3RT2018-1AM21-0UA0

## **Data sheet**



contactor, NEMA version, 5 HP, 460 / 575 V, 3-pole, 208 V AC, 50/60 Hz, 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	
<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>	3 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	1 W
<ul> <li>without load current share typical</li> </ul>	5.7 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 AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	30 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	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

3
690 V
690 V
22 A
22 A
20 A
16 A
12.4 A
8.9 A
16 A
12.4 A
8.9 A
11.5 A
19.4 A
13.2 A
9.6 A
9.6 A
9.6 A
8.9 A
6.6 A
6.4 A
6.4 A
6.4 A
4 mm²
5.5 A
4.4 A
7.7 //
20 A
20 A
2.1 A
2.1 A 0.8 A
2.1 A 0.8 A 0.6 A
2.1 A 0.8 A
2.1 A 0.8 A 0.6 A 0.6 A
2.1 A 0.8 A 0.6 A 0.6 A
2.1 A 0.8 A 0.6 A 0.6 A 20 A
2.1 A 0.8 A 0.6 A 0.6 A 20 A 20 A 12 A
2.1 A 0.8 A 0.6 A 0.6 A 20 A 20 A 12 A 1.6 A
2.1 A 0.8 A 0.6 A 0.6 A 20 A 20 A 12 A 1.6 A 0.8 A
2.1 A 0.8 A 0.6 A 0.6 A 20 A 20 A 12 A 1.6 A
2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 12 A 1.6 A 0.8 A 0.7 A
2.1 A 0.8 A 0.6 A 0.6 A 20 A 20 A 12 A 1.6 A 0.8 A 0.7 A
2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 12 A 1.6 A 0.8 A 0.7 A
2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 12 A 1.6 A 0.8 A 0.7 A
2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 12 A 1.6 A 0.8 A 0.7 A  20 A 20 A 20 A 20 A
2.1 A 0.8 A 0.6 A 0.6 A  20 A 20 A 12 A 1.6 A 0.8 A 0.7 A

	— at 24 V rated value	20 A
- with 2 current paths in series at DC-3 at DC-5  - at 22 V rafed value - at 110 V rated value - at 110 V rated value - at 110 V rated value - 20 A - at 24 V rafed value - 20 A - at 24 V rafed value - 20 A - at 24 V rafed value - 20 A - at 24 V rafed value - 20 A - at 25 V rafed value - 20 A - at 20 V rafed value - 20 A - 25 KW - 25 KW - 25 KW - 25 KW - 38 KW - 38 KW - 39 KW - 30 KW - 3	— 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>	
With 3 current paths in series at DC-3 at DC-5	— at 24 V rated value	20 A
- with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value - at 160 V rated value - at 160 V rated value - at 20 A - at 170 V rated value - at 440 V rated value - at 460 V rated value - at 560 V rated value - at 560 V rated value - at 460 V rated value - at 560 V	— 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>	
	•	20 A
operating power  * at AC-2 at 40 OV rated value  * at AC-3 — at 230 V rated value  - at 400 V rated value  - at 400 V rated value  - at 500 V rated value  - at 600 V for current peak value n=20 rated value  - up to 400 V for current peak value n=20 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 500 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak value n=30 rated value  - up to 400 V for current peak va		
at AC-2 at 400 V rated value		
at AC-2 at 400 V rated value     at AC-3     at 230 V rated value     at 230 V rated value     at 500 V rated value     at 690 V rated value     at 230 V rated value     at 690 V rated value     ap to 690 V for current pask value n=20 rated value     up to 400 V for current pask value n=20 rated value     up to 690 V for current pask value n=20 rated value     value 690 V for current pask value n=30 rated value     value 10 500 V for current pask value n=30 rated value     value 10 500 V for current pask value n=30 rated value     value 10 500 V for current pask value n=30 rated value     value 10 690 V for current pask value n=30 rated value     value 10 690 V for current pask value n=30 rated value     value 10 690 V for current pask value n=30 rated value     value 10 690 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value     value 600 V for current pask value n=30 rated value		0.2 A
at AC-3  at 230 V rated value  at 400 V rated value  at 500 V rated value  at 500 V rated value  at 600 V rated value  at 230 V rated value  at 230 V rated value  at 230 V rated value  at 250 V rated value  at 500 V rated value  at 600 V for current peak value n=20 rated value  aup to 500 V for current peak value n=20 rated value  aup to 500 V for current peak value n=30 rated val		7.5 (44)
		7.5 KVV
at 500 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 600 V roc current peak value n-20 rated value at 6.6 kWA at 600 V for current peak value n-20 rated value at 6.6 kWA at 600 V for current peak value n-20 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA at 600 V for current peak value n-30 rated value at 6.6 kWA		
** at AC-3e** - at 230 V rated value		
at AC-3e  at 230 V rated value  at 400 V rated value  at 630 V rated value  7.5 kW  7.5 kW  operating power for approx. 200000 operating cycles at AC-4  at 400 V rated value  2.5 kW  operating apparent power at AC-6  up to 230 V for current peak value n=20 rated value  up to 400 V for current peak value n=20 rated value  up to 500 V for current peak value n=20 rated value  up to 400 V for current peak value n=20 rated value  up to 500 V for current peak value n=20 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  4.4 kVA  up to 690 V for current peak value n=30 rated value  4.5 kVA  up to 500 V for current peak value n=30 rated value  5.5 kVA  up to 690 V for current peak value n=30 rated value  6.6 kVA  4.7 kVA  4.8 kVA  5.8 kVA  3.8 kVA  3.8 kVA  3.8 kVA  4.9 to 500 V for current peak value n=30 rated value  4.9 to 690 V for current peak value n=30 rated value  5.5 kVA  4.9 to 690 V for current peak value n=30 rated value  7.8 kVA  5.8 kVA  6.9 kVA  6.9 kVA  6.9 kVA  6.9 kVA  6.9 kVA  6.6 kVA  6.7 kVA  6.7 kVA  6.7 kVA  6.7 kVA  6.7 kVA  6.8 kVA  6.9	— at 500 V rated value	7.5 kW
- at 230 V rated value	— at 690 V rated value	7.5 kW
	• at AC-3e	
- at 500 V rated value	— at 230 V rated value	4 kW
operating power for approx. 200000 operating cycles at AC-4  • at 400 V rated value • at 690 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 60 s swi	— at 400 V rated value	7.5 kW
operating power for approx. 200000 operating cycles at AC-4  at 400 V rated value at 690 V rated value at 690 V rated value operating apparent power at AC-6a  up to 230 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a up to 690 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value sup to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value sup to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated val	— at 500 V rated value	7.5 kW
at 400 V rated value at 690 V rated value at 690 V rated value poperating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 890 V for current peak value n=20 rated value poperating apparent power at AC-6a up to 200 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value 5.5 kVA  up to 690 V for current peak value n=30 rated value 5.6 kVA  short-time withstand current in cold operating state up to 40 °C  ilimited to 1 s switching at zero current maximum ilimited to 5 s switching at zero current maximum ilimited to 30 s switching at zero current maximum ilimited to 60 s switching at zero current maximum ilimited to 60 s switching at zero current maximum alimited to 60 s switching at zero current maximum foload switching frequency at AC-1 maximum at AC-2 maximum at AC-2 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum  at AC-3 maximum  at AC-3 maximum  at AC-4 maximum  at AC-5 maximum  at AC-4 maximum  at AC-4 maximum  at AC-5 maximum  at AC-5 maximum  at AC-6 max	— at 690 V rated value	7.5 kW
at 400 V rated value at 690 V rated value  by to 230 V for current peak value n=20 rated value  up to 400 V for current peak value n=20 rated value  up to 500 V for current peak value n=20 rated value  up to 500 V for current peak value n=20 rated value  up to 690 V for current peak value n=20 rated value  up to 690 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  vup to 500 V for current peak value n=30 rated value  iup to 500 V for current peak value n=30 rated value  iup to 500 V for current peak value n=30 rated value  ilmited to 1 s switching at zero current maximum  ilmited to 5 s switching at zero current maximum  ilmited to 30 s switching at zero current maximum  ilmited to 50 s switching at zero	operating power for approx. 200000 operating cycles at AC-	
• at 690 V rated value  operating apparent power at AC-6a  • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value  operating apparent power at AC-6a  • up to 230 V for current peak value n=30 rated value  operating apparent power at AC-8a  • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching frequency • at AC  operating frequency • at AC  10 000 1/h • at AC-3 maximum • at AC-4 maximum  250 1/h  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC • at 50 Hz rated value	4	
operating apparent power at AC-5a  • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum  no-load switching frequency • at AC  10 000 1/h  operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-5 maximum • at AC-6 maximum • at AC-7 maximum • at AC-8 maximum • at AC-8 maximum • at AC-9 m	<ul> <li>at 400 V rated value</li> </ul>	2.5 kW
up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 690 V for current peak value n=30 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current maximum up to 690 A; Use minimum cross-section acc. to AC-1 rated value up to 690 A; Use minimum cross-section acc. to AC-1 rated value up to 690 A; Use minimum cross-section acc. to AC-1 rated value up to 690 A; Use minimum cross-section acc. to AC-1 r	at 690 V rated value	3.5 kW
up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value 10.6 kVA  operating apparent power at AC-6a up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum slimited to 60 s switching at zero current maximum At AC-30 maximum  at AC-20 maximum at AC-20 maximum at AC-20 maximum at AC-20 maximum At AC-30 maximum At AC-40 maximum AC-40 maximum AC-40 maximum AC-40 maximum AC-40 maximum AC-40 maxi	operating apparent power at AC-6a	
up to 500 V for current peak value n=20 rated value  up to 690 V for current peak value n=20 rated value  operating apparent power at AC-6a  up to 230 V for current peak value n=30 rated value  up to 400 V for current peak value n=30 rated value  up to 500 V for current peak value n=30 rated value  up to 690 V for current peak value n=30 rated value  up to 690 V for current peak value n=30 rated value  short-time withstand current in cold operating state up to  40 °C  limited to 1 s switching at zero current maximum  limited to 5 s switching at zero current maximum  limited to 10 s switching at zero current maximum  limited to 10 s switching at zero current maximum  limited to 60 s switching at zero current maximum  limited to 60 s switching at zero current maximum  roload switching frequency  at AC  at AC-1 maximum  1 000 1/h  at AC-2 maximum  7 50 1/h  at AC-3 maximum  200 A; Use minimum cross-section acc. to AC-1 rated value  128 A; Use minimum cross-section acc. to AC-1 rated value  129 A; Use minimum cross-section acc. to AC-1 rated value  120 000 1/h  120 000 1/h  AC-3 maximum  AC-3 maximum  AC-3 maximum  AC-3 maximum  AC-4 maximum  AC-3 maximum  AC-4 maximum  AC-4 maximum  AC-5 01/h  AC  control supply voltage at AC  at 50 Hz rated value  208 V	<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	3.8 kVA
up to 690 V for current peak value n=20 rated value  operating apparent power at AC-6a     up to 230 V for current peak value n=30 rated value     up to 400 V for current peak value n=30 rated value     up to 590 V for current peak value n=30 rated value     up to 590 V for current peak value n=30 rated value     up to 690 V for current peak value n=30 rated value     ve up to 690 V for current peak value n=30 rated value     short-time withstand current in cold operating state up to 40 °C     ve limited to 1 s switching at zero current maximum     ve limited to 10 s switching at zero current maximum     ve limited to 10 s switching at zero current maximum     ve limited to 30 s switching at zero current maximum     ve limited to 60 s switching at zero current maximum     ve limited to 60 s switching at zero current maximum     ve limited to 60 s switching at zero current maximum     ve limited to 60 s switching at zero current maximum     ve at AC-     ve at AC-1 maximum     ve at AC-2 maximum     ve at AC-1 maximum     ve at AC-3 maximum     ve at AC-4 maximum     ve at AC-3 maximum     ve at AC-4 maximum     ve at AC-4 maximum     ve at AC-5 maximum     very control circuit/ Control     type of voltage of the control supply voltage     very control supply voltage at AC	<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	6.6 kVA
operating apparent power at AC-6a  • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value  • up to 690 V for current peak value n=30 rated value  **Short-time withstand current in cold operating state up to 40 °C  • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  7 A ; Use minimum cross-section acc. to AC-1 rated value  10 000 1/h  10 000 1/h  • at AC  10 000 1/h  • at AC-2 maximum  1000 1/h  • at AC-3 maximum  1000 1/h  • at AC-3 maximum  250 1/h  • at AC-4 maximum  250 1/h  Control circuit/ Control  type of voltage of the control supply voltage  • at 50 Hz rated value	<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	8.3 kVA
up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C  ilmited to 1 s switching at zero current maximum ilmited to 10 s switching at zero current maximum ilmited to 10 s switching at zero current maximum ilmited to 30 s switching at zero current maximum ilmited to 60 s switch	• up to 690 V for current peak value n=20 rated value	10.6 kVA
up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C  limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum ro-load switching frequency at AC  operating frequency at AC-1 maximum limited to 40 of the control supply voltage AC  control circuit/ Control type of voltage of the control supply voltage at 5.5 kVA  7.6 kVA  4.4 kVA 5.5 kVA  7.6 kVA  4.4 kVA 5.5 kVA  7.6 kVA  4.4 kVA 5.5 kVA  7.6 kVA  4.9 Use minimum cross-section acc. to AC-1 rated value  10 00 A/L ye minimum cross-section acc. to AC-1 rated value  10 000 1/h 10 000 1/h 10 000 1/h 10 000 1/h 11 000 1/h 12 000 1/h 13 000 1/h 14 000 1/h 15 01 1/h 16 01 1/h 17 01 1/h 18 01 1/h 19 01 1/h 19 01 1/h 10 01 1/h 10 01 1/h 10 01 1/h 11 01 01 1/h 12 01 1/h 13 01 01 1/h 14 01 01 01 01 01 01 01 01 01 01 01 01 01	operating apparent power at AC-6a	
• up to 500 V for current peak value n=30 rated value     • up to 690 V for current peak value n=30 rated value     • up to 690 V for current peak value n=30 rated value      **Short-time withstand current in cold operating state up to 40 °C      • limited to 1 s switching at zero current maximum     • limited to 5 s switching at zero current maximum     • limited to 10 s switching at zero current maximum     • limited to 30 s switching at zero current maximum     • limited to 30 s switching at zero current maximum     • limited to 60 s switching at zero current maximum     • limited to 60 s switching at zero current maximum     **O-load switching frequency     • at AC     ** at AC-1 maximum     **at AC-2 maximum     **at AC-3 maximum     **at AC-4 maximu	• up to 230 V for current peak value n=30 rated value	2.5 kVA
• up to 690 V for current peak value n=30 rated value  short-time withstand current in cold operating state up to 40 °C  • limited to 1 s switching at zero current maximum  • limited to 5 s switching at zero current maximum  • limited to 10 s switching at zero current maximum  • limited to 30 s switching at zero current maximum  • limited to 30 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  74 A; Use minimum cross-section acc. to AC-1 rated value  • limited to 60 s switching at zero current maximum  75 A; Use minimum cross-section acc. to AC-1 rated value  • limited to 60 s switching at zero current maximum  76 Operating frequency  • at AC  • at AC-1 maximum  1 000 1/h  • at AC-2 maximum  750 1/h  • at AC-3 maximum  750 1/h  • at AC-4 maximum  750 1/h  • at AC-4 maximum  250 1/h  Control circuit/ Control  type of voltage of the control supply voltage  • at 50 Hz rated value  7.6 kVA  AC-1 rated value  1000 A; Use minimum cross-section acc. to AC-1 rated value  1000 1/h  1000 1/	• up to 400 V for current peak value n=30 rated value	4.4 kVA
short-time withstand current in cold operating state up to 40 °C  • limited to 1 s switching at zero current maximum  • limited to 5 s switching at zero current maximum  • limited to 10 s switching at zero current maximum  • limited to 30 s switching at zero current maximum  • limited to 30 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  • limited to 60 s switching at zero current maximum  74 A; Use minimum cross-section acc. to AC-1 rated value  • limited to 60 s switching at zero current maximum  74 A; Use minimum cross-section acc. to AC-1 rated value  • limited to 60 s switching at zero current maximum  74 A; Use minimum cross-section acc. to AC-1 rated value  10 000 1/h  • at AC-1 rated value  10 000 1/h  • at AC-2 maximum  1000 1/h  • at AC-3 maximum  750 1/h  • at AC-3 maximum  750 1/h  • at AC-4 maximum  750 1/h  • at AC-4 maximum  250 1/h  Control circuit/ Control  type of voltage of the control supply voltage  • at 50 Hz rated value  208 V	<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	5.5 kVA
short-time withstand current in cold operating state up to 40 °C  • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum  74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum  74 A; Use minimum cross-section acc. to AC-1 rated value  10 000 1/h  11 000 1/h  12 00 1/h  13 00 1/h  14 00 1/h  15 00 1/h  16 00 1/h  17 00 1/h  17 00 1/h  18 00 1/h  19 00 1/h  10	• up to 690 V for current peak value n=30 rated value	7.6 kVA
• limited to 1 s switching at zero current maximum     • limited to 5 s switching at zero current maximum     • limited to 5 s switching at zero current maximum     • limited to 10 s switching at zero current maximum     • limited to 30 s switching at zero current maximum     • limited to 30 s switching at zero current maximum     • limited to 60 s switching at zero current maximum     • limited to 60 s switching at zero current maximum     74 A; Use minimum cross-section acc. to AC-1 rated value     75 A; Use minimum cross-section acc. to AC-1 rated value     76 A; Use minimum cross-section acc. to AC-1 rated value     77 A; Use minimum cross-section acc. to AC-1 rated value     78 A; Use minimum cross-section acc. to AC-1 rated value     79 A; Use minimum cross-section acc. to AC-1 rated value     70 Oo0 1/h     70 Oo0 1/h     70 Operating frequency     • at AC-     • at AC-1 maximum     75 O 1/h     • at AC-2 maximum     75 O 1/h     • at AC-3 maximum     75 O 1/h     • at AC-4 maximum     75 O 1/h     • at AC-4 maximum     75 O 1/h     • at AC-4 maximum     75 O 1/h     Control circuit/ Control     type of voltage of the control supply voltage     • at 50 Hz rated value		
<ul> <li>limited to 5 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching frequency</li> <li>at AC</li> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>at AC-5 maximum</li> <li>at AC-6 maximum</li> <li>at AC-7 maximum</li> <li>at AC-8 maximum</li> <li>at AC-9 maximum</li> <l< td=""><td></td><td></td></l<></ul>		
<ul> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>74 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>no-load switching frequency</li> <li>at AC</li> <li>10 000 1/h</li> <li>operating frequency</li> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-4 m</li></ul>	<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	300 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>74 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>no-load switching frequency</li> <li>at AC</li> <li>10 000 1/h</li> <li>operating frequency</li> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>at AC-3 maximum</li> <li>at AC-4 maximum</li> <li></li></ul>	<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	169 A; Use minimum cross-section acc. to AC-1 rated value
ilmitted to 60 s switching at zero current maximum  74 A; Use minimum cross-section acc. to AC-1 rated value  no-load switching frequency     at AC  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  control supply voltage at AC  at 50 Hz rated value  74 A; Use minimum cross-section acc. to AC-1 rated value  10 000 1/h  10 000 1/h  AC  10 000 1/h  AC  10 000 1/h  AC  208 V	<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	128 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency  • at AC  10 000 1/h  operating frequency  • at AC-1 maximum  • at AC-2 maximum  • at AC-3 maximum  • at AC-3 maximum  • at AC-3e maximum  • at AC-4 maximum  • at AC-4 maximum  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  • at 50 Hz rated value  10 000 1/h  750 1/h  750 1/h  AC  Control supply voltage at AC  • at 50 Hz rated value  208 V	<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	92 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>at AC</li> <li>operating frequency</li> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>250 1/h</li> </ul> Control circuit/ Control type of voltage of the control supply voltage <ul> <li>AC</li> <li>control supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>208 V</li> </ul>	• limited to 60 s switching at zero current maximum	74 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>at AC</li> <li>operating frequency</li> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>250 1/h</li> </ul> Control circuit/ Control type of voltage of the control supply voltage <ul> <li>AC</li> <li>control supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>208 V</li> </ul>	no-load switching frequency	
operating frequency  • at AC-1 maximum  • at AC-2 maximum  • at AC-3 maximum  • at AC-3 maximum  • at AC-3 maximum  • at AC-4 maximum  • at AC-4 maximum  Control circuit/ Control  type of voltage of the control supply voltage  control supply voltage at AC  • at 50 Hz rated value  1 000 1/h  750 1/h  750 1/h  AC  Control circuit/ Control  208 V		10 000 1/h
<ul> <li>at AC-1 maximum</li> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>at AC-4 maximum</li> <li>250 1/h</li> </ul> Control circuit/ Control type of voltage of the control supply voltage <ul> <li>AC</li> <li>control supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>208 V</li> </ul>	operating frequency	
<ul> <li>at AC-2 maximum</li> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>250 1/h</li> </ul> Control circuit/ Control type of voltage of the control supply voltage <ul> <li>AC</li> <li>control supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>208 V</li> </ul>		1 000 1/h
<ul> <li>at AC-3 maximum</li> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>250 1/h</li> </ul> Control circuit/ Control type of voltage of the control supply voltage <ul> <li>AC</li> <li>control supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>208 V</li> </ul>	• at AC-2 maximum	750 1/h
<ul> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> <li>250 1/h</li> <li>Control circuit/ Control</li> <li>type of voltage of the control supply voltage</li> <li>control supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>208 V</li> </ul>		
<ul> <li>at AC-4 maximum</li> <li>Control circuit/ Control</li> <li>type of voltage of the control supply voltage</li> <li>Control supply voltage at AC</li> <li>at 50 Hz rated value</li> <li>208 V</li> </ul>		
type of voltage of the control supply voltage  control supply voltage at AC  • at 50 Hz rated value  AC  208 V		
type of voltage of the control supply voltage AC  control supply voltage at AC  • at 50 Hz rated value 208 V		
control supply voltage at AC  ● at 50 Hz rated value 208 V		AC
• at 50 Hz rated value 208 V		AC
		200.1/
at but Hz lated value		
	at 60 Hz rated value	208 V
operating range factor control supply voltage rated value of magnet coil at AC		

● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	37 VA
● at 60 Hz	33 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.8
● at 60 Hz	0.75
apparent holding power of magnet coil at AC	
● at 50 Hz	5.7 VA
● at 60 Hz	4.4 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
● at 60 Hz	0.25
closing delay	
• at AC	9 35 ms
opening delay	
• at AC	4 15 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NO contacts for auxiliary contacts instantaneous	1
contact	
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul> <li>at 230 V rated value</li> </ul>	10 A
<ul> <li>at 400 V rated value</li> </ul>	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
<ul> <li>at 60 V rated value</li> </ul>	6 A
<ul><li>at 110 V rated value</li></ul>	3 A
at 125 V rated value	2 A
<ul> <li>at 220 V rated value</li> </ul>	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	14 A
at 600 V rated value	11 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	1 hp
— at 230 V rated value	2 hp
• for 3-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 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	
<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA)
— with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
nstallation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
side-by-side mounting	Yes
height	58 mm
width	45 mm
depth	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	
of electrical connection     for main current circuit	caray type terminals
for main current circuit     for auxiliary and control circuit	screw-type terminals screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections for main contacts	Colon type terminale
• 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 main contacts     for auxiliary contacts	20 12
= nor auxmany comacts	ZU 1Z
·	
Safety related data	
Safety related data product function	Voc. with 3DH20
product function  • mirror contact according to IEC 60947-4-1	Yes; with 3RH29
Safety related data product function	Yes; with 3RH29 1 000 000

73 %
100 FIT
20 a
IP20
finger-safe, for vertical contact from the front
Yes
Yes

Certificates/ approvals

## **General Product Approval**





Confirmation



**KC** 



**Functional** ЕМС Safety/Safety of Machinery

**Declaration of Conformity** 

**Test Certificates** 



Type Examination Cer**tificate** 





Type Test Certificates/Test Report

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

## Marine / Shipping













Marine / Shipping

other

Railway

Environment



Confirmation



Vibration and Shock

**Environmental Confirmations** 

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

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

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

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

Information on the packaging

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

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

Industry Mall (Online ordering system)

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-1AM21-0UA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AM21-0UA0

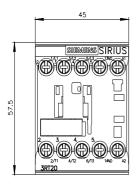
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2018-1AM21-0UA0&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2018-1AM21-0UA0&lang=en</a>

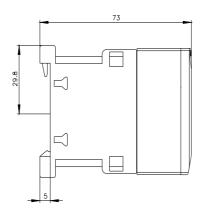
Characteristic: Tripping characteristics, I2t, Let-through current

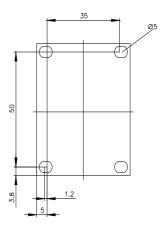
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AM21-0UA0/char

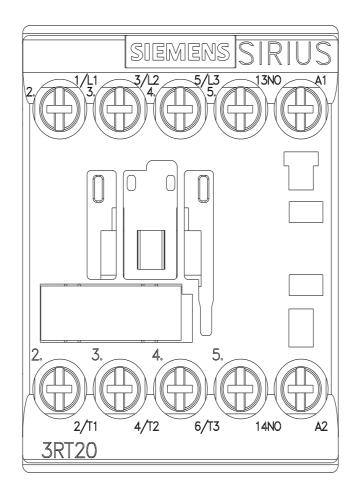
Further characteristics (e.g. electrical endurance, switching frequency)

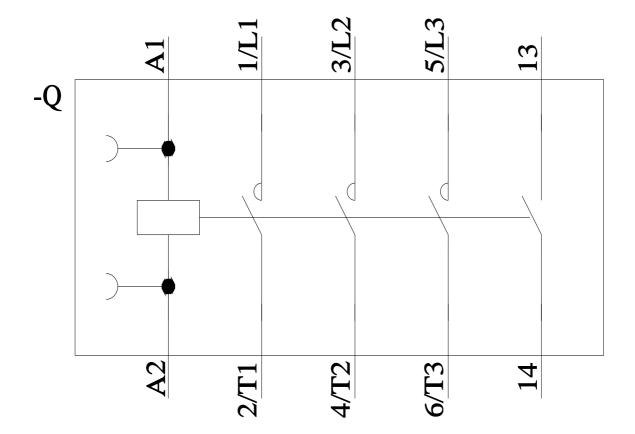
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2018-1AM21-0UA0&objecttype=14&gridview=view1











last modified: 2/10/2023 🖸