SIEMENS

Data sheet

3RT2046-3NF30



power contactor, AC-3e/AC-3, 95 A, 45 kW / 400 V, 3-pole, 83-155 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, size: S3

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	\$3
	55
product extension	No
function module for communication	No Yes
auxiliary switch	res
power loss [W] for rated value of the current	40.0.14
at AC in hot operating state	19.8 W
at AC in hot operating state per pole	6.6 W
without load current share typical	1.8 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
of main circuit with degree of pollution 3 rated value	1 000 V
of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
 of main circuit rated value 	8 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	10.3g / 5 ms, 6,.g / 10 ms
• at DC	6.7 g / 5 ms, 4g / 10 ms
shock resistance with sine pulse	
• at AC	16.3g / 5 ms, 10.g / 10 ms
• at DC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (operating cycles)	
 of contactor typical 	10 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	04/11/2017
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one - 71868-10-5
Weight	1.815 kg
mbient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	

a during operation	25 160 %
during operation	-25 +60 °C
• during storage	-55 +80 °C
relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30	10 % 95 %
maximum	
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	267 kg
global warming potential [CO2 eq] during manufacturing	9.35 kg
global warming potential [CO2 eq] during operation	259 kg
global warming potential [CO2 eq] after end of life	-1.55 kg
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 	1 000 V
• at AC-3e rated value maximum	1 000 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C rated	130 A
value • at AC-1	
 at AC-1 — up to 690 V at ambient temperature 40 °C rated value 	130 A
— up to 690 V at ambient temperature 60 °C rated value	110 A
• at AC-3	
— at 400 V rated value	95 A
— at 500 V rated value	95 A
— at 690 V rated value	78 A
— at 1000 V rated value	30 A
• at AC-3e	
— at 400 V rated value	95 A
— at 500 V rated value	95 A
— at 690 V rated value	78 A
— at 1000 V rated value	30 A
• at AC-4 at 400 V rated value	80 A
• at AC-5a up to 690 V rated value	114 A
• at AC-5b up to 400 V rated value	95 A
● at AC-6a	
— up to 230 V for current peak value n=20 rated value	84.4 A
— up to 400 V for current peak value n=20 rated value	84.4 A
— up to 500 V for current peak value n=20 rated value	84.4 A
— up to 690 V for current peak value n=20 rated value	58 A
● at AC-6a	
— up to 230 V for current peak value n=30 rated value	56.3 A
 — up to 400 V for current peak value n=30 rated value 	56.3 A
— up to 500 V for current peak value n=30 rated value	56.3 A
— up to 690 V for current peak value n=30 rated value	56.3 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	42 A
• at 690 V rated value	30 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	100 A
— at 60 V rated value	60 A
— at 110 V rated value	9 A
— at 220 V rated value	2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.4 A

	 with 2 current paths in series at DC-1 	
		100 A
•••••••••••••••••••••••••••••••••••		
	-	100 A
- al 400 Y raide value4.5 Å- al 600 Y raide value2.6 Å- al 624 Y field value40.4- al 624 Y field value40.4- al 624 Y field value6.4- al 624 Y field value2.5 Å- al 620 Y raide value0.6 Å- al 620 Y raide value0.05 Å- al 620 Y raide value0.06 Å- al 620 Y raide value100 Å- al 620 Y raide value100 Å- al 620 Y raide value0.06 Å- al 620 Y raide value0.64 Å- al 620 Y raide value0.65 Å- al 620 Y raide value0.64 Å- al 620 Y raide value55 Å- al 620 Y raide value55 Å- al 620 Y raide value65 Å- al 600 Y raide value56 Å- al 600 Y raide		
• at 1 current path at DC-3 at DC-5·- at 24 V trade value6.0- at 10 V rade value25.0- at 10 V rade value0.15.0- at 20 V rade value0.15.0- at 20 V rade value0.00.0- at 20 V rade value0.42.0- at 20 V rade value0.42.0- at 20 V rade value0.42.0- at 400 V rade value0.00.0- at 20 V rade value0.00.0- at 200 V rade value0.00.0- at 200 V rade value0.00.0- at 200 V rade value0.00.0- at 2		
		2.0 A
	-	40.4
- al 110 V rated value2.5 A- al 220 V rated value1A- al 600 V rated value0.6 A- al 600 V rated value0.00 A- al 60 V rated value100 A- al 60 V rated value100 A- al 60 V rated value0.00 A- al 60 V rated value0.02 A- al 60 V rated value0.16 A- al 60 V rated value0.00 A- al 60 V rated value2.00 V rated value- al 60 V rated value2.00 V rated value- al 60 V rated value2.00 V rated value- al 60 V rated value2.00 V rated value<		
- al 400 V rated value0.15 Å- al 600 V rated value000 Å- al 24 V rated value100 Å- al 24 V rated value100 Å- al 60 V rated value100 Å- al 720 V rated value100 Å- al 720 V rated value100 Å- al 720 V rated value0.06 Å- al 720 V rated value0.06 Å- al 720 V rated value0.16 Å- al 720 V rated value0.16 Å- al 720 V rated value0.00 Å- al 720 V rated value0.05 Å- al 720 V rated value0.35 Å- al 720 V rated value22 kW- al 740 V rated value22 kW- al 740 V rated value55 kW- al 720 V rated value37 kW- al 720 V rated value25 kW- al 720 V rated value37 kW- al 720 V rated value55 kW- al 720 V rated value55 kW- al 720 V rated value75 kW- al 720 V rated valu		
with 2 current paths in series at DC-3 at DC-5 at 24 V rated value at 20 V rated value 00 A at 110 V rated value 00 A at 110 V rated value 00 A at 220 V rated value 042 A at 440 V rated value 010 A at 440 V rated value 05 A at 440 V rated value 05 A at 420 V rated value 05 A at 420 V rated value 05 A at 62 V rated value 05 K at 62 V rated value 05 K at 62 V rated value 55 K at 62 V rated value 55 K at 62 V rated value 55 K at 62 V rated value 55 K at 62 V rated value		
- at 24 V rated value 100 Å - at 60 V rated value 100 Å - at 60 V rated value 00 Å - at 220 V rated value 0.42 Å - at 440 V rated value 0.16 Å - at 60 V rated value 0.16 Å - at 60 V rated value 100 Å - at 62 V rated value 0.06 Å - at 64 V rated value 0.08 Å - at 640 V rated value 0.8 Å - at 640 V rated value 0.8 Å - at 640 V rated value 5 KW - at 630 V rated value 5 KW		0.06 A
- at 60 V rated value 100 A - at 110 V rated value 000 A - at 220 V rated value 0.42 A - at 600 V rated value 0.16 A • with 3 current paths in series at DC-3 at DC-5 - - at 60 V rated value 100 A - at 60 V rated value 0.8 A - at 400 V rated value 0.8 A - at 400 V rated value 0.8 A - at 400 V rated value 22 kW - at 400 V rated value 24 kW - at 600 V rated value 55 kW - at 600 V rated value 75 kW - at 600 V rated value 75 kW - at 600 V rated value 22 kW - at 600 V rated value 75 kW - at 600 V rated value 75 kW - at 600 V rated value <	-	
- at 110 V rated value 100 A - at 220 V rated value 7 A - at 400 V rated value 0.16 A - at 600 V rated value 100 A - at 60 V rated value 100 A - at 40 V rated value 100 A - at 40 V rated value 0.05 A - at 40 V rated value 0.35 A - at 400 V rated value 5 kW - at 600		
	— at 60 V rated value	
- at 440 V rated value 0.42 Å - at 600 V rated value 0.16 Å • with 3 current paths in series at DC-3 at DC-5 - - at 24 V rated value 100 Å - at 60 V rated value 100 Å - at 60 V rated value 100 Å - at 60 V rated value 35 Å - at 100 V rated value 0.8 Å - at 600 V rated value 0.8 Å - at 600 V rated value 0.8 Å - at 600 V rated value 55 KW - at 400 V rated value 45 kW • at AC-2 at 400 V rated value 45 kW - at 600 V rated value 55 kW - at 600 V rated value 55 kW - at 100 V rated value 55 kW - at 600 V rated value 75 kW - at 600 V rated value 55 kW - at 600 V rated value 58 kW - at 600 V rated value		
at 600 V rated value 0.16 Å • with 3 current paths in series at DC-3 at DC-5 at 24 V rated value 100 A at 100 V rated value 100 A at 110 V rated value 35 A at 440 V rated value 0.8 A at 440 V rated value 0.35 A at 600 V rated value 0.35 A at 200 V rated value 0.35 A at 200 V rated value 0.35 K at 200 V rated value 22 kW at 600 V rated value 75 kW at 200 V rated value 37 kW at 200 V rated value 55 kW at 200 V rated value 55 kW at 600 V rated value 56 kW at 600 V rated value 56 kW at 600 V rated value 76 kW at 600 V rated value 76 kW at 600 V rated value 37 kW		
• with 3 current paths in series at DC-3 at DC-5I- at 24 V rated value100 A- at 60 V rated value100 A- at 60 V rated value00 A- at 220 V rated value35 A- at 600 V rated value0.8 A- at 600 V rated value0.8 A- at 600 V rated value0.8 A- at 600 V rated value25 KW- at 220 V rated value22 KW- at 230 V rated value22 KW- at 600 V rated value55 KW- at 600 V rated value55 KW- at 600 V rated value55 KW- at 600 V rated value25 KW- at 600 V rated value55 KW- at 600 V rated value22 KW- at 600 V rated value22 KW- at 600 V rated value23 KW- at 600 V rated value35 KW- at 600 V rated value n=20 rated value56 KW- at 600 V rated value n=20 rated value66 KVA- up to 500 V for current peak value n=20 rated value68 KVA- up to 600 V for current peak value n=20 rated value60 KVA- up to 500 V for curren		
		0.16 A
	 with 3 current paths in series at DC-3 at DC-5 	
	— at 24 V rated value	
	— at 60 V rated value	100 A
	— at 110 V rated value	
at 800 V rated value 0.35 A operating power	— at 220 V rated value	35 A
operating power 45 kW • at AC-2 at 400 V rated value 45 kW • at AC-3	— at 440 V rated value	0.8 A
• at AC-2 at 400 V rated value45 kW• at AC-3 at 230 V rated value22 kW- at 400 V rated value45 kW- at 600 V rated value55 kW- at 600 V rated value75 kW- at 1000 V rated value37 kW- at 1000 V rated value22 kW- at 230 V rated value55 kW- at 230 V rated value22 kW- at 400 V rated value55 kW- at 400 V rated value55 kW- at 400 V rated value75 kW- at 400 V rated value75 kW- at 690 V rated value75 kW- at 600 V rated value75 kW- at 100 V rated value75 kW- at 600 V rated value8 kVA- up to 230 V for current peak value n=20 rated value73 kVA- up to 600 V for current peak value n=20 rated value73 kVA- up to 600 V for current peak value n=20 rated value69 kVA- up to 600 V for current peak value n=20 rated value69 kVA- up to 600 V for current peak value n=30 rated value69 kVA	— at 600 V rated value	0.35 A
• at AC-3 22 kW - at 230 V rated value 22 kW - at 400 V rated value 45 kW - at 500 V rated value 55 kW - at 690 V rated value 75 kW - at 230 V rated value 37 kW - at 230 V rated value 22 kW - at 230 V rated value 45 kW - at 230 V rated value 55 kW - at 230 V rated value 55 kW - at 230 V rated value 55 kW - at 690 V rated value 55 kW - at 690 V rated value 75 kW - at 690 V rated value 75 kW - at 690 V rated value 75 kW - at 690 V rated value 22 kW - at 690 V rated value 22 kW - at 690 V rated value 22 kW - at 690 V rated value 33 kVA - up to 230 V for current peak value n=20 rated value 33 kVA - up to 230 V for current peak value n=20 rated value 68 kVA - up to 690 V for current peak value n=20 rated value 69 kVA - up to 690 V for current peak value n=20 rated value 69 kVA - up to 690 V for current peak value n=20 rated value 69 kVA	operating power	
- at 230 V rated value22 kW- at 400 V rated value45 kW- at 500 V rated value55 kW- at 690 V rated value75 kW- at 1000 V rated value75 kW- at 1000 V rated value75 kW- at 230 V rated value22 kW- at 230 V rated value45 kW- at 400 V rated value55 kW- at 400 V rated value55 kW- at 400 V rated value55 kW- at 500 V rated value55 kW- at 690 V rated value75 kW- at 690 V rated value75 kW- at 1000 V rated value75 kW- at 1000 V rated value75 kW- at 1000 V rated value72 kWoperating power for approx. 20000 operating cycles at AC-422 kW• at 400 V rated value22 kW• at 400 V rated value73 kWoperating power at AC-6a22 kW• up to 230 V for current peak value n=20 rated value33 kVA• up to 500 V for current peak value n=20 rated value58 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=30 rated value69 kVA• up to 230 V for current peak value n=30 rated value60 kVA• up to 230 V for current peak value n=30 rated value62 kVA• up to 230 V for current peak value n=30 rated value62 kVA• up to 230 V for current peak value n=30 rated value62 kVA<	 at AC-2 at 400 V rated value 	45 kW
- at 400 V rated value45 kW- at 500 V rated value55 kW- at 690 V rated value75 kW- at 1000 V rated value37 kW- at 230 V rated value22 kW- at 230 V rated value45 kW- at 400 V rated value55 kW- at 400 V rated value55 kW- at 690 V rated value55 kW- at 690 V rated value75 kW- at 690 V rated value75 kW- at 1000 V rated value75 kW- at 690 V rated value72 kW• at 400 V rated value22 kW• at 400 V rated value31 kVA• at 400 V rated value33 kVA• at 400 V rated value n=20 rated value33 kVA• up to 230 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value58 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=30 rated value62 kWA• up to 230 V for current peak value n=30 rated value62 kVA• up to 230 V for current peak value n=30 rated value62 kVA• up to 230 V for current peak value n=30 rated value62 kVA• up to 230 V for current peak value n=30 rated value	• at AC-3	
- at 500 V rated value 55 kW - at 690 V rated value 75 kW - at 1000 V rated value 37 kW - at 230 V rated value 22 kW - at 230 V rated value 22 kW - at 400 V rated value 45 kW - at 500 V rated value 55 kW - at 690 V rated value 55 kW - at 690 V rated value 55 kW - at 690 V rated value 57 kW - at 1000 V rated value 37 kW - at 1000 V rated value 22 kW - at 000 V rated value 22 kW - at 690 V rated value 22 kW • at 600 V rated value 22 kW • at 600 V rated value 22 kW • at 600 V rated value 23 kVA • at 600 V for current peak value n=20 rated value 33 kVA • up to 230 V for current peak value n=20 rated value 58 kVA • up to 690 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=30 rated value 52 kVA • up to 230 V for current pe	— at 230 V rated value	22 kW
- at 890 V rated value75 kW- at 1000 V rated value37 kW• at AC-3e at 230 V rated value22 kW- at 400 V rated value45 kW- at 600 V rated value55 kW- at 690 V rated value75 kW- at 690 V rated value75 kW- at 1000 V rated value22 kW- at 1000 V rated value22 kW- at 1000 V rated value22 kW• at 690 V rated value22 kW• at 690 V rated value22 kW• at 690 V rated value33 kVA• at 690 V for current peak value n=20 rated value58 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value22 kW• up to 690 V for current peak value n=20 rated value58 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=30 rated value22 k kVA	— at 400 V rated value	45 kW
- at 1000 V rated value37 kW- at 230 V rated value22 kW- at 230 V rated value22 kW- at 400 V rated value45 kW- at 500 V rated value55 kW- at 690 V rated value37 kWoperating power for approx. 20000 operating cycles at AC- 437 kW• at 400 V rated value22 kW• at 400 V rated value22 kW• at 400 V rated value22 kW• at 690 V rated value27.4 kWoperating apparent power at AC-6a58 kVA• up to 230 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 690 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value58 kVA• up to 690 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 690 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=30 rated value52 kVA• up to 500 V for current peak value n=30 rated value52 kVA• up to 500 V for current peak value n=30 rated value52 kVA	— at 500 V rated value	55 kW
• at AC-3eC- at 230 V rated value22 kW- at 400 V rated value45 kW- at 500 V rated value55 kW- at 600 V rated value75 kW- at 600 V rated value75 kW- at 600 V rated value22 kW- at 400 V rated value22 kW- at 600 V rated value27.4 kW- operating apparent power at AC-6a58 kVA- up to 230 V for current peak value n=20 rated value58 kVA- operating apparent power at AC-6a58 kVA- up to 500 V for current peak value n=20 rated value69 kVA- operating apparent power at AC-6a58 kVA- up to 500 V for current peak value n=20 rated value69 kVA- operating apparent power at AC-6a58 kVA- up to 500 V for current peak value n=20 rated value69 kVA- operating apparent power at AC-6a58 kVA- up to 500 V for current peak value n=20 rated value59 kVA- operating apparent power at AC-6a58 kVA- operating apparent power at AC-6a	— at 690 V rated value	75 kW
- at 230 V rated value22 kW- at 400 V rated value45 kW- at 500 V rated value55 kW- at 690 V rated value75 kW- at 1000 V rated value37 kWoperating power for approx. 20000 operating cycles at AC-422 kW422 kW- at 400 V rated value22 kW- at 400 V rated value22 kW- at 690 V rated value22 kW- at 690 V rated value33 kVA- operating apparent power at AC-6a58 kVA- up to 230 V for current peak value n=20 rated value58 kVA- up to 500 V for current peak value n=20 rated value69 kVA- up to 500 V for current peak value n=30 rated value22 kW- up to 230 V for current peak value n=20 rated value73 kVA- up to 500 V for current peak value n=20 rated value69 kVA- up to 230 V for current peak value n=30 rated value22 kWA	— at 1000 V rated value	37 kW
- at 400 V rated value45 kW- at 500 V rated value55 kW- at 600 V rated value75 kW- at 1000 V rated value37 kWoperating power for approx. 200000 operating cycles at AC-422 kW- at 400 V rated value22 kW- at 600 V rated value27.4 kWoperating apparent power at AC-6a33 kVA- up to 230 V for current peak value n=20 rated value33 kVA- up to 500 V for current peak value n=20 rated value58 kVA- up to 690 V for current peak value n=20 rated value69 kVA- up to 500 V for current peak value n=20 rated value22 kW- up to 500 V for current peak value n=20 rated value28 kVA- up to 500 V for current peak value n=20 rated value58 kVA- up to 500 V for current peak value n=20 rated value69 kVA- up to 500 V for current peak value n=20 rated value22 kW- up to 500 V for current peak value n=20 rated value22 kW- up to 500 V for current peak value n=20 rated value22 kW- up to 500 V for current peak value n=20 rated value22 kW- up to 500 V for current peak value n=20 rated value22 kW- up to 500 V for current peak value n=30 rated value22 kW	• at AC-3e	
- at 500 V rated value55 kW- at 690 V rated value75 kW- at 1000 V rated value37 kWoperating power for approx. 200000 operating cycles at AC-422 kW• at 400 V rated value22 kW• at 690 V rated value27.4 kW• operating apparent power at AC-6a33 kVA• up to 230 V for current peak value n=20 rated value33 kVA• up to 500 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value69 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 500 V for current peak value n=20 rated value52 kVA• up to 230 V for current peak value n=30 rated value52 kVA	— at 230 V rated value	22 kW
- at 690 V rated value75 kW- at 1000 V rated value37 kWoperating power for approx. 200000 operating cycles at AC-422 kW• at 400 V rated value22 kW• at 690 V rated value27.4 kW• at 690 V rated value33 kVA• up to 230 V for current peak value n=20 rated value33 kVA• up to 500 V for current peak value n=20 rated value58 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value58 kVA• up to 690 V for current peak value n=20 rated value58 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA	— at 400 V rated value	45 kW
at 1000 V rated value37 kWoperating power for approx. 200000 operating cycles at AC-4	— at 500 V rated value	55 kW
operating power for approx. 200000 operating cycles at AC- 4C• at 400 V rated value22 kW• at 690 V rated value27.4 kWoperating apparent power at AC-6a-• up to 230 V for current peak value n=20 rated value33 kVA• up to 400 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value69 kVA	— at 690 V rated value	75 kW
4-• at 400 V rated value22 kW• at 690 V rated value27.4 kWoperating apparent power at AC-6a-• up to 230 V for current peak value n=20 rated value33 kVA• up to 400 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 690 V for current peak value n=20 rated value69 kVA• up to 230 V for current peak value n=20 rated value62 kVA	— at 1000 V rated value	37 kW
• at 400 V rated value 22 kW • at 690 V rated value 27.4 kW operating apparent power at AC-6a - • up to 230 V for current peak value n=20 rated value 33 kVA • up to 400 V for current peak value n=20 rated value 58 kVA • up to 500 V for current peak value n=20 rated value 58 kVA • up to 500 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=20 rated value 22 k kVA		
• at 690 V rated value 27.4 kW operating apparent power at AC-6a - • up to 230 V for current peak value n=20 rated value 33 kVA • up to 400 V for current peak value n=20 rated value 58 kVA • up to 500 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=20 rated value 69 kVA • up to 690 V for current peak value n=30 rated value 22.4 kVA		
operating apparent power at AC-6a33 kVA• up to 230 V for current peak value n=20 rated value33 kVA• up to 400 V for current peak value n=20 rated value58 kVA• up to 500 V for current peak value n=20 rated value73 kVA• up to 690 V for current peak value n=20 rated value69 kVAoperating apparent power at AC-6a22.4 kVA		
• up to 230 V for current peak value n=20 rated value 33 kVA • up to 400 V for current peak value n=20 rated value 58 kVA • up to 500 V for current peak value n=20 rated value 73 kVA • up to 690 V for current peak value n=20 rated value 69 kVA operating apparent power at AC-6a 22.4 kVA		27.4 kW
• up to 400 V for current peak value n=20 rated value 58 kVA • up to 500 V for current peak value n=20 rated value 73 kVA • up to 690 V for current peak value n=20 rated value 69 kVA operating apparent power at AC-6a 22.4 kVA • up to 230 V for current peak value n=30 rated value 22.4 kVA		
• up to 500 V for current peak value n=20 rated value 73 kVA • up to 690 V for current peak value n=20 rated value 69 kVA operating apparent power at AC-6a 22.4 kVA		
• up to 690 V for current peak value n=20 rated value 69 kVA operating apparent power at AC-6a 22.4 kVA • up to 230 V for current peak value n=30 rated value 22.4 kVA		58 kVA
operating apparent power at AC-6a 22.4 kVA • up to 230 V for current peak value n=30 rated value 22.4 kVA	 up to 500 V for current peak value n=20 rated value 	73 kVA
• up to 230 V for current peak value n=30 rated value 22.4 kVA	 up to 690 V for current peak value n=20 rated value 	69 kVA
	operating apparent power at AC-6a	
• up to 400 V for current peak value n=30 rated value 39 kVA	 up to 230 V for current peak value n=30 rated value 	22.4 kVA
	• up to 400 V for current peak value n=30 rated value	39 kVA

 up to 500 V for current peak value n=30 rated value 	48.7 kVA
 up to 690 V for current peak value n=30 rated value 	67.3 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	1 725 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	1 297 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	946 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	610 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	486 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	1 000 1/h
• at DC	1 000 1/h
 operating frequency at AC-1 maximum 	900 1/h
• at AC-2 maximum	350 1/h
• at AC-3 maximum	850 1/h
• at AC-3e maximum	850 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value	83 155 V
● at 60 Hz rated value	83 155 V
control supply voltage at DC rated value	83 155 V
operating range factor control supply voltage rated value of magnet coil at DC	
● initial value	0.8
full-scale value	1.1
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.8 1.1
design of the surge suppressor	with varistor
inrush current peak	1.5 A
duration of inrush current peak	50 µs
locked-rotor current mean value	1.1 A
locked-rotor current peak	2.7 A
duration of locked-rotor current	150 ms
holding current mean value	15 mA
apparent pick-up power of magnet coil at AC	
• at 50 Hz	151 VA
• at 60 Hz	151 VA
apparent holding power	
at minimum rated control supply voltage at DC	1.8 VA
at maximum rated control supply voltage at DC	1.8 VA
apparent holding power	
at minimum rated control supply voltage at AC	
— at 50 Hz	3.1 VA
— at 60 Hz	3.1 VA
at maximum rated control supply voltage at AC	
• at maximum rated control supply voltage at AC — at 50 Hz	3.1 VA
— at 50 Hz — at 60 Hz	
	3.1 VA
apparent holding power of magnet coil at AC	2 4 \/A
• at 50 Hz	3.1 VA
• at 60 Hz	3.1 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.95
• at 60 Hz	0.95
closing power of magnet coil at DC	76 W
holding power of magnet coil at DC	1.8 W
closing delay	
• at AC	50 70 ms

• at DC	50 70 ms		
	50 70 III5		
opening delay	20 57 mg		
• at AC	38 57 ms		
• at DC	38 57 ms		
arcing time	10 20 ms Standard A1 - A2		
control version of the switch operating mechanism Auxiliary circuit	Standard AT - A2		
	1		
number of NC contacts for auxiliary contacts instantaneous contact			
number of NO contacts for auxiliary contacts instantaneous contact	1		
operational current at AC-12 maximum	10 A		
operational current at AC-15			
• at 230 V rated value	6 A		
 at 400 V rated value 	3 A		
• at 500 V rated value	2 A		
• at 690 V rated value	1 A		
operational current at DC-12			
• at 24 V rated value	10 A		
• at 48 V rated value	6 A		
• at 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 	1 A		
at 600 V rated value	0.15 A		
operational current at DC-13			
• 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 125 V rated value	0.9 A		
at 220 V rated value	0.3 A		
at 600 V rated value	0.1 A		
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)		
UL/CSA ratings			
full-load current (FLA) for 3-phase AC motor			
 at 480 V rated value 	96 A		
 at 600 V rated value 	77 A		
yielded mechanical performance [hp]			
 for single-phase AC motor 			
— at 110/120 V rated value	10 hp		
— at 230 V rated value	20 hp		
• for 3-phase AC motor			
— at 200/208 V rated value	30 hp		
— at 220/230 V rated value	30 hp		
— at 460/480 V rated value	75 hp		
— at 575/600 V rated value	75 hp		
contact rating of auxiliary contacts according to UL	A600 / P600		
Short-circuit protection			
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA		
design of the fuse link			
 for short-circuit protection of the main circuit 			
 — with type of coordination 1 required 	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80		
— with type of assignment 2 required	kA) gG: 160 A (690 V, 100 kA), aM: 100 A (690 V, 100 kA), BS88: 125 A (415 V, 80		
	κA)		
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)		
Installation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface		
fastening method side-by-side mounting	Yes		

fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	140 mm
width	70 mm
depth	152 mm
required spacing	
with side-by-side mounting	
— forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
 for grounded parts 	
— forwards	20 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
• for live parts	10 mm
- for live parts — forwards	20 mm
— upwards	10 mm
— downwards	10 mm
— at the side	10 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
 for auxiliary and control circuit 	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 	
 finely stranded with core end processing 	2x (2.5 35 mm²), 1x (2.5 50 mm²)
 for AWG cables for main contacts 	2x (10 1/0), 1x (10 2)
connectable conductor cross-section for main contacts	
• solid	2.5 16 mm²
stranded	6 70 mm²
 finely stranded with core end processing 	2.5 50 mm²
connectable conductor cross-section for auxiliary contacts	
 solid or stranded 	0.5 2.5 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	
 for auxiliary contacts 	
— solid or stranded	2x (0.5 2.5 mm²)
— finely stranded with core end processing	2x (0.5 1.5 mm ²)
— finely stranded without core end processing	2x (0.5 2.5 mm ²)
 for AWG cables for auxiliary contacts 	2x (20 16)
AWG number as coded connectable conductor cross section	
for main contacts	10 2
for auxiliary contacts	20 14
Safety related data	
product function	
mirror contact according to IEC 60947-4-1	Yes
 positively driven operation according to IEC 60947-5-1 	No
	Yes
suitable for safety function	Yes
suitability for use safety-related switching OFF	
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	10.1/
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN	100 FIT

31920						
ISO 13849		_				
device type according	uto ISO 13849-1	_	3			
	cording to ISO 13849-2 n	00066371/	Yes			
IEC 61508	ording to 150 15045-2 II	ecessary	103			
	cording to IEC 61508-2		Туре А			
Electrical Safety			Type / C			
	the front according to I	EC 60529	IP20			
	ne front according to IEC		finger-safe, for vertical contact from the front			
Approvals Certificates						
General Product App	roval					
(me	Confirmation	~ ~		ŝ	<u>KC</u>	
(\mathbf{u})		CE	UK	(ŸL)		
CCC		EG-Konf.	CH	Ŭ.		
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proval						
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	RCM			ABS	DNV	
Marine / Shipping				other	Railway	
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Transport Information		Environmental C	on			
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	EFU					
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Further information Information on the page	ekaging					
https://support.industry.	siemens.com/cs/ww/en/vi	<u>ew/109813875</u>				

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=3RT2046-3NF30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2046-3NF30

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-3NF30

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

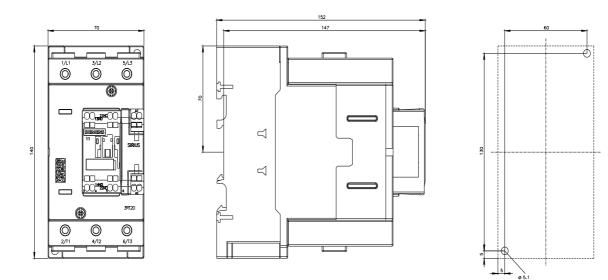
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2046-3NF30&lang=en

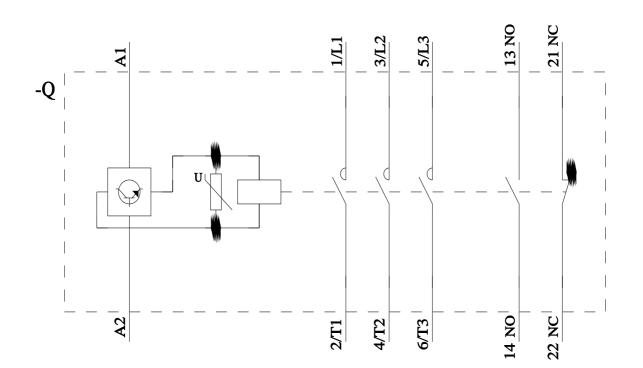
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2046-3NF30/char

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

 http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2046-3NF30&objecttype=14&gridview=view1





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