Data sheet 3RT2015-2BB42-0CC0



power contactor, AC-3e/AC-3, 7 A, 3 kW / 400 V, 3-pole, 24 V DC, auxiliary contacts: 1 NC, spring-loaded terminal, size: S00, communication-capable

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	Yes
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 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 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
SVHC substance name	Lead - 7439-92-1
Weight	0.316 kg
mbient 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	95 %

maximum	
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	153 kg
global warming potential [CO2 eq] during manufacturing	1.42 kg
global warming potential [CO2 eq] during operation	152 kg
global warming potential [CO2 eq] after end of life	-0.305 kg
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 at AC-1	18 A
 at AC-1 up to 690 V at ambient temperature 40 °C rated 	18 A
value	
— 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 at AC-5b up to 400 V rated value	15.8 A
at AC-5b up to 400 V rated valueat AC-6a	5.8 A
— 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 60 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 60 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 60 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	0.7 A
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	15 A
— at 60 V rated value	0.35 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	15 A
— at 60 V rated value	3.5 A
— at 110 V rated value	0.25 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	15 A
— at 60 V rated value	15 A
— at 110 V rated value	15 A
— at 220 V rated value	1.2 A
— at 440 V rated value	0.14 A
— at 600 V rated value	0.14 A
operating power	
• at AC-3	
— at 230 V rated value	1.5 kW
— at 400 V rated value	3 kW
— at 500 V rated value	3 kW
— at 690 V rated value	4 kW
• at AC-3e	
— at 230 V rated value	1.5 kW
— at 400 V rated value	3 kW
— at 500 V rated value	3 kW
— at 690 V rated value	4 kW
operating power for approx. 200000 operating cycles at AC-	
at 400 V rated value	1.15 kW
at 690 V rated value	1.15 kW
operating apparent power at AC-6a	
up to 230 V for current peak value n=20 rated value	1.5 kVA
up to 400 V for current peak value n=20 rated value	2.7 kVA
• up to 500 V for current peak value n=20 rated value	3.3 kVA
up to 690 V for current peak value n=20 rated value	4.3 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	1 kVA
• up to 400 V for current peak value n=30 rated value	1.8 kVA
• up to 500 V for current peak value n=30 rated value	2.2 kVA
up to 690 V for current peak value n=30 rated value	2.9 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	120 A; Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum	86 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	67 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	52 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum 	43 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	10 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-3e maximum	750 1/h

at AC-4 maximum	250 1/h
Control circuit/ Control	200 1111
	DC
type of voltage of the control supply voltage	
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
control version of the switch operating mechanism	Standard A1 - A2, optionally via function module
Auxiliary circuit	
number of NC 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	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
at 24 V rated value	10 A
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 125 V rated value	0.9 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	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	4.8 A
at 600 V rated value	6.1 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	0.25 hp
— at 230 V rated value	0.75 hp
 ◆ for 3-phase AC motor 	
— at 200/208 V rated value	1.5 hp
— at 220/230 V rated value	2 hp
— at 460/480 V rated value	3 hp
— at 575/600 V rated value	5 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
design of the fuse link	
for short-circuit protection of the main circuit	

 — with type of coordination 1 required 	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)
 — with type of assignment 2 required 	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)
nstallation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward an backward by +/- 22.5° on vertical mounting surface
fastening method side-by-side mounting	Yes
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	70 mm
width	45 mm
depth	73 mm
required spacing	
with side-by-side mounting	10 mm
— forwards	10 mm
— upwards — downwards	10 mm
— at the side	0 mm
for grounded parts	O IIIIII
— forwards	10 mm
— upwards	10 mm
— upwards — at the side	6 mm
— downwards	10 mm
for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 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)
 for AWG cables for main contacts 	2x (20 12)
connectable conductor cross-section for main contacts	
• solid	0.5 4 mm²
• stranded	0.5 4 mm²
 finely stranded with core end processing 	0.5 2.5 mm²
finely stranded without core end processing	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	
• solid or stranded	0.5 4 mm²
finely stranded with core end processing	0.5 2.5 mm²
finely stranded without core end processing	0.5 2.5 mm²
type of connectable conductor cross-sections	
for auxiliary contacts	0. (0.543)
— 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)
for AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section	2x (20 12)
• for main contacts	20 12
for auxiliary contacts	20 12
afety related data	
arcty related data	

 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947-5-1 	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type 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



<u>KC</u>

General Product Approval

EMV

Test Certificates

Marine / Shipping





Special Test Certificate

Type Test Certificates/Test Report





Marine / Shipping





LRS







Miscellaneous

other

other

Railway

Dangerous goods

Environment

Confirmation

Special Test Certificate

Transport Information



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=3RT2015-2BB42-0CC0

Cax online generator

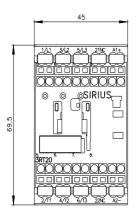
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-2BB42-0CC0

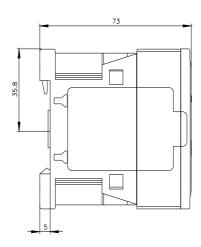
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

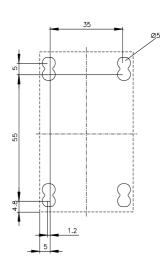
https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-2BB42-0CC0

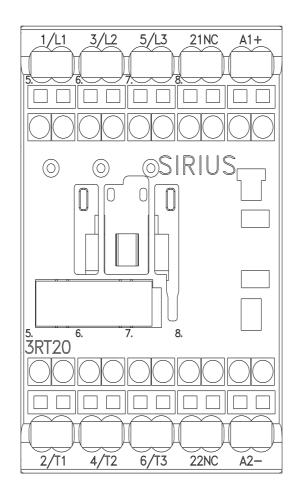
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-2BB42-0CC0&lang=en

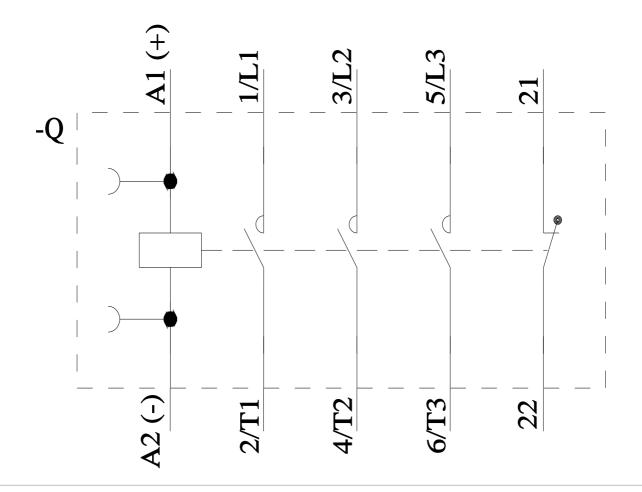
Characteristic: Tripping characteristics, I2t, Let-through current











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