SIEMENS

Data sheet

3RT2016-1BP41



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 230 V DC, auxiliary contacts: 1 NO, screw terminal, size: S00

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S00
product extension	
 function module for communication 	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	0.9 W
 at AC in hot operating state per pole 	0.3 W
 without load current share typical 	4 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	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 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
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
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	
• at AC-1 at 400 V at ambient temperature 40 °C rated	22 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	22 A
— up to 690 V at ambient temperature 60 °C rated	20 A
value	
● 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	5.2.4
— 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 — up to 500 V for current peak value n=20 rated value 	5.3 A 5.3 A
— up to 500 V for current peak value n=20 rated value	5.5 A
• at AC-6a	54
 up to 230 V for current peak value n=30 rated value 	3.5 A
— up to 200 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 mm ²
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
• with 2 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	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
— at 600 V rated value	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			
 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			
 with 3 current paths in series at DC-3 at DC-5 				
— 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-2 at 400 V rated value	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 250 v rated value — 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-	5.5 KVV			
4				
• at 400 V rated value	2 kW			
• at 690 V rated value	2.5 kW			
operating apparent power at AC-6a				
• up to 230 V for current peak value n=20 rated value	2 kVA			
 up to 400 V for current peak value n=20 rated value 	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 	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 5 s switching at zero current maximum 	111 A; Use minimum cross-section acc. to AC-1 rated value			
 limited to 10 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 	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	230 V			
operating range factor control supply voltage rated value of				
magnet coil at DC				

closing power of magnet coll at DC 4 W hobiting power of magnet coll at DC 4 W • it DC 50-100 ms • end CC 7-13 ms • at DC 10 • at DC 10 • at DC 7					
Indicing power of magnet coil at DC 4 W closing datay an 100 ms • e ILDC 30 100 ms • e ILDC 7 13 ms • a IDC 7 13 ms arcing time 10 15 ms control version of the switch operating mechanism Standard A1 - A2 Anxitizey clocut 10 15 ms control version of the switch operating mechanism 11 operational current at AC-12 msmum 10 A operational current at AC-13 11 • at 200 V rated value 2 A • at 200 V rated value 10 A • at 204 Value value 10 A • at 200 Vated value <	• full-scale value	1.1			
closing delay 30 100 ms opening delay 1015 ms exiting time 1015 ms control version of the switch operating mechanism Skundard A1 - A2 Auxiliary circuit 1 number of NO contacts for auxiliary contacts instantaneous 1 operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A operational current at AC-12 4 • 41600 V inted value 3.A • 41600 V inted value 3.A • 4160 V inted value 3.A <td></td> <td colspan="4">4 W</td>		4 W			
• et DC 30100 ms oppling dely - • et DC 713 ms • et DC 713 ms • et DC 713 ms • et DC 9100 ms • et dDC 9100 ms • et dDC 1015 ms • et dDC 10		4 W			
opening delay 713 ms • et DC 713 ms control variation of the switch operating mechanism Standard A1 - A2 Availancy closed 1 control of NO controls for availary contracts instantaneous 1 operational current at AC-12 maximum 10 A • at 800 V rated value 6 A • at 800 V rated value 0 A	closing delay				
• ± DC. 7 13 ms acting time 10 15 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10.A operational current at AC-12 maximum 10.A operational current at AC-15 10.A • at 300 V rated value 3.A • at 600 V rated value 3.A • at 600 V rated value 10.A • at 600 V rated value 3.A • at 600 V rated value 0.A • at 60 V rated value 0.A • at 60 V rated value 0.15 A • operational current at DC-13 • • at 80 V rated value 0.16 A • at 80 V rated value 0.3 A • at 80 V rated value 0.3 A • at 80 V rated value 0.1 A • at 800 V rated value 0.1 A • at 800 V rated value 0.3 A • at 800 V rated value 0.3 A • at 800 V rated value 0.1 A • at 800 V rated value 0.3 A • at 800 V rated value 0.3 A	• at DC	30 100 ms			
arcting time 10 _ 15 ms control variation of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 10 united of NC contacts of auxiliary contacts instantaneous 10 operational current at AC-12 maximum 10 A extra 230 V rated value 3A extra 430 V rated value 3A extra 430 V rated value 3A extra 40 V rated value 6A extra 40 V rated value 7A extra 40 V rated value <	opening delay				
control of the switch operating mechanism Standard A1 - A2 Auxiliary circuit United of NC contects for auxiliary contacts instantaneous contact Image of NC contects for auxiliary contacts instantaneous contact operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A et al 30 V rated value 3.A et al 30 V rated value 3.A et al 40 V rated value 3.A et al 40 V rated value 6.A et al 40 V rated value 6.A et al 40 V rated value 6.A et al 40 V rated value 7.A et al 40 V rated value 7.A et al 50 V rated value 7.A	• at DC	7 13 ms			
Auxiliary circuit 1 number of NO contacts for auxiliary contacts instantaneous 1 operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A • at 300 Vitated value 10 A • at 300 Vitated value 2A • at 680 Vitated value 1A • at 680 Vitated value 6A • at 60 Vitated value 6A • at 60 Vitated value 6A • at 60 Vitated value 6A • at 20 Vitated value 1A • at 20 Vitated value 1A • at 60 Vitated value 1A • at 80 Vitated value 1A <t< td=""><td>arcing time</td><td>10 15 ms</td></t<>	arcing time	10 15 ms			
number of ND contacts for auxiliary contacts instantaneous 1 contact 10 A operational current at AC-15 10 A • at 20 V rated value 3 A • at 30 V rated value 1 A operational current at DC-12 10 A • at 30 V rated value 6 A • at 30 V rated value 6 A • at 30 V rated value 6 A • at 20 V rated value 6 A • at 20 V rated value 1 A • at 20 V rated value 1 A • at 20 V rated value 1 A • at 20 V rated value 0 A • at 80 V	control version of the switch operating mechanism	Standard A1 - A2			
contact 10 A operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 230 Yrated value 3 A • at 300 Yrated value 3 A • at 500 Yrated value 1 A operational current at DC-12 1 A • at 24 Vrated value 6 A • at 40 Vrated value 6 A • at 40 Vrated value 6 A • at 40 Vrated value 6 A • at 20 Vrated value 7 A	Auxiliary circuit				
operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 30 V rated value 3 A • at 30 V rated value 3 A • at 30 V rated value 3 A • at 50 V rated value 1 A operational current at DC-12 • 10 A • at 45 V rated value 6 A • at 46 V rated value 6 A • at 10 V rated value 6 A • at 20 V rated value 7 A • at 20 V rated value 6 A • at 20 V rated value 7 A • at 20 V rated value 7 A • at 20 V rated value 7 A • at 20 V rated value 0.4 A • at 20 V rated value 0.4 A • at 20 V rated value 0.4 A • at 60 V rated value 0.4 A • at 20 V rated value 0.4 A • at 20 V rated value 0.4 A • at 20 V rated value 0.4 A • at 40 V rated value 0.4 A • at 200 V rated value 7.6 A • at 300 V rated value 9 A		1			
operate 230 V rated value 10 A • at 230 V rated value 10 A • at 400 V rated value 3 A • at 500 V rated value 2 A • at 800 V rated value 1 A operational current at DC-12 0 A • at 80 V rated value 6 A • at 80 V rated value 7 A • at 80 V rated value 7 A • at 80 V rated value 7 A • at 80 V rated value 0.15 A operational current at DC-13 • at 80 V rated value • at 80 V rated value 7 A • at 80 V rated value 0.3 A • at 80 V rated value 0.3 A • at 80 V rated value 0.3 A • at 80 V rated value 7 5 A • at 800 V rated value 9 A • at 800 V rated value 9 A • at 800 V rated value 7 5 A		10.4			
• at 230 V rated value 3 A • at 600 V rated value 3 A • at 600 V rated value 1 A • oportational current at DC-12 • • at 80 V rated value 10 A • at 80 V rated value 0 A • at 80 V rated value 0.15 A • oporational current at DC-13 0 A • at 80 V rated value 0 A • at 800 V rated value 0 A	•	10 A			
• at 400 V rated value 3 A • at 500 V rated value 1 A operational current at DC-12 • • at 24 V rated value 10 A • at 24 V rated value 0 A • at 48 V rated value 0 A • at 48 V rated value 0 A • at 10 V rated value 0 A • at 10 V rated value 0 A • at 120 V rated value 0 A • at 20 V rated value 0 A • at 200 V rated value 0.15 A • at 200 V rated value 0.15 A • at 60 V rated value 0.15 A • at 60 V rated value 0.2 A • at 60 V rated value 0.2 A • at 60 V rated value 0.3 A • at 120 V rated value 0.3 A • at 200 V rated value 0.3 A • at 80 V rated value 0.3 A • at 80 V rated value 0.3 A • at 80 V rated value 0.3 hp • at 80 V rated value 0.3 hp • at 80 V rated value 0.3 hp • at 800 V rated value 9 A Vie	-	10.4			
• at 500 V rated value 1A • at 500 V rated value 1A • at 24 V rated value 10 A • at 48 V rated value 6 A • at 40 V rated value 6 A • at 100 V rated value 6 A • at 22 V rated value 3 A • at 220 V rated value 3 A • at 220 V rated value 2 A • at 220 V rated value 0 A • at 300 V rated value 2 A • at 300 V rated value 0.3 A • at 300 V rated value 0.1 A • at 300 V rated value 7.6 A • at 300 V rated value 7.6 A • at 300 V rated value 7.6 A • at 300 V rated value 9 A • at 300 V rated value 7.6 A • at 300 V rated value 7.6 A • at 300 V rated value 7.6 A • at 300 V rated value					
• at 880 V rated value 1 A operational current at DC-12 0.A • at 48 V rated value 0.A • at 60 V rated value 6 A • at 60 V rated value 3 A • at 125 V rated value 2 A • at 800 V rated value 0.15 A operational current at DC-13 0.15 A • at 800 V rated value 0.15 A operational current at DC-13 0.15 A • at 800 V rated value 0.A • at 80 V rated value 0.A • at 800 V rated value 0.					
operational current at DC-12 10 A • at 24 V rated value 10 A • at 40 V rated value 6 A • at 60 V rated value 6 A • at 10 V rated value 2 A • at 220 V rated value 1 A • at 200 V rated value 1 A • at 200 V rated value 0.15 A operational current at DC-13 10 A • at 40 V rated value 2 A • at 40 V rated value 0.9 A • at 200 V rated value 0.9 A • at 200 V rated value 0.9 A • at 200 V rated value 0.1 A • at 600 V rated value 9 A yleide mechanical performance (hp) • for single-phase AC motor • at 600 V rated value 9 A yleide mechanical performance (hp) • for 3-phase AC motor • at 600 V rated value<					
• at 24 V rated value 10 A • at 48 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 operational current at DC-13 0 A • at 420 V rated value 0.15 A operational current at DC-13 0 A • at 42 V rated value 0.15 A operational current at DC-13 0 A • at 60 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 0.3 A • at 125 V rated value 0.3 A • at 220 V rated value 0.1 A • at 400 V rated value 0.1 A • ot 600 V rated value 7.6 A • ot 600 V rated value 7.6 A • ot 600 V rated value 7.6 A • ot 600 V rated value 9 A vilicided mechanical performance [tp] • ot significity or tated value • ot 600 V rated value 1 hp • of 3 shpase AC motor - at 220/200 V rated value - at 220/200 V rated value 3 hp - at 220/200 V rated value 5 hp - at 22		IA			
• at 48 V rated value 6 A • at 60 V rated value 6 A • at 120 V rated value 3 A • at 220 V rated value 1 A • at 220 V rated value 0.15 A opportional current at DC-13 • • at 24 V rated value 0.15 A opportional current at DC-13 • • at 24 V rated value 2 A • at 80 V rated value 0.3 A • at 220 V rated value 0.3 A • at 200 V rated value 0.3 A • at 800 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings 7.6 A • at 600 V rated value 9 A violded mechanical performance [tp] • for single-phase AC motor • at 600 V rated value 9 A violded value 0.33 hp • at 200 V rated value 0.33 hp • at 200 V rated value 1 hp • for 3-phase AC motor - • at 200 V rated value 3 hp • at 200 V rated value 5 hp • at 200208 V rated value 5 hp • at 200208 V	•	10.0			
• at 60 V rated value 6 A • at 110 V rated value 3 A • at 125 V rated value 2 A • at 220 V rated value 0.15 A opperational current at DC-13 • • at 42 V rated value 10 A • at 42 V rated value 10 A • at 42 V rated value 2 A • at 43 V rated value 2 A • at 105 V rated value 3 A • at 105 V rated value 0.3 A • at 25 V rated value 0.3 A • at 200 V rated value 0.1 A contact reliability of auxiliary contacts 1 foully switching per 100 million (17 V, 1 mA) U/uCSA ratings T full-load current (FLA) for 3-phase AC motor 7.6 A • at 400 V rated value 0.33 hp • at 230 V rated value 9 A • at 200 V rated value 0.33 hp • at 200 V rated value 0.33 hp • at 200 V rated value 1 hp • for 3-phase AC motor - • at 200 V rated value 3 hp • at 2002/20 V rated value 3 hp					
• at 110 V rated value 3 A • at 125 V rated value 2 A • at 200 V rated value 0.15 A opportional current at DC-13 0.15 A • at 24 V rated value 0 A • at 24 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 2 A • at 60 V rated value 0.9 A • at 125 V rated value 0.3 A • at 220 V rated value 0.3 A • at 200 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings T full-da current (FLA) for 3-phase AC motor • • at 600 V rated value 7.6 A • at 600 V rated value 7.6 A • at 600 V rated value 7.6 A • at 600 V rated value 9 A vielded mechanical performance [hp] • • for 3-phase AC motor - - at 200 V rated value 1 hp • at 600 V rated value 3 hp - at 200/208 V rated value 3 hp					
• at 125 V rated value 2 A • at 220 V rated value 1 A • at 600 V rated value 0.15 A operational current at DC-13 10 A • at 44 V rated value 10 A • at 40 V rated value 2 A • at 60 V rated value 2 A • at 10 V rated value 2 A • at 10 V rated value 0.3 A • at 220 V rated value 0.3 A • at 60 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings Total V rated value full-dad current (FLA) for 3-phase AC motor - • at 800 V rated value 9 A visided mechanical performance (hp) • • for single-phase AC motor - - at 200/208 V rated value 0.33 hp - at 200/208 V rated value 1 hp • for 3-phase AC motor - - at 200/208 V rated value 3 hp - at 200/208 V rated value 3 hp - at 200/208 V rated value 7.5 hp contact reling of auxiliary contacts according to UL A600 / G600 Short-circ					
• at 220 V rated value 1 A • at 600 V rated value 0.15 A operational current at DC-13					
• at 600 V rated value 0.15 Å operational current at DC-13 10 Å • at 24 V rated value 10 Å • at 48 V rated value 2 Å • at 60 V rated value 2 Å • at 10 V rated value 0.9 Å • at 25 V rated value 0.3 Å • at 60 V rated value 0.1 Å contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mÅ) UL/CSA ratings 1 full-load current (FLA) for 3-phase AC motor - • at 800 V rated value 9 Å vijelded mechanical performance [hp] - • for single-phase AC motor - - at 200/208 V rated value 0.33 hp - at 200/208 V rated value 0.33 hp - at 200/208 V rated value 0.33 hp - at 200/208 V rated value 3 hp - at 200/208 V rated value 3 hp - at 200/208 V rated value 3 hp - at 450/480 V rated value 5 hp - at 575/600 V rated value 7.5 hp contact rating of auxiliary contacts according to UL A600 / G600 Short-circuit protection of the main circuit - - with type of coordination 1 required g6: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS8: 35A (415V, 80kA) - with type of assignment 2 required					
operational current at DC-13 10 A • at 24 V rated value 10 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 1 A • at 220 V rated value 0.9 A • at 220 V rated value 0.1 A Contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) U/CSA ratings 1 full-load current (FLA) for 3-phase AC motor • • at 800 V rated value 7.6 A • at 800 V rated value 9 A yielded mechanical performance [hp] • • for single-phase AC motor - - at 200 V rated value 1 hp • for 3-phase AC motor - - at 2002 V rated value 1 hp • for 3-phase AC motor - - at 2002 V vated value 3 hp - at 2002 V vated value 3 hp - at 2002 V rated value 5 hp - at 575/60 V vated value 7.5 hp Contact rating of auxiliary contacts according to UL A600 / 0600 Short-circuit protection g6: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)					
• at 24 V rated value 10 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 10 V rated value 1 A • at 125 V rated value 0.9 A • at 220 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings		0.15 A			
• at 48 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 1 A • at 125 V rated value 0.9 A • at 220 V rated value 0.3 A • at 600 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) ULCSA ratings	-				
• at 60 V rated value 2 A • at 110 V rated value 1 A • at 125 V rated value 0.9 A • at 220 V rated value 0.3 A • at 600 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) UL/CSA ratings					
ext 110 V rated value 1 A ext 125 V rated value 0.9 A ext 220 V rated value 0.1 A contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) 1L/CSA ratings full-load current (FLA) for 3-phase AC motor • at 460 V rated value 9 A yielded mechanical performance [hp] • for single-phase AC motor - at 110/120 V rated value 9 A yielded mechanical performance [hp] • for single-phase AC motor - at 120/208 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 220/230 V rated value 5 hp - at 450/480 V rated value 5 hp - at 576/600 V rated value 7.5 hp contact rating of auxiliary contacts according to UL A600 / Q600 Short-circuit protection fer auxiliary switch required • for short-circuit protection of the main circuit - with type of coordination 1 required - with type of coordination 1 required gG: 35A (690V,100kA), aW: 20A (690V,100kA), BS8B: 35A (415V,80kA) gG: 35A (690V,100kA), aW: 20A (690V,100kA),					
• at 125 V rated value 0.9 Å • at 220 V rated value 0.3 Å • at 600 V rated value 0.1 Å contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mÅ) ULCSA ratings 1 full-load current (FLA) for 3-phase AC motor - • at 480 V rated value 9 Å • at 600 V rated value 9 Å • at 600 V rated value 9 Å • or single-phase AC motor - - at 110/120 V rated value 0.33 hp - at 200/208 V rated value 1 hp • for 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 200/208 V rated value 5 hp - at 50/500 V rated value 7.5 hp contact rating of auxiliary contacts according to UL A600 / 0600 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 coordination 1 required gG: 0A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) - with type o					
• 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					
• 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					
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 100/120 V rated value 0.33 hp at 230 V rated value 0.33 hp at 200/208 V rated value 1 hp for 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 4600/480 V rated value 6 hp at 4575/600 V rated value 7.5 hp contact rating of auxiliary contacts according to UL A6000 / Q600 Short-circuit protection of the main circuit For short-circuit protection of the main circuit For short-circuit protection of the main circuit For short-circuit protection of the auxiliary switch required g6: 35A (690V, 100kA), aM: 16A (690V, 100kA), BS88: 35A (415V, 80kA) g6: 10 A (500 V, 1 1kA) Installation/ mounting dimensions th/-180° rotation possible on vertical mounting surface; can be tilted forward an backward by +/- 22.5° on vertical mounting surface side-by-side mounting Yees					
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 110/120 V rated value 0.33 hp - at 200/208 V rated value 1 hp • for 3-phase AC motor - at 220/208 V rated value - at 220/208 V rated value 3 hp - at 220/208 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 460/480 V rated value - with type of coordination 1 required gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) - with type of coordination 1 required gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) - with type of coordination 1 required gG: 35A (690V,100kA), aM: 16A (690V, 100kA), BS88: 35A (415V, 80kA) • for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) • for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) <tr< td=""><td></td><td></td></tr<>					
full-load current (FLA) for 3-phase AC motor 7.6 A • at 480 V rated value 9 A yielded mechanical performance [hp] 9 A • for single-phase AC motor 0.33 hp 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 200/208 V rated value 3 hp at 220/230 V rated value 5 hp at 460/480 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 gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) • for short-circuit protection of the main circuit gG: 20A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) • for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 1 tkA) Installation/ mounting / dimensions +/-180° rotation possible on vertical mounting surface; can be tilted forward an 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 </td <td></td> <td>1 faulty switching per 100 million (17 V, 1 mA)</td>		1 faulty switching per 100 million (17 V, 1 mA)			
• at 480 V rated value 7.6 A • at 600 V rated value 9 A yielded mechanical performance [hp] 9 A • for single-phase AC motor 0.33 hp - 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 220/230 V rated value 5 hp - at 6575/600 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 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 coordination 1 required gG: 30A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) - with type of coordination 1 required gG: 10 A (500 V, 1 tkA) Installation/ mounting / dimensions +/-180° rotation possible on vertical mounting surface; can be tilted forward am 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					
• at 600 V rated value 9 A yielded mechanical performance [hp] . • for single-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 200/208 V rated value 3 hp at 460/480 V rated value 5 hp at 4575/600 V rated value 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) gG: 10 A (500 V, 1 0kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) gG: 10 A (500 V, 1 kA) Installation/ mounting/ dimensions +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface side-by-side mounting Yes 					
• for single-phase AC motor 0.33 hp - at 110/120 V rated value 0.33 hp - at 230 V rated value 1 hp • for 3-phase AC motor 2 hp - at 220/230 V rated value 3 hp - at 220/230 V rated value 3 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 4600 / Q600 Short-circuit protection of the main circuit 9G: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) - with type of coordination 1 required gG: 35A (690V,100kA), aM: 16A (690V, 100kA), BS88: 35A (415V,80kA) - with type of assignment 2 required gG: 10A (500 V, 1 kA) - with type of assignment 2 required gG: 10A (500 V, 10kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) - for short-circuit protection of the auxiliary switch required gG: 10A (500 V, 1 kA) - 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		9 A			
- 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 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 4690 / Q600 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: 10 A (500 V, 100kA), aM: 16A (690V, 100kA), BS88: 20A (415V,80kA) - for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 100kA), aM: 16A (690V, 100kA), BS88: 20A (415V,80kA) - with type of assignment 2 required gG: 10 A (500 V, 1 tA) 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 viside-by-side mounting Yes					
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 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: 04 (690V, 100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) with type of assignment 2 required gG: 10 A (500 V, 1 kA) Installation/ mounting/ dimensions +/-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	-				
• for 3-phase AC motor 2 hp - 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 460/480 V rated value 7.5 hp contact rating of auxiliary contacts according to UL A600 / Q600 Short-circuit protection 460/480 V rated value design of the fuse link 6 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) - with type of assignment 2 required gG: 10 A (500 V, 1 kA) Installation/ mounting/ dimensions +/-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		•			
		1 hp			
		· ·			
		3 hp			
contact rating of auxiliary contacts according to UL A600 / Q600 Short-circuit protection A600 / Q600 design of the fuse link of r 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 +/-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	— at 460/480 V rated value				
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, 10kA), 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 screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715	— at 575/600 V rated value	7.5 hp			
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 gG: 20A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) 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 +/-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 	contact rating of auxiliary contacts according to UL	A600 / Q600			
• for short-circuit protection of the main circuit 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, 10kA), 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 #/-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	Short-circuit protection				
	design of the fuse link				
	 for short-circuit protection of the main circuit 				
• for short-circuit protection of the auxiliary switch required gG: 10 A (500 V, 1 kA) Installation/ mounting/ dimensions 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	 — with type of coordination 1 required 	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)			
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 Yes	 — with type of assignment 2 required 	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)			
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	• for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)			
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	Installation/ mounting/ dimensions				
side-by-side mounting Yes	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	height	58 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		
Connections/ Terminals			
type of electrical connection			
for main current circuit	screw-type terminals		
 for auxiliary and control circuit 	screw-type terminals		
 at contactor for auxiliary contacts 	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		
 solid or stranded 	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²		
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)		
connectable conductor cross-section for main contacts			
• solid	0.5 4 mm²		
 stranded 	0.5 4 mm²		
 finely stranded with 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		
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		
 finely stranded with core end processing 	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			
 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			
 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 61508	20 a		
protection class IP on the front according to IEC 60529	IP20		
protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529	IP20 finger-safe, for vertical contact from the front		

		<u>Confirmation</u>	UL.	<u>KC</u>	EHC	
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Conform	nity	Test Certificates		
RCM	<u>Type Examination Cer-</u> <u>tificate</u>	CE EG-Konf.	UK CA	Type Test Certific- ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	
Marine / Shipping						
ABS	B U REAU VERITAS		Lloyd's Register us	PRS	RINA	
Marine / Shipping	other		Railway	Dangerous Good	Environment	
RMRS	<u>Confirmation</u>		<u>Vibration and Shock</u>	Transport Information	Environmental Con- firmations	
https://press.siemens.c Siemens is working o Please contact your loo	I to exit the Russian mark com/global/en/pressrelease on the renewal of the curr cal Siemens office on the s other than the sanctioned E	e/siemens-wind-down-russ rent EAC certificates. tatus of validity of the EAC	certification if you inten	d to import or offer to supp	ly these products to an	
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=3RT2016-1BP41 Cax online generator						
	http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-1BP41 Service&Support (Manuals, Certificates, Characteristics, FAQs,)					

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1BP41

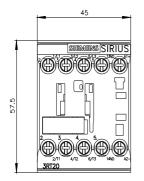
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2016-1BP41&lang=en

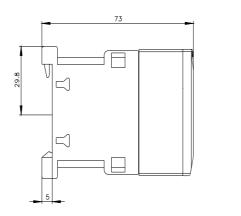
Characteristic: Tripping characteristics, I²t, Let-through current

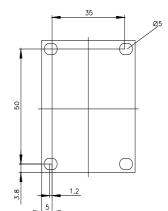
https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1BP41/char

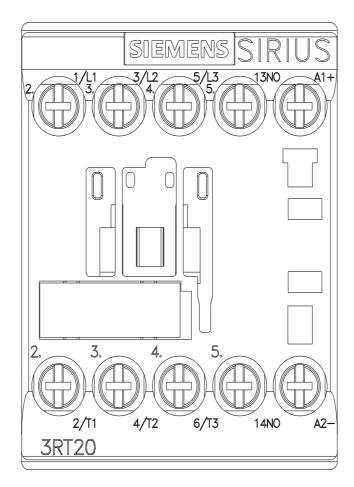
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-1BP41&objecttype=14&gridview=view1

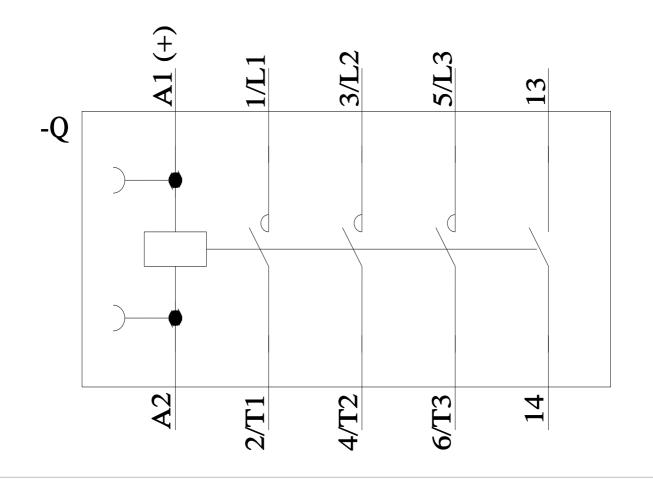








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