## Data sheet

3RT2017-2KF42-0LA0



traction contactor, AC-3e/AC-3, 12 A, 5.5 kW / 400 V, 3-pole, 110 V DC, 0.7-1.25\* Us, with integrated suppressor diode, auxiliary contacts: 1 NC, spring-loaded terminal, size: S00, with plugged on series resistor

product brand name	SIRIUS	
product designation	Power contactor	
design of the product	With extended operating range	
product type designation	3RT2	
General technical data		
size of contactor	S00	
product extension		
<ul> <li>function module for communication</li> </ul>	No	
auxiliary switch	Yes	
power loss [W] for rated value of the current		
<ul> <li>at AC in hot operating state</li> </ul>	3.6 W	
<ul> <li>at AC in hot operating state per pole</li> </ul>	1.2 W	
<ul> <li>without load current share typical</li> </ul>	4 W	
insulation voltage		
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V	
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V	
surge voltage resistance		
<ul> <li>of main circuit rated value</li> </ul>	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	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	
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000	
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	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		
<ul> <li>during operation</li> </ul>	-40 +70 °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	22 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	22 A
value	20. A
<ul> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul>	20 A
at AC-2 at 400 V rated value	12 A
• at AC-3	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
• at AC-3e	
— at 400 V rated value	12 A
— at 500 V rated value	9.2 A
— at 690 V rated value	6.7 A
at AC-4 at 400 V rated value	8.5 A
minimum cross-section in main circuit	
at maximum AC-1 rated value	4 mm²
operational current for approx. 200000 operating cycles at	
AC-4	
at 400 V rated value	4.1 A
at 690 V rated value	3.3 A
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
— at 600 V rated value	0.6 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— 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 600 V rated value	0.7 A
with 3 current paths in series at DC-1	
— at 24 V rated value	20 A
— at 110 V rated value	20 A
— at 220 V rated value	20 A
— at 440 V rated value	1.3 A
— at 600 V rated value	1 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.1 A
with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 110 V rated value	0.35 A
with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	20 A
at ZT V rated Value	20 A
— at 110 V rated value	2071
— at 110 V rated value	1.5.Δ
— at 220 V rated value	1.5 A
<ul><li>— at 220 V rated value</li><li>— at 440 V rated value</li></ul>	0.2 A
— at 220 V rated value	

• at AC-3	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	5.5 kW
• at AC-3e	
— at 230 V rated value	3 kW
— at 400 V rated value	5.5 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	5.5 kW
operating power for approx. 200000 operating cycles at AC-	
• at 400 V rated value	2 kW
at 690 V rated value	2.5 kW
short-time withstand current in cold operating state up to 40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	200 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	123 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	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
no-load switching frequency	
• at DC	1 500 1/h
operating frequency	
<ul> <li>at AC-2 at AC-3e maximum</li> </ul>	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage	DC
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	0.7
full-scale value	1.25
design of the surge suppressor	suppressor diode
closing power of magnet coil at DC	13 W
holding power of magnet coil at DC	4 W
closing delay	05 400
• at DC	25 130 ms
opening delay	7. 00
• at DC	7 20 ms
arcing time  control version of the switch operating mechanism	10 15 ms E1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	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	1A
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
<ul> <li>at 60 V rated value</li> </ul>	2 A
<ul> <li>at 110 V rated value</li> </ul>	1 A
<ul> <li>at 125 V rated value</li> </ul>	0.9 A
<ul> <li>at 220 V rated value</li> </ul>	0.3 A
<ul> <li>at 600 V rated value</li> </ul>	0.1 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	11 A
at 600 V rated value	11 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	0.5 hp
— at 230 V rated value	2 hp
• for 3-phase AC motor	'
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	7.5 hp
— at 575/600 V rated value	10 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
product function short circuit protection	No
design of the fuse link	INU
for short-circuit protection of the main circuit	
	CC: FOA (FOO) / 400kA \ cM: 20A (FOO) / 400kA \ DS90: 2FA (44F) / 90kA \
— with type of coordination 1 required	gG: 50A (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)
Installation/ mounting/ dimensions	./4000   1   1   1   1   1   1   1   1   1
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 60715
side-by-side mounting	Yes
height	70 mm
width	45 mm
depth	121 mm
<u> </u>	12 1 11111
required enacing	
required spacing	
with side-by-side mounting	10 mm
with side-by-side mounting     — forwards	10 mm
<ul><li>with side-by-side mounting</li><li>— forwards</li><li>— upwards</li></ul>	10 mm
<ul><li>with side-by-side mounting</li><li>— forwards</li><li>— upwards</li><li>— downwards</li></ul>	10 mm 10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul>	10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> </ul>	10 mm 10 mm 0 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> </ul>	10 mm 10 mm 0 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> </ul>	10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> </ul>	10 mm 10 mm 0 mm 10 mm 10 mm 6 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> <li>downwards</li> </ul>	10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> <li>for live parts</li> </ul>	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> <li>for live parts</li> <li>forwards</li> </ul>	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> <li>for live parts</li> <li>forwards</li> <li>upwards</li> </ul>	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> <li>for live parts</li> <li>forwards</li> <li>upwards</li> <li>for live parts</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> </ul>	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting</li></ul>	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting</li> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> <li>for grounded parts</li> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> <li>for live parts</li> <li>upwards</li> <li>upwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> <li>downwards</li> </ul>	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
<ul> <li>with side-by-side mounting <ul> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> <li>for grounded parts <ul> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> </ul> </li> <li>for live parts <ul> <li>forwards</li> <li>upwards</li> <li>upwards</li> <li>for live parts</li> <li>downwards</li> <li>upwards</li> <li>at the side</li> </ul> </li> </ul>	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
with side-by-side mounting         — forwards         — upwards         — downwards         — at the side         • for grounded parts         — forwards         — upwards         — at the side         — downwards         — downwards         • for live parts         — forwards         — upwards         — upwards         — downwards         — upwards         — at the side  Connections/ Terminals	10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
with side-by-side mounting         — forwards         — upwards         — downwards         — at the side         • for grounded parts         — forwards         — upwards         — upwards         — at the side         — downwards         • for live parts         — forwards         — upwards         — upwards         — at the side         — downwards         — upwards         — at the side  Connections/ Terminals  type of electrical connection	10 mm 10 mm 0 mm 10 mm
with side-by-side mounting         — forwards         — upwards         — downwards         — at the side         • for grounded parts         — forwards         — upwards         — upwards         — at the side         — downwards         • for live parts         — forwards         — upwards         — upwards         — at the side         — downwards         — at the side  Connections/ Terminals  type of electrical connection         • for main current circuit	10 mm 10 mm 0 mm 10 mm
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         — upwards         — downwards         — at the side         — downwards         — upwards         — at the side  Connections/ Terminals  type of electrical connection         • for main current circuit         • for auxiliary and control circuit	10 mm 10 mm 0 mm 10 mm spring-loaded terminals spring-loaded terminals
with side-by-side mounting     — forwards     — upwards     — downwards     — at the side     • for grounded parts     — forwards     — upwards     — at the side     — downwards     — at the side     — downwards     • for live parts     — forwards     — upwards     — upwards     — a the side     — downwards     — at the side  Connections/ Terminals  type of electrical connection     • for main current circuit     • for auxiliary and control circuit     • at contactor for auxiliary contacts	10 mm 10 mm 0 mm 10 mm  spring-loaded terminals spring-type terminals Spring-type terminals
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     — upwards     — downwards     — upwards     — at the side     — downwards     — upwards     — at the side  Connections/ Terminals  type of electrical connection     • for main current circuit     • for auxiliary and control circuit     • at contactor for auxiliary contacts     • of magnet coil	10 mm 10 mm 0 mm 10 mm  spring-loaded terminals spring-type terminals Spring-type terminals
with side-by-side mounting         — forwards         — upwards         — downwards         — at the side         • for grounded parts         — forwards         — upwards         — upwards         — at the side         — downwards         • for live parts         — forwards         — upwards         — upwards         — downwards         — at the side  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	10 mm 10 mm 0 mm 10 mm 5 mm 10 mm 5 mm

<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)
finely stranded without core end processing	2x (0.5 2.5 mm²)
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul> <li>— solid or stranded</li> </ul>	2x (0,5 4 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 12)
AWG number as coded connectable conductor cross section	
• for main contacts	20 12
• for auxiliary contacts	20 12
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
B10 value with high demand rate according to SN 31920	1 000 000
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
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
Communication/ Protocol	
	No
product function bus communication	INO

## **General Product Approval**





Confirmation



<u>KC</u>



Functional

EMC Safety/Safety of Machinery

Declaration of Conformity
Test Certificates



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

## Marine / Shipping













Marine / Shipping other Railway Dangerous Good



Confirmation



Special Test Certificate

Vibration and Shock

<u>Transport Information</u>

Environment

## **Further information**

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RT2017-2KF42-0LA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2017-2KF42-0LA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2KF42-0LA0

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

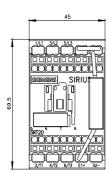
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2017-2KF42-0LA0&lang=en

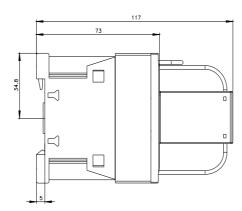
Characteristic: Tripping characteristics, I2t, Let-through current

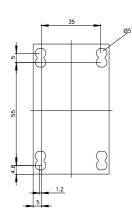
https://support.industry.siemens.com/cs/ww/en/ps/3RT2017-2KF42-0LA0/char

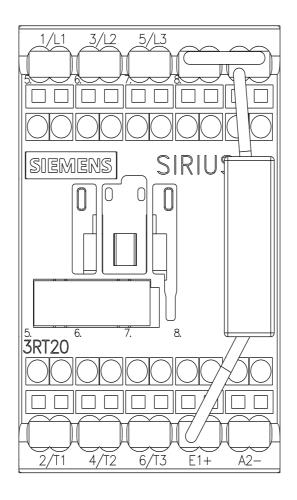
Further characteristics (e.g. electrical endurance, switching frequency)

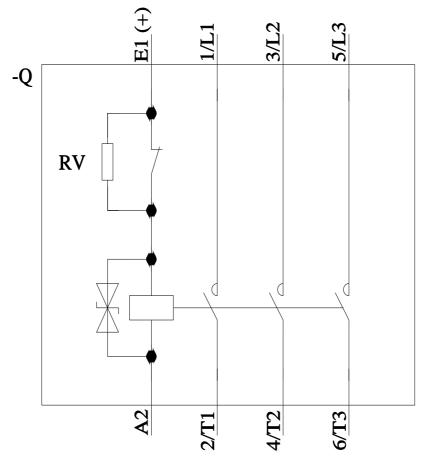
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2017-2KF42-0LA0&objecttype=14&gridview=view1











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