



power contactor, AC-3e/AC-3, 7 A, 3 kW / 400 V, 1 NO, 24 V AC, 50 / 60 Hz 3-pole, frame size S00 spring-loaded terminal upright mounting position

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2

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	0.6 W
at AC in hot operating state per pole	0.2 W
without load current share typical	4.2 W
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 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 (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	3
number of NO contacts for main contacts	3
operating voltage	
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	18 A
• 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-3	
— at 400 V rated value	7 A
— at 500 V rated value	6 A
— at 690 V rated value	4.9 A
• at AC-3e	
— at 400 V rated value	7 A
— at 500 V rated value	6 A
— at 690 V rated value	4.9 A
• at AC-4 at 400 V rated value	6.5 A
• at AC-5a up to 690 V rated value	15.8 A
• at AC-5b up to 400 V rated value	5.8 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	4 A
— up to 400 V for current peak value n=20 rated value	4 A
— up to 500 V for current peak value n=20 rated value	3.8 A
— up to 690 V for current peak value n=20 rated value	3.6 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	2.7 A
— up to 400 V for current peak value n=30 rated value	2.7 A
— up to 500 V for current peak value n=30 rated value	2.5 A
— up to 690 V for current peak value n=30 rated value	2.4 A
minimum cross-section in main circuit at maximum AC-1 rated value	2.5 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	2.6 A
• at 690 V rated value	1.8 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	15 A
— at 110 V rated value	1.5 A
— at 220 V rated value	0.6 A
— at 440 V rated value	0.42 A
— at 600 V rated value	0.42 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	15 A
— at 110 V rated value	8.4 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.5 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	15 A
— at 440 V rated value	0.9 A

— at 600 V rated value ● at 1 current path at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value ● with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value ● with 3 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value	0.7 A 15 A 0.1 A 15 A 0.25 A 15 A 15 A 1.2 A 0.14 A 0.14 A
operating power	
● at AC-2 at 400 V rated value ● at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value ● at AC-3e — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value	3 kW 1.5 kW 3 kW 3 kW 4 kW 1.5 kW 3 kW 3 kW 4 kW
operating power for approx. 200000 operating cycles at AC-4	
● at 400 V rated value ● at 690 V rated value	1.15 kW 1.15 kW
operating apparent power at AC-6a	
● up to 230 V for current peak value n=20 rated value ● up to 400 V for current peak value n=20 rated value ● up to 500 V for current peak value n=20 rated value ● up to 690 V for current peak value n=20 rated value	1.5 kVA 2.7 kVA 3.3 kVA 4.3 kVA
operating apparent power at AC-6a	
● up to 230 V for current peak value n=30 rated value ● up to 400 V for current peak value n=30 rated value ● up to 500 V for current peak value n=30 rated value ● up to 690 V for current peak value n=30 rated value	1 kVA 1.8 kVA 2.2 kVA 2.9 kVA
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	120 A; Use minimum cross-section acc. to AC-1 rated value 86 A; Use minimum cross-section acc. to AC-1 rated value 67 A; Use minimum cross-section acc. to AC-1 rated value 52 A; Use minimum cross-section acc. to AC-1 rated value 43 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
● at AC	10 000 1/h
operating frequency	
● at AC-1 maximum ● at AC-2 maximum ● at AC-3 maximum ● at AC-3e maximum ● at AC-4 maximum	1 000 1/h 750 1/h 750 1/h 750 1/h 250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
● at 50 Hz rated value ● at 60 Hz rated value	24 V 24 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz ● at 60 Hz	0.8 ... 1.1 0.85 ... 1.1
apparent pick-up power of magnet coil at AC	

• at 50 Hz • at 60 Hz	27 VA
inductive power factor with closing power of the coil	24.3 VA
• at 50 Hz • at 60 Hz	0.8
apparent holding power of magnet coil at AC	0.75
• at 50 Hz • at 60 Hz	4.2 VA
inductive power factor with the holding power of the coil	3.3 VA
• at 50 Hz • at 60 Hz	0.25
closing delay	0.25
• at AC	9 ... 35 ms
opening delay	
• at AC	4 ... 15 ms
arcing time	10 ... 15 ms
control version of the switch operating mechanism	Standard A1 - A2

Auxiliary circuit

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 • at 400 V rated value • at 500 V rated value • at 690 V rated value	10 A
	3 A
	2 A
	1 A
operational current at DC-12	
• at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 A
	6 A
	6 A
	3 A
	2 A
	1 A
	0.15 A
operational current at DC-13	
• at 24 V rated value • at 48 V rated value • at 60 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	10 A
	2 A
	2 A
	1 A
	0.9 A
	0.3 A
	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings

full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value • at 600 V rated value	4.8 A
	6.1 A
yielded mechanical performance [hp]	
• for single-phase AC motor — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value	0.25 hp
	0.75 hp
	1.5 hp
	2 hp
	3 hp
	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 — with type of assignment 2 required	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)

- for short-circuit protection of the auxiliary switch required

gG: 10 A (500 V, 1 kA)

Installation/ mounting/ dimensions

mounting position

fastening method

- side-by-side mounting

height

width

depth

required spacing

- with side-by-side mounting
 - forwards
 - upwards
 - downwards
 - at the side
- for grounded parts
 - forwards
 - upwards
 - at the side
 - downwards
- for live parts
 - forwards
 - upwards
 - downwards
 - at the side

standing, on horizontal mounting surface

screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715

Yes

70 mm

45 mm

73 mm

10 mm

10 mm

10 mm

0 mm

10 mm

10 mm

6 mm

10 mm

10 mm

10 mm

10 mm

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

spring-loaded terminals

spring-loaded terminals

Spring-type terminals

Spring-type terminals

type of connectable conductor cross-sections

- for main contacts
 - solid
 - solid or stranded
 - finely stranded with core end processing
 - finely stranded without core end processing
- at AWG cables for main contacts

2x (0.5 ... 4 mm²)

2x (0.5 ... 4 mm²)

2x (0.5 ... 2.5 mm²)

2x (0.5 ... 2.5 mm²)

2x (20 ... 12)

connectable conductor cross-section for main contacts

- solid
- stranded
- finely stranded with core end processing
- finely stranded without core end processing

0.5 ... 4 mm²

0.5 ... 4 mm²

0.5 ... 2.5 mm²

0.5 ... 2.5 mm²

connectable conductor cross-section for auxiliary contacts

- solid or stranded
- finely stranded with core end processing
- finely stranded without core end processing

0.5 ... 4 mm²

0.5 ... 2.5 mm²

0.5 ... 2.5 mm²

type of connectable conductor cross-sections

- for auxiliary contacts
 - solid or stranded
 - finely stranded with core end processing
 - finely stranded without core end processing
- at AWG cables for auxiliary contacts

2x (0.5 ... 4 mm²)

2x (0.5 ... 2.5 mm²)

2x (0.5 ... 2.5 mm²)

2x (20 ... 12)

AWG number as coded connectable conductor cross section

- for main contacts
- for auxiliary contacts

20 ... 12

20 ... 12

Safety related data

product function

- mirror contact according to IEC 60947-4-1

Yes; with 3RH29

B10 value with high demand rate according to SN 31920

1 000 000

proportion of dangerous failures

- with low demand rate according to SN 31920
- with high demand rate according to SN 31920

failure rate [FIT] with low demand rate according to SN 31920

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

suitability for use

- safety-related switching OFF

40 %

73 %

100 FIT

20 y

IP20

finger-safe, for vertical contact from the front

Yes

Certificates/ approvals**General Product Approval**

[Confirmation](#)



[KC](#)



EMC	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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[Type Examination Certificate](#)



EG-Konf.

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping

ABS



BUREAU VERITAS



DNV



LRS



PRS



RINA

Marine / Shipping	other	Railway
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RMRS

[Confirmation](#)



VDE

[Confirmation](#)

[Vibration and Shock](#)

Further information

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=3RT2015-2AB01-1AA0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-2AB01-1AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-2AB01-1AA0>

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

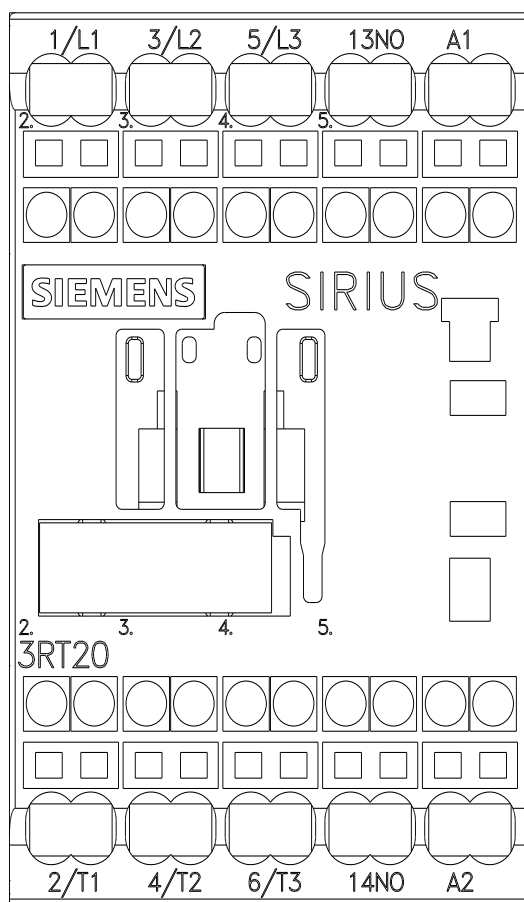
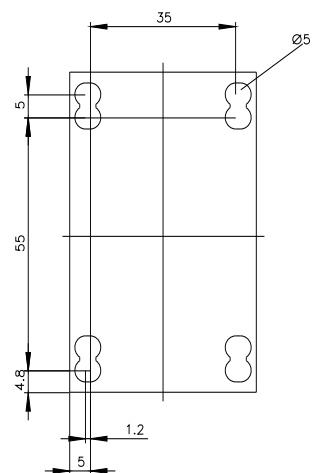
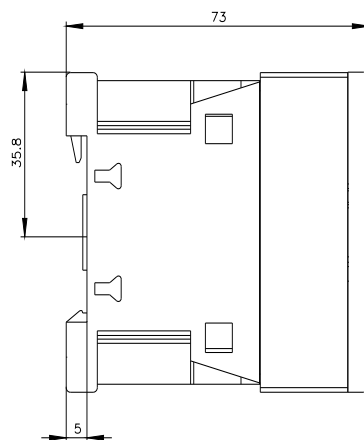
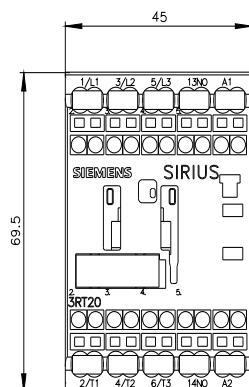
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-2AB01-1AA0&lang=en

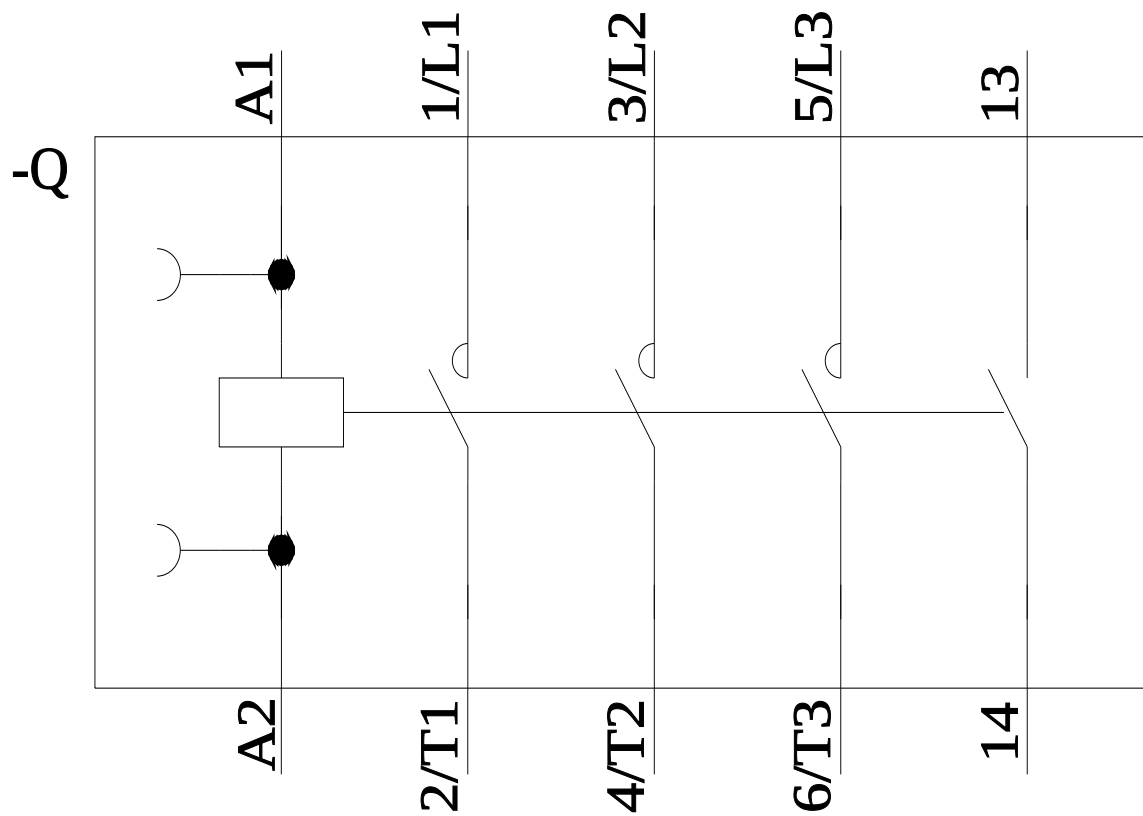
Characteristic: Tripping characteristics, I_{pt}, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-2AB01-1AA0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2015-2AB01-1AA0&objecttype=14&gridview=view1>





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11/21/2022 [↗](#)