



power contactor, AC-3, 35 A, 18.5 kW / 400 V, 4-pole, 42 V AC, 50 Hz, main contacts: 2 NO + 2 NC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

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
power loss [W] for rated value of the current	
• at AC in hot operating state per pole	2.2 W
• without load current share typical	6.5 W
type of calculation of power loss depending on pole	quadratic
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 protective separation between coil and main contacts according to EN 60947-1	400 V
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 (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)	10/01/2014
Weight	1.143 kg
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
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	4
number of NO contacts for main contacts	2
number of NC contacts for main contacts	2
operational current	
<ul style="list-style-type: none"> ● at AC-1 up to 690 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value — at ambient temperature 60 °C rated value ● at AC-2 at AC-3 at 400 V <ul style="list-style-type: none"> — per NO contact rated value — per NC contact rated value 	60 A 55 A 35 A 35 A
minimum cross-section in main circuit at maximum AC-1 rated value	16 mm ²
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 — at 110 V rated value — at 220 V rated value — at 440 V rated value ● with 2 current paths in series at DC-1 <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 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V per NC contact rated value — at 24 V per NO contact rated value — at 110 V per NC contact rated value — at 110 V per NO contact rated value — at 220 V per NC contact rated value — at 220 V per NO contact rated value — at 440 V per NC contact rated value — at 440 V per NO contact rated value ● with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V per NC contact rated value — at 24 V per NO contact rated value — at 110 V per NC contact rated value — at 110 V per NO contact rated value — at 220 V per NC contact rated value — at 220 V per NO contact rated value — at 440 V per NC contact rated value — at 440 V per NO contact rated value 	55 A 4.5 A 1 A 0.4 A 55 A 45 A 5 A 1 A 35 A 35 A 1.25 A 2.5 A 0.5 A 1 A 0.045 A 0.1 A 55 A 55 A 12.5 A 25 A 2.5 A 5 A 0.135 A 0.27 A
operating power at AC-2 at AC-3	
<ul style="list-style-type: none"> ● at 230 V per NC contact rated value ● at 230 V per NO contact rated value ● at 400 V per NC contact rated value ● at 400 V per NO contact rated value 	11 kW 11 kW 18.5 kW 18.5 kW
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 	546 A; Use minimum cross-section acc. to AC-1 rated value 443 A; Use minimum cross-section acc. to AC-1 rated value 334 A; Use minimum cross-section acc. to AC-1 rated value 241 A; Use minimum cross-section acc. to AC-1 rated value 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 operational current per conductor	2.2 W
power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor	2.2 W
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 	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	42 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	190 VA
• at 50 Hz	190 VA
inductive power factor with closing power of the coil	0.72
• at 50 Hz	0.72
apparent holding power of magnet coil at AC	16 VA
• at 50 Hz	16 VA
inductive power factor with the holding power of the coil	0.37
• at 50 Hz	0.37
closing delay	
• at AC	10 ... 80 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
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	
yielded mechanical performance [hp]	
• for 3-phase AC motor at 460/480 V rated value	20 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: 125 A (690 V, 100 kA)
— with type of coordination 2 required	gG: 63 A (690 V, 100 kA)
• for short-circuit protection of the auxiliary switch required	gG: 10 A (690 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 50022
height	114 mm
width	75 mm
depth	130 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 0 mm — downwards 0 mm — at the side 0 mm • for grounded parts <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 50 mm — at the side 10 mm — downwards 50 mm • for live parts <ul style="list-style-type: none"> — forwards 0 mm — backwards 0 mm — upwards 50 mm — downwards 50 mm — at the side 10 mm 	

Connections/ Terminals

type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil 	<p>screw-type terminals</p> <p>screw-type terminals</p> <p>Screw-type terminals</p> <p>Screw-type terminals</p>
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid 2x (1 ... 35 mm²), 1x (1 ... 50 mm²) — solid or stranded 2x (1 ... 35 mm²), 1x (1 ... 50 mm²) — finely stranded with core end processing 2x (1 ... 25 mm²), 1x (1 ... 35 mm²) • for AWG cables for main contacts 2x (18 ... 2), 1x (18 ... 1) 	
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) — solid or stranded 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 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) 	
AWG number as coded connectable conductor cross section for main contacts	18 ... 1
AWG number as coded connectable conductor cross section for auxiliary contacts	20 ... 14

Safety related data

product function	
<ul style="list-style-type: none"> • mirror contact according to IEC 60947-4-1 • positively driven operation according to IEC 60947-5-1 	<p>Yes</p> <p>No</p>

Electrical Safety

protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front









Approvals Certificates

General Product Approval



KC



EMV	Test Certificates		Maritime application		
 RCM	Type Test Certificates/Test Report	Special Test Certificate	 ABS	 BUREAU VERITAS	 DNV
Maritime application		other		Railway	
 LRS	 PRS	 RMRS	 产品合格 QC PASS	Confirmation	Special Test Certificate
Dangerous goods	Environment				
Transport Information	Environmental Confirmations				

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RT2535-1AD00>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2535-1AD00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AD00>

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

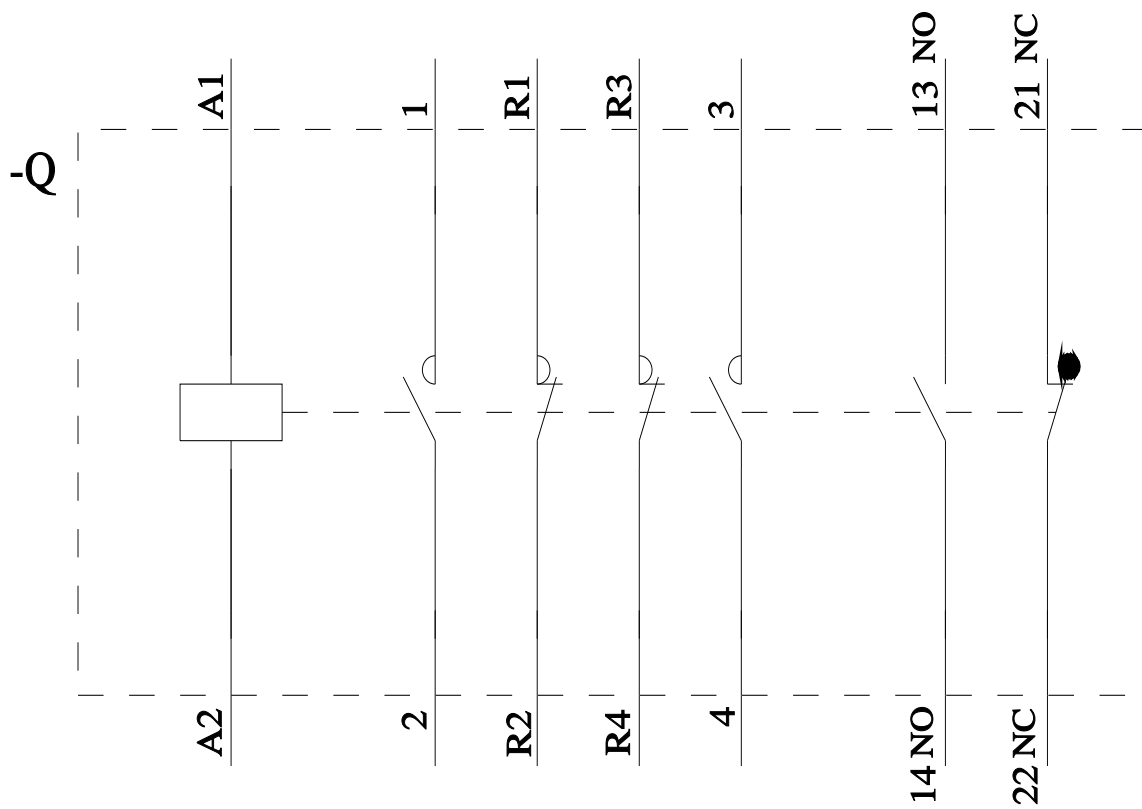
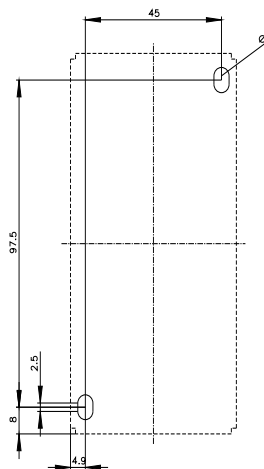
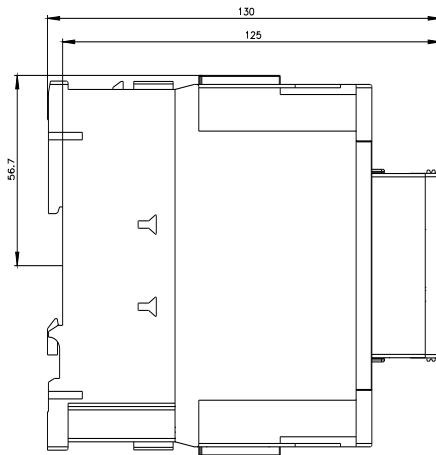
https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2535-1AD00&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2535-1AD00/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2535-1AD00&objecttype=14&gridview=view1>



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