SIEMENS

Data sheet 3RT2517-2BB40

power contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 4-pole, 24 V DC, main contacts: 2 NO + 2 NC, spring-loaded 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	7.3g / 5 ms, 4.7g / 10 ms
shock resistance with sine pulse	
● at DC	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 %
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	22 A
— at ambient temperature 60 °C rated value	20 A
● at AC-2 at AC-3 at 400 V	
— per NO contact rated value	12 A
— per NC contact rated value	9 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm²
operational 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
● **at 1 current path at DC-3 at DC-5**	
— at 24 V per NC contact rated value	20 A
— at 24 V per NO contact rated value	20 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	20 A
— at 24 V per NO contact rated value	20 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-2 at AC-3	
● at 230 V per NC contact rated value	2.2 kW
● at 230 V per NO contact rated value	3 kW
● at 400 V per NC contact rated value	4 kW
● at 400 V per NO contact rated value	5.5 kW
short-time withstand current in cold operating state up to 40 °C	
● limited to 1 s switching at zero current maximum	125 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 5 s switching at zero current maximum	123 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 10 s switching at zero current maximum	96 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 30 s switching at zero current maximum	74 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 60 s switching at zero current maximum	61 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	1.2 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	DC
control supply voltage at DC	
● rated value	24 V
operating range factor control supply voltage rated value of magnet coil at DC	
● initial value	0.8
● full-scale value	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
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)
● 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	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 circuit	spring-loaded terminals
• at contactor for auxiliary contacts	Spring-type terminals
• of magnet coil	Spring-type terminals
type of connectable conductor cross-sections for main contacts	
• solid	2x (0.5 ... 4 mm²)
• solid or 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)
type of connectable conductor cross-sections	
• for auxiliary contacts	
— solid	2x (0.5 ... 4 mm²)
— solid or 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 cables 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 according to IEC 60947-4-1	Yes; with 3RH29
• positively driven operation according to IEC 60947-5-1	No
T1 value for proof test interval or service life according to IEC 61508	20 a
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

Certificates/ approvals

General Product Approval | **EMC**

Confirmation

Functional Safety/Safety of Machinery | **Declaration of Conformity** | **Test Certificates** | **Marine / Shipping**

Type Examination Certificate

Special Test Certific-ate | Type Test Certific-ates/Test Report

Marine / Shipping

other | **Railway** | **Dangerous Good**

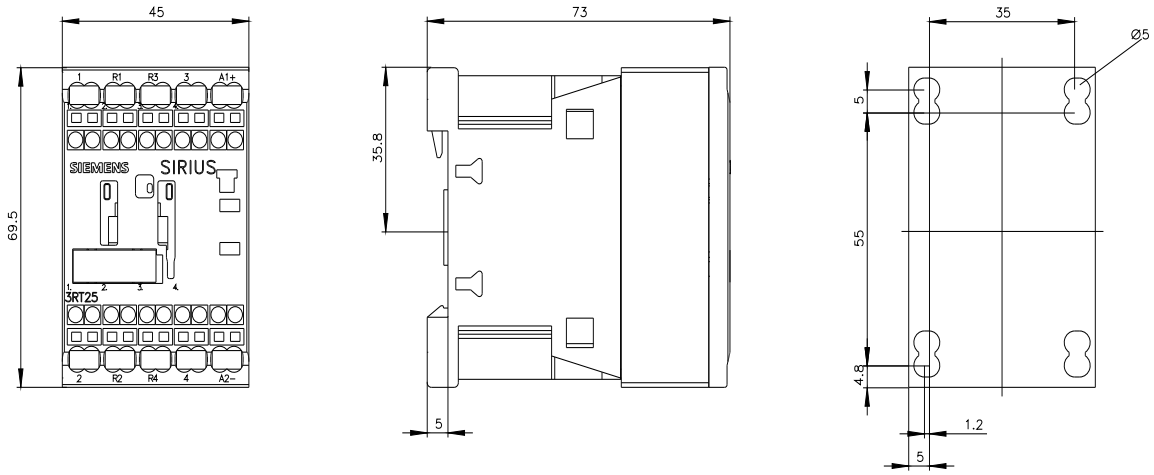
Confirmation

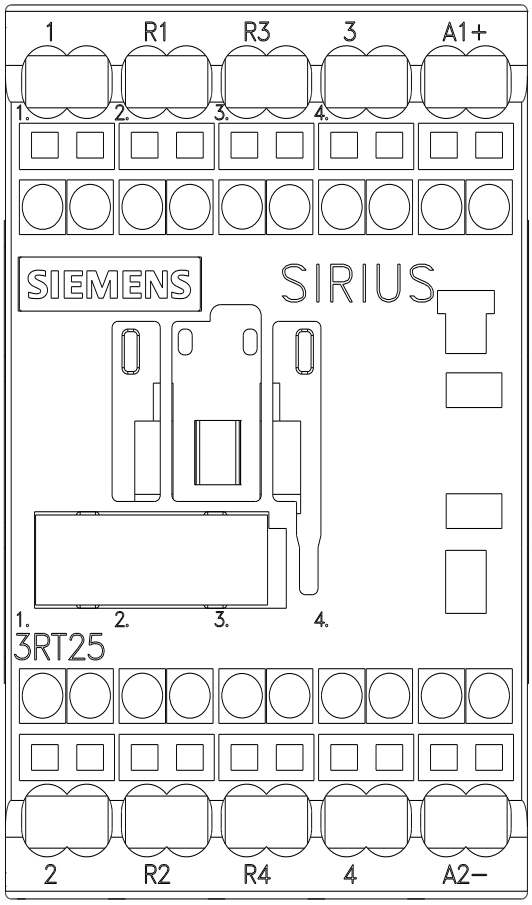
Vibration and Shock

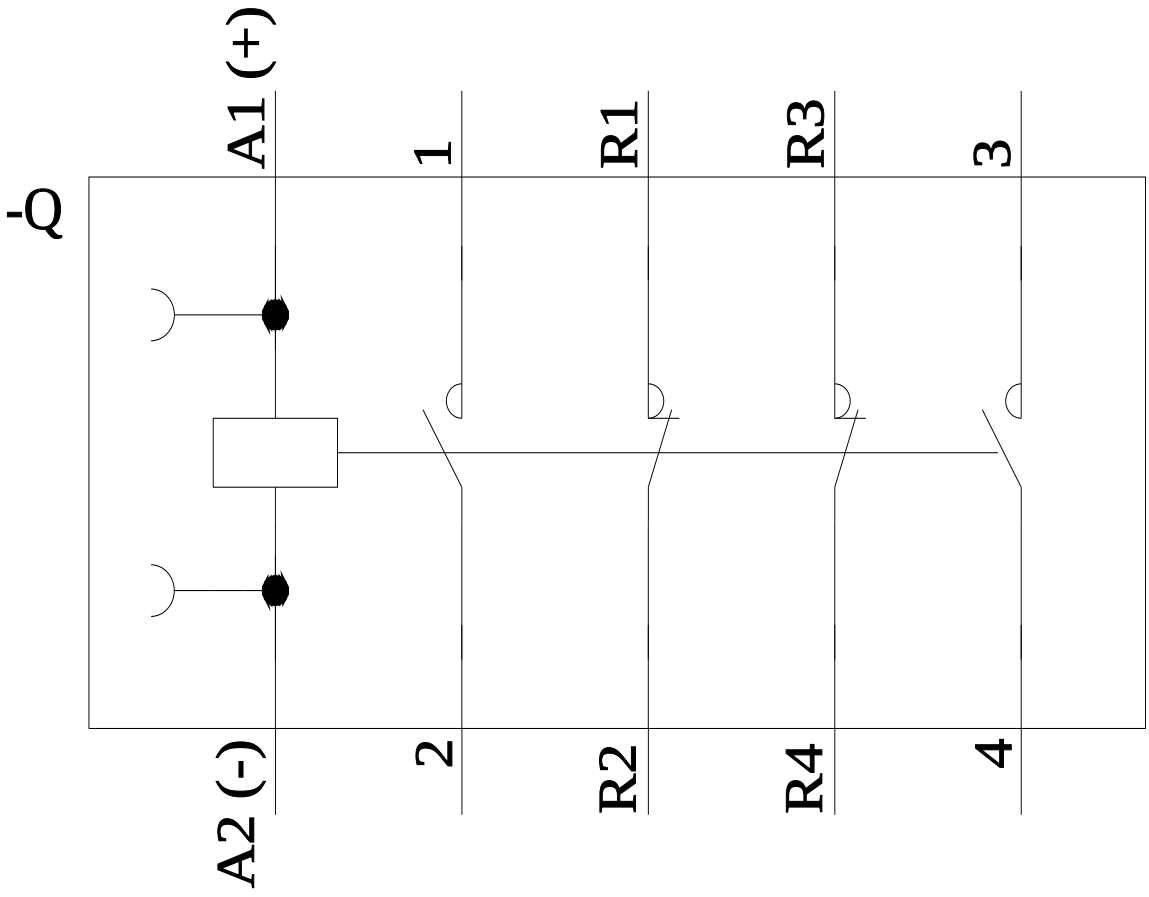
Transport Information

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=3RT2517-2BB40
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2517-2BB40
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-2BB40
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2517-2BB40&lang=en
Characteristic: Tripping characteristics, I²t, Let-through current
https://support.industry.siemens.com/cs/ww/en/ps/3RT2517-2BB40/char
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2517-2BB40&objecttype=14&gridview=view1







last modified: 11/21/2022