## **SIEMENS**

Data sheet 3RT2016-1CK27



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 120 V AC, 50/60 Hz, with varistor plugged on, auxiliary contacts: 3 NO + 2 NC, screw terminal, size: S00, removable auxiliary switch

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S00
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	No
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	0.9 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	0.3 W
without load current share typical	4.2 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
of main circuit rated value	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at AC	10,5g / 5 ms, 6,6g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	07/01/2006
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	
• at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C rated value	22 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value  — up to 690 V at ambient temperature 60 °C rated	22 A 20 A
value	20 A
• at AC-3	
— at 400 V rated value	9 A
— at 500 V rated value	7.7 A
— at 690 V rated value	6.7 A
• at AC-3e	
— at 400 V rated value	9 A
— at 500 V rated value	7.7 A
— at 690 V rated value	6.7 A
at AC-4 at 400 V rated value	8.5 A
at AC-5a up to 690 V rated value	19.4 A
at AC-5b up to 400 V rated value	7.4 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	5.3 A
— up to 400 V for current peak value n=20 rated value	5.3 A
— up to 500 V for current peak value n=20 rated value	5.3 A
— up to 690 V for current peak value n=20 rated value  — up to 690 V for current peak value n=20 rated value	5.A
at AC-6a	
— up to 230 V for current peak value n=30 rated value	3.5 A
·	3.5 A
— up to 400 V for current peak value n=30 rated value  — up to 500 V for current peak value n=30 rated value	
·	3.6 A 3.3 A
— up to 690 V for current peak value n=30 rated value	3.3 A
minimum cross section in main circuit at maximum AC 1 rated	
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm <sup>2</sup>
value operational current for approx. 200000 operating cycles at	
value operational current for approx. 200000 operating cycles at AC-4	4 mm²
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value	4 mm² 4.1 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value	4 mm² 4.1 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current	4 mm² 4.1 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1	4 mm²  4.1 A  3.3 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value	4 mm²  4.1 A  3.3 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value	4 mm²  4.1 A  3.3 A  20 A  20 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value	4 mm²  4.1 A 3.3 A  20 A 20 A 2.1 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value	4 mm²  4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 440 V rated value	4 mm²  4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 600 V rated value	4 mm²  4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 600 V rated value  — at 24 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A 20 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 60 V rated value  — at 60 V rated value	4.1 A 3.3 A  20 A 20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A 20 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 60 V rated value  — at 60 V rated value  — at 110 V rated value  — at 110 V rated value  — at 110 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A 20 A 20 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A 20 A 21 A 20 A 20 A 20 A 20 A 20 A
operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A 20 A 2.1 A 0.8 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 60 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 60 V rated value  — at 220 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A 20 A 2.1 A 0.8 A
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 600 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 60 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value	4.1 A 3.3 A  20 A 20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A 20 A 21 A 20
value  operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 60 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value — at 60 V rated value — at 60 V rated value — at 110 V rated value — at 440 V rated value — at 220 V rated value — at 24 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value — at 60 V rated value — at 60 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 20 A 20 A 20 A 20 A 20 A 2
operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 22 V rated value — at 24 V rated value — at 60 V rated value — at 60 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 600 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 20 A 20 A 20 A 20 A 20 A 2
operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 60 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 240 V rated value — at 600 V rated value — at 24 V rated value — at 250 V rated value — at 270 V rated value	4.1 A 3.3 A  20 A 20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 20 A 20 A 20 A 20 A 20 A 2
operational current for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value  operational current • at 1 current path at DC-1  — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 22 V rated value — at 24 V rated value — at 60 V rated value — at 60 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 600 V rated value	4.1 A 3.3 A  20 A 20 A 2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 20 A 20 A 20 A 20 A 20 A 2

— at 24 V rated value	20 A
— at 60 V rated value	0.5 A
— at 110 V rated value	0.15 A
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 110 V rated value	0.35 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	1.5 A
— at 440 V rated value	0.2 A
— at 600 V rated value	0.2 A
operating power	
<ul> <li>at AC-2 at 400 V rated value</li> </ul>	4 kW
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	5.5 kW
• at AC-3e	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	4 kW
— at 690 V rated value	5 kW
operating power for approx. 200000 operating cycles at AC-	
4	
<ul> <li>at 400 V rated value</li> </ul>	2 kW
<ul> <li>at 690 V rated value</li> </ul>	2.5 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	2 kVA
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	3.6 kVA
up to 500 V for current peak value n=20 rated value	4.6 kVA
• up to 690 V for current peak value n=20 rated value	5.9 kVA
operating apparent power at AC-6a	
up to 230 V for current peak value n=30 rated value	1.3 kVA
up to 400 V for current peak value n=30 rated value	2.4 kVA
up to 500 V for current peak value n=30 rated value	3.1 kVA
·	
up to 690 V for current peak value n=30 rated value  Short time withstand current in sold energing state up to	4 kVA
short-time withstand current in cold operating state up to 40 °C	
limited to 1 s switching at zero current maximum	155 A; Use minimum cross-section acc. to AC-1 rated value
limited to 1 s switching at zero current maximum	111 A; Use minimum cross-section acc. to AC-1 rated value
limited to 3 s switching at zero current maximum	86 A; Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum     limited to 30 s switching at zero current maximum	66 A; Use minimum cross-section acc. to AC-1 rated value
Ilmited to 50's switching at zero current maximum     Imited to 60 s switching at zero current maximum	55 A; Use minimum cross-section acc. to AC-1 rated value
	OO A, OOE HIIIIIIIUIII GIOOS-SECLIOII ACC. IO AC-1 TAIEU VAIUE
no-load switching frequency	10 000 1/b
• at AC	10 000 1/h
operating frequency	4.000.4/b
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• 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	120 V
• at 60 Hz rated value	120 V
operating range factor control supply voltage rated value of	
magnet coil at AC	

number of NC contacts for auxiliary contacts instantaneous contact         2           number of NO contacts for auxiliary contacts instantaneous contact         3           operational current at AC-12 maximum         10 A           operational current at AC-15         6 A           • at 230 V rated value         6 A           • at 400 V rated value         3 A           • at 500 V rated value         1 A           • at 690 V rated value         10 A           • at 44 V rated value         6 A           • at 48 V rated value         6 A           • at 60 V rated value         6 A           • at 110 V rated value         3 A           • at 220 V rated value         1 A           • at 220 V rated value         1 A           • at 600 V rated value         2 A           • at 24 V rated value         1 A           • at 24 V rated value         2 A           • at 25 V rated value         2 A           • at 600 V rated value         2 A           • at 48 V rated value         2 A           • at 48 V rated value         2 A           • at 60 V rated value         2 A           • at 60 V rated value         2 A           • at 60 V rated value         3 A           • at 60		
Seeign of the aurge suppressor   with variator   apparent plack-up power of magnet coll at AC   27 VA   2.4 SVA	• at 50 Hz	
sparent plok-up power of magnet coll at AC	• at 60 Hz	0.85 1.1
### ### ### ### ### ### ### ### ### ##	design of the surge suppressor	with varistor
* alt 90 Hz	apparent pick-up power of magnet coil at AC	
Multicity power factor with closing power of the coil	● at 50 Hz	27 VA
* at 50 Ptz	● at 60 Hz	24.3 VA
	inductive power factor with closing power of the coil	
apparent holding power of magnet coil at AC	● at 50 Hz	0.8
## 150 Hz	• at 60 Hz	0.75
miductive power factor with the holding power of the coil   *a ti 50 Hz	apparent holding power of magnet coil at AC	
Inductive power factor with the holding power of the coll     a it 50 Hz   0.25     a it 60 Hz   0.25     a	● at 50 Hz	4.2 VA
+ a1 50 Hz	• at 60 Hz	3.3 VA
• at 80 Hz	inductive power factor with the holding power of the coil	
a I AC   935 ms     a I AC   415 ms     a I AC   515 ms	● at 50 Hz	0.25
	• at 60 Hz	0.25
A   AC	closing delay	
	• at AC	9 35 ms
arcing time   10 15 ms   Standard A1 - A2	opening delay	
Control version of the switch operating mechanism   Standard A1 - A2	• at AC	4 15 ms
Auxillary circuit  number of NC contacts for auxiliary contacts instantaneous contact ontact operational current at AC-12 maximum  operational current at AC-12 maximum  operational current at AC-15  - at 230 V rated value  - at 400 V rated value  - at 500 V rated value  - at 600 V rated value  - at 800 V rated value  - at 80 V rated v	arcing time	10 15 ms
number of NC contacts for auxiliary contacts instantaneous contact         2           number of NO contacts for auxiliary contacts instantaneous contact         3           contact         10 A           operational current at AC-15 mustimum         10 A           e at 230 V rated value         3 A           e at 500 V rated value         2 A           e at 660 V rated value         1A           e at 680 V rated value         10 A           e at 48 V rated value         6 A           e at 48 V rated value         6 A           e at 48 V rated value         6 A           e at 110 V rated value         3 A           e at 125 V rated value         3 A           e at 125 V rated value         1 A           e at 220 V rated value         1 A           e at 220 V rated value         1 A           e at 220 V rated value         6 A           e at 42 V rated value         2 A           e at 42 V rated value         2 A           e at 42 V rated value         2 A           e at 110 V rated value         1 A           e at 120 V rated value         0.3 A           e at 120 V rated value         0.9 A           e at 220 V rated value         0.3 A           e at 60 V rated v		Standard A1 - A2
contact         contacts for auxiliary contacts instantaneous contact           contact contact for auxiliary contacts instantaneous contact         3           operational current at AC-12 maximum         10 A           operational current at AC-15         4 at 230 V rated value         6 A           at 4 300 V rated value         3 A         4 at 400 V rated value           at 690 V rated value         1 A           operational current at DC-12         4 at 24 V rated value         6 A           at 81 60 V rated value         6 A           at 11 10 V rated value         6 A           at 12 12 V rated value         1 A           at 12 20 V rated value         1 A           at 12 20 V rated value         1 A           at 24 V rated value         6 A           at 32 20 V rated value         6 A           at 48 V rated value         6 A           at 48 V rated value         6 A           at 12 4 V rated value         1 A           at 12 5 V rated value         2 A           at 12 5 V rated value         1 A           at 12 5 V rated value         1 A           at 12 5 V rated value         2 A           at 22 0 V rated value         3 A           at 22 0 V rated value         3 A      <	Auxiliary circuit	
contact           operational current at AC-12 maximum         10 A           operational current at AC-15	contact	
Page		3
• at 230 V rated value		10 A
	operational current at AC-15	
	at 230 V rated value	6 A
• at 690 V rated value	at 400 V rated value	3 A
Operational current at DC-12	at 500 V rated value	2 A
• at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 600 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 120 V rated value • at 120 V rated value • at 600 V rated value • at 220 V rated value • at 320 V rated value • at 220 V rated value • at 230 V rated value • at 230 V rated value • at 230 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor • at 220 V rated value • for 3-phase AC motor	at 690 V rated value	1 A
<ul> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <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>at 600 V rated value</li> <li>out 600 V rated value</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 20 V rated value</li> <li>at 200 V rated value</li> <li>at 600 V rated value</li> <li>at 200 V rated value</li> <li>bf or single-phase AC motor</li> <li>at 200 V rated value</li> <li>at 200 V rated value</li> <li>bf or 3-phase AC motor</li> <li>at 200 V rated value</li> <li>bf or 3-phase AC motor</li> <li>at 200 V rated value</li> <li>at 200 V rated value</li></ul>	operational current at DC-12	
• at 60 V rated value	at 24 V rated value	
at 110 V rated value     at 125 V rated value     at 220 V rated value     at 220 V rated value     at 600 V rated value     at 48 V rated value     at 48 V rated value     at 48 V rated value     at 110 V rated value     at 48 V rated value     at 48 V rated value     at 110 V rated value     at 110 V rated value     at 125 V rated value     at 220 V rated value     at 220 V rated value     at 220 V rated value     at 80 V rated value     at 100 V rated value     at 200 V rated value	at 48 V rated value	6 A
		6 A
• at 220 V rated value • at 600 V rated value  operational current at DC-13  • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 120 V rated value • at 220 V rated value • at 220 V rated value • at 860 V rated value • at 125 V rated value • at 125 V rated value • at 120 V rated value • at 220 V rated value • at 860 V rated value • at 120 V rated value • at 120 V rated value • at 120 V rated value • at 300 V rated value • at 480 V rated value • at 480 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 100 V rated value • at 100 V rated value • at 100 V rated value • at 200 V rated	at 110 V rated value	3 A
• at 600 V rated value 0.15 A  operational current at DC-13  • at 24 V rated value 6 A • at 48 V rated value 2 A • at 60 V rated value 1 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 9 A  yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value 0.33 hp — at 230 V rated value 1 hp • for 3-phase AC motor — at 200/208 V rated value 2 hp — at 220/230 V rated value 2 hp — at 220/230 V rated value 3 hp	• at 125 V rated value	2 A
operational current at DC-13	at 220 V rated value	1 A
<ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <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>at 480 V rated value</li> <li>at 600 V rated value</li> <li>at 7.6 A</li> <li>yelded mechanical performance [hp]</li> <li>for single-phase AC motor</li> <li>at 110/120 V rated value</li> <li>0.33 hp</li> <li>at 230 V rated value</li> <li>1 hp</li> <li>for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>2 hp</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul>	at 600 V rated value	0.15 A
<ul> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 480 V rated value</li> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 7.6 A</li> <li>at 600 V rated value</li> <li>at 110/120 V rated value</li> <li>at 110/120 V rated value</li> <li>at 230 V rated value</li> <li>hp</li> <li>for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>at 200/208 V rated value</li> <li>at 200/230 V rated value</li> <li>at 220/230 V rated value</li> <li>at 220/230 V rated value</li> <li>at 220/230 V rated value</li> </ul>	-	
<ul> <li>at 60 V rated value</li> <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>at 600 V rated value</li> <li>at 600 V rated value</li> <li>1 faulty switching per 100 million (17 V, 1 mA)</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor</li> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>for single-phase AC motor</li> <li>at 110/120 V rated value</li> <li>at 230 V rated value</li> <li>for single-phase AC motor</li> <li>at 230 V rated value</li> <li>at 230 V rated value</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul>	• at 24 V rated value	6 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>at 600 V rated value</li> <li>at aulty switching per 100 million (17 V, 1 mA)</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor</li> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>for single-phase AC motor</li> <li>at 110/120 V rated value</li> <li>at 230 V rated value</li> <li>for 3-phase AC motor</li> <li>at 230 V rated value</li> <li>at 230 V rated value</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul>	• at 48 V rated value	2 A
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.1 A</li> <li>contact reliability of auxiliary contacts</li> <li>1 faulty switching per 100 million (17 V, 1 mA)</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor         <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>9 A</li> </ul> </li> <li>yielded mechanical performance [hp]         <ul> <li>for single-phase AC motor</li> <li>at 110/120 V rated value</li> <li>1 hp</li> </ul> </li> <li>for 3-phase AC motor         <ul> <li>at 230 V rated value</li> <li>1 hp</li> </ul> </li> <li>for 3-phase AC motor         <ul> <li>at 200/208 V rated value</li> <li>2 hp</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul> </li> </ul>	• at 60 V rated value	2 A
<ul> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.1 A</li> <li>contact reliability of auxiliary contacts</li> <li>1 faulty switching per 100 million (17 V, 1 mA)</li> </ul> UL/CSA ratings full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>9 A</li> </ul> yielded mechanical performance [hp] <ul> <li>for single-phase AC motor</li> <li>at 110/120 V rated value</li> <li>1 hp</li> </ul> for 3-phase AC motor <ul> <li>at 230 V rated value</li> <li>1 hp</li> </ul> for 3-phase AC motor <ul> <li>at 200/208 V rated value</li> <li>2 hp</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul>	at 110 V rated value	1 A
at 600 V rated value  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  at 600 V rated value  b for single-phase AC motor  - at 110/120 V rated value  for 3-phase AC motor  at 230 V rated value  for 3-phase AC motor  - at 200/208 V rated value  at 220/230 V rated value  2 hp  at 220/230 V rated value  3 hp	• at 125 V rated value	0.9 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  • at 600 V rated value  9 A  yielded mechanical performance [hp]  • for single-phase AC motor  — at 110/120 V rated value  0.33 hp  — at 230 V rated value  • for 3-phase AC motor  — at 200/208 V rated value  — at 220/230 V rated value  3 hp	• at 220 V rated value	0.3 A
### Comparison of Comparison o	at 600 V rated value	0.1 A
full-load current (FLA) for 3-phase AC motor  • at 480 V rated value  • at 600 V rated value  9 A  yielded mechanical performance [hp]  • for single-phase AC motor  — at 110/120 V rated value  0.33 hp  — at 230 V rated value  1 hp  • for 3-phase AC motor  — at 200/208 V rated value  2 hp  — at 220/230 V rated value  3 hp		1 faulty switching per 100 million (17 V, 1 mA)
<ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> <li>9 A</li> <li>yielded mechanical performance [hp]</li> <li>for single-phase AC motor         <ul> <li>at 110/120 V rated value</li> <li>at 230 V rated value</li> <li>for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>at 220/230 V rated value</li> </ul> </li> <li>\$ 1 hp</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul>	UL/CSA ratings	
● at 600 V rated value  yielded mechanical performance [hp]  ● for single-phase AC motor  — at 110/120 V rated value 0.33 hp — at 230 V rated value 1 hp  ● for 3-phase AC motor — at 200/208 V rated value 2 hp — at 220/230 V rated value 3 hp	full-load current (FLA) for 3-phase AC motor	
yielded mechanical performance [hp]  • for single-phase AC motor  — at 110/120 V rated value 0.33 hp  — at 230 V rated value 1 hp  • for 3-phase AC motor  — at 200/208 V rated value 2 hp  — at 220/230 V rated value 3 hp		
<ul> <li>for single-phase AC motor         <ul> <li>at 110/120 V rated value</li> <li>at 230 V rated value</li> </ul> </li> <li>for 3-phase AC motor         <ul> <li>at 200/208 V rated value</li> <li>2 hp</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul> </li> </ul>		9 A
<ul> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> <li>• for 3-phase AC motor</li> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>3 hp</li> </ul>		
<ul> <li>— at 230 V rated value</li> <li>• for 3-phase AC motor</li> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>3 hp</li> </ul>	• for single-phase AC motor	
<ul> <li>for 3-phase AC motor</li> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>3 hp</li> </ul>	— at 110/120 V rated value	0.33 hp
— at 200/208 V rated value       2 hp         — at 220/230 V rated value       3 hp		1 hp
— at 220/230 V rated value 3 hp	• for 3-phase AC motor	
	— at 200/208 V rated value	2 hp
— at 460/480 V rated value 5 hp	— at 220/230 V rated value	3 hp
	— at 460/480 V rated value	5 hp

— at 575/600 V rated value	7.5 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>	
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)
for short-circuit protection of the auxiliary switch required	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
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
side-by-side mounting	Yes
height	58 mm
width	45 mm
depth	117 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
for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	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	
• solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
<ul> <li>solid or stranded</li> </ul>	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
connectable conductor cross-section for main contacts	
• solid	0.5 4 mm²
<ul><li>stranded</li></ul>	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 12
AWG number as coded connectable conductor cross	
section	
for main contacts	20 12
for auxiliary contacts	20 12
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes

<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 a
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
suitability for use	
<ul> <li>safety-related switching OFF</li> </ul>	Yes

Certificates/ approvals

## **General Product Approval**





Confirmation



<u>KC</u>



**EMC** 

**Functional** Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping



Type Examination Cer**tificate** 





Special Test Certific-<u>ate</u>



Marine / Shipping











Confirmation

other

other

Railway

**Environment** 



Vibration and Shock

**Environmental Confirmations** 

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

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

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

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

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2016-1CK27

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-1CK27

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1CK27

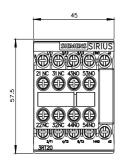
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

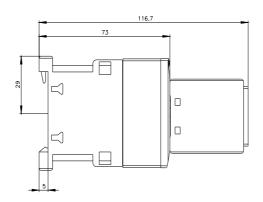
Characteristic: Tripping characteristics, I2t, Let-through current

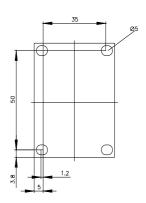
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1CK27/char

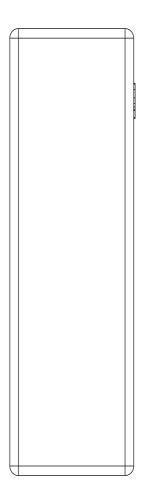
Further characteristics (e.g. electrical endurance, switching frequency)

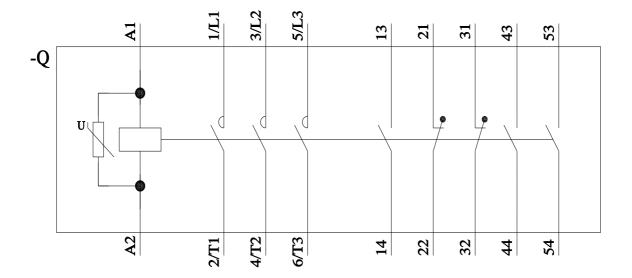
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-1CK27&objecttype=14&gridview=view1











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