



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 4-pole, 110 V DC, main contacts: 2 NO + 2 NC, screw terminal

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
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 DC	6,7g / 5 ms, 4,2g / 10 ms
shock resistance with sine pulse	
• at DC	10,5g / 5 ms, 6,6g / 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 %

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	

• at AC-1 up to 690 V — at ambient temperature 40 °C rated value — at ambient temperature 60 °C rated value • at AC-2 at AC-3 at 400 V — per NO contact rated value — per NC contact rated value	18 A 16 A 9 A 9 A 2.5 mm ²
minimum cross-section in main circuit at maximum AC-1 rated value	
operational current	
• at 1 current path at DC-1 — 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 — 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 — 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 — 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	16 A 2.1 A 0.8 A 0.6 A 16 A 12 A 1.6 A 0.8 A 16 A 16 A 0.075 A 0.15 A 0.375 A 0.75 A 16 A 16 A 0.175 A 0.35 A
operating power at AC-2 at AC-3	
• 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 2.2 kW 4 kW 4 kW
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	110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 86 A; Use minimum cross-section acc. to AC-1 rated value 66 A; Use minimum cross-section acc. to AC-1 rated value 54 A; Use minimum cross-section acc. to AC-1 rated value 0.7 W
power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor	
no-load switching frequency	
• at AC • at DC	10 000 1/h 10 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
• rated value	110 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value • full-scale value	0.8 1.1
closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay	
• at DC	30 ... 100 ms
opening delay	
• at DC	7 ... 13 ms

arcing time	10 ... 15 ms
residual current of the electronics for control with signal <0>	
• at DC at 24 V maximum permissible	0.01 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	1 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)
• 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
• side-by-side mounting	Yes
height	57.5 mm
width	45 mm
depth	73 mm
required spacing	
• with side-by-side mounting	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	0 mm
• for grounded parts	
— forwards	0 mm
— backwards	0 mm
— upwards	0 mm
— at the side	6 mm
— downwards	0 mm
• for live parts	
— forwards	0 mm

— backwards	0 mm
— upwards	0 mm
— downwards	0 mm
— at the side	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

type of connectable conductor cross-sections

- for auxiliary contacts
 - solid
 - 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

screw-type terminals
screw-type terminals
Screw-type terminals
Screw-type terminals

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
2x (20 ... 16), 2x (18 ... 14), 2x 12
20 ... 12

Safety related data

product function

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

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

Yes; with 3RH29
No

20 a

IP20

finger-safe, for vertical contact from the front

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

[Type Examination Certificate](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping



other

Railway

Dangerous Good



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=3RT2516-1BF40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-1BF40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1BF40>

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

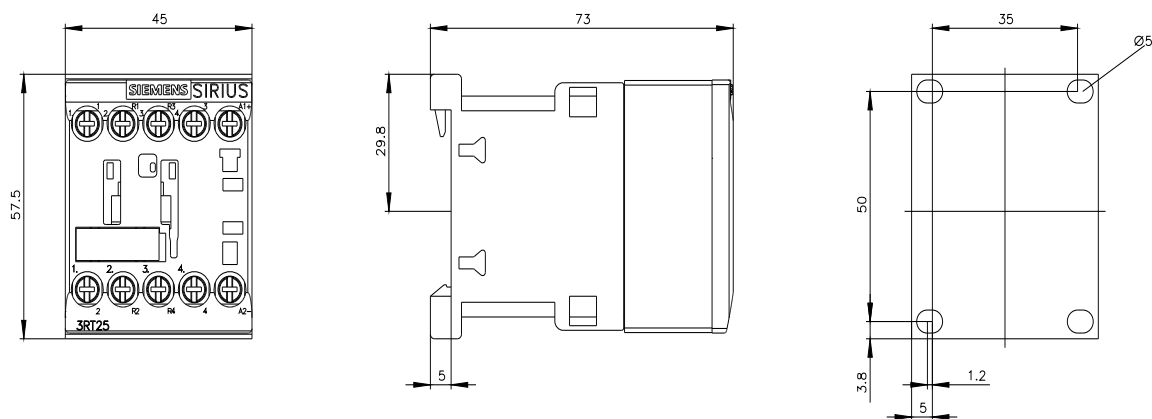
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2516-1BF40&lang=en

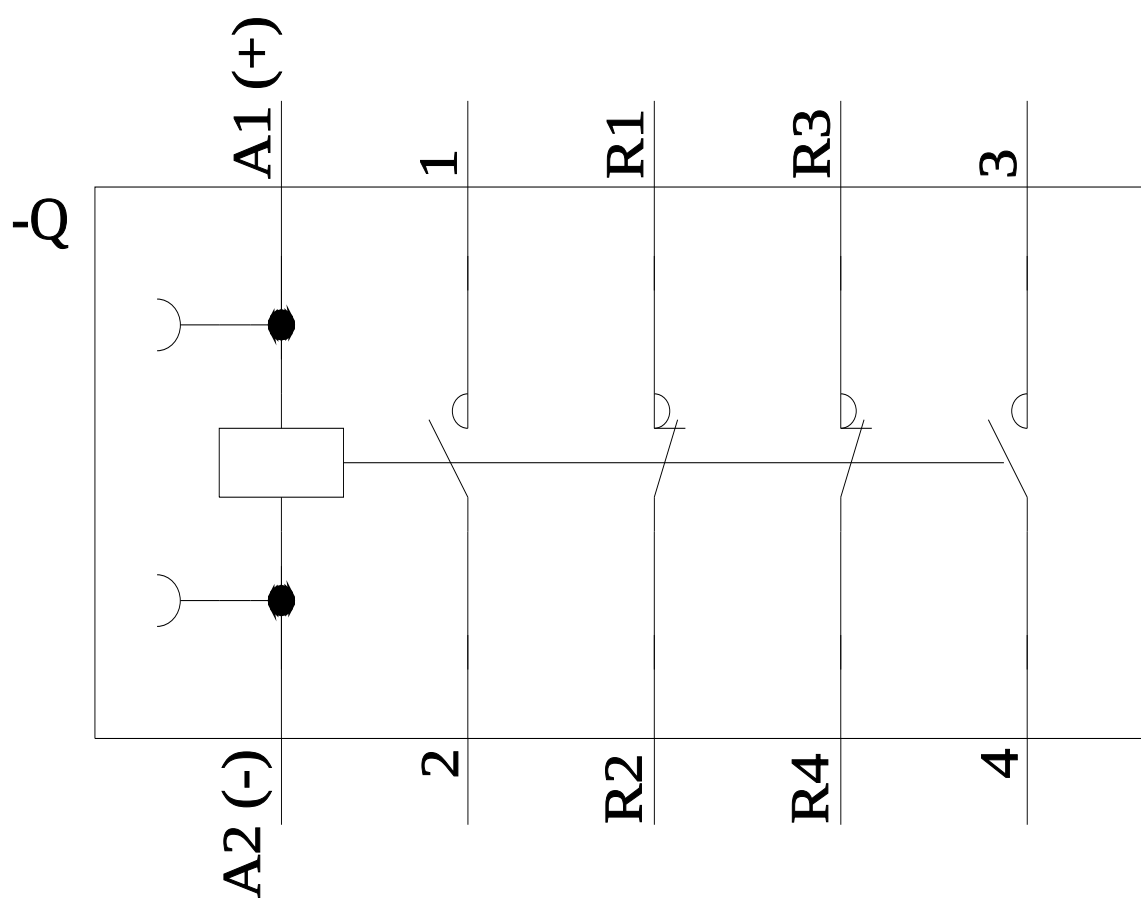
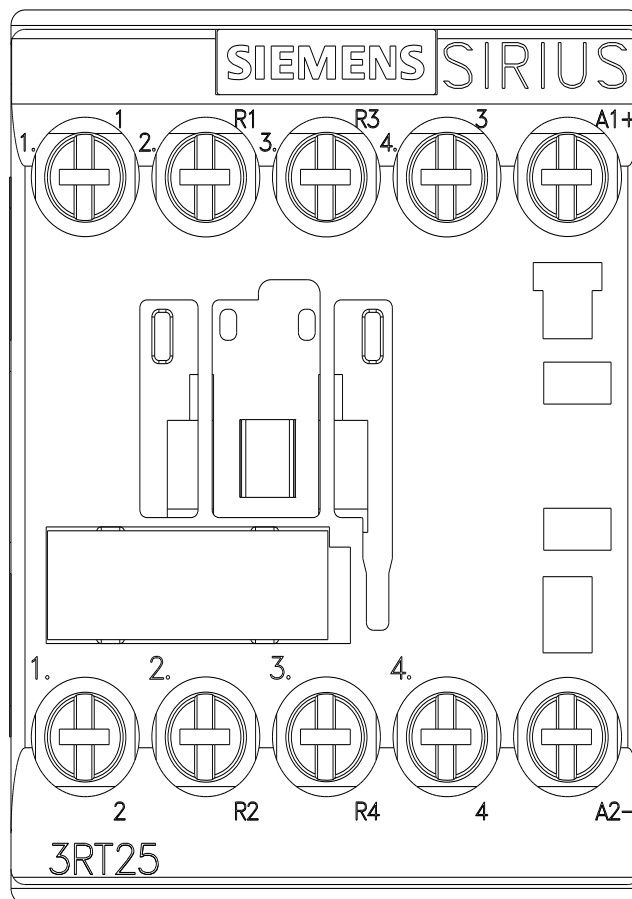
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-1BF40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2516-1BF40&objecttype=14&gridview=view1>





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