## **SIEMENS**

Data sheet 3RT2016-2VB41



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 24 V DC, 0.85-1.85\* Us, with integrated diode, auxiliary contacts: 1 NO, spring-loaded terminal, size: S00, not expandable with auxiliary switch

product brand name	SIRIUS
product designation	Coupling 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	1.6 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	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 DC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at DC	10,5g / 5 ms, 6,6g / 10 ms
mechanical service life (operating cycles)	
of contactor typical	30 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
• at AC-3 rated value maximum	690 V

• at AC-3e rated value maximum	690 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	22 A
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	22 A
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated 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
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	8.5 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	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	5 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	3.5 A
— up to 400 V for current peak value n=30 rated value	3.5 A
— up to 500 V for current peak value n=30 rated value	3.6 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	4 mm²
value operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	4.1 A
at 690 V rated value	3.3 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	
	20 A
— at 60 V rated value	20 A 20 A
<ul><li>— at 60 V rated value</li><li>— at 110 V rated value</li></ul>	
	20 A
— at 110 V rated value	20 A 12 A
— at 110 V rated value — at 220 V rated value	20 A 12 A 1.6 A
<ul><li>— at 110 V rated value</li><li>— at 220 V rated value</li><li>— at 440 V rated value</li></ul>	20 A 12 A 1.6 A 0.8 A
<ul> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul>	20 A 12 A 1.6 A 0.8 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A 20 A 20 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A 20 A 20 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A 20 A 20 A 20 A 20 A 20 A 1.3 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A 20 A 20 A 20 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 120 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 1 current path at DC-3 at DC-5</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A 20 A 20 A 20 A 20 A 20 A 1.3 A 1 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 1 current path at DC-3 at DC-5</li> <li>at 24 V rated value</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A  20 A 20 A 20 A 20 A 1.3 A 1 A
<ul> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 3 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 120 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 1 current path at DC-3 at DC-5</li> </ul>	20 A 12 A 1.6 A 0.8 A 0.7 A 20 A 20 A 20 A 20 A 20 A 1.3 A 1 A

with 2 current paths in series at DC-3 at DC-5	
— 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	
• 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	
• at 400 V rated value	2 kW
at 690 V rated value	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
• up to 400 V for current peak value n=20 rated value	3.6 kVA
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	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	4 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>	155 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	111 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	86 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 30 s switching at zero current maximum	66 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	55 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	10 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
• rated value	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.85
• full-scale value	1.85
design of the surge suppressor	diode
closing power of magnet coil at DC	1.6 W
holding power of magnet coil at DC	1.6 W
<u> </u>	

opening delay at DC         20 80 ms           arcing time         10 16 ms           control version of the switch operating mechanism         stundard A1 - A2           Common of ND contracts for auxiliary contacts instantaneous contact contact contact contact at AC-15 maximum         10           operational current at AC-15 maximum         10           a # 230 V rated value         10 A           a # 4 600 V rated value         1 A           a # 500 V rated value         1 A           a # 4 40 V rated value         1 A           a # 4 40 V rated value         1 A           a # 10 V rated value         1 A           a # 10 V rated value         1 A           a # 10 V rated value         1 A           a # 12 V rated value         1 A           a # 24 V rated value         1 A           a # 24 V rated value         1 A           a # 24 V rated value         2 A           a # 24 V rated value         2 A           a # 24 V rated value         2 A           a # 24 V rated value         1 A           a # 25 V rated value         2 A	closing delay	
# ail DC	• at DC	25 120 ms
Inc.	opening delay	
Control version of the switch operating mechanism   Standard A1 - A2	• at DC	20 80 ms
Abactisary directil  ourbailed TNO contacts for auxiliary contacts instantaneous of contacts for auxiliary contacts instantaneous of contacts and AC-12 maximum operational current at AC-15  ** at 250 V rated value 10 A  ** at 350 V rated value 2 A  ** at 350 V rated value 10 A  ** at 360 V rated value 10 A  ** at 48 V rated value 10 A  ** at 48 V rated value 2 A  ** at 48 V rated value 3 A  ** at 150 V rated value 2 A  ** at 160 V rated value 3 A  ** at 160 V rated value 1 A  ** at 180 V rated value 2 A  ** at 180 V rated value 1 A  ** at 180 V rated value 2 A  ** at 180 V rated value 2 A  ** at 180 V rated value 2 A  ** at 180 V rated value 3 A  ** at 180 V rated value 1 A  ** at 180 V rated value 2 A  ** at 180 V rated value 3 A  ** at 180 V rated value 4 A  ** at 180 V rated value 5 A  ** at 180 V rated value 5 A  ** at 180 V rated value 7 A  ** at 180 V rated value 7 A  ** at 180 V rated value 7 A  ** at 180 V rated value 9 A  ** at 180 V rated value 9 A  ** at 180 V rated value 1 A	arcing time	10 15 ms
	control version of the switch operating mechanism	Standard A1 - A2
Operational current at AC-12 maximum	Auxiliary circuit	
Operational current at AC-15	number of NO contacts for auxiliary contacts instantaneous	1
• 1230 V rated value	·	10 A
al 400 V rated value	·	
• 11 500 V rated value		
• at 690 V rated value         10 A           • at 24 V rated value         6 A           • at 60 V rated value         6 A           • at 60 V rated value         3 A           • at 125 V rated value         2 A           • at 220 V rated value         0.15 A           • at 220 V rated value         0.15 A           • poperational current at DC-13         2 A           • at 24 V rated value         10 A           • at 60 V rated value         2 A           • at 60 V rated value         2 A           • at 110 V rated value         2 A           • at 120 V rated value         1 A           • at 125 V rated value         0.9 A           • at 25 V rated value         0.9 A           • at 260 V rated value         0.1 A           • at 60 V rated value         0.3 A           • at 60 V rated value         9.4           • for single-phase AC motor         4.5 A           • at 220 V rated value         1 hp           • for short-increat protection of the auxillary contacts according to UL		
Part   A		
• at 24 V rated value		1 A
• 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 600 V rated value		
at 24 V rated value		
		0.15 A
• at 48 V rated value	·	
at 220 V rated value at 600 V rated value 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 7.6 A at 600 V rated value 9 A  yielded mechanical performance [hp]  of or single-phase AC motor at 110/120 V rated value 1 hp  of 3-phase AC motor  at 200/208 V rated value 2 hp  at 200/208 V rated value 3 hp  at 200/208 V rated value 5 hp  at 576/600 V rated value 5 hp  at 600-4 rated value 6 for 3-phase AC motor  at 200/208 V rated value 5 hp  at 200/208 V rated value 7.5 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link of rot short-circuit protection of the main circuit with type of coordination 1 required 9 G: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) 9 G: 10A (500 V, 1 kA)  Installation/ mounting/ dimensions  mounting position 4-180 rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface; can be		
• at 600 V rated value  contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 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 1 hp • for 3-phase AC motor — at 220 V rated value 9 hp • for 3-phase AC motor — at 200/208 V rated value 2 hp — at 220/230 V rated value 3 hp — at 220/230 V rated value 9 hp — at 460/480 V rated value 9 hp — at 575/600 V rated value 8 hoo/ V and		
contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor		
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  • for 3-phase AC motor  — at 220 V rated value  • for 3-phase AC motor  — at 220/230 V rated value  • for 3-phase AC motor  — at 220/230 V rated value  — at 220/230 V rated value  — at 460/480 V rated value  — at 460/480 V rated value  — at 575/600 V rated value  — at 575/600 V rated value  Contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required  — with type of coordination 1 required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • sice-by-side mounting  • side-by-side mounting  width  45 mm  depth		
full-load current (FLA) for 3-phase AC motor  at 480 V rated value  7.6 A  9 A  yielded mechanical performance [hp]  for single-phase AC motor  -at 110/120 V rated value  1 hp  for 3-phase AC motor  -at 2200 V rated value  1 hp  for 3-phase AC motor  -at 2200/208 V rated value  2 hp  -at 2200/208 V rated value  3 hp  -at 2200/200 V rated value  3 hp  -at 460/480 V rated value  -at 575/600 V rated value  -at 575/600 V rated value  7.5 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link  for short-circuit protection of the main circuit  -with type of assignment 2 required  wift type of assignment 2 required  for short-circuit protection of the auxiliary switch required  for short-circuit protection of the auxiliary switch required  sign 3: 36 (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A (415V, 80kA)  for short-circuit protection of the auxiliary switch required  sign 3: 10 A (500 V, 1 kA)  Installation/ mounting/ dimensions  mounting position  4/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface  screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715  Yes  height  width  45 mm  depth		1 faulty switching per 100 million (17 V, 1 mA)
• 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 — at 460/480 V rated value 5 hp — at 4575/600 V rated value 7.5 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required 9G: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) • for short-circuit protection of the auxiliary switch required 9G: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V,80kA) • for short-circuit protection of the auxiliary switch 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 • side-by-side mounting  width 45 mm  depth 73 mm		
at 600 V rated value  yielded mechanical performance [hp]  of or single-phase AC motor  — at 110/120 V rated value — at 230 V rated value of or 3-phase AC motor  — at 200/208 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 4575/600 V rated value — at 575/600 V rated value — at 575/600 V rated value — at 575/600 V rated value — with yield of coordination 1 required — with type of coordination 1 required — with type of coordination 1 required of or short-circuit protection of the main circuit — with type of assignment 2 required of or short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the auxiliary switch required solution for short-circuit protection of the sall substance for short-circuit protection of the sall		
yielded mechanical performance [hp]  • for single-phase AC motor  — at 110/120 V rated value — 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 — at 460/480 V rated value — at 575/600 V rated value — at 575/600 V rated value 7.5 hp  contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required 9G: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) — with type of assignment 2 required 9G: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) 9G: 10 A (500 V, 1 kA)  Installation/ mounting/ dimensions  mounting position  +/-180° rotation possible on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface; can be tilled forward and backward by +/- 22.5° on vertical mounting surface;		
• for single-phase AC motor  — at 110/120 V rated value — at 230 V rated value — at 230 V rated value 1 hp  • for 3-phase AC motor — at 220/208 V rated value 2 hp — at 220/230 V rated value — 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  Short-circuit protection  design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required 9G: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) 9 for short-circuit protection of the auxiliary switch required 9G: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) 9 for short-circuit protection of the auxiliary switch required 1 sign 2 for 3 for		9 A
- at 110/120 V rated value - at 230 V rated value • for 3-phase AC motor - at 220/230 V rated value 2 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  Short-circuit protection  design of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required with type of assignment 2 required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions  mounting position  4/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 ves height 70 mm width depth 73 mm		
- at 230 V rated value  • for 3-phase AC motor  - at 200/208 V rated value  - at 220/230 V rated value  - at 460/480 V rated value  - at 575/600 V rated value  - at 200/230 V rated value  - at 4600/430 V rated value  - at 200/230 V rated value  - at 200/230 V rated value  - at 4600/430 V rated value  - at 4600/430 V rated value  - at 4600/40 V rated value  - at 200/230 V rated value  - at		0.00 hr
<ul> <li>for 3-phase AC motor         <ul> <li>at 200/208 V rated value</li> <li>at 220/230 V rated value</li> <li>3 hp</li> </ul> </li> <li>at 460/480 V rated value</li> <li>5 hp</li> <li>at 575/600 V rated value</li> <li>7.5 hp</li> </ul> <li>contact rating of auxiliary contacts according to UL</li> <li>A600 / Q600</li> <li>Short-circuit protection</li> <li>design of the fuse link         <ul> <li>for short-circuit protection of the main circuit</li> <li>with type of coordination 1 required</li> <li>for short-circuit protection of the auxiliary switch required</li> <li>gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)</li> <li>gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)</li> <li>gG: 10 A (500 V, 1 kA)</li> </ul> </li> <li>Installation/ mounting/ dimensions</li> <li>mounting position</li> <li>#/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface</li> <li>screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715</li> <li>yes</li> <li>height</li> <li>70 mm</li> <li>width</li> <li>45 mm</li> <li>depth</li> <li>73 mm</li>		·
- at 200/208 V rated value 2 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		ТПР
- 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  • for short-circuit protection of the main circuit  - with type of coordination 1 required gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)  • with type of assignment 2 required 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	·	2 hn
- 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  • for short-circuit protection of the main circuit  — with type of coordination 1 required gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)  — with type of assignment 2 required 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		
- at 575/600 V rated value  contact rating of auxiliary contacts according to UL  A600 / Q600  Short-circuit protection  design of the fuse link  of rate short-circuit protection of the main circuit  - with type of coordination 1 required  of rate short-circuit protection of the auxiliary switch required  of rate short-circuit protection of the auxiliary switch required  of rate short-circuit protection of the auxiliary switch required  of rate short-circuit protection of the auxiliary switch required  of rate of short-circuit protection of the auxiliary switch required  of rate of short-circuit protection of the auxiliary switch required  of rate of short-circuit protection of the auxiliary switch required  of short-circuit protection of the main circuit  of short-circuit protection of the main circuit  of satisfaction of short-circuit protection of the auxiliary switch required  of short-circuit protection of the main circuit  of short-circuit protection of the short-circuit protection of th		·
contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) — with type of assignment 2 required gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) 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 screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715  • side-by-side mounting  Yes  height 70 mm  width 45 mm  depth		
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  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 • side-by-side mounting  • side-by-side mounting  height  70 mm  width  45 mm  depth		
design of the fuse link  • for short-circuit protection of the main circuit  — with type of coordination 1 required — with type of assignment 2 required — with type of assignment 2 required — for short-circuit protection of the auxiliary switch 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 • side-by-side mounting  height  70 mm  width  45 mm  depth  73 mm		A000 / Q000
<ul> <li>for short-circuit protection of the main circuit         — with type of coordination 1 required         — with type of assignment 2 required         — with type of assignment 2 required         — with type of assignment 2 required         — for short-circuit protection of the auxiliary switch required         — gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)         — gG: 10 A (500 V, 1 kA)         — stallation/ mounting/ dimensions         — with type of assignment 2 required         — gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)         — gG: 10 A (500 V, 1 kA)         — yes and single on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface         — side-by-side mounting         — side-by-side mounting         — yes         — yes</li></ul>		
<ul> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> <li>— with type of assignment 2 required</li> <li>— for short-circuit protection of the auxiliary switch required</li> <li>Installation/ mounting/ dimensions</li> <li>— with type of assignment 2 required</li> <li>— for short-circuit protection of the auxiliary switch required</li> <li>— for short-circuit protection of the auxiliary switch required</li> <li>— with type of assignment 2 required</li> <li>— gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)</li> <li>— gG: 10 A (500 V, 1 kA)</li> <li>Installation/ mounting/ dimensions</li> <li>— with type of assignment 2 required</li> <li>— gG: 20A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)</li> <li>— gG: 20A (690V,100kA), aM: 20A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)</li> <li>— gG: 20A (690V,100kA), aM: 20A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)</li> <li>— gG: 20A (690V,100kA), aM: 20A (690V,100kA), aM:</li></ul>		
— with type of assignment 2 required for short-circuit protection of the auxiliary switch required  for short-circuit protection of the auxiliary switch required  gG: 20A (690V, 100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)  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  yes  height 70 mm  width 45 mm  depth 73 mm	·	aC: 35A (600V 100kA) 3M: 30A (600V 100kA) D000: 35A (415V 00kA)
● for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 1 kA)  Installation/ mounting/ dimensions  mounting position	**	
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     70 mm       width     45 mm       depth     73 mm		
mounting position  +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface  fastening method		90. 10 A (000 V, 1 M)
backward by +/- 22.5° on vertical mounting surface  fastening method		1/ 400° rotation possible on visiting and according and
• side-by-side mounting  height  70 mm  width  45 mm  depth  73 mm	mounting position	
height         70 mm           width         45 mm           depth         73 mm	fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
width         45 mm           depth         73 mm	• side-by-side mounting	Yes
depth 73 mm	height	70 mm
•	width	45 mm
required spacing	depth	73 mm
	required spacing	

W	
with side-by-side mounting	40
— 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	
<ul> <li>for main current circuit</li> </ul>	spring-loaded terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Spring-type terminals
of magnet coil	Spring-type terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (0.5 4 mm²)
<ul> <li>solid or stranded</li> </ul>	2x (0,5 4 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)
finely stranded without core end processing	2x (0.5 2.5 mm²)
connectable conductor cross-section for main contacts	
• solid	0.5 4 mm²
<ul> <li>stranded</li> </ul>	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm²
finely stranded without core end processing	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm²
finely stranded without core end processing	0.5 2.5 mm²
type of connectable conductor cross-sections	0.0 2.0
for auxiliary contacts	
— solid or stranded	2x (0,5 4 mm²)
finely stranded with core end processing	2x (0.5 2.5 mm²)
— finely stranded without core end processing	2x (0.5 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 12)
AWG number as coded connectable conductor cross	ZA (20 12)
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>	No
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC	20 a
61508	
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	
safety-related switching OFF	Yes
Certificates/ approvals	
General Product Approval	
1,000	



Confirmation





<u>KC</u>



**Functional EMC** Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 



Type Examination Cer**tificate** 





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

Type Test Certificates/Test Report

## Marine / Shipping













Marine / Shipping

other

Railway

**Dangerous Good** 

**Environment** 



Confirmation



Vibration and Shock

**Transport Information** 

Environmental Con**firmations** 

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,...)

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2016-2VB41

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-2VB41

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

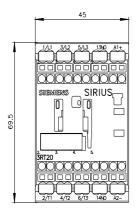
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2016-2VB41&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2016-2VB41&lang=en</a>

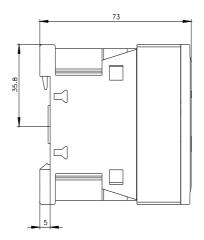
Characteristic: Tripping characteristics, I2t, Let-through current

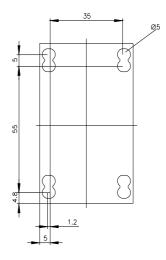
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2VB41/char

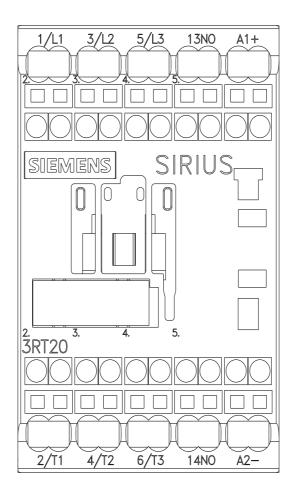
Further characteristics (e.g. electrical endurance, switching frequency)

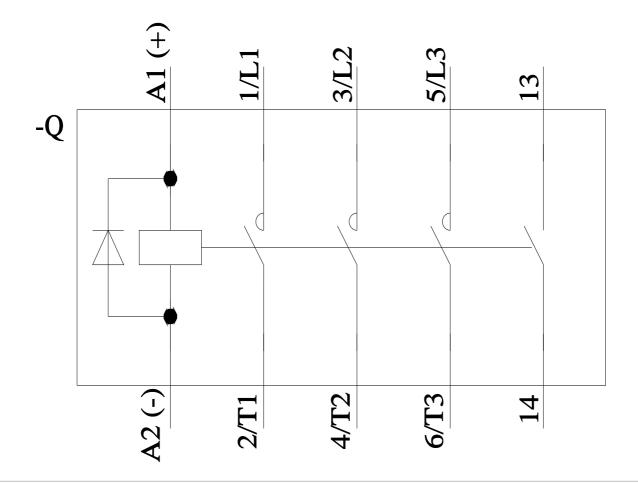
3RT2016-2VB41&objecttype=14&gridview=view1











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