



Contactor, AC-3, 55 kW/400 V 1 NO+1 NC, 110 V AC/50 Hz 120 V/60 Hz
3-pole, 3 NO, Size S3 Screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S3
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	23.7 W
• per pole	7.9 W
power loss [W] for rated value of the current without load current share typical	22 W
surge voltage resistance	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
shock resistance with sine pulse	
• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (switching 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.03.2017
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
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
operational current	

<ul style="list-style-type: none"> ● at AC-1 at 400 V at ambient temperature 40 °C rated value 	130 A
<ul style="list-style-type: none"> ● at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value 	130 A
<ul style="list-style-type: none"> — up to 690 V at ambient temperature 60 °C rated value 	110 A
<ul style="list-style-type: none"> — up to 1000 V at ambient temperature 40 °C rated value 	70 A
<ul style="list-style-type: none"> — up to 1000 V at ambient temperature 60 °C rated value 	60 A
<ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	110 A
<ul style="list-style-type: none"> — at 500 V rated value 	110 A
<ul style="list-style-type: none"> — at 690 V rated value 	98 A
<ul style="list-style-type: none"> — at 1000 V rated value 	30 A
<ul style="list-style-type: none"> ● at AC-4 at 400 V rated value 	97 A
<ul style="list-style-type: none"> ● at AC-5a up to 690 V rated value 	120 A
<ul style="list-style-type: none"> ● at AC-5b up to 400 V rated value 	110 A
<ul style="list-style-type: none"> ● at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=20 rated value 	98 A
<ul style="list-style-type: none"> — up to 400 V for current peak value n=20 rated value 	98 A
<ul style="list-style-type: none"> — up to 500 V for current peak value n=20 rated value 	98 A
<ul style="list-style-type: none"> — up to 690 V for current peak value n=20 rated value 	98 A
<ul style="list-style-type: none"> ● at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=30 rated value 	65.3 A
<ul style="list-style-type: none"> — up to 400 V for current peak value n=30 rated value 	65.3 A
<ul style="list-style-type: none"> — up to 500 V for current peak value n=30 rated value 	65.3 A
<ul style="list-style-type: none"> — up to 690 V for current peak value n=30 rated value 	65.3 A
minimum cross-section in main circuit at maximum AC-1 rated value	50 mm ²
operational current for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value 	46 A
<ul style="list-style-type: none"> ● at 690 V rated value 	36 A
operational current	
<ul style="list-style-type: none"> ● at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value 	100 A
<ul style="list-style-type: none"> — at 110 V rated value 	9 A
<ul style="list-style-type: none"> — at 220 V rated value 	2 A
<ul style="list-style-type: none"> — at 440 V rated value 	0.6 A
<ul style="list-style-type: none"> — at 600 V rated value 	0.4 A
<ul style="list-style-type: none"> ● with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value 	100 A
<ul style="list-style-type: none"> — at 110 V rated value 	100 A
<ul style="list-style-type: none"> — at 220 V rated value 	10 A
<ul style="list-style-type: none"> — at 440 V rated value 	1.8 A
<ul style="list-style-type: none"> — at 600 V rated value 	1 A
<ul style="list-style-type: none"> ● with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value 	100 A
<ul style="list-style-type: none"> — at 110 V rated value 	100 A
<ul style="list-style-type: none"> — at 220 V rated value 	80 A
<ul style="list-style-type: none"> — at 440 V rated value 	4.5 A
<ul style="list-style-type: none"> — at 600 V rated value 	2.6 A
operational current	
<ul style="list-style-type: none"> ● at 1 current path at DC-3 at DC-5 	

<ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value ● with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value ● with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value 	40 A 2.5 A 1 A 0.15 A 0.06 A 100 A 100 A 7 A 0.42 A 0.16 A 100 A 100 A 35 A 0.8 A 0.35 A
operating power	
<ul style="list-style-type: none"> ● at AC-2 at 400 V rated value ● at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 1000 V rated value 	55 kW 30 kW 55 kW 75 kW 90 kW 37 kW
operating power for approx. 200000 operating cycles at AC-4	
<ul style="list-style-type: none"> ● at 400 V rated value ● at 690 V rated value 	24.3 kW 32.9 kW
operating apparent power at AC-6a	
<ul style="list-style-type: none"> ● 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 	39 kV·A 67 kV·A 84 kV·A 117 kV·A
operating apparent power at AC-6a	
<ul style="list-style-type: none"> ● 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 	26 kV·A 45.2 kV·A 56.5 kV·A 78 kV·A
short-time withstand current in cold operating state up to 40 °C	
<ul style="list-style-type: none"> ● 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 60 s switching at zero current maximum 	1 960 A; Use minimum cross-section acc. to AC-1 rated value 1 502 A; Use minimum cross-section acc. to AC-1 rated value 1 095 A; Use minimum cross-section acc. to AC-1 rated value 707 A; Use minimum cross-section acc. to AC-1 rated value 562 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
<ul style="list-style-type: none"> ● at AC 	5 000 1/h
operating frequency	
<ul style="list-style-type: none"> ● at AC-1 maximum ● at AC-2 maximum ● at AC-3 maximum ● at AC-4 maximum 	900 1/h 350 1/h 850 1/h 200 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
<ul style="list-style-type: none"> ● at 50 Hz rated value ● at 60 Hz rated value 	110 V 120 V
operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> ● at 50 Hz 	0.8 ... 1.1