

Power contactor, AC-3 40 A, 18.5 kW / 400 V 2 NO + 2 NC 230 V
AC, 50 Hz 4-pole size S2 screw terminals 1 NO + 1 NC integrated



Product brand name	SIRIUS
Product designation	contactor
Product type designation	3RT25
General technical data	
Size of contactor	S2
Product extension	
• function module for communication	No
• Auxiliary switch	Yes
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 acc. to EN 60947-1	400 V

Protection class IP	
• on the front	IP20
• of the terminal	IP00
Shock resistance at rectangular impulse	
• at AC	11.8g / 5 ms, 7.4g / 10 ms
Shock resistance with sine pulse	
• at AC	18.5g / 5 ms, 11.6g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	10 000 000
• of the contactor with added electronics-compatible auxiliary switch block typical	5 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Reference code acc. to DIN EN 81346-2	Q

Ambient conditions

Installation altitude at height above sea level	
• maximum	2 000 m
Ambient temperature	
• during operation	-40 ... +70 °C
• during storage	-55 ... +80 °C

Main circuit

Number of poles for main current circuit	4
Number of NO contacts for main contacts	2
Number of NC contacts for main contacts	2
Operating current	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	60 A
— up to 690 V at ambient temperature 60 °C rated value	55 A
• at AC-2 at AC-3 at 400 V	
— per NO contact rated value	35 A
— per NC contact rated value	35 A
Minimum cross-section in main circuit	
• at maximum AC-1 rated value	16 mm²
Operating current	
• at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
• with 2 current paths in series at DC-1	

— at 24 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
Operating current	
• at 1 current path at DC-3 at DC-5	
— at 24 V per NC contact rated value	35 A
— at 24 V per NO contact rated value	35 A
— at 110 V per NC contact rated value	1.25 A
— at 110 V per NO contact rated value	2.5 A
— at 220 V per NC contact rated value	0.5 A
— at 220 V per NO contact rated value	1 A
— at 440 V per NC contact rated value	0.045 A
— at 440 V per NO contact rated value	0.1 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V per NC contact rated value	55 A
— at 24 V per NO contact rated value	55 A
— at 110 V per NC contact rated value	12.5 A
— at 110 V per NO contact rated value	25 A
— at 220 V per NC contact rated value	2.5 A
— at 220 V per NO contact rated value	5 A
— at 440 V per NC contact rated value	0.135 A
— at 440 V per NO contact rated value	0.27 A
Operating power	
• at AC-1	
— at 230 V rated value	23 kW
— at 400 V rated value	39 kW
• at AC-2 at AC-3	
— at 230 V per NC contact rated value	11 kW
— at 230 V per NO contact rated value	11 kW
— at 400 V per NC contact rated value	18.5 kW
— at 400 V per NO contact rated value	18.5 kW
Short-time withstand current in cold operating state up to 40 °C	
• limited to 1 s switching at zero current maximum	546 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 5 s switching at zero current maximum	443 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 10 s switching at zero current maximum	334 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 30 s switching at zero current maximum	241 A; Use minimum cross-section acc. to AC-1 rated value

• limited to 60 s switching at zero current maximum	196 A; Use minimum cross-section acc. to AC-1 rated value
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	4 W
No-load switching frequency • at AC	5 000 1/h
Operating frequency • at AC-1 maximum	1 200 1/h

Control circuit/ Control

Type of voltage of the control supply voltage	AC
Control supply voltage at AC • at 50 Hz rated value	230 V
Operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz	0.8 ... 1.1
Apparent pick-up power of magnet coil at AC • at 50 Hz	190 V·A 190 V·A
Inductive power factor with closing power of the coil • at 50 Hz	0.72 0.72
Apparent holding power of magnet coil at AC • at 50 Hz	16 V·A 16 V·A
Inductive power factor with the holding power of the coil • at 50 Hz	0.37 0.37
Closing delay • at AC	12 ... 22 ms
Opening delay • at AC	10 ... 18 ms
Arcing time	10 ... 20 ms
Control version of the switch operating mechanism	AC

Auxiliary circuit

Number of NC contacts for auxiliary contacts • instantaneous contact	1
Number of NO contacts for auxiliary contacts • instantaneous contact	1
Operating current at AC-12 maximum	10 A
Operating current at AC-15 • at 230 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value	6 A 3 A 2 A 1 A
Operating current at DC-12	

• at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
Operating current at DC-13	
• at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
Contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / P600
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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: 125 A (690 V, 100 kA) gG: 63A (690V, 100kA) fuse gG: 10 A

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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
• Side-by-side mounting	Yes
Height	114 mm
Width	75 mm
Depth	130 mm
Required spacing	
• with side-by-side mounting — forwards — Backwards — upwards — downwards	0 mm 0 mm 0 mm 0 mm

— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— at the side	10 mm
— downwards	50 mm
• for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	10 mm

Connections/ Terminals

Type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²)
— single or multi-stranded	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²)
— finely stranded with core end processing	2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²)
• at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
AWG number as coded connectable conductor cross section for main contacts	18 ... 1

Safety related data

Product function	
• Mirror contact acc. to IEC 60947-4-1	Yes
• positively driven operation acc. to IEC 60947-5-1	No
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529

Certificates/ approvals

General Product Approval	EMC	Functional Safety/Safety of Machinery
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CCC



CSA



UL



RCM

[Type Examination Certificate](#)

Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS

Marine / Shipping	other
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LRS



PRS



RINA



DNVGL.COM/AF

[Confirmation](#)

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=3RT2535-1AP00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2535-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AP00>

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

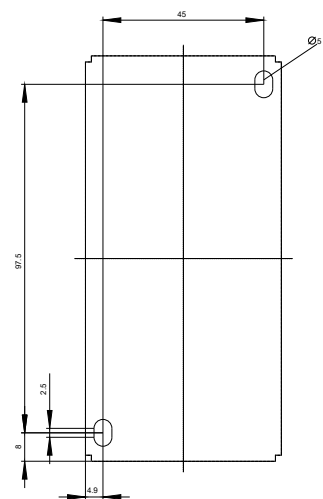
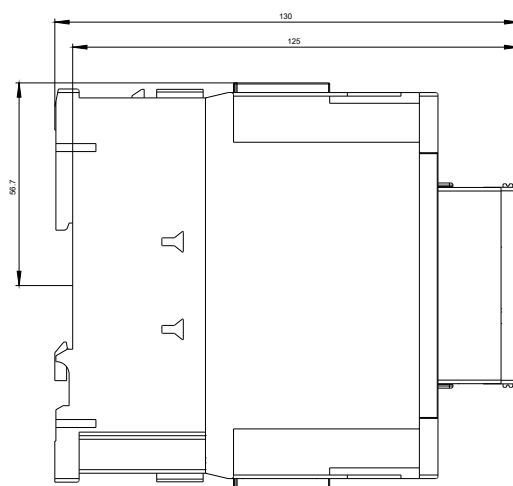
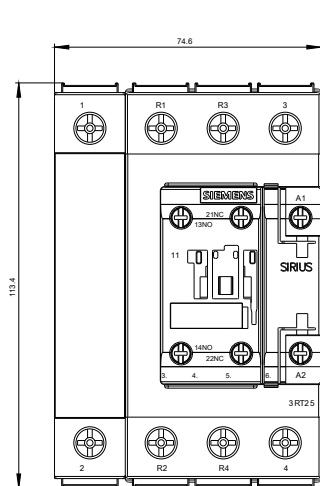
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2535-1AP00&lang=en

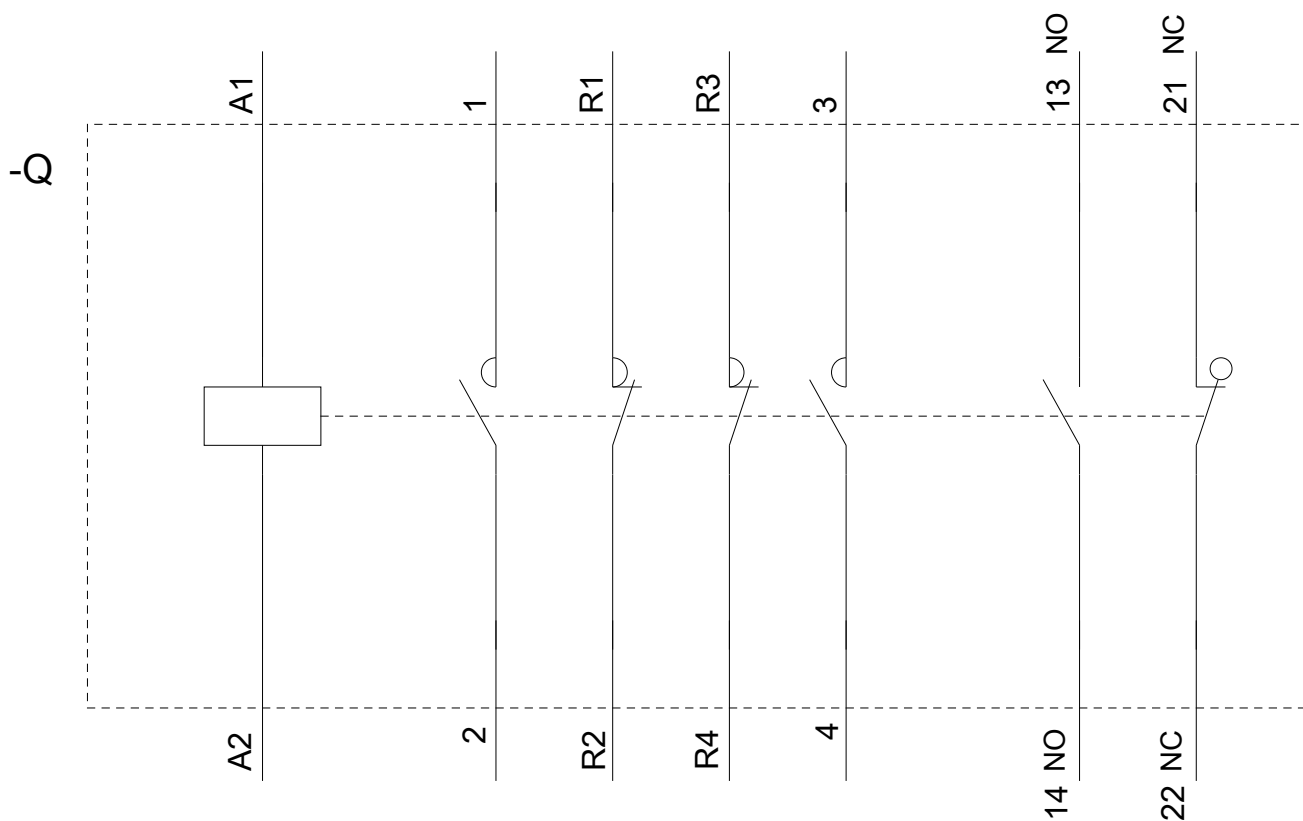
Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2535-1AP00&objecttype=14&gridview=view1>





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