## SIEMENS

## Data sheet

## 3RT2038-1AL24

Power contactor, AC-3 80 A, 37 kW / 400 V 2 NO + 2 NC, 230 V AC 50/60 Hz, 3-pole Size S2, screw terminals



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
<ul> <li>auxiliary switch</li> </ul>	No
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
power loss [W] for rated value of the current without load current share typical	17.2 W
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	
<ul> <li>between coil and main contacts acc. to EN 60947-1</li> </ul>	400 V

protection class IP	
• on the front	IP20
• of the terminal	IP00
shock resistance at rectangular impulse	
• at AC	9.8g / 5 ms, 6.5g / 10 ms
shock resistance with sine pulse	
• at AC	15.3g / 5 ms, 10.1g / 10 ms
mechanical service life (switching cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronics- compatible 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 acc. to DIN EN 81346-2	Q
Ambient conditions	
installation altitude at height above sea level	2 000 m
maximum	
ambient temperature	
during operation	-25 +60 °C
• during storage	-55 +80 °C
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
operating current	
• at AC-1 at 400 V	
<ul> <li>— 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 °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-4 at 400 V rated value	55 A
• at AC-5a up to 690 V rated value	79.2 A
• at AC-5b up to 400 V rated value	66.4 A
• at AC-6a	

	70 4
— 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	
<ul> <li>at maximum AC-1 rated value</li> </ul>	35 mm²
operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	30 A
• at 690 V rated value	24 A
operating current	
• at 1 current path at DC-1	
— at 24 V rated value	55 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	55 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
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 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
operating current	

• at 1 current path at DC-3 at DC-5	25 A
— at 24 V rated value	35 A 2.5 A
— at 110 V rated value	1 A
— at 220 V rated value	
— at 440 V rated value	0.1 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	55 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
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 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
operating power for approx. 200000 operating cycles	
at AC-4	
• at 400 V rated value	15.8 kW
• at 690 V rated value	21.8 kW
operating apparent output at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	27.8 kV·A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	48.4 kV·A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	60.6 kV·A
<ul> <li>up to 690 V for current peak value n=20 rated value</li> </ul>	69.3 kV·A
operating apparent output at AC-6a	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	18.6 kV·A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	32.3 kV·A

<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	40.4 kV·A			
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	55.8 kV·A			
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>	1 298 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	898 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	640 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	414 A; Use minimum cross-section acc. to AC-1 rated value			
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	333 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	700 1/h			
• at AC-2 maximum	350 1/h			
• at AC-3 maximum	500 1/h			
• at AC-4 maximum	150 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	210 V·A			
• at 60 Hz	188 V·A			
inductive power factor with closing power of the coil				
● at 50 Hz	0.69			
• at 60 Hz	0.65			
apparent holding power of magnet coil at AC				
• at 50 Hz	17.2 V·A			
● at 60 Hz	16.5 V·A			
inductive power factor with the holding power of the				
coil				

• at 50 Hz	0.36
• at 60 Hz	0.39
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	
<ul> <li>instantaneous contact</li> </ul>	2
number of NO contacts for auxiliary contacts	
<ul> <li>instantaneous contact</li> </ul>	2
operating current at AC-12 maximum	10 A
operating 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
operating 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
operating current at DC-13	
• at 24 V rated value	6 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 three-phase AC motor	

• at 480 V rated value	65 A
• at 600 V rated value	62 A
yielded mechanical performance [hp]	

<ul> <li>for single-phase AC motor</li> </ul>			
— at 110/120 V rated value	5 hp		
— at 230 V rated value	15 hp		
<ul> <li>for three-phase AC motor</li> </ul>			
— at 200/208 V rated value	20 hp		
— at 220/230 V rated value	25 hp		
— at 460/480 V rated value	50 hp		
— at 575/600 V rated value	60 hp		
contact rating of auxiliary contacts according to UL	A600 / Q600		
Short-circuit protection			
design of the fuse link			
<ul> <li>for short-circuit protection of the main circuit</li> </ul>			
— 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)		
— with type of assignment 2 required	gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)		
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)		
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		
mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715		
<ul> <li>side-by-side mounting</li> </ul>	Yes		
height	114 mm		
width	55 mm		
depth	174 mm		
required spacing			
<ul> <li>with side-by-side mounting</li> </ul>			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
<ul> <li>for grounded parts</li> </ul>			
— forwards	10 mm		
— upwards	10 mm		
— at the side	6 mm		
— downwards	10 mm		
<ul> <li>for live parts</li> </ul>			
— forwards	10 mm		
— forwards — upwards	10 mm 10 mm		

- downwards     10 mm       - at the side     6 mm       Connections? Terminals     screw-type terminals       • for main current circuit     screw-type terminals       • at the side     Screw-type terminals       • of main current circuit     Screw-type terminals       • of main contacts     Screw-type terminals       • for main contacts     Screw-type terminals       • for main contacts     2x (1 35 mm <sup>2</sup> ), 1x (1 50 mm <sup>2</sup> )       - finely stranded with core end processing     2x (1 25 mm <sup>2</sup> ), 1x (1 50 mm <sup>2</sup> )       • for main contacts     2x (1 25 mm <sup>2</sup> ), 1x (1 50 mm <sup>2</sup> )       • for oncactable conductor for main contacts     2x (1 25 mm <sup>2</sup> )       • finely stranded with core end processing     1 35 mm <sup>2</sup> • finely stranded with core end processing     5 2.5 mm <sup>2</sup> • finely stranded with core end processing     5 2.5 mm <sup>2</sup> • finely stranded with core end processing     5 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> )       • for auxiliary contacts     2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )       • for auxiliary contacts     2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )       • for auxiliary contacts     2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )       • for auxiliary contacts     2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )    <	decomposed a	10 mm		
Connections/ Terminals           Ype of electrical connection         screw-type terminals           • for main current circuit         screw-type terminals           • or auxiliary and control current circuit         screw-type terminals           • or auxiliary contacts         Screw-type terminals           • or main contacts         Screw-type terminals           • or main contacts         Screw-type terminals           • or main contacts         2x (1 35 mm <sup>2</sup> )           - finely stranded with core end processing         2x (1 25 mm <sup>2</sup> )           • finely stranded with core end processing         1 35 mm <sup>2</sup> • finely stranded with core end processing         0.5 2.5 mm <sup>2</sup> • single or multi-stranded         0.5 2.5 mm <sup>2</sup> • single or multi-stranded         2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )           • hely stranded with core end processing         2x (20.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )           • linely stranded with core end processing         2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )           • linely stranded with core end processing         2x (20.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )           • linely stranded with core end processing         2x (0.5 1.5 mm <sup>2</sup> ), 2x (0.75 2.5 mm <sup>2</sup> )           • type of connectable conductor cross-sections at AWG numbers exoded connectable conductor cross-sections at AWG conductors	— downwards	10 mm		
type of electrical connection         or main current circuit         screw-type terminals           • for main current circuit         screw-type terminals           • for main control current circuit         Screw-type terminals           • of main contacts         Screw-type terminals           • of main contacts         Screw-type terminals           • for main contacts         Screw-type terminals           • for main contacts         Screw-type terminals           • for main contacts         2x (1 35 mm²), 1x (1 50 mm²)           • finely stranded with core end processing         2x (1 25 mm²), 1x (1 35 mm²)           • finely stranded with core end processing         1 35 mm²           • finely stranded with core end processing         0.5 2.5 mm²           • linely stranded with core end processing         0.5 2.5 mm²           • linely stranded with core end processing         0.5 2.5 mm²           • linely stranded with core end processing         2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)           • linely stranded with core end processing         2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)           • proper connectable conductor cross-sections for auxiliary contacts         2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)           • for auxiliary contacts         18 1         2x (20 16), 2x (18 14)           AWG number as coded conne	— at the side	6 mm		
• for main current circuitscrew-type terminals• for auxiliary and control current circuitscrew-type terminals• of magnet coilScrew-type terminals• of magnet coilScrew-type terminals• for main contactsScrew-type terminals• for main contacts2x (1 35 mm²), 1x (1 50 mm²)• finely stranded with core end processing2x (1 25 mm²), 1x (1 35 mm²)• at AWG conductor for main contacts2x (1 25 mm²), 1x (1 35 mm²)• at AWG conductor cross-section for main contacts2x (1 25 mm²), 1x (1 35 mm²)• inely stranded with core end processing1 35 mm²• inely stranded thit core end processing0.5 2.5 mm²• single or multi-stranded0.5 2.5 mm²• inely stranded with core end processing0.5 2.5 mm²• inely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections for auxiliary contacts2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sect	Connections/ Terminals			
• for auxiliary and control current circuitscrew-type terminals• at contactor for auxiliary contactsScrew-type terminals• of magnet collScrew-type terminals• for main contacts*• finely stranded with core end processing2x (1 35 mm²) 1x (1 50 mm²)• finely stranded with core end processing2x (1 25 mm²), 1x (1 35 mm²)• finely stranded with core end processing2x (1 25 mm²), 1x (1 35 mm²)• finely stranded with core end processing1 35 mm²• finely stranded with core end processing0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• single or multi-stranded0.5 2.5 mm²• single or multi-stranded0.5 2.5 mm²• single or multi-stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• single or multi-stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• single or multi-stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• productors for auxiliary contacts2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• fine validary contacts2 14• for auxiliary contacts2 14• for auxiliary contacts2 14• for auxiliary contacts1.000 000 <td< td=""><td>type of electrical connection</td><td></td></td<>	type of electrical connection			
• at contactor for auxiliary contacts       Screw-type terminals         • of main contacts       Screw-type terminals         • of r main contacts       2x(135 mm <sup>2</sup> ), 1x(150 mm <sup>2</sup> )         - finely stranded with core end processing       2x(182), 1x(181)         contactable conductor cross-section for main contacts       2x(182), 1x(181)         contactable conductor cross-section for main contacts       2x(1025 mm <sup>2</sup> )         • finely stranded with core end processing       135 mm <sup>2</sup> • finely stranded with core end processing       0.525 mm <sup>2</sup> • single or multi-stranded       0.525 mm <sup>2</sup> • single or multi-stranded       0.525 mm <sup>2</sup> • finely stranded with core end processing       2x(0.515 mm <sup>2</sup> ), 2x(0.7525 mm <sup>2</sup> )         • finely stranded with core end processing       2x(0.515 mm <sup>2</sup> ), 2x(0.7525 mm <sup>2</sup> )         • finely stranded with core end processing       2x(0.515 mm <sup>2</sup> ), 2x(0.7525 mm <sup>2</sup> )         • finely stranded with core end processing       2x(0.515 mm <sup>2</sup> ), 2x(0.7525 mm <sup>2</sup> )         • for auxiliary contacts       2x(0.515 mm <sup>2</sup> ), 2x(0.7525 mm <sup>2</sup> )         • for auxiliary contacts       181         • for auxiliary contacts       1000 000         • for auxiliary contacts       2014         Step related data       2014 <td><ul> <li>for main current circuit</li> </ul></td> <td>screw-type terminals</td>	<ul> <li>for main current circuit</li> </ul>	screw-type terminals		
• of magnet collScrewtype terminalstype of connectable conductor cross-sections • firm ain contacts • single or multi-stranded • finely stranded with core end processing • at AWG conductors for main contacts • finely stranded with core end processing • single or multi-stranded • single or multi-stranded • single or multi-stranded • finely stranded with core end processing • single or multi-stranded • single or multi-stranded • finely stranded with core end processing • finely strande •	<ul> <li>for auxiliary and control current circuit</li> </ul>	screw-type terminals		
type of connectable conductor cross-sections         - single or multi-stranded         2x (135 mm <sup>3</sup> ), 1x (150 mm <sup>3</sup> )           - finely stranded with core end processing         2x (125 mm <sup>3</sup> ), 1x (150 mm <sup>3</sup> )           - at AWG conductors for main contacts         2x (125 mm <sup>3</sup> ), 1x (150 mm <sup>3</sup> )           - finely stranded with core end processing         2x (182), 1x (181)           connectable conductor cross-section for nain contacts         0.525 mm <sup>2</sup> - finely stranded with core end processing         0.525 mm <sup>2</sup> - single or multi-stranded         0.525 mm <sup>2</sup> - single or multi-stranded         2x (0.51,5 mm <sup>3</sup> ), 2x (0.752,5 mm <sup>3</sup> )           - single or multi-stranded         2x (0.51,5 mm <sup>3</sup> ), 2x (0.752,5 mm <sup>3</sup> )           - single or multi-stranded         2x (0.51,5 mm <sup>3</sup> ), 2x (0.752,5 mm <sup>3</sup> )           - single or multi-stranded         2x (0.51,5 mm <sup>3</sup> ), 2x (0.752,5 mm <sup>3</sup> )           - single or multi-stranded         2x (0.51,5 mm <sup>3</sup> ), 2x (0.752,5 mm <sup>3</sup> )           - finely stranded with core end processing         2x (1814)           - finely stranded with core end processing         2x (0.51,5 mm <sup>3</sup> ), 2x (0.752,5 mm <sup>3</sup> )           - for main contacts         1000 000           - for main contacts         1000 000           - for main contacts         1000 000           - for m	<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals		
• for main contacts $2x (1 35 mm^2), 1x (1 50 mm^3)$ - single or multi-stranded $2x (1 25 mm^2), 1x (1 35 mm^3)$ • at AWG conductors for main contacts $2x (1 25 mm^2), 1x (1 35 mm^3)$ connectable conductor cross-section for main contacts $2x (1 25 mm^2), 1x (1 35 mm^3)$ • finely stranded with core end processing $1 35 mm^2$ • finely stranded with core end processing $1 35 mm^2$ • single or multi-stranded $0.5 2.5 mm^2$ • single or multi-stranded $0.5 2.5 mm^2$ • linely stranded with core end processing $0.5 2.5 mm^2$ • single or multi-stranded $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • hinely stranded with core end processing $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • hinely stranded with core end processing $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • hinely stranded with core end processing $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • hinely stranded with core end processing $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • hinely stranded with core end processing $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for nain contacts $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for nain contacts $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for auxiliary contacts $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for auxiliary contacts $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for auxiliary contacts $2x (0.5 1.5 mm^2), 2x (0.75 2.5 mm^2)$ • for auxiliary contacts $100 00000$ • fo	<ul> <li>of magnet coil</li> </ul>	Screw-type terminals		
	type of connectable conductor cross-sections			
finely stranded with core end processing e at AWG conductors for main contacts2x (1 25 mm³), 1x (1 35 mm²) 2x (18 2), 1x (18 1)connectable conductor cross-section for main contacts1 35 mm²- finely stranded with core end processing1 35 mm²connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²- single or multi-stranded0.5 2.5 mm²- finely stranded with core end processing0.5 2.5 mm²- single or multi-stranded0.5 2.5 mm²- single or multi-stranded2x (0.5 1,5 mm²), 2x (0.75 2.5 mm²)- single or multi-stranded2x (0.5 1,5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1,5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1,5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1,5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1,5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1,5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (0.5 1,5 mm²), 2x (0.75 2,5 mm²)- for auxiliary contacts18 1- for auxiliary contacts18 1- for auxiliary contacts1000 000- for auxiliary contacts1000 000- with high demand rate acc. to SN 3192073 %- with low demand rate acc. to SN 3192073 %- with low demand rate acc. to SN 31920100 FIT- with low demand rate acc. to SN	<ul> <li>for main contacts</li> </ul>			
• at AWG conductors for main contacts2× (18 2), 1× (18 1)connectable conductor cross-section for main contacts1 35 mm²• finely stranded with core end processing1 35 mm²connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²• single or mutil-stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• type of connectable conductor cross-sections for auxiliary contacts2× (0,5 1,5 mm²), 2× (0,75 2,5 mm²)• neingle or mutil-stranded2× (0,5 1,5 mm²), 2× (0,75 2,5 mm²)• finely stranded with core end processing2× (0,5 1,5 mm²), 2× (0,75 2,5 mm²)• type of connectable conductor cross-sections for auxiliary contacts2× (0,5 1,5 mm²), 2× (0,75 2,5 mm²)• finely stranded with core end processing2× (0.5 1,5 mm²), 2× (0,75 2,5 mm²)• type of connectable conductor cross-sections section18 1• for main contacts18 1• for auxiliary contacts20 14Staty related data1000 000proportion of dangerous failures • with high demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• miror contact acc. to IEC 60947.41Yes• positively driven operati	— single or multi-stranded	2x (1 35 mm²), 1x (1 50 mm²)		
connectable conductor cross-section for main contacts       1 35 mm <sup>2</sup> inely stranded with core end processing       1 35 mm <sup>2</sup> connectable conductor cross-section for auxiliary contacts       0.5 2.5 mm <sup>2</sup> inely stranded with core end processing       0.5 2.5 mm <sup>2</sup> inely stranded with core end processing       0.5 2.5 mm <sup>2</sup> inely stranded with core end processing       0.5 2.5 mm <sup>2</sup> inely stranded with core end processing       0.5 2.5 mm <sup>2</sup> inely stranded with core end processing       2x (0.5 1,5 mm <sup>2</sup> ), 2x (0.75 2,5 mm <sup>2</sup> )         inely stranded with core end processing       2x (0.5 1,5 mm <sup>2</sup> ), 2x (0.75 2,5 mm <sup>2</sup> )         with our contactable conductor cross-sections at AWG conductors for auxiliary contacts       2x (20 16), 2x (18 14)         AWG number as coded connectable conductor cross- section       1 14         if or auxiliary contacts       1 14         Safety related data       20 14         Safety related data       40 %         with high demand rate acc. to SN 31920       1 .000 000         induct function       73 %         with low demand rate acc. to SN 31920       100 FIT         induct function       100 FIT         with low demand rate acc. to SN 31920       100 FIT         indirect functi	<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 25 mm²), 1x (1 35 mm²)		
contactsI 35 mm²• finely stranded with core end processing1 35 mm²connectable conductor cross-section for auxiliary contexts0.5 2.5 mm²• single or multi-stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• single or multi-stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- single or multi-stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- single or multi-stranded2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)- finely stranded with core end processing2x (20 16), 2x (18 14)• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (20 16), 2x (18 14)• for main contacts18 1• for main contacts1000 000• for auxiliary contacts1000 000Proportion of dangerous failures1000 000• with high demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192040 %• with low demand rate acc. to SN 319201000 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• mirror contact acc. to IEC 60947-4-1Yes• positively dr	<ul> <li>at AWG conductors for main contacts</li> </ul>	2x (18 2), 1x (18 1)		
• finely stranded with core end processing1 35 mm³connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²• single or multi-stranded0.5 2.5 mm²• finely stranded with core end processing for auxiliary contacts2x (0.5 1,5 mm²), 2x (0.75 2,5 mm²)- single or multi-stranded2x (0.5 1,5 mm²), 2x (0.75 2,5 mm²)- finely stranded with core end processing (- finely stranded with core end processing type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (0.5 1,5 mm²), 2x (0.75 2,5 mm²)AWG number as coded connectable conductor cross section2x (0.5 16), 2x (18 14)AWG number as coded connectable conductor cross section18 1• for nain contacts18 1• for auxiliary contacts20 14Safety related data40 %• with high demand rate acc. to SN 319201000 000• with low demand rate acc. to SN 3192073 %• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No				
Connectable conductor cross-section for auxiliary contacts0.5 2.5 mm²• single or multi-stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• type of connectable conductor cross-sections for auxiliary contacts2x (0.5 1.5 mm²), 2x (0,75 2.5 mm²)• single or multi-stranded2x (0.5 1.5 mm²), 2x (0,75 2.5 mm²)• finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (0.2 10), 2x (18 14)AWG conductors for auxiliary contacts18 1• for main contacts18 1• for main contacts100 000• with high demand rate acc. to SN 319201000 000 <b>Propotion of dangerous failures</b> • with high demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %failure rate [FIT] • with how demand rate acc. to SN 31920100 FITproduct function • mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No	contacts			
contacts0.5 2.5 mm²• single or multi-stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• type of connectable conductor cross-sections for auxiliary contacts2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)- single or multi-stranded2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)- finely stranded with core end processing2x (20 16), 2x (18 14)• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (20 16), 2x (18 14)• for main contacts18 1• for main contacts20 14• for main contacts20 14• for auxiliary contacts1000 000• with high demand rate acc. to SN 319201000 000• with high demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• with high demand rate acc. to SN 31920100 FIT• product functionFIT• with high demand rate acc. to SN 31920100 FIT• positively driven operation acc. to EC 60947-5-No	<ul> <li>finely stranded with core end processing</li> </ul>	1 35 mm²		
• single or multi-stranded0.5 2.5 mm²• finely stranded with core end processing0.5 2.5 mm²• type of connectable conductor cross-sections for auxiliary contacts2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)- single or multi-stranded2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)- finely stranded with core end processing2x (20 16), 2x (18 14)• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (20 16), 2x (18 14)• for main contacts18 1• for main contacts20 14• for auxiliary contacts1000 000Proportion of dangerous failures40 %• with high demand rate acc. to SN 319201000 000proportion of dangerous failures73 %• with high demand rate acc. to SN 31920100 FITproduct function100 FIT• with high demand rate acc. to SN 31920100 FITproduct function100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5No	-			
<ul> <li>finely stranded with core end processing</li> <li>type of connectable conductor cross-sections for auxiliary contacts</li> <li>– single or multi-stranded</li> <li>– finely stranded with core end processing</li> <li>type of connectable conductor cross-sections at AWG conductors for auxiliary contacts</li> <li>AWG number as coded connectable conductor cross- section</li> <li>for main contacts</li> <li>for auxiliary contacts</li> <li>20 14</li> <li>Safety related data</li> <li>Safety related data</li> <li>with high demand rate acc. to SN 31920</li> <li>To FIT</li> <li>with low demand rate acc. to SN 31920</li> <li>Fillure rate [FIT]</li> <li>with low demand rate acc. to SN 31920</li> <li>To FIT</li> <li>product function</li> <li>mirror contact acc. to IEC 60947-4-1</li> <li>positively driven operation acc. to IEC 60947-5-</li> <li>No</li> </ul>		0.5 0.5 mm²		
Interformation and processing• type of connectable conductor cross-sections for auxiliary contacts- single or multi-stranded2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)• finely stranded with core end processing • type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)• AWG number as coded connectable conductor cross- section2x (20 16), 2x (18 14)• for main contacts18 1• for auxiliary contacts20 14• for auxiliary contacts1000 000 <b>Safety related data</b> 1000 000 <b>Proportion of dangerous failures</b> • with high demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %failure rate [FIT] • with low demand rate acc. to SN 31920100 FITproduct function • mirror contact acc. to IEC 60947-4-1 • positively driven operation acc. to IEC 60947-5-YesNoNo	-			
for auxiliary contacts2x (0,5 1,5 mm³), 2x (0,75 2,5 mm³) single or multi-stranded2x (0,5 1,5 mm³), 2x (0,75 2,5 mm³) finely stranded with core end processing2x (20 16), 2x (18 14) finely stranded connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross section18 1 for main contacts18 1- for auxiliary contacts20 14Safety related data20 14B10 value1000 000- with high demand rate acc. to SN 319201000 000proportion of dangerous failures40 %- with high demand rate acc. to SN 3192073 %failure rate [FIT]100 FIT- with how demand rate acc. to SN 31920100 FITproduct function100 FIT- mirror contact acc. to IEC 60947-4-1Yes- positively driven operation acc. to IEC 60947-5-No		0.5 2.5 mm²		
finely stranded with core end processing2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross section18 1• for main contacts18 1• for auxiliary contacts20 14Safety related data1000 000proportion of dangerous failures1 000 000• with high demand rate acc. to SN 319201 000 000proportion of dangerous failures73 %• with how demand rate acc. to SN 31920100 FIT• with how demand rate acc. to SN 31920100 FIT• mitror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No				
• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts2x (20 16), 2x (18 14)AWG number as coded connectable conductor cross section18 1• for main contacts18 1• for auxiliary contacts10 14Safety related data20 14B10 value1000 000• with high demand rate acc. to SN 319201 000 000• with low demand rate acc. to SN 3192040 %• with low demand rate acc. to SN 3192040 %• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• with low demand rate acc. to SN 31920100 FIT• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-5No	— single or multi-stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)		
AWG conductors for auxiliary contactsImage: Content and the section of	<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
sectionI8• for main contacts18• for auxiliary contacts20Safety related dataB10 value• with high demand rate acc. to SN 31920• with high demand rate acc. to SN 319201000 000proportion of dangerous failures• with high demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %failure rate [FIT]100 FIT• with how demand rate acc. to SN 31920100 FITproduct function100 FIT• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-5No		2x (20 16), 2x (18 14)		
• for main contacts18 1• for auxiliary contacts20 14Safety related dataB10 value1000 000• with high demand rate acc. to SN 319201 000 000proportion of dangerous failures40 %• with high demand rate acc. to SN 3192073 %failure rate [FIT]1000 FIT• with low demand rate acc. to SN 31920100 FITproduct function100 FIT• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No	AWG number as coded connectable conductor cross			
<ul> <li>for auxiliary contacts</li> <li>20 14</li> <li>Safety related data</li> <li>With high demand rate acc. to SN 31920</li> <li>with high demand rate acc. to SN 31920</li> <li>with low demand rate acc. to SN 31920</li> <li>with high demand rate acc. to SN 31920</li> <li>with high demand rate acc. to SN 31920</li> <li>% %</li> <li>with high demand rate acc. to SN 31920</li> <li>% %</li> <li>With high demand rate acc. to SN 31920</li> <li>%</li> <li>With high demand rate acc. to SN 31920</li> <li>%</li> <li>With high demand rate acc. to SN 31920</li> <li>%</li> <li>%</li> <li>With high demand rate acc. to SN 31920</li> <li>%</li> <li>%</li></ul>	section			
Safety related data         B10 value         • with high demand rate acc. to SN 31920         proportion of dangerous failures         • with low demand rate acc. to SN 31920         40 %         • with high demand rate acc. to SN 31920         * with high demand rate acc. to SN 31920         • with high demand rate acc. to SN 31920         * with how demand rate acc. to SN 31920         * with how demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to SN 31920         * with low demand rate acc. to IEC 60947-4-1         * with low demand rate acc. to IEC 60947-5-5         * No	• for main contacts			
B10 value• with high demand rate acc. to SN 319201 000 000proportion of dangerous failures40 %• with low demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %failure rate [FIT]100 FIT• with low demand rate acc. to SN 31920100 FITproduct functionYes• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No	<ul> <li>for auxiliary contacts</li> </ul>	20 14		
• with high demand rate acc. to SN 319201 000 000proportion of dangerous failures• with low demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %failure rate [FIT]• with low demand rate acc. to SN 31920100 FITproduct function• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-5No	Safety related data			
proportion of dangerous failures40 %• with low demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %failure rate [FIT]100 FIT• with low demand rate acc. to SN 31920100 FIT• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No	B10 value			
• with low demand rate acc. to SN 3192040 %• with high demand rate acc. to SN 3192073 %failure rate [FIT]100 FIT• with low demand rate acc. to SN 31920100 FITproduct functionYes• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No	<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	1 000 000		
<ul> <li>with high demand rate acc. to SN 31920</li> <li>failure rate [FIT]         <ul> <li>with low demand rate acc. to SN 31920</li> <li>foroduct function</li> <li>mirror contact acc. to IEC 60947-4-1</li> <li>Positively driven operation acc. to IEC 60947-5-</li> </ul> </li> </ul>	proportion of dangerous failures			
failure rate [FIT]       100 FIT         • with low demand rate acc. to SN 31920       100 FIT         product function       Yes         • mirror contact acc. to IEC 60947-4-1       Yes         • positively driven operation acc. to IEC 60947-5-       No	• with low demand rate acc. to SN 31920	40 %		
• with low demand rate acc. to SN 31920100 FITproduct function·• mirror contact acc. to IEC 60947-4-1Yes• positively driven operation acc. to IEC 60947-5-No	<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	73 %		
product function     Yes       • mirror contact acc. to IEC 60947-4-1     Yes       • positively driven operation acc. to IEC 60947-5-     No	failure rate [FIT]			
<ul> <li>mirror contact acc. to IEC 60947-4-1</li> <li>positively driven operation acc. to IEC 60947-5-</li> <li>No</li> </ul>	• with low demand rate acc. to SN 31920	100 FIT		
positively driven operation acc. to IEC 60947-5-     No	product function			
	• mirror contact acc. to IEC 60947-4-1	Yes		
		No		

EC 61508	st interval or servi		) у			
protection against electrical shock		fir	finger-safe when touched vertically from front acc. to IEC 60529			
uitability for use saf	ety-related switchi	ng OFF Ye	Yes			
rtificates/ approv	als					
General Product	Approval				EMC	
	CSA		<u>KC</u>	EHC	RCM	
Functional Safety/Safety of Machinery	Declaration of	<sup>c</sup> Conformity	Test Certificates	3	Marine / Ship- ping	
Type Examination Certificate	EG-Konf.	Miscellaneous	Type Test Certific- ates/Test Report	Special Test Certi- ficate	ABS	
Marine / Shippin	g					
BUREAU VERITAS	Lloyd's Register Lrs	PRS	RINA	RMRS	DNV-GL	
other						
Confirmation						

urther 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=3RT2038-1AL24

Cax online generator

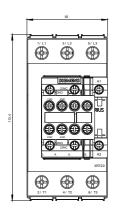
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2038-1AL24

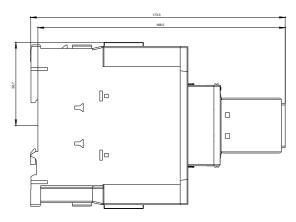
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1AL24

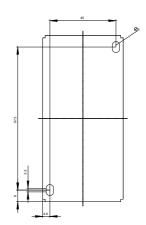
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2038-1AL24&lang=en

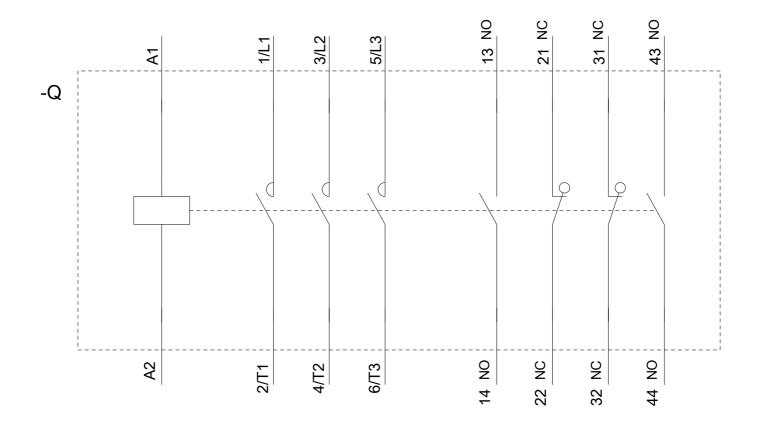
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1AL24/char

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2038-1AL24&objecttype=14&gridview=view1









last modified:

09/08/2020