SIEMENS

Data sheet 3RT2516-2AP00

Power contactor, AC-3 9 A, 4 kW / 400 V 2 NO + 2 NC 230 V AC, 50/60 Hz 4-pole Size S00 Spring-type 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
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	IP20
Shock resistance at rectangular impulse	
• at AC	6,7g / 5 ms, 4,2g / 10 ms

Shock resistance with sine pulse	
• at AC	10,5g / 5 ms, 6,6g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	30 000 000
• 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	-25 ... +60 °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	18 A
— up to 690 V at ambient temperature 60 °C rated value	16 A
• at AC-2 at AC-3 at 400 V	
— per NO contact rated value	9 A
— per NC contact rated value	9 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	2.5 mm²
• at 40 °C minimum permissible	2.5 mm²
Operating current	
• at 1 current path at DC-1	
— at 24 V rated value	20 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A
— at 440 V rated value	0.6 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A

— at 440 V rated value	0.8 A
Operating current	
• at 1 current path at DC-3 at DC-5	
— at 24 V per NC contact rated value	16 A
— at 24 V per NO contact rated value	16 A
— at 110 V per NC contact rated value	0.075 A
— at 110 V per NO contact rated value	0.15 A
— at 220 V per NC contact rated value	0.375 A
— at 220 V per NO contact rated value	0.75 A
• with 2 current paths in series at DC-3 at DC-5	
— at 24 V per NC contact rated value	16 A
— at 24 V per NO contact rated value	16 A
— at 110 V per NC contact rated value	0.175 A
— at 110 V per NO contact rated value	0.35 A
Operating power	
• at AC-1	
— at 230 V rated value	6.5 kW
— at 400 V rated value	11 kW
• at AC-2 at AC-3	
— at 230 V per NC contact rated value	2.2 kW
— at 230 V per NO contact rated value	2.2 kW
— at 400 V per NC contact rated value	4 kW
— at 400 V per NO contact rated value	4 kW
Power loss [W] at AC-3 at 400 V for rated value of the operating current per conductor	0.7 W
No-load switching frequency	
• at AC	10 000 1/h
• at DC	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	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	27 V·A
• at 50 Hz	27 V·A
• at 60 Hz	24.3 V·A

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	4.2 V·A
• at 50 Hz	4.2 V·A
• at 60 Hz	3.3 V·A
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	3.5 ... 14 ms
Arcing time	10 ... 15 ms
Residual current of the electronics for control with signal <0>	
• at AC at 230 V maximum permissible	0.003 A

Auxiliary circuit

Number of NC contacts for auxiliary contacts	
• instantaneous contact	0
Number of NO contacts for auxiliary contacts	
• instantaneous contact	0
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
Operating 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
Operating 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 110/120 V rated value	0.33 hp
— at 230 V rated value	1 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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022
• Side-by-side mounting	Yes
Height	70 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	spring-loaded terminals
• for auxiliary and control current circuit	spring-loaded terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (0.5 ... 4 mm²)
— single or multi-stranded	2x (0,5 ... 4 mm²)
— finely stranded with core end processing	2x (0.5 ... 2.5 mm²)
— finely stranded without core end processing	2x (0.5 ... 2.5 mm²)
• at AWG conductors for main contacts	2x (20 ... 12)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.5 ... 4 mm²)
— single or multi-stranded	2x (0,5 ... 4 mm²)
— finely stranded with core end processing	2x (0.5 ... 2.5 mm²)
— finely stranded without core end processing	2x (0.5 ... 2.5 mm²)
• at AWG conductors for auxiliary contacts	2x (20 ... 12)
AWG number as coded connectable conductor cross section for main contacts	20 ... 12

Safety related data

Product function	
• Mirror contact acc. to IEC 60947-4-1	Yes; with 3RH29
• positively driven operation acc. to IEC 60947-5-1	No
T1 value for proof test interval or service life acc. to IEC 61508	20 y
Protection against electrical shock	finger-safe

Certificates/approvals

General Product Approval				Functional Safety/Safety of Machinery	Declaration of Conformity
CCC	CSA	UL	EAC	Type Examination Certificate	EG-Konf.

Test Certificates	Marine / Shipping				
Type Test Certificates/Test Report	ABS	BUREAU VERITAS	LRS	PRS	RINA

Marine / Shipping		other	
RMRS	DNVGL.COM/AF	Confirmation	VDE

Further information

Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2516-2AP00

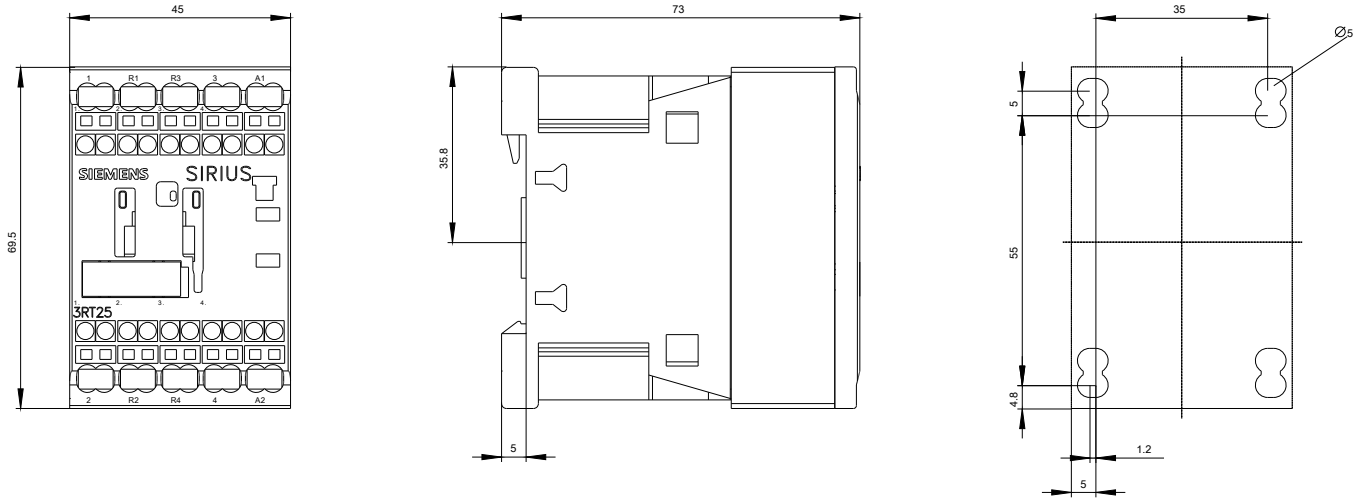
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2516-2AP00

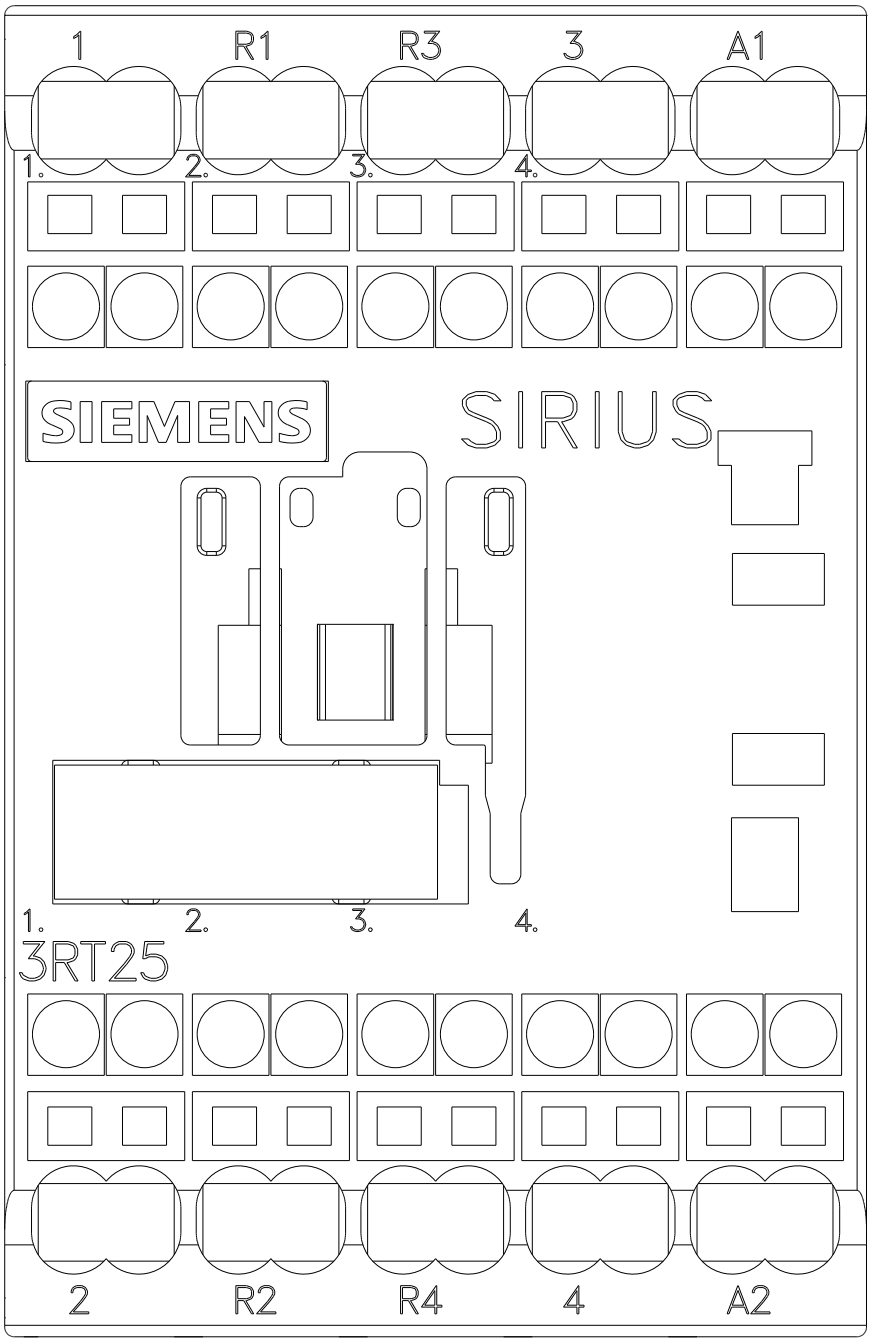
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-2AP00

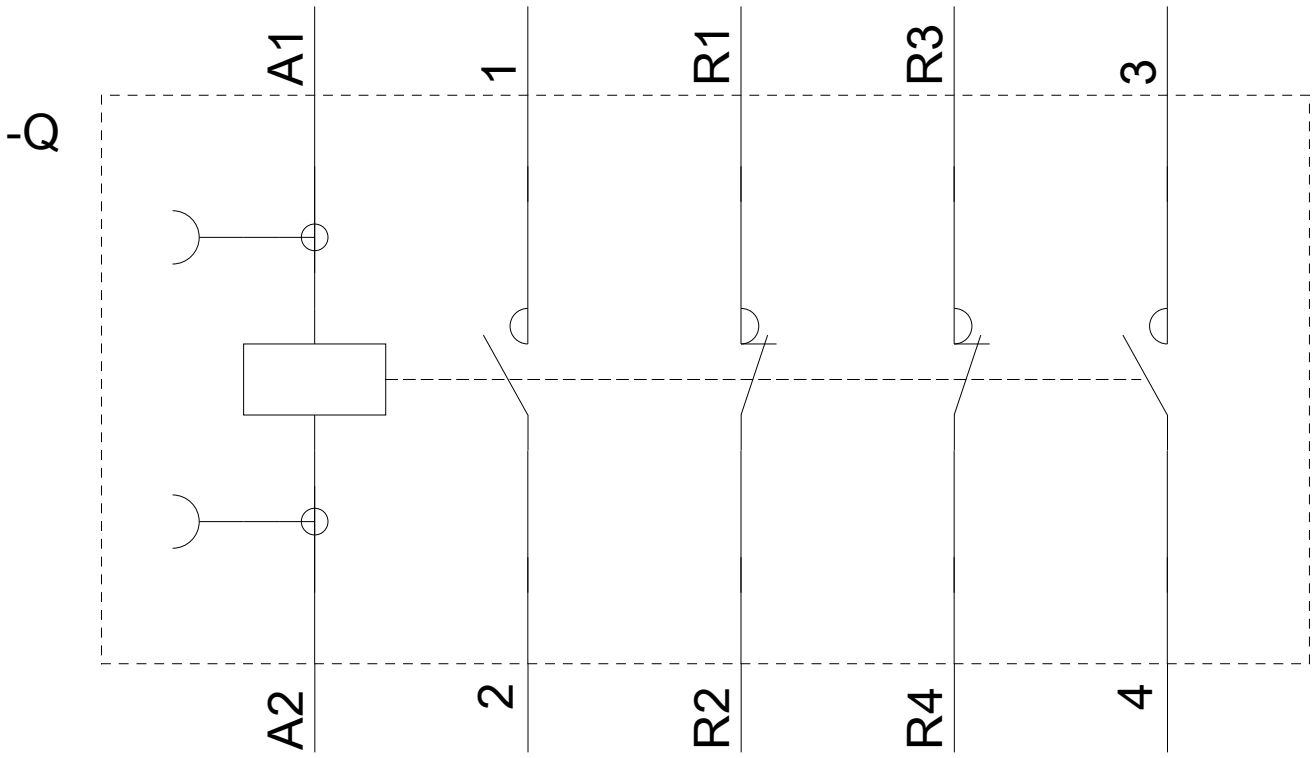
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2516-2AP00&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2516-2AP00/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2516-2AP00&objecttype=14&gridview=view1







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