# **SIEMENS**

Data sheet 3RT2016-2FB41



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 24 V DC, with integrated diode, auxiliary contacts: 1 NO, spring-loaded terminal, size: S00  $\,$ 

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	Yes
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 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	
<ul> <li>of main circuit rated value</li> </ul>	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
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Blei - 7439-92-1
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	

number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
at AC-3e rated value maximum	690 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated</li> </ul>	22 A
value	
• at AC-1	
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> </ul>	22 A
— up to 690 V at ambient temperature 60 °C rated	20 A
value	2071
• 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	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	444
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 stand value.	20.4
— 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
with 2 current paths in series at DC-1	00.4
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.7 A
with 3 current paths in series at DC-1	
— 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	20 A
— at 440 V rated value	1.3 A
<ul> <li>at 600 V rated value</li> </ul>	1 A

at 1 current path at DC-3 at DC-5	
— 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	
• 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	5.5 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
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	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	
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	1.3 kVA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	2.4 kVA
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	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
limited to 5 s switching at zero current maximum	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
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	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	

docide   d	full-scale value	1.1
closing power of magnet coil at DC		
A W   Closing delay		
Closing delay		
## CIDC  opening delay  ## CIDC  archg time  control version of the switch operating mechanism  Standard A1-A2  Auxillary circuit  number of No contacts for auxillary contacts instantaneous control version of the switch operating mechanism  Auxillary circuit  number of No contacts for auxillary contacts instantaneous control control version of the switch operating auxillary contacts instantaneous control accurrent at AC-12  ### A120 V rated value  ### A120 V		
A		30 100 ms
arching time		
Secondary Incidence   10		38 65 ms
Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15  • 12 230 V rated value • 10 A • 12 30 V rated value • 10 A • 12 500 V rated value • 10 A • 15 500 V rated value • 10 A • 16 500 V rated value • 10 A • 16 80 V rated value • 10 A • 11 10 V rated value • 12 20 V rated value • 11 10 V rated value • 12 10 V rated value • 12 10 V rated value • 11 10 V rated value • 12 10 V rated value • 13 10 V rated value • 14 80 V rated value • 15 10 V rated value • 16 10 V rated value • 17 5 V rated value • 17 5 A • 18 20 V rated value • 18 10 V rated value • 19 A • 19 0 V rated value • 10 A • 10 O S A • 11 10 V rated value • 10 O S A • 11 10 V rated value • 10 O S A • 11 10 V rated value • 10 O S A • 11 10 V rated value • 10 O S A • 11 10 V rated value • 10 O S A • 11 10 V rated value • 10 O S A • 11 10 V rated value • 10 S A S S S S S S S S S S S S S S S S S		10 15 ms
December of NO contacts for auxiliary contacts instantaneous contact	control version of the switch operating mechanism	Standard A1 - A2
Operational current at AC-12 maximum   10 A   Operational current at AC-15   Operational current at AC-16   Operational current at AC-19   Operational cu	Auxiliary circuit	
Operational current at AC-12 maximum   10 A   Operational current at AC-15		1
Operational current at AC-15		10 Λ
• at 230 V rated value	·	10 A
• at 400 V rated value 2A	·	10 Δ
• at 500 V rated value		
• at 690 V rated value 10.A  operational current at DC-12  • 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 125 V rated value 1 A • at 80 V rated value 2 A • at 125 V rated value 1 A • at 80 V rated value 1 A • at 800 V rated value 2 A • at 220 V rated value 1 A • at 800 V rated value 2 A • at 220 V rated value 1 A • at 80 V rated value 2 A • at 80 V rated value 3 A • at 125 V rated value 4 A • at 125 V rated value 4 A • at 125 V rated value 5 A • at 125 V rated value 4 A • at 125 V rated value 5 A • at 125 V rated value 6 A • at 125 V rated value 9 A • at 125 V rated value 1 A •		
10 A		
• at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 1125 V rated value • at 220 V rated value • at 220 V rated value • at 80 V rated value • at 80 V rated value • at 84 V rated value • at 84 V rated value • at 85 V rated value • at 85 V rated value • at 86 V rated value • at 10 A • at 125 V rated value • at 10 A • at 125 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 100 V rated value • at 200 V rated value • at 100 V		
• at 48 V rated value • at 60 V rated value • at 107 V rated value • at 1125 V rated value • at 125 V rated value • at 220 V rated value • at 24 V rated value • at 24 V rated value • at 24 V rated value • at 80 V rated value • at 110 V rated value • at 220 V rated value • at 800 V rated value • for 3-phase AC motor • at 110/120 V rated value • at 220/230 V rated value • at 220/230 V rated value • at 220/230 V rated value • at 575/600 V rated value • for short-circuit protection  design of the fuse link • for short-circuit protection of the main circuit • with type of assignment 2 required • with type of coordination 1 required • for short-circuit protection of the auxiliary switch required mounting position  +/-180° rotation possible on vertical mounting surface; can be tilted forward an	•	10 A
• 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 600 V rated value • at 600 V rated value • at 48 V rated value • at 110 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 125 V rated value • at 125 V rated value • at 126 V rated value • at 127 V rated value • at 128 V rated value • at 128 V rated value • at 129 V rated value • at 120 V rated value • at 200 V rated value • at 450 V rated value • at 200 V rated value • at		
• at 125 V rated value • at 220 V rated value • at 220 V rated value • at 260 V rated value  operational current at DC-13 • at 24 V rated value • at 48 V rated value • at 48 V rated value • at 110 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 126 V rated value • at 126 V rated value • at 127 V rated value • at 128 V rated value • at 128 V rated value • at 129 V rated value • at 129 V rated value • at 120 V rated value • for 3-phase AC motor • at 120 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 200 V rated value • for 3-phase AC motor • at 460 V rated value • for 3-phase AC motor • at 460 V rated value • for 3-phase AC motor • at 460 V rated value • for 3-phase AC motor • at 460 V rated value • for 3-phase AC motor • at 460 V rated value • for 3-phase AC motor • at 460 V rated value • for 3-phase AC motor • rated value •		
• 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 10 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 600 V rated value  • at 100 V rated value  • at 600 V rated value  • at 600 V rated value  • for single-phase AC motor  — at 110/120 V rated value  • for 3-phase AC motor  — 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 460/480 V rated value  — at 45/5/600 V rated value  — at 57/5/600 V rated value  — at 460/480 V rated value  — at 57/5/600 V rated value  — at 600 V rated value  — at 600 V rated value  — at 75/600 V rated value  — with type of coordination 1 required  — with type of assignment 2 required  • for short-circuit protection of the main circuit  — 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  • 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  • 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 protecti	• at 125 V rated value	2 A
e at 24 V rated value	• at 220 V rated value	1 A
at 24 V rated value at 48 V rated value 2 A at 48 V rated value 2 A at 110 V rated value 3 A at 110 V rated value 4 A at 110 V rated value 5 A 5 A 5 A 5 A 5 A 5 A 5 A 5 A 5 A 5 A	at 600 V rated value	0.15 A
at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value 0.9 A at 220 V rated value 0.3 A at 600 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 7.6 A at 800 V rated value 9 A  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 200/280 V rated value 2 hp - at 220/230 V rated value 3 hp - at 460/480 V rated value 3 hp - at 460/480 V rated value - at 575/600 V rated value 5 hp - at 575/600 V rated value - at 575/600 V rated value - with type of coordination 1 required - with type of coordination 1 required - with type of assignment 2 required for short-circuit protection of the main circuit - with type of assignment 2 required for short-circuit protection of the auxiliary switch required for	operational current at DC-13	
at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value 0.9 A at 125 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 7.6 A at 600 V rated value 9 A  yielded mechanical performance [hp] for single-phase AC motor at 1230 V rated value 1 hp for 3-phase AC motor at 230 V rated value 1 hp for 3-phase AC motor at 220/230 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  Short-circuit protection  design of the fuse link for short-circuit protection of the main circuit with type of assignment 2 required for short-circuit protection to the main circuit with type of assignment 2 required for short-circuit protection for the main circuit with type of assignment 2 required for short-circuit protection for the main circuit with type of assignment 2 required for short-circuit protection of the auxiliary switch required for short-circuit protection for the auxiliary switch req	at 24 V rated value	10 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>o.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>at 600 V rated value</li> <li>b for single-phase AC motor</li> <li>at 10/120 V rated value</li> <li>for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>at 460/480 V rated value</li> <li>b for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>for 3-phase AC motor</li> <li>at 200/208 V rated value</li> <li>for 3-phase AC motor</li> <li>at 260/608 V rated value</li> <li>for 3-phase AC motor</li> <li>at 460/480 V rated value</li> <li>b fbp</li> <li>at 460/480 V rated value</li> <li>b fbp</li> <li>at 457/500 V rated value</li> <li>b fbp</li> <li>at 575/600 V rated value</li> <li>b fbp</li> <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</li> <li>for short-circuit protection of the main circuit</li> <li>with type of coordination 1 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: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V,80kA)</li> </ul> </li> <li>mounting position</li> <li>+/-180° rotation possible on vertical mounting surface; can be tilted forward and surface; can be tilted</li></ul>	• at 48 V rated value	2 A
at 125 V rated value at 220 V rated value 3 A at 600 V rated value 0.1 A  taulty 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 at 600 V rated value  at 600 V rated value  for single-phase AC motor  - at 110/120 V rated value - at 230 V rated value - at 230 V rated value - at 230 V rated value - at 220/230 V rated value - at 200/208 V rated value - at 200/208 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 - with type of coordination 1 required - with type of sasignment 2 required - with type of assignment 2 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 - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the or or of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or short-circuit protection of the auxiliary switch required - of or of or	at 60 V rated value	2 A
at 220 V rated value 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 at 600 V rated value by eldded mechanical performance [hp]  of or single-phase AC motor at 110/120 V rated value by rated value contact rating of auxiliary contacts according to UL  Short-circuit protection  design of the fuse link by for short-circuit protection of the main circuit by with type of coordination 1 required by respectively required by rated value by rated value contact rating of auxiliary contacts according to UL  Short-circuit protection of the main circuit by rote of short-circuit protection of the auxiliary switch required by rated value contact rating of auxiliary contacts according to UL  Short-circuit protection of the main circuit by rated value contact rating of auxiliary contacts according to UL  Short-circuit protection of the auxiliary switch required contact rating of auxiliary contacts according to UL  Short-circuit protection of the auxiliary switch required contact rating of auxiliary switch required contact rating of auxiliary contacts according to UL  Short-circuit protection of the auxiliary switch required contact rating of auxiliary switch required contact rating of auxiliary contacts according to UL  Short-circuit protection of the auxiliary switch required contact rating of auxiliary switch required contact rating of auxiliary contacts according to UL  Short-circuit pr	• at 110 V rated value	1 A
at 600 V rated value  contact reliability of auxiliary contacts  UL/GSA ratings  full-load current (FLA) for 3-phase AC motor  at 480 V rated value  at 600 V rated value  for single-phase AC motor  - at 110/120 V rated value  for 3-phase AC motor  - at 230 V rated value  at 200/208 V rated value  at 220/203 V rated value  - at 220/230 V rated value  - at 460/480 V rated value  - at 575/600 V rated value  - at 575/600 V rated value  - at 600 V rated value  -	• 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  1 hp  • for 3-phase AC motor  — at 220/208 V rated value  1 hp  • for 3-phase AC motor  — at 220/230 V rated value  2 hp  — at 220/230 V rated value  3 hp  — at 575/600 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 coordination 1 required  • for short-circuit protection of the auxiliary switch required  Installation/ mounting/ dimensions  mounting position  1 faulty switching per 100 million (17 V, 1 mA)  7.6 A  9 A  9 A  7.6 A  9 A  9 A  9 A  9 A  9 A  9 A  9 A	• at 220 V rated value	0.3 A
### Company of the fuse link    Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output   Company of the fuse link   Output	at 600 V rated value	0.1 A
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  9 0.33 hp  1 hp  for 3-phase AC motor  - at 230 V rated value  1 hp  for 3-phase AC motor  - at 200/280 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 assignment 2 required  with type of assignment 2 required  for short-circuit protection of the auxiliary switch required  for short-circuit protection o	contact reliability of auxiliary contacts	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</li> <li>at 110/120 V rated value</li> <li>nat 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>nat 220/230 V rated value</li> <li>at 200/208 V rated value</li> <li>at 200/208 V rated value</li> <li>bp</li> <li>at 460/480 V rated value</li> <li>bp</li> <li>at 575/600 V rated value</li> <li>bp</li> <li>at 575/600 V rated value</li> <li>bp</li> <li>at 575/600 V rated value</li> <li>bf p</li> <li>contact rating of auxiliary contacts according to UL</li> <li>Short-circuit protection</li> <li>design of the fuse link</li> <li>for short-circuit protection of the main circuit</li> <li>with type of coordination 1 required</li> <li>gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)</li> <li>for short-circuit protection of the auxiliary switch 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> </ul> Installation/ mounting/ dimensions mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward and	UL/CSA ratings	
at 600 V rated value  yielded mechanical performance [hp]  of r single-phase AC motor  - at 110/120 V rated value - at 230 V rated value - at 200/208 V rated value - at 220/230 V rated value - at 220/230 V rated value - at 420/830 V rated value - at 460/480 V rated value - at 575/600 V rat	full-load current (FLA) for 3-phase AC motor	
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  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 — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the aux	• at 480 V rated value	7.6 A
for single-phase AC motor         — at 110/120 V rated value	at 600 V rated value	9 A
- 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 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 of or short-circuit protection of the auxiliary switch required for short-circuit protection of the short-circuit protection of the auxiliary switch required for short-circuit protection of the short-circuit protection of the short-circuit p		
- 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 575/600 V rated value — at 575/600 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         — with rotection          design of the fuse link         — with type of coordination 1 required         — 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         — 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         — 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         — 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         — for short-circuit protection of the auxiliary switch required         — for short-circuit protection of the auxiliary switch required         — at 200 / 4000 / 4		
- at 200/208 V rated value 2 hp - at 220/230 V rated value 5 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 +/-180° rotation possible on vertical mounting surface; can be tilted forward and		1 hp
- at 220/230 V rated value - at 460/480 V rated value - at 575/600 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 - 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  • 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  • 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  • 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  • 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  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxilia	•	
- at 460/480 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  - 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  - with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  - with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  - with type of assignment 2 required  • for short-circuit protection of the auxiliary switch required  - with type of assignment 2		·
- 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  • for short-circuit protection of the auxiliary switch required  • for short-circuit protection of the auxiliary switch required    G: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)    G: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)    G: 10 A (500 V, 1 kA)    Installation/ mounting/ dimensions    H/-180° rotation possible on vertical mounting surface; can be tilted forward and		
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<ul> <li>for short-circuit protection of the main circuit</li> <li>— with type of coordination 1 required</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>— for short-circuit protection of the auxiliary switch 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>— for short-circuit protection of the auxiliary switch 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>— for short-circuit protection of the auxiliary switch 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>— for short-circuit protection of the auxiliary switch 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>— for short-circuit protection of the auxiliary switch 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>— for short-circuit protection of the auxiliary switch 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>— for short-circuit protection of the auxiliary switch 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>— for short-circuit prote</li></ul>		
— 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 +/-180° rotation possible on vertical mounting surface; can be tilted forward and	-	
— 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 +/-180° rotation possible on vertical mounting surface; can be tilted forward and		aG: 354 (690)/ 100k4), aM: 204 (690)/ 100k4), BSSS: 354 (415)/ 80k4)
• 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	**	
Installation/ mounting/ dimensions  mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward and		
mounting position +/-180° rotation possible on vertical mounting surface; can be tilted forward and	· · · · · · · · · · · · · · · · · · ·	90. 10 A (000 V, 1 IA)
		+/-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	side-by-side mounting	Yes

height	70 mm
width	45 mm
depth	73 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	
— 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
— at the side  Connections/ Terminals	Viiiii
type of electrical connection	
••	enring loaded terminals
for main current circuit     for auxiliany and control circuit	spring-loaded terminals
for auxiliary and control circuit     a st contactor for auxiliary contactor	spring-loaded terminals
at contactor for auxiliary contacts	Spring-type terminals
of magnet coil	Spring-type terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (0.5 4 mm²)
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)
connectable conductor cross-section for main contacts	
• solid	0.5 4 mm <sup>2</sup>
• stranded	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
finely stranded without core end processing	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
<ul> <li>solid or stranded</li> </ul>	0.5 4 mm²
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 2.5 mm²
finely stranded without core end processing	0.5 2.5 mm²
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid or stranded	2x (0,5 4 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 12)
AWG number as coded connectable conductor cross	
section	00 40
• for main contacts	20 12
for auxiliary contacts	20 12
Safety related data	
product function	
mirror contact according to IEC 60947-4-1	Yes; with 3RH29
suitability for use safety-related switching OFF	Yes
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 %
with high demand rate according to SN 31920	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
TA value for an effect interval an emissible according to IFO	20 a
T1 value for proof test interval or service life according to IEC 61508	20 0

#### Certificates/ approvals

### **General Product Approval**





Confirmation



<u>KC</u>



**EMC** 

Functional Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certific-

## Marine / Shipping













Marine / Shipping

other

Railway

Dangerous Good

Environment



Household and similar appliances

Confirmation

Vibration and Shock

**Transport Information** 

Environmental Confirmations

#### Further information

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=3RT2016-2FB41

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-2FB41

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2FB41

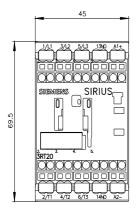
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

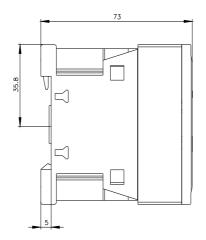
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2016-2FB41\&lang=en}$ 

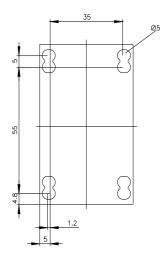
Characteristic: Tripping characteristics, I²t, Let-through current

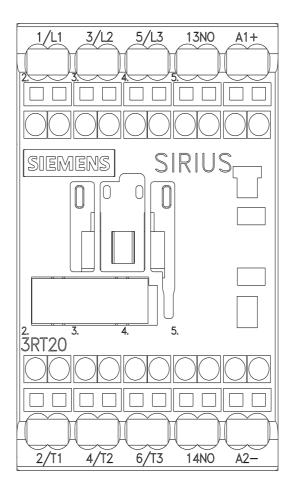
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-2FB41/char Further characteristics (e.g. electrical endurance, switching frequency)

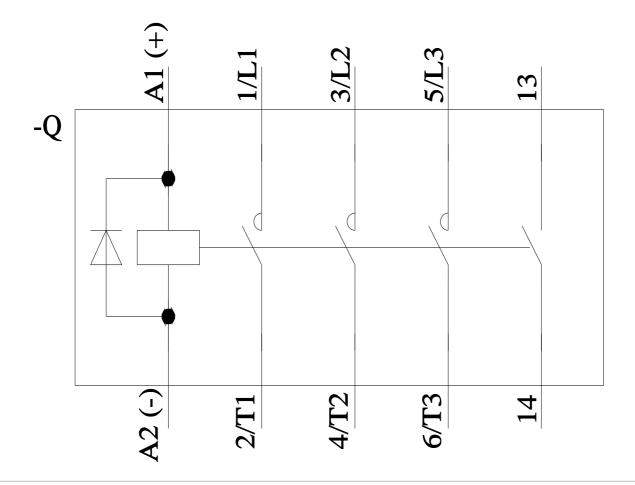
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-2FB41&objecttype=14&gridview=view1











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