



Power contactor, AC-3 25 A, 11 kW / 400 V 2 NO + 2 NC, 230 V AC, 50 / 60 Hz, 3-pole, Size S0, Screw terminal Captive auxiliary switch

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2

General technical data

size of contactor	S0
product extension	
• function module for communication	No
• auxiliary switch	No
power loss [W] for rated value of the current	
• at AC in hot operating state	5.7 W
• at AC in hot operating state per pole	1.9 W
• without load current share typical	10.5 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 safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	8,3g / 5 ms, 5,3g / 10 ms
shock resistance with sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 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 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 value	40 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	40 A
— up to 690 V at ambient temperature 60 °C rated value	35 A
• at AC-3	
— at 400 V rated value	25 A
— at 500 V rated value	18 A
— at 690 V rated value	13 A
• at AC-3e	
— at 400 V rated value	25 A
— at 500 V rated value	18 A
— at 690 V rated value	13 A
• at AC-4 at 400 V rated value	15.5 A
• at AC-5a up to 690 V rated value	35.2 A
• at AC-5b up to 400 V rated value	20.7 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	20.2 A
— up to 400 V for current peak value n=20 rated value	20.2 A
— up to 500 V for current peak value n=20 rated value	20.2 A
— up to 690 V for current peak value n=20 rated value	12.9 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	13.5 A
— up to 400 V for current peak value n=30 rated value	13.5 A
— up to 500 V for current peak value n=30 rated value	13.5 A
— up to 690 V for current peak value n=30 rated value	13 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm ²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	9 A
• at 690 V rated value	9 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A

— at 600 V rated value • at 1 current path at DC-3 at DC-5 — at 24 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 — 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 — 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	1.4 A 20 A 1 A 0.09 A 0.06 A 35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A
operating power	
• at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value • at AC-3e — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value	5.5 kW 11 kW 11 kW 11 kW 5.5 kW 11 kW 11 kW 11 kW
operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value • at 690 V rated value	4.4 kW 7.7 kW
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	8 kVA 13.9 kVA 17.4 kVA 15.4 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	5.3 kVA 9.3 kVA 11.6 kVA 15.5 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 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum	375 A; Use minimum cross-section acc. to AC-1 rated value 300 A; Use minimum cross-section acc. to AC-1 rated value 210 A; Use minimum cross-section acc. to AC-1 rated value 144 A; Use minimum cross-section acc. to AC-1 rated value 118 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h
operating frequency	
• at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3e maximum • at AC-4 maximum	1 000 1/h 750 1/h 750 1/h 750 1/h 250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz rated value • at 60 Hz rated value	230 V 230 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	81 VA
• at 60 Hz	79 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	
• at 50 Hz	10.5 VA
• at 60 Hz	8.5 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
• at 60 Hz	0.28
closing delay	
• at AC	8 ... 40 ms
opening delay	
• at AC	4 ... 16 ms
arcing time	10 ... 10 ms
control version of the switch operating mechanism	Standard A1 - A2

Auxiliary circuit

number of NC contacts for auxiliary contacts instantaneous contact	2
number of NO contacts for auxiliary contacts instantaneous contact	2
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	6 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	21 A
• at 600 V rated value	22 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	2 hp
— at 230 V rated value	3 hp
• for 3-phase AC motor	
— at 200/208 V rated value	5 hp
— at 220/230 V rated value	7.5 hp
— at 460/480 V rated value	15 hp
— at 575/600 V rated value	20 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 - with type of assignment 2 required - for short-circuit protection of the auxiliary switch required	gG: 100 A (690 V, 100 kA), aM: 50 A (690 V, 100 kA), BS88: 100 A (415 V, 80 kA) gG: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A (415V, 80kA) gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position fastening method - side-by-side mounting height width depth required spacing - with side-by-side mounting - forwards - upwards - downwards - at the side - for grounded parts - forwards - upwards - at the side - downwards - for live parts - forwards - upwards - downwards - at the side	+/-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 Yes 85 mm 45 mm 141 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm 6 mm
Connections/ Terminals	
type of electrical connection - for main current circuit - for auxiliary and control circuit - at contactor for auxiliary contacts - of magnet coil type of connectable conductor cross-sections - for main contacts - solid - solid or stranded - finely stranded with core end processing - at AWG cables for main contacts connectable conductor cross-section for main contacts - solid - stranded - finely stranded with core end processing connectable conductor cross-section for auxiliary contacts - solid or stranded - finely stranded with core end processing type of connectable conductor cross-sections - for auxiliary contacts - solid or stranded - finely stranded with core end processing - at AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section - for main contacts - for auxiliary contacts	screw-type terminals screw-type terminals Screw-type terminals Screw-type terminals 2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (16 ... 12), 2x (14 ... 8) 1 ... 10 mm ² 1 ... 10 mm ² 1 ... 10 mm ² 0.5 ... 2.5 mm ² 0.5 ... 2.5 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14) 16 ... 8 20 ... 14

Safety related data

product function

- mirror contact according to IEC 60947-4-1
- positively driven operation according to IEC 60947-5-1

B10 value with high demand rate according to SN 31920

proportion of dangerous failures

- with low demand rate according to SN 31920
- with high demand rate according to SN 31920

failure rate [FIT] with low demand rate according to SN 31920

T1 value for proof test interval or service life according to IEC 61508

protection class IP on the front according to IEC 60529

touch protection on the front according to IEC 60529

suitability for use

- safety-related switching OFF

Yes
No
450 000
40 %
73 %
100 FIT
20 y
IP20
finger-safe, for vertical contact from the front
Yes

Certificates/ approvals

General Product Approval



[Confirmation](#)



[KC](#)



EMC	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Examination Certificate](#)



EG-Konf.



[Type Test Certificates/Test Report](#)



ABS

Marine / Shipping	other
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LRS



RINA



RMRS

[Confirmation](#)

other	Railway
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[Confirmation](#)

[Vibration and Shock](#)

Further information

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=3RT2026-1AL24-3MA0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2026-1AL24-3MA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1AL24-3MA0>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2026-1AL24-3MA0&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1AL24-3MA0/char>

Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2026-1AL24-3MA0&objecttype=14&gridview=view1>





