# **SIEMENS**

## **Data sheet**

## 3RT2038-1NB30-0CC0



Power contactor, AC-3 80 A, 37 kW / 400 V 1 NO + 1 NC, 20-33 V AC/DC communication-capable, with varistor, 3-pole, size S2 screw terminals

product type designation product type designation general technical data  size of contactor product extension  • function module for communication • function module for communication • auxiliary switch  power loss [W] for rated value of the current • at AC in hot operating state per pole • at AC in hot operating state per pole • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of main circuit rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit rated value • of auxiliary value value • of auxiliary swith sine pulse • at AC • at DC  7.7g / 5 ms, 4.5g / 10 ms  2 y / 5 ms, 7g / 10 ms  auxiliary switch block typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added aux	product brand name	SIRIUS
Size of contactor   S2	product designation	Power contactor
size of contactor product extension • function module for communication • auxiliary switch  power loss [W] for rated value of the current • at AC in hot operating state per pole • without load current share typical insulation voltage • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit rated value • of auxiliary switch bloads for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance with sine pulse • at AC • at DC  grown shock resistance • at AC  grown shock resist	product type designation	3RT2
product extension • function module for communication • auxiliary switch  power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state per pole • without load current share typical • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of main circuit rated value • of auxiliary circuit rated value • of xuxiliary switch sine pulse • at AC • at DC  shock resistance at rectangular impulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added alexiliary switch block typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  // Amblent conditions installation altitude at height above sea level maximum ambient temperature • during operation  // Yes  17.1 W  17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 17.1 W 1	General technical data	
• function module for communication • auxiliary switch  power loss [W] for rated value of the current • at AC in hot operating state   17.1 W • at AC in hot operating state per pole • without load current share typical   2 W  insulation voltage • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of main circuit rated value   6 kV • of auxiliary circuit rated value   7.7g / 5 ms, 4.5g / 10 ms • at AC   7.7g / 5 ms, 4.5g / 10 ms • at AC   12g / 5 ms, 7g / 10 ms • at AC   12g / 5 ms, 7g / 10 ms • at AC   12g / 5 ms, 7g / 10 ms • at AC   12g / 5 ms, 7g / 10 ms • at DC   12g / 5 ms, 7g / 10 ms • at DC   12g / 5 ms, 7g / 10 ms • at DC   12g / 5 ms, 7g / 10 ms • of contactor typical   10 000 000 • of the contactor with added electronically optimized auxiliary switch block typical   5 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10 000 000 • of the contactor with added auxiliary switch block typical   10	size of contactor	S2
auxiliary switch     power loss [W] for rated value of the current	product extension	
power loss [W] for rated value of the current  • at AC in hot operating state • at AC in hot operating state per pole • without load current share typical  Insulation voltage • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value • at AC • at AC • at DC  shock resistance at rectangular impulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  at DC  shock resistance with sine pulse • at AC • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quo on the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quo on the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quo on the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quo on the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quo on the contactor with added auxiliary switch block typical  and the contactor with added auxiliary switch block typical  et al. Country to the contactor with added auxiliary switch block typical  and the contactor with added auxiliary switch block typical  and the contactor with added auxiliary switch block typical	<ul> <li>function module for communication</li> </ul>	Yes
at AC in hot operating state per pole  bit AC in hot operating state per pole  without load current share typical  insulation voltage  of main circuit with degree of pollution 3 rated value  of auxiliary circuit with degree of pollution 3 rated value  of auxiliary circuit rated value  of avxiliary avxiliary insulated avxiliary insulated avxiliary switch sine pulse  of the contactor with added electronically optimized avxiliary switch block typical  of the contactor with added electronically optimized avxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with	auxiliary switch	Yes
at AC in hot operating state per pole  without load current share typical  insulation voltage  of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value  of auxiliary circuit with degree of pollution 3 rated value  surge voltage resistance of main circuit rated value of auxiliary circuit rated value of avxiliary sible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse of at AC of at DC of at DC of at AC of at AC of contactor with sine pulse of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the c	power loss [W] for rated value of the current	
insulation voltage  of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit rated value of main circuit rated value of auxiliary circuit rated value of the contactor with sine pulse of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical	<ul> <li>at AC in hot operating state</li> </ul>	17.1 W
insulation voltage  • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value  surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value  • of auxiliary circuit rated value  maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • of contactor Upical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary	<ul> <li>at AC in hot operating state per pole</li> </ul>	5.7 W
of main circuit with degree of pollution 3 rated value     of auxiliary circuit with degree of pollution 3 rated value  surge voltage resistance     of main circuit rated value     of auxiliary circuit rated value     active of auxiliary circuit rated value     of auxiliary circuit rated value     of auxiliary circuit rated value     of auxiliary sible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse     of at AC     of contactor with sine pulse     of contactor typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added a	<ul> <li>without load current share typical</li> </ul>	2 W
of auxiliary circuit with degree of pollution 3 rated value  surge voltage resistance     of main circuit rated value     of auxiliary conditions      of contactor according to IEC 81346-2     substance Prohibitance (Date)     of conditions  installation altitude at height above sea level maximum     of uniq operation      of waximum permissible voltage for safe isolation between of kV     of contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical	insulation voltage	
surge voltage resistance  of main circuit rated value  of auxiliary circuit rated value  of auxiliary circuit rated value  maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse  ot at AC  at DC  7.7g / 5 ms, 4.5g / 10 ms  shock resistance with sine pulse  ot at AC  at DC  12g / 5 ms, 7g / 10 ms  at DC  12g / 5 ms, 7g / 10 ms  mechanical service life (switching cycles)  of contactor typical  of the contactor typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Q  Substance Prohibitance (Date)  installation altitude at height above sea level maximum  ambient temperature  of during operation  -25 +60 °C	<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
of main circuit rated value     of auxiliary circuit rated value     amaximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1      shock resistance at rectangular impulse     o at AC     o at DC     shock resistance with sine pulse     o at AC     o at DC     shock resistance with sine pulse     o at AC     o at DC     or contactor typical     of contactor typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with ad		690 V
of auxiliary circuit rated value     maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse     oat AC     oat DC     at DC     at DC     of contactor typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     reference code according to IEC 81346-2     Substance Prohibitance (Date)     installation altitude at height above sea level maximum     ambient temperature     oduring operation      od the contactor with added auxiliary aux	surge voltage resistance	
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1  shock resistance at rectangular impulse  • at AC • at DC  shock resistance with sine pulse • at AC • at DC  shock resistance with sine pulse • at AC • at DC  at AC • at DC  12g / 5 ms, 4.5g / 10 ms  12g / 5 ms, 7g / 10 ms  12g / 5 ms, 7g / 10 ms  mechanical service life (switching cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature • during operation  400 V  7.7g / 5 ms, 4.5g / 10 ms  12g / 5 ms, 7g / 10 ms	<ul> <li>of main circuit rated value</li> </ul>	6 kV
shock resistance at rectangular impulse  • at AC  • at DC  **Nock resistance with sine pulse  • at AC  • at DC  **Nock resistance with sine pulse  • at AC  • at DC  • at DC  **Nock resistance with sine pulse  • at AC  • at DC  **Nock resistance with sine pulse  • at AC  • at DC  **Nock resistance with sine pulse  • at AC  • at DC  **Mochanical service life (switching cycles)  • of contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of t	of auxiliary circuit rated value	6 kV
<ul> <li>at AC</li> <li>at DC</li> <li>7.7g / 5 ms, 4.5g / 10 ms</li> <li>shock resistance with sine pulse</li> <li>at AC</li> <li>at DC</li> <li>12g / 5 ms, 7g / 10 ms</li> <li>at DC</li> <li>12g / 5 ms, 7g / 10 ms</li> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>reference code according to IEC 81346-2</li> <li>Q</li> <li>Substance Prohibitance (Date)</li> <li>10/01/2014</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature</li> <li>during operation</li> <li>-25 +60 °C</li> </ul>		400 V
at DC      shock resistance with sine pulse     at AC     at DC      at	shock resistance at rectangular impulse	
shock resistance with sine pulse  • at AC  • at DC  mechanical service life (switching cycles)  • of contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  12g / 5 ms, 7g / 10 ms  10 000 000  10 000 000  10 000 000  10 000 00	• at AC	7.7g / 5 ms, 4.5g / 10 ms
<ul> <li>at AC</li> <li>at DC</li> <li>12g / 5 ms, 7g / 10 ms</li> <li>mechanical service life (switching cycles)</li> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>reference code according to IEC 81346-2</li> <li>Substance Prohibitance (Date)</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature</li> <li>of uring operation</li> <li>-25 +60 °C</li> </ul>	• at DC	7.7g / 5 ms, 4.5g / 10 ms
at DC  mechanical service life (switching cycles)     of contactor typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature     oduring operation  12g / 5 ms, 7g / 10 ms  10 000 000  5 000 000  10 000 000  10 000 000  10 000 00	shock resistance with sine pulse	
mechanical service life (switching cycles)  of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation  10 000 000 10 000	• at AC	12g / 5 ms, 7g / 10 ms
<ul> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>reference code according to IEC 81346-2</li> <li>Substance Prohibitance (Date)</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature</li> <li>during operation</li> <li>10 000 000</li> <li>2 000 000</li> </ul>	• at DC	12g / 5 ms, 7g / 10 ms
of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical      reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature     oduring operation  5 000 000  10 000 000  10 000 000  10 000 00	mechanical service life (switching cycles)	
auxiliary switch block typical  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum  ambient temperature of during operation  10 000 000  10/001/2014  2 000 m  2 000 m	<ul> <li>of contactor typical</li> </ul>	10 000 000
reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/01/2014  Ambient conditions installation altitude at height above sea level maximum 2 000 m  ambient temperature  • during operation -25 +60 °C		5 000 000
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation  10/01/2014  2 000 m  -25 +60 °C		10 000 000
Ambient conditions  installation altitude at height above sea level maximum 2 000 m  ambient temperature  • during operation -25 +60 °C	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum  ambient temperature  ● during operation  2 000 m  -25 +60 °C	Substance Prohibitance (Date)	10/01/2014
ambient temperature         ● during operation         -25 +60 °C	Ambient conditions	
• during operation -25 +60 °C	installation altitude at height above sea level maximum	2 000 m
	ambient temperature	
● during storage -55 +80 °C	<ul> <li>during operation</li> </ul>	-25 +60 °C
	<ul> <li>during storage</li> </ul>	-55 +80 °C

relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
lain 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> <li>at AC-1</li> </ul>	90 A
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	90 A
<ul> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul>	80 A
• at AC-3	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
• at AC-3e	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	55 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	79.2 A
at AC-5b up to 400 V rated value	66.4 A
• at AC-6a	
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  A C C	58 A
• at AC-6a	40.7.4
— up to 230 V for current peak value n=30 rated value	46.7 A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated</li> </ul>	46.7 A
value  — up to 690 V for current peak value n=30 rated	46.7 A
value minimum cross-section in main circuit at maximum AC-1	35 mm²
operational current for approx. 200000 operating	
cycles at AC-4	20.4
at 400 V rated value	30 A
at 690 V rated value	24 A
operational current	
at 1 current path at DC-1  at 24 V retail value.	55.0
— 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
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.1 A
— at 600 V rated value	0.06 A
with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	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
• at AC-3e	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	37 kW
— at 690 V rated value	45 kW
operating power for approx. 200000 operating cycles at AC-4	
at 400 V rated value	15.8 kW
at 690 V rated value	21.8 kW
operating apparent power at AC-6a	Z no my
	27.8 kVA
up to 230 V for current peak value n=20 rated value     up to 400 V for current peak value n=20 rated value	48.4 kVA
up to 400 V for current peak value n=20 rated value     up to 500 V for current peak value n=20 rated value	
• up to 500 V for current peak value n=20 rated value	60.6 kVA
• up to 690 V for current peak value n=20 rated value	69.3 kVA
operating apparent power at AC-6a	40.012/4
up to 230 V for current peak value n=30 rated value	18.6 kVA
• up to 400 V for current peak value n=30 rated value	32.3 kVA
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	40.4 kVA
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	55.8 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>	1 298 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
Iimited to 30 s switching at zero current maximum	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	1 500 1/h
u	

• at DC	1 500 1/h		
operating frequency	. 555		
• at AC-1 maximum	700 1/h		
• at AC-2 maximum			
• at AC-3 maximum	350 1/h		
at AC-3 maximum     at AC-3e maximum	500 1/h 500 1/h		
at AC-3e maximum     at AC-4 maximum			
	150 1/h		
Control circuit/ Control			
type of voltage of the control supply voltage	AC/DC		
control supply voltage at AC			
at 50 Hz rated value	20 33 V		
at 60 Hz rated value	20 33 V		
control supply voltage at DC			
rated value	20 33 V		
operating range factor control supply voltage rated value of magnet coil at DC			
initial value	0.8		
full-scale value	1.1		
operating range factor control supply voltage rated value of magnet coil at AC			
● at 50 Hz	0.8 1.1		
● at 60 Hz	0.8 1.1		
design of the surge suppressor	with varistor		
inrush current peak	3 A		
duration of inrush current peak	50 µs		
locked-rotor current mean value	1 A		
locked-rotor current peak	2.6 A		
duration of locked-rotor current	230 ms		
holding current mean value	40 mA		
apparent pick-up power of magnet coil at AC			
• at 50 Hz	40 VA		
● at 60 Hz	40 VA		
apparent holding power of magnet coil at AC			
● at 50 Hz	2 VA		
• at 60 Hz	2 VA		
closing power of magnet coil at DC	23 W		
holding power of magnet coil at DC	1 W		
closing delay			
• at AC	35 110 ms		
• at DC	35 110 ms		
opening delay			
• at AC	30 55 ms		
• at DC	30 55 ms		
arcing time	10 20 ms		
control version of the switch operating mechanism	Standard A1 - A2, optionally via function module		
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			
at 230 V rated value	10 A		
at 400 V rated value	3 A		
• at 500 V rated value	2 A		
at 690 V rated value	1 A		
operational current at DC-12			
at 24 V rated value	10 A		
at 48 V rated value	6 A		
at 40 V rated value     at 60 V rated value	6 A		
at 110 V rated value	3 A		
■ at 110 v rateu value	JA		

<ul> <li>at 125 V rated value</li> </ul>	2 A
<ul> <li>at 220 V rated value</li> </ul>	1 A
at 600 V rated value	0.15 A
operational current at DC-13	
<ul> <li>at 24 V rated value</li> </ul>	10 A
<ul> <li>at 48 V rated value</li> </ul>	2 A
<ul> <li>at 60 V rated value</li> </ul>	2 A
at 110 V rated value	1 A
at 125 V rated value	0.9 A
at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	65 A
at 600 V rated value	62 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	5 hp
— at 230 V rated value	15 hp
for 3-phase AC motor	10 114
— at 200/208 V rated value	20 hn
	20 hp
<ul><li>— at 220/230 V rated value</li><li>— at 460/480 V rated value</li></ul>	25 hp
	50 hp
— at 575/600 V rated value	60 hp
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the fuse link	
for short-circuit protection of the main circuit	
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)
for short-circuit protection of the auxiliary switch	gG: 10 A (500 V, 1 kA)
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
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
side-by-side mounting	Yes
height	114 mm
width	55 mm
depth	130 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
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	

type of electrical connection		
for main current circuit	screw-type terminals	
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals	
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals	
of magnet coil	Screw-type terminals	
type of connectable conductor cross-sections		
• for main contacts		
<ul> <li>solid or stranded</li> </ul>	2x (1 35 mm²), 1x (1 50 mm²)	
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 25 mm²), 1x (1 35 mm²)	
<ul> <li>at AWG cables for main contacts</li> </ul>	2x (18 2), 1x (18 1)	
connectable conductor cross-section for main contacts		
<ul> <li>finely stranded with core end processing</li> </ul>	1 35 mm²	
connectable conductor cross-section for auxiliary contacts		
<ul><li>solid or stranded</li></ul>	0.5 2.5 mm²	
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²	
type of connectable conductor cross-sections		
<ul> <li>for auxiliary contacts</li> </ul>		
<ul><li>— solid or stranded</li></ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)	
AWG number as coded connectable conductor cross section		
• for main contacts	18 1	
<ul> <li>for auxiliary contacts</li> </ul>	20 14	
Safety related data		
product function		
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes	
<ul> <li>positively driven operation according to IEC 60947- 5-1</li> </ul>	No	
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 y	
protection class IP on the front according to IEC 60529	IP20	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front	
suitability for use		
<ul> <li>safety-related switching OFF</li> </ul>	Yes	
Certificates/ approvals		

#### Certificates/ approvals

## **General Product Approval**





Confirmation



<u>KC</u>



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





Special Test Certificate

Type Test Certificates/Test Report

#### Marine / Shipping













Marine / Shipping other Railway Dangerous Good

(MRS

<u>Confirmation</u> <u>Confirmation</u> <u>Vibration and Shock</u> <u>Transport Information</u> tion

### **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=3RT2038-1NB30-0CC0

Cax online generator

 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2038-1NB30-0CC0}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1NB30-0CC0

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2038-1NB30-0CC0&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1NB30-0CC0/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2038-1NB30-0CC0&objecttype=14&gridview=view1

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