# **SIEMENS**

### **Data sheet**

3RT2037-3XF44-0LA2



traction contactor, AC-3e/AC-3, 65 A, 30 kW / 400 V, 3-pole, 110 V DC, 0.7-1.25 $^{\star}$  Us, electronic drive, with integrated varistor, auxiliary contacts: 2 NO + 2 NC, main circuit: screw terminal, control and auxiliary circuit: spring-loaded terminal, size: S2, removable auxiliary switch

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	S2	
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>	11.4 W	
<ul> <li>at AC in hot operating state per pole</li> </ul>	3.8 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	6.1g / 5 ms, 3.7g / 10 ms	
shock resistance with sine pulse		
• at DC	9.6g / 5 ms, 5.8g / 10 ms	
mechanical service life (operating cycles)		
<ul> <li>of contactor typical</li> </ul>	10 000 000	
<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)	10/01/2014	
SVHC substance name	Blei - 7439-92-1 Bleimonoxid (Bleioxid) - 1317-36-8	
Ambient conditions		
installation altitude at height above sea level maximum	2 000 m	
ambient temperature		
during operation	-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 %	

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	80 A
value	00 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	80 A
value	
— up to 690 V at ambient temperature 60 °C rated	70 A
value	05.4
at AC-2 at 400 V rated value	65 A
• at AC-3	
— at 400 V rated value	65 A
— at 500 V rated value	65 A
— at 690 V rated value	47 A
• at AC-3e	
— at 400 V rated value	65 A
— at 500 V rated value	65 A
— at 690 V rated value	47 A
at AC-4 at 400 V rated value	55 A
minimum cross-section in main circuit	
<ul> <li>at maximum AC-1 rated value</li> </ul>	25 mm²
at maximum Ith rated value	25 mm²
operational current for approx. 200000 operating cycles at	
AC-4	
at 400 V rated value	28 A
at 690 V rated value	22 A
operational current	
at 1 current path at DC-1	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	
— at 24 V rated value	55 A
— at 110 V rated value	55 A
— at 220 V rated value	45 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
	0.1 A
— at 440 V rated value	
— at 440 V rated value — at 600 V rated value	0.06 A
— at 600 V rated value	0.06 A
<ul> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
<ul> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-3 at DC-5</li> <li>at 24 V rated value</li> </ul>	55 A
<ul> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-3 at DC-5</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> </ul>	55 A 25 A
<ul> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-3 at DC-5</li> <li>at 24 V rated value</li> </ul>	55 A

with 3 current nathe in carine at DC 2 at DC 5		
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> <li>— at 24 V rated value</li> </ul>	55 A	
— at 24 v rated value  — at 110 V rated value	55 A	
— at 220 V rated value	25 A	
— at 440 V rated value	0.6 A	
— at 600 V rated value	0.35 A	
operating power	20 144	
at AC-2 at 400 V rated value	30 kW	
• at AC-3	40 5 144	
— at 230 V rated value	18.5 kW	
— at 400 V rated value	30 kW	
— at 500 V rated value	37 kW	
— at 690 V rated value	37 kW	
• at AC-3e	40 5 1114	
— at 230 V rated value	18.5 kW	
— at 400 V rated value	30 kW	
— at 500 V rated value	37 kW	
— at 690 V rated value	37 kW	
operating power for approx. 200000 operating cycles at AC-		
at 400 V rated value	14.7 kW	
at 690 V rated value	20 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>	1 055 A; Use minimum cross-section acc. to AC-1 rated value	
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	730 A; Use minimum cross-section acc. to AC-1 rated value	
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	520 A; Use minimum cross-section acc. to AC-1 rated value	
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	336 A; Use minimum cross-section acc. to AC-1 rated value	
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	272 A; Use minimum cross-section acc. to AC-1 rated value	
no-load switching frequency		
• at DC	1 500 1/h	
operating frequency		
• at AC-2 at AC-3e maximum	400 1/h	
at AC-4 maximum	200 1/h	
Ratings for railway applications		
thermal current (Ith) up to 690 V		
<ul> <li>up to 40 °C according to IEC 60077 rated value</li> </ul>	80 A	
up to 70 °C according to IEC 60077 rated value	60 A	
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	
rated value     operating range factor control supply voltage rated value of	110 V	
rated value     operating range factor control supply voltage rated value of magnet coil at DC		
rated value  operating range factor control supply voltage rated value of magnet coil at DC      initial value	0.7	
rated value  operating range factor control supply voltage rated value of magnet coil at DC      initial value      full-scale value	0.7 1.25	
rated value  operating range factor control supply voltage rated value of magnet coil at DC      initial value     full-scale value  design of the surge suppressor	0.7 1.25 with varistor	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak	0.7 1.25 with varistor 1.5 A	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak	0.7 1.25 with varistor 1.5 A 50 μs	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value	0.7 1.25 with varistor 1.5 A	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current holding current mean value	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A 0.8 A 230 ms	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current holding current mean value closing power of magnet coil at DC	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A 0.8 A 230 ms 12 mA 23 W	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current holding current mean value closing power of magnet coil at DC holding power of magnet coil at DC	0.7 1.25 with varistor 1.5 A 50 µs 0.45 A 0.8 A 230 ms 12 mA	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current holding current mean value closing power of magnet coil at DC holding power of magnet coil at DC closing delay	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A 0.8 A 230 ms 12 mA 23 W 1 W	
rated value  operating range factor control supply voltage rated value of magnet coil at DC      initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current holding current mean value closing power of magnet coil at DC holding power of magnet coil at DC closing delay     at DC	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A 0.8 A 230 ms 12 mA 23 W	
rated value  operating range factor control supply voltage rated value of magnet coil at DC     initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current holding current mean value closing power of magnet coil at DC holding power of magnet coil at DC closing delay	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A 0.8 A 230 ms 12 mA 23 W 1 W	
rated value  operating range factor control supply voltage rated value of magnet coil at DC      initial value     full-scale value  design of the surge suppressor inrush current peak duration of inrush current peak locked-rotor current mean value locked-rotor current peak duration of locked-rotor current holding current mean value closing power of magnet coil at DC holding power of magnet coil at DC closing delay     at DC opening delay	0.7 1.25 with varistor 1.5 A 50 μs 0.45 A 0.8 A 230 ms 12 mA 23 W 1 W	

control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	2
instantaneous contact	2
number of NO contacts for auxiliary contacts	2
instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	6 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	1A
at 600 V rated value	0.15 A
operational current at DC-13	
• at 24 V rated value	6 A
at 48 V rated value	2 A
at 60 V rated value	2 A
at 110 V rated value	1A
at 125 V rated value	0.9 A
at 220 V rated value	0.3 A
• at 600 V rated value	0.1 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	65 A
• at 600 V rated value	52 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
• for 3-phase AC motor	
— at 200/208 V rated value	20 hp
— at 220/230 V rated value	20 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	50 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	
• for short-circuit protection of the main circuit	
— with type of coordination 1 required	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 125A (690V,100kA), aM: 63A (690V,100kA), BS88: 100A (415V,80kA)
for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
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 60715
side-by-side mounting	Yes
height	114 mm
width	55 mm
depth	178 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm

— upwards	10 mm	
— downwards	10 mm	
— at the side	0 mm	
<ul> <li>for grounded parts</li> </ul>		
— forwards	10 mm	
— upwards	10 mm	
— at the side	6 mm	
— downwards	10 mm	
<ul> <li>for live parts</li> </ul>		
— forwards	10 mm	
— upwards	10 mm	
— downwards	10 mm	
— at the side	6 mm	
Connections/ Terminals		
type of electrical connection		
for main current circuit	screw-type 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	7 3 37	
solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)	
finely stranded with core end processing	2x (1 25 mm²), 1x (1 35 mm²)	
type of connectable conductor cross-sections		
for auxiliary contacts		
— solid or stranded	2x (0.5 2.5 mm²)	
finely stranded with core end processing	2x (0.5 1.5 mm²)	
— finely stranded without core end processing	2x (0.5 2.5 mm²)	
for AWG cables for auxiliary contacts	2x (0.5 2.5 min <sup>-</sup> ) 2x (20 14)	
AWG number as coded connectable conductor cross	LA (20 14)	
section		
• for main contacts	18 1	
for auxiliary contacts	20 14	
Safety related data		
product function		
mirror contact according to IEC 60947-4-1	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		
with low demand rate according to SN 31920	40 %	
with high demand rate according to SN 31920	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	20 a	
61508		
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		
product function bus communication	No	
Certificates/ approvals		
General Product Approval		

### General Product Approval



Confirmation





<u>KC</u>



EMC Safety/Safety of Ma chinery	Declaration of Conformity	Test Certificates
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## Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

### Marine / Shipping













other Railway 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=3RT2037-3XF44-0LA2

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2037-3XF44-0LA2

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-3XF44-0LA2

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

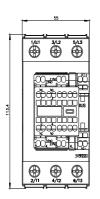
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2037-3XF44-0LA2&lang=en

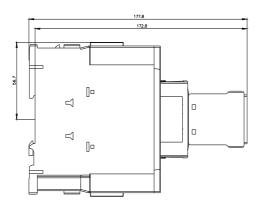
Characteristic: Tripping characteristics, I2t, Let-through current

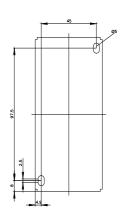
https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-3XF44-0LA2/char

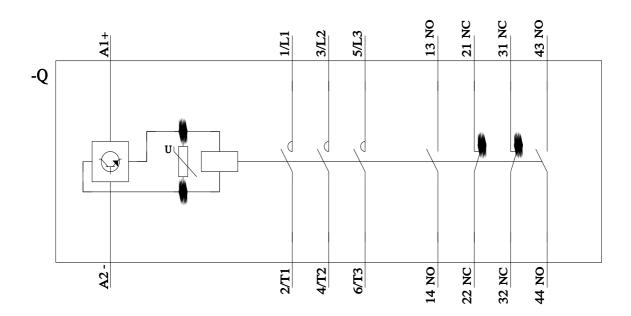
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2037-3XF44-0LA2&objecttype=14&gridview=view1









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