards10 mm downwards6 mm at the side6 mmConnections/ Terminalstype of electrical connection- for auxiliary and control circuitscrew-type terminals- of main current circuitscrew-type terminals- of magnet coilScrew-type terminals- of main contactsScrew-type terminals- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)- at AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²- connectable conductor cross-section for main2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²		
at the side6 mm downwards10 mm• for live parts forwards10 mm upwards10 mm upwards10 mm downwards10 mm downwards6 mm at the side6 mm <b>Connections/ Terminals</b> type of electrical connection• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• of magnet coilScrew-type terminals• of magnet coilScrew-type terminals• of main contactsScrew-type terminals• of main contactsScrew-type terminals• of magnet coilScrew-type terminals• of magnet coilScrew-type terminals• of main contacts2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)• at AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• at AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²connectable conductor cross-section for main2x (1 2.5 mr²), 2x (2.5 6 mm²), 1x 10 mm²		
downwards       10 mm         • for live parts       10 mm         powards       10 mm         upwards       10 mm         downwards       10 mm         downwards       10 mm         at the side       6 mm         Connections/ Terminals         at the side       6 mm         Connections/ Terminals         • for main current circuit       screw-type terminals         • for auxiliary and control circuit       screw-type terminals         • at contactor for auxiliary contacts       Screw-type terminals         • of magnet coil       Screw-type terminals         • of main contacts       - solid         - solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 10 mm²)         • at AWG cables for main contacts       2x (16 12), 2x (14 8)         connectable conductor cross-section for main contacts       2x (16 12), 2x (14 8)		
<ul> <li>for live parts         <ul> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>downwards</li> <li>mm</li> <li>at the side</li> <li>mm</li> </ul> </li> <li>Terminals</li> <li>type of electrical connection         <ul> <li>for auxiliary and control circuit</li> <li>screw-type terminals</li> <li>for auxiliary and control circuit</li> <li>screw-type terminals</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Screw-type terminals</li> </ul> </li> <li>type of connectable conductor cross-sections         <ul> <li>for main contacts</li> <li>solid or stranded</li> <li>to rinely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> <li>at AWG cables for main contacts</li> </ul> </li> </ul>		
- forwards10 mm- upwards10 mm- downwards10 mm- at the side6 mmConnections/Terminalstype of electrical connection• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of magnet coilScrew-type terminalstype of connectable conductor cross-sectionsScrew-type terminals• for main contacts- solid- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)• at AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• at AWG cables for main contacts2x (16 12), 2x (14 8)		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       screw-type terminals         • at contactor for auxiliary contacts       Screw-type terminals         • of magnet coil       Screw-type terminals         type of connectable conductor cross-sections       • for main contacts         - solid       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         • at AWG cables for main contacts       2x (16 12), 2x (14 8)	•	
- downwards10 mm- at the side6 mmConnections/ Terminalstype of electrical connection• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of magnet coilScrew-type terminalstype of connectable conductor cross-sections• for main contacts- solid- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• at AWG cables for main contacts2x (1 2.5 mm²), 2x (14 8)connectable conductor cross-section for main contacts2x (1 2.5 mm²), 2x (14 8)		
at the side6 mmConnections/ Terminalstype of electrical connection• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of magnet coilScrew-type terminalstype of connectable conductor cross-sectionsScrew-type terminals• for main contacts- solid- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• at AWG cables for main contacts2x (16 12), 2x (14 8)connectable conductor cross-section for main contacts2x (16 12), 2x (14 8)		
Connections/ Terminals         type of electrical connection         • for main current circuit       screw-type terminals         • for auxiliary and control circuit       screw-type terminals         • at contactor for auxiliary contacts       Screw-type terminals         • of magnet coil       Screw-type terminals         type of connectable conductor cross-sections       Screw-type terminals         • for main contacts       Screw-type terminals         • a solid       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         • at AWG cables for main contacts       2x (16 12), 2x (14 8)         connectable conductor cross-section for main contacts       2x (16 12), 2x (14 8)		
type of electrical connection• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of magnet coilScrew-type terminalstype of connectable conductor cross-sectionsScrew-type terminals• for main contacts- solid- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 10 mm²)• at AWG cables for main contacts2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²connectable conductor cross-section for main contacts2x (16 12), 2x (14 8)		0
• for main current circuitscrew-type terminals• for auxiliary and control circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of magnet coilScrew-type terminalstype of connectable conductor cross-sectionsScrew-type terminals• for main contacts- solid- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• at AWG cables for main contacts2x (1 12), 2x (14 8)		
<ul> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> <li>Screw-type terminals</li> <li>of main contacts</li> <li>for main contacts</li> <li>- solid</li> <li>- solid or stranded</li> <li>- finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> <li>2x (1 2.5 mm<sup>2</sup>), 2x (2.5 10 mm<sup>2</sup>)</li> <li>2x (1 2.5 mm<sup>2</sup>), 2x (2.5 10 mm<sup>2</sup>)</li> <li>2x (1 2.5 mm<sup>2</sup>), 2x (2.5 10 mm<sup>2</sup>)</li> <li>2x (1 2.5 mm<sup>2</sup>), 2x (2.5 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></li> <li>2x (1 2.5 mm<sup>2</sup>), 2x (14 8)</li> </ul>		
• at contactor for auxiliary contacts       Screw-type terminals         • of magnet coil       Screw-type terminals         type of connectable conductor cross-sections       • for main contacts         • for main contacts       - solid         - solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm²)         - finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 10 mm²)         • at AWG cables for main contacts       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         connectable conductor cross-section for main contacts       2x (1 6 12), 2x (14 8)		
• of magnet coilScrew-type terminalstype of connectable conductor cross-sectionsScrew-type terminals• for main contacts2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid2x (1 2.5 mm²), 2x (2.5 10 mm²)- solid or stranded2x (1 2.5 mm²), 2x (2.5 10 mm²)- finely stranded with core end processing2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²• at AWG cables for main contacts2x (1 2.5 mm²), 2x (14 8)connectable conductor cross-section for main contacts2x (16 12), 2x (14 8)	-	
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	-	
<ul> <li>for main contacts         <ul> <li>for main contacts</li> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>at AWG cables for main contacts</li> </ul> </li> <li>connectable conductor cross-section for main contacts</li> </ul>		on ow type terminate
solid       2x (1 2.5 mm²), 2x (2.5 10 mm²)         solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm²)         finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 10 mm²)         finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         at AWG cables for main contacts       2x (1 2.5 mm²), 2x (14 8)         connectable conductor cross-section for main contacts       2x (16 12), 2x (14 8)		
— solid or stranded       2x (1 2.5 mm²), 2x (2.5 10 mm²)         — finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         • at AWG cables for main contacts       2x (1 2.5 mm²), 2x (14 8)         connectable conductor cross-section for main contacts       2x (16 12), 2x (14 8)		2x (1 2.5 mm <sup>2</sup> ), 2x (2.5 10 mm <sup>2</sup> )
— finely stranded with core end processing       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         • at AWG cables for main contacts       2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²         connectable conductor cross-section for main contacts       2x (16 12), 2x (14 8)		
• at AWG cables for main contacts 2x (16 12), 2x (14 8) connectable conductor cross-section for main contacts		
connectable conductor cross-section for main contacts		
contacts		
• solid 1 10 mm <sup>2</sup>		
	• solid	1 10 mm <sup>2</sup>

	4 40 0
• stranded	1 10 mm <sup>2</sup>
finely stranded with core end processing     connectable conductor cross-section for auxiliary     contexts	1 10 mm <sup>2</sup>
contacts <ul> <li>solid or stranded</li> </ul>	0.5 2.5 mm <sup>2</sup>
	0.5 2.5 mm <sup>2</sup>
finely stranded with core end processing	0.5 2.5 11111-
type of connectable conductor cross-sections	
for auxiliary contacts	$2x (0.5 - 4.5 mm^2) 2x (0.75 - 0.5 mm^2)$
— solid or stranded	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )
at AWG cables for auxiliary contacts      AWG number as coded connectable conductor cross     section	2x (20 16), 2x (18 14)
for main contacts	16 8
for auxiliary contacts	20 14
Safety related data	20
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	+50 000
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 у
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	
General Product Approval	
EMC Functional Safety/Safety of Declaration of Machinery	of Conformity Test Certificates
RCM Type Examination Certificate UK	EG-Konf. Special Test Certific- ate Type Test Certific- ates/Test Report
Marine / Shipping	
	LIRS RINA RINA
other	



## **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=3RT2027-1AM20-0UA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2027-1AM20-0UA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AM20-0UA0

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

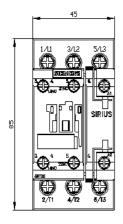
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2027-1AM20-0UA0&lang=en

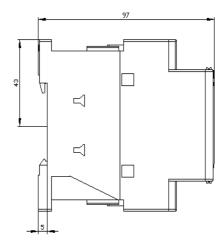
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

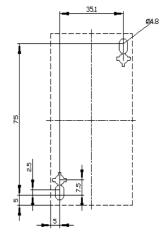
https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AM20-0UA0/char

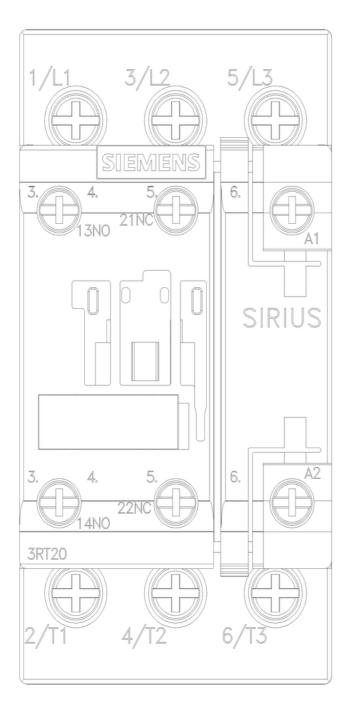
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2027-1AM20-0UA0&objecttype=14&gridview=view1









last modified:

6/2/2022 🖸