



power contactor, AC-3e/AC-3, 25 A, 11 kW / 400 V, 3-pole, 21-28 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, screw terminal

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

General technical data

size of contactor	S0
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	5.7 W
• at AC in hot operating state per pole	1.9 W
• without load current share typical	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	8,3g / 5 ms, 5,3g / 10 ms
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 10 ms
• at DC	15g / 5 ms, 10g / 10 ms
mechanical service life (operating cycles)	
• of contactor typical	10 000 000
• 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 Prohibition (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	40 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	40 A
— up to 690 V at ambient temperature 60 °C rated value	35 A
• at AC-3	
— at 400 V rated value	25 A
— at 500 V rated value	18 A
— at 690 V rated value	13 A
• at AC-3e	
— at 400 V rated value	25 A
— at 500 V rated value	18 A
— at 690 V rated value	13 A
• at AC-4 at 400 V rated value	15.5 A
• at AC-5a up to 690 V rated value	35.2 A
• at AC-5b up to 400 V rated value	20.7 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	20.2 A
— up to 400 V for current peak value n=20 rated value	20.2 A
— up to 500 V for current peak value n=20 rated value	20.2 A
— up to 690 V for current peak value n=20 rated value	12.9 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	13.5 A
— up to 400 V for current peak value n=30 rated value	13.5 A
— up to 500 V for current peak value n=30 rated value	13.5 A
— up to 690 V for current peak value n=30 rated value	13 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm ²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	9 A
• at 690 V rated value	9 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 60 V rated value	20 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 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— 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 60 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 60 V rated value	5 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
● with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 60 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
— at 600 V rated value	0.16 A
● with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 60 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	
● at AC-3	
— at 230 V rated value	5.5 kW
— at 400 V rated value	11 kW
— at 500 V rated value	11 kW
— at 690 V rated value	11 kW
● at AC-3e	
— at 230 V rated value	5.5 kW
— at 400 V rated value	11 kW
— at 500 V rated value	11 kW
— at 690 V rated value	11 kW
operating power for approx. 200000 operating cycles at AC-4	
● at 400 V rated value	4.4 kW
● at 690 V rated value	7.7 kW
operating apparent power at AC-6a	
● up to 230 V for current peak value n=20 rated value	8 kVA
● up to 400 V for current peak value n=20 rated value	13.9 kVA
● up to 500 V for current peak value n=20 rated value	17.4 kVA
● up to 690 V for current peak value n=20 rated value	15.4 kVA
operating apparent power at AC-6a	
● up to 230 V for current peak value n=30 rated value	5.3 kVA
● up to 400 V for current peak value n=30 rated value	9.3 kVA
● up to 500 V for current peak value n=30 rated value	11.6 kVA
● up to 690 V for current peak value n=30 rated value	15.5 kVA
short-time withstand current in cold operating state up to 40 °C	
● limited to 1 s switching at zero current maximum	375 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 5 s switching at zero current maximum	300 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 10 s switching at zero current maximum	210 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 30 s switching at zero current maximum	144 A; Use minimum cross-section acc. to AC-1 rated value
● limited to 60 s switching at zero current maximum	118 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
● at AC	1 500 1/h
● at DC	1 500 1/h
operating frequency	
● at AC-1 maximum	1 000 1/h
● at AC-2 maximum	750 1/h

• at AC-3 maximum • at AC-3e maximum • at AC-4 maximum	750 1/h 750 1/h 250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	
• at 50 Hz rated value • at 60 Hz rated value	21 ... 28 V 21 ... 28 V
control supply voltage at DC	
• rated value	21 ... 28 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value • full-scale value	0.7 1.3
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz • at 60 Hz	0.7 ... 1.3 0.7 ... 1.3
design of the surge suppressor	with varistor
inrush current peak	3 A
duration of inrush current peak	30 µs
locked-rotor current mean value	0.3 A
locked-rotor current peak	0.52 A
duration of locked-rotor current	180 ms
holding current mean value	45 mA
apparent pick-up power of magnet coil at AC	
• at 50 Hz • at 60 Hz	6.6 VA 6.7 VA
inductive power factor with closing power of the coil	
• at 50 Hz • at 60 Hz	0.98 0.98
apparent holding power of magnet coil at AC	
• at 50 Hz • at 60 Hz	1.9 VA 2 VA
inductive power factor with the holding power of the coil	
• at 50 Hz • at 60 Hz	0.86 0.82
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	1.4 W
closing delay	
• at AC • at DC	50 ... 80 ms 50 ... 80 ms
opening delay	
• at AC • at DC	30 ... 50 ms 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 instantaneous contact	1
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	10 A 6 A 6 A 3 A

• at 125 V rated value • at 220 V rated value • at 600 V rated value	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 0.3 A 0.3 A 0.3 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	21 A 22 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	2 hp 3 hp 5 hp 7.5 hp 15 hp 20 hp
contact rating of auxiliary contacts according to UL	A600 / P600
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 • for short-circuit protection of the auxiliary switch required	gG: 100 A (690 V, 100 kA), aM: 50 A (690 V, 100 kA), BS88: 100 A (415 V, 80 kA) gG: 35A (690V, 100kA), aM: 20A (690V, 100kA), BS88: 35A (415V, 80kA) 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	85 mm
width	45 mm
depth	107 mm
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	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	screw-type terminals screw-type terminals

• at contactor for auxiliary contacts • of magnet coil	Screw-type terminals
type of connectable conductor cross-sections for main contacts	Screw-type terminals
• solid • solid or stranded • finely stranded with core end processing	2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²)
connectable conductor cross-section for main contacts	2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²)
• solid • stranded • finely stranded with core end processing	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
connectable conductor cross-section for auxiliary contacts	1 ... 10 mm ²
• solid • stranded • finely stranded with core end processing	1 ... 10 mm ²
connectable conductor cross-section for auxiliary contacts	1 ... 10 mm ²
• solid or stranded • finely stranded with core end processing	0.5 ... 2.5 mm ²
type of connectable conductor cross-sections	0.5 ... 2.5 mm ²
• for auxiliary contacts — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
AWG number as coded connectable conductor cross section	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²)
• for main contacts • for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
	16 ... 8
	20 ... 14

Safety related data

product function	Yes
• mirror contact according to IEC 60947-4-1	450 000
B10 value with high demand rate according to SN 31920	
proportion of dangerous failures	40 %
• with low demand rate according to SN 31920 • 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 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
suitability for use	Yes
• safety-related switching OFF	

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](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Test Certificates	Marine / Shipping
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[Miscellaneous](#)



Marine / Shipping	other		Railway	Dangerous Good	
	Confirmation		Confirmation	Vibration and Shock	Transport Information

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=3RT2026-1NB30>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2026-1NB30>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1NB30>

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

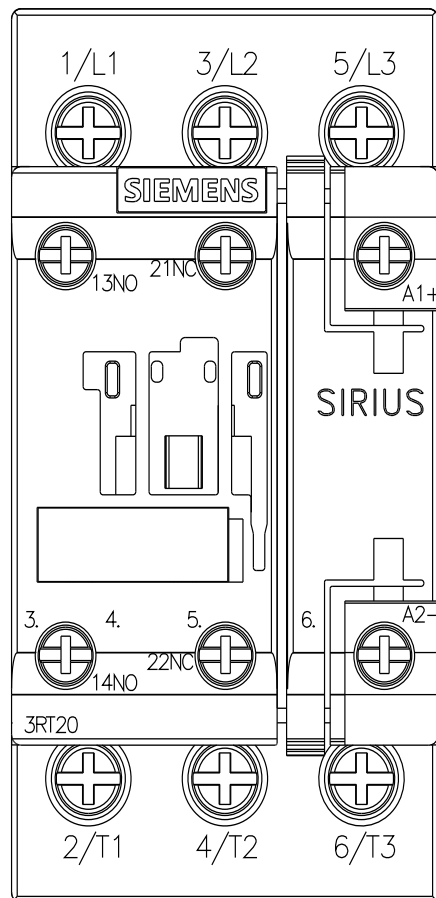
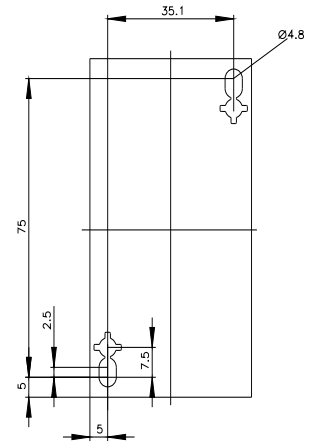
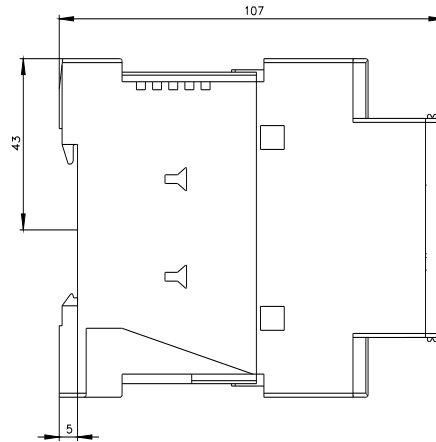
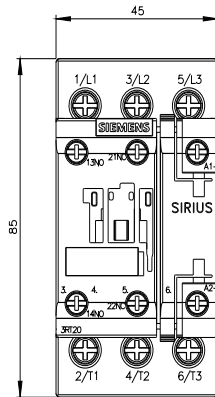
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2026-1NB30&lang=en

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2026-1NB30/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2026-1NB30&objecttype=14&gridview=view1>





2/10/2023