



power contactor, AC-3, 16 A, 7.5 kW / 400 V, 4-pole, 230 V AC, 50/60 Hz, main contacts: 2 NO + 2 NC, screw terminal, size: S00

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
General technical data	
size of contactor	S00
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	1 W
• without load current share typical	1.5 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	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)	
• of contactor typical	30 000 000
• 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 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes

Global Warming Potential [CO2 eq] total	39.6 kg
Global Warming Potential [CO2 eq] during manufacturing	1.18 kg
Global Warming Potential [CO2 eq] during operation	38.5 kg
Global Warming Potential [CO2 eq] after end of life	-0.155 kg
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 	22 A 20 A 16 A 9 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 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 ● 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 	20 A 2.1 A 0.8 A 0.6 A 20 A 12 A 1.6 A 0.8 A 20 A 20 A 0.075 A 0.15 A 0.375 A 0.75 A 20 A 20 A 0.175 A 0.35 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 	2.2 kW 4 kW 4 kW 7.5 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 	165 A; Use minimum cross-section acc. to AC-1 rated value 165 A; Use minimum cross-section acc. to AC-1 rated value 128 A; Use minimum cross-section acc. to AC-1 rated value 92 A; Use minimum cross-section acc. to AC-1 rated value 74 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	1 W
power loss [W] at AC-3e at 400 V for rated value of the operational current per conductor	1 W
no-load switching frequency	
<ul style="list-style-type: none"> ● at AC ● at DC 	10 000 1/h 10 000 1/h
operating frequency	
<ul style="list-style-type: none"> ● at AC-1 maximum 	1 000 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
• at 60 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
• at 60 Hz	0.85 ... 1.1
apparent pick-up power of magnet coil at AC	37 VA
• at 50 Hz	37 VA
• at 60 Hz	33 VA
inductive power factor with closing power of the coil	0.8
• at 50 Hz	0.8
• at 60 Hz	0.75
apparent holding power of magnet coil at AC	5.7 VA
• at 50 Hz	5.7 VA
• at 60 Hz	4.4 VA
inductive power factor with the holding power of the coil	0.25
• 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
residual current of the electronics for control with signal <0>	
• at AC at 230 V maximum permissible	0.004 A
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	0
number of NO contacts for auxiliary contacts instantaneous contact	0
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
operational current at DC-12	
• 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 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 single-phase AC motor at 230 V rated value	2 hp
• for 3-phase AC motor at 460/480 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	
— with type of coordination 1 required	gG: 35 A (690 V, 100 kA)
— with type of assignment 2 required	gG: 20A (690V, 100kA)

<ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 	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
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 50022
height	57.5 mm
width	45 mm
depth	73 mm
required spacing	
<ul style="list-style-type: none"> with side-by-side mounting <ul style="list-style-type: none"> forwards backwards upwards downwards at the side for grounded parts <ul style="list-style-type: none"> forwards backwards upwards at the side downwards for live parts <ul style="list-style-type: none"> forwards backwards upwards downwards at the side 	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 mm 0 mm 0 mm 0 mm 0 mm 0 mm 6 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 	screw-type terminals screw-type terminals Screw-type terminals Screw-type terminals
type of connectable conductor cross-sections for main contacts	
<ul style="list-style-type: none"> solid solid or stranded finely stranded with core end processing 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> solid solid or stranded finely stranded with core end processing for AWG cables for auxiliary contacts 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12
AWG number as coded connectable conductor cross section for main contacts	20 ... 12
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 	Yes; with 3RH29 No
IEC 61508	
T1 value	
<ul style="list-style-type: none"> for proof test interval or service life according to IEC 61508 	20 a
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	



[Confirmation](#)



EG-Konf.



CCC



UL

General Product Approval	EMV	Functional Safety	Test Certificates		Marine / Shipping
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RCM

[Type Examination Certificate](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS

Marine / Shipping



DNV



LRS



PRS



RINA



RMRS

other	Railway	Environment			
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[Miscellaneous](#)

[Confirmation](#)

[Special Test Certificate](#)



[Environmental Confirmations](#)

Further information

Information on the packaging

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

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=3RT2518-1AP00>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2518-1AP00>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2518-1AP00>

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

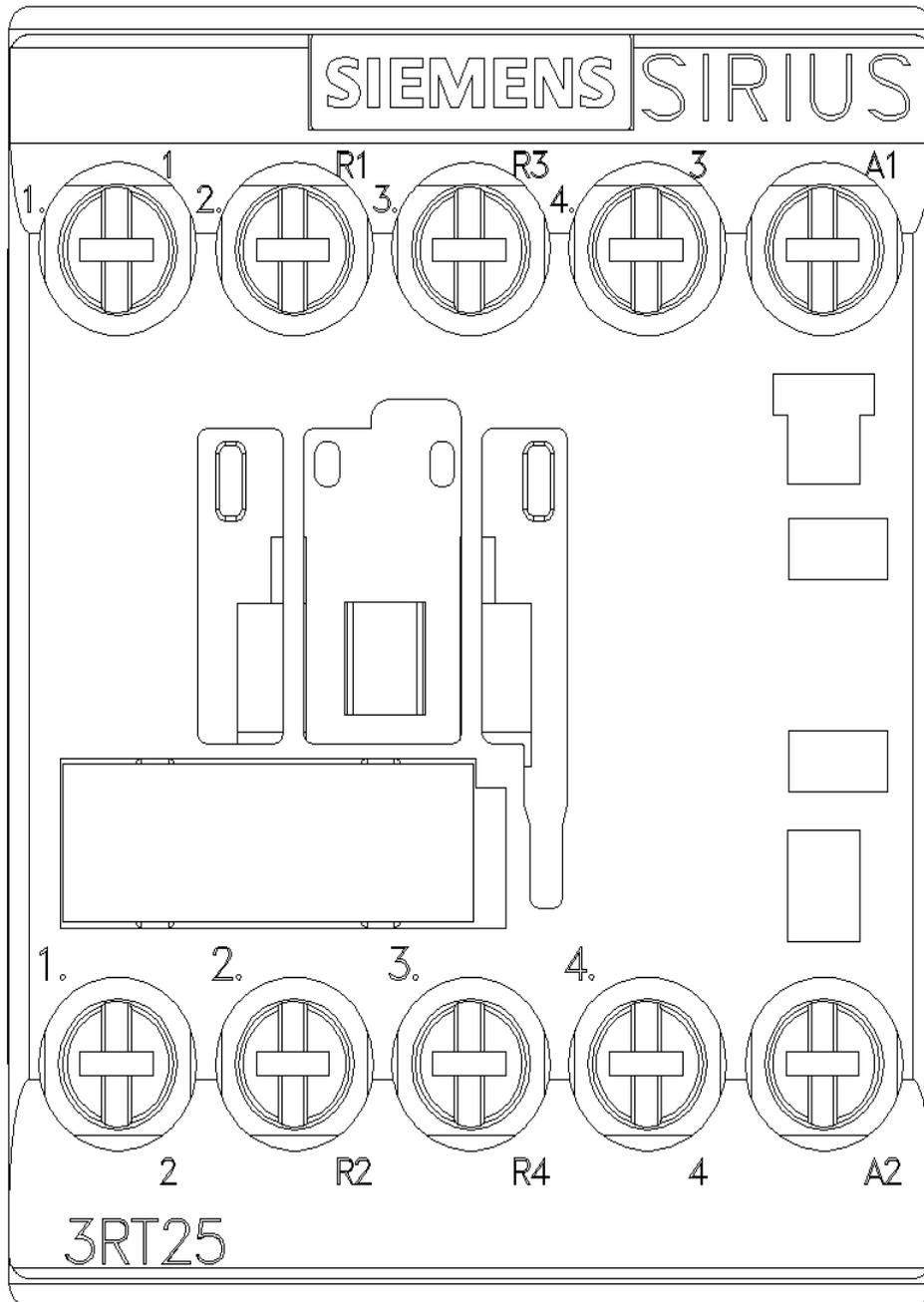
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2518-1AP00&lang=en

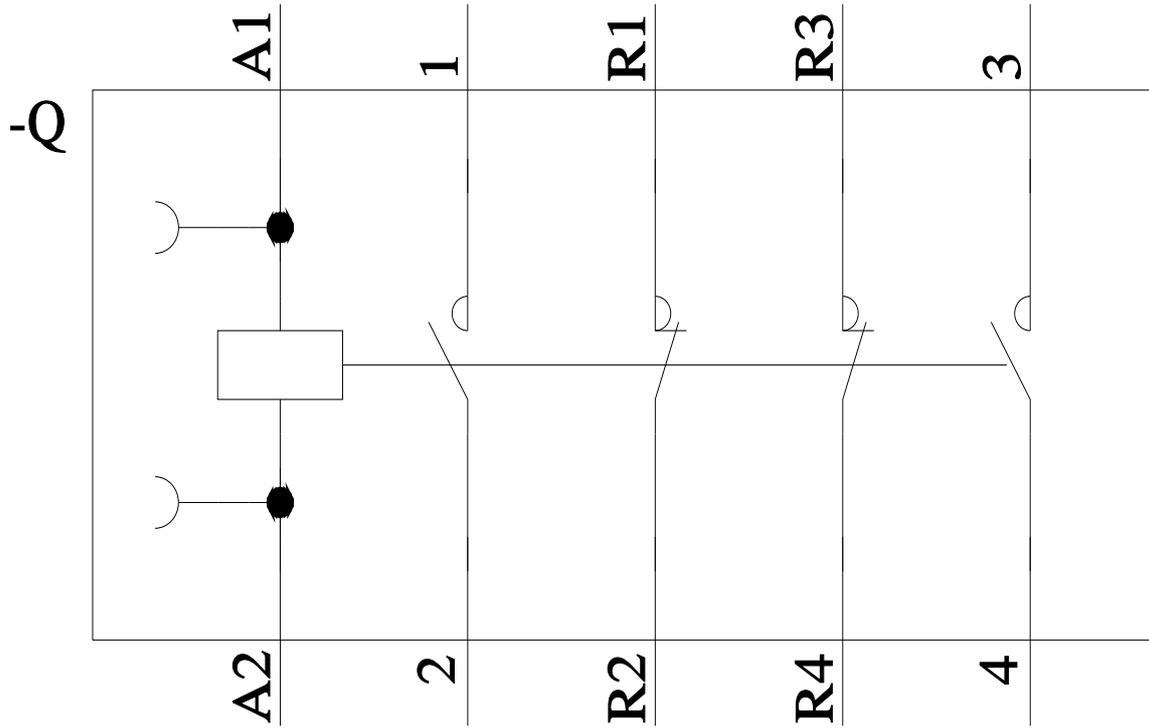
Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2518-1AP00/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2518-1AP00&objecttype=14&gridview=view1>





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