## SIEMENS

## Data sheet

## 3RT2025-4XJ40-0LA2



traction contactor, AC-3e/AC-3, 17 A, 7.5 kW / 400 V, 3-pole, 72 V DC, 0.7-1.25\* Us, electronic drive, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, ring cable lug connection, size: S0

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	S0
product extension	
<ul> <li>function module for communication</li> </ul>	No
<ul> <li>auxiliary switch</li> </ul>	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	2.7 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	0.9 W
<ul> <li>without load current share typical</li> </ul>	1.6 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
<ul> <li>of auxiliary circuit rated value</li> </ul>	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	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 10g / 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)	10/01/2009
mbient 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 %
Aain 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
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C rated	40 A
value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	40 A
value	
<ul> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul>	35 A
at AC-2 at 400 V rated value	17 A
• at AC-3	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
• at AC-3e	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
at AC-4 at 400 V rated value	15.5 A
minimum cross-section in main circuit	
at maximum AC-1 rated value	10 mm²
at maximum No Protect value	10 mm <sup>2</sup>
operational current for approx. 200000 operating cycles at	
AC-4	
<ul> <li>at 400 V rated value</li> </ul>	7.7 A
at 690 V rated value	7.7 A
operational current	
<ul> <li>at 1 current path at DC-1</li> </ul>	
— at 24 V rated value	35 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
• with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1A
— at 600 V rated value	0.8 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 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	20 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
	0.27 A 0.16 A

— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
<ul> <li>at AC-2 at 400 V rated value</li> </ul>	7.5 kW
• at AC-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
• at AC-3e	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
operating power for approx. 200000 operating cycles at AC-	
4	
• at 400 V rated value	3.5 kW
• at 690 V rated value	6 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>	225 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	225 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	189 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	140 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	115 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-1 maximum	1 000 1/h
at AC-2 maximum	1 000 1/h
• at AC-3 maximum	1 000 1/h
• at AC-3e maximum	1 000 1/h
at AC-2 at AC-3e maximum	1 000 1/h
• at AC-4 maximum	300 1/h
Ratings for railway applications	
thermal current (lth) up to 690 V	
up to 40 °C according to IEC 60077 rated value	40 A
up to 70 °C according to IEC 60077 rated value	30 A
Control circuit/ Control	20
type of voltage	DC
type of voltage of the control supply voltage	DC
control supply voltage at DC	
rated value	72 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	with varistor
duration of locked-rotor current	180 ms
closing power of magnet coil at DC	13.2 W
holding power of magnet coil at DC	1.3 W
closing delay	
• at DC	50 75 ms
opening delay	
• at DC	30 50 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	

number of NC contacts for auxiliary contacts	1
instantaneous contact	1
number of NO contacts for auxiliary contacts	1
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	
<ul> <li>at 24 V rated value</li> </ul>	10 A
<ul> <li>at 48 V rated value</li> </ul>	6 A
<ul> <li>at 60 V rated value</li> </ul>	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
<ul> <li>at 220 V rated value</li> </ul>	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
<ul> <li>at 220 V rated value</li> </ul>	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	14 A
• at 600 V rated value	17 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	1 hp
— at 230 V rated value	3 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	15 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	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
- with type of coordination 1 required	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
- with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (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	91 mm
width	45 mm
depth	107 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 pa</li> </ul>	irts				
— forwards			10 mm		
— upwards			10 mm		
— at the side			6 mm		
- downward	s		10 mm		
<ul> <li>for live parts</li> </ul>					
— forwards			10 mm		
- upwards			10 mm		
— downward	s		10 mm		
— at the side			6 mm		
Connections/ Terminal					
type of electrical con					
			Ring cable lug connection		
for main current circuit     for auxiliary and control circuit					
for auxiliary and control circuit		ring terminal lug connection			
at contactor for	auxiliary contacts		Ring cable lug connection		
<ul> <li>of magnet coil</li> </ul>			Ring cable lug connection		
Safety related data					
product function					
<ul> <li>mirror contact a</li> </ul>	ccording to IEC 60947-4-1		Yes		
<ul> <li>positively driven</li> </ul>	operation according to IEC	C 60947-5-1	No		
B10 value with high de	emand rate according to SN	31920	450 000		
proportion of danger	ous failures				
<ul> <li>with low deman</li> </ul>	d rate according to SN 319	20	40 %		
<ul> <li>with high demar</li> </ul>	nd rate according to SN 319	920	73 %		
failure rate [FIT] with lo	ow demand rate according	to SN 31920	100 FIT		
	interval or service life acco		20 a		
	n the front according to II	EC 60529	IP00		
Communication/ Proto	-				
product function bus		_	No		
-			110		
Certificates/ approvals					
Certificates/ approvals					
Certificates/ approvals General Product App					
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		Confirmation		KC	rnr
		Confirmation	U	KC	FAC
		Confirmation		KC	EAC
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General Product App	oroval	Confirmation	(h)	KC	EAC
General Product App	Functional				EAC
General Product App	Functional Safety/Safety of Ma-	Confirmation		KC Test Certificates	EAC
General Product App	Functional				EAC
General Product App	Functional Safety/Safety of Ma- chinery		Conformity	Test Certificates	EAC Special Test Certific-
General Product App	Functional Safety/Safety of Ma-		Conformity		ERC Special Test Certific- ate
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## 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=3RT2025-4XJ40-0LA2

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2025-4XJ40-0LA2

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-4XJ40-0LA

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

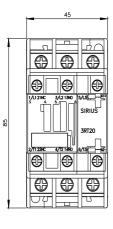
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2025-4XJ40-0LA2&lang=en

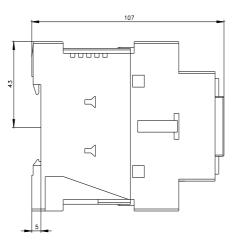
Characteristic: Tripping characteristics, I2t, Let-through current

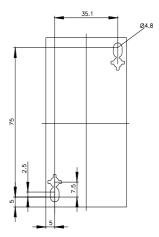
https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-4XJ40-0LA2/char

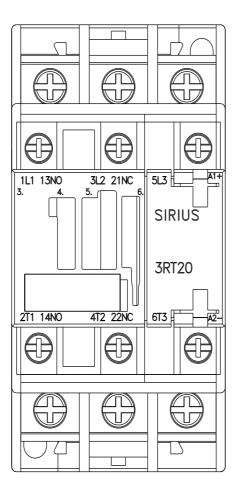
Further characteristics (e.g. electrical endurance, switching frequency)

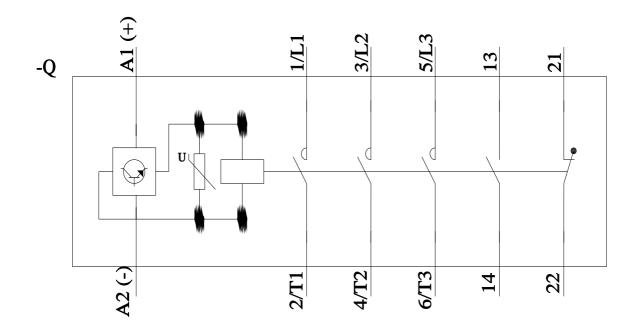
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2025-4XJ40-0LA2&objecttype=14&gridview=view1











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