



Contactor, AC-3, 30 kW/400 V 110 V AC/50 Hz/120 V AC/60 Hz 4-pole, 2 NO+2 NC, Size S3 Screw terminal 1 NO+1 NC integrated

product brand name	SIRIUS
product designation	contactor
product type designation	3RT25
General technical data	
size of contactor	S3
product extension	
• function module for communication	No
• auxiliary switch	Yes
insulation voltage	
• of main circuit with degree of pollution 3 rated value	1 000 V
• of auxiliary circuit with degree of pollution 3 rated value	690 V
surge voltage resistance	
• of main circuit rated value	8 kV
• of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	690 V
shock resistance at rectangular impulse	
• at AC	6.7 g / 5 ms, 4.0 g / 10 ms
shock resistance with sine pulse	
• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
mechanical service life (switching 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.09.2017
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 acc. to IEC 60068-2-30 maximum	95 %
Main circuit	
number of poles for main current circuit	4
number of NO contacts for main contacts	2

number of NC contacts for main contacts	2
operational current	
- at AC-1 up to 690 V - at ambient temperature 40 °C rated value - at ambient temperature 60 °C rated value - at AC-2 at AC-3 at 400 V - per NO contact rated value - per NC contact rated value	100 A 90 A 65 A 65 A
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm ²
operational current	
at 1 current path at DC-1 - at 24 V rated value - at 110 V rated value - at 220 V rated value - at 440 V rated value - at 600 V rated value with 2 current paths in series at DC-1 - at 24 V rated value - at 110 V rated value - at 220 V rated value - at 440 V rated value at 1 current path at DC-3 at DC-5 - at 24 V per NC contact rated value - at 24 V per NO contact rated value - at 110 V per NC contact rated value - at 110 V per NO contact rated value - at 220 V per NC contact rated value - at 220 V per NO contact rated value - at 440 V per NC contact rated value - at 440 V per NO contact rated value with 2 current paths in series at DC-3 at DC-5 - at 24 V per NC contact rated value - at 24 V per NO contact rated value - at 110 V per NC contact rated value - at 110 V per NO contact rated value - at 220 V per NC contact rated value - at 220 V per NO contact rated value - at 440 V per NC contact rated value - at 440 V per NO contact rated value	100 A 9 A 2 A 0.6 A 0.4 A 100 A 100 A 10 A 1.8 A 40 A 40 A 2.5 A 2.5 A 1 A 1 A 0.15 A 0.15 A 100 A 100 A 100 A 100 A 7 A 7 A 0.42 A 0.42 A
operating power at AC-2 at AC-3	
- at 230 V per NC contact rated value - at 230 V per NO contact rated value - at 400 V per NC contact rated value - at 400 V per NO contact rated value	18.5 kW 18.5 kW 30 kW 30 kW
short-time withstand current in cold operating state up to 40 °C	
- limited to 1 s switching at zero current maximum - limited to 5 s switching at zero current maximum - limited to 10 s switching at zero current maximum - limited to 30 s switching at zero current maximum - limited to 60 s switching at zero current maximum	880 A; Use minimum cross-section acc. to AC-1 rated value 880 A; Use minimum cross-section acc. to AC-1 rated value 691 A; Use minimum cross-section acc. to AC-1 rated value 437 A; Use minimum cross-section acc. to AC-1 rated value 344 A; Use minimum cross-section acc. to AC-1 rated value
power loss [W] at AC-3 at 400 V for rated value of the operational current per conductor	3.5 W
no-load switching frequency	
at AC	5 000 1/h
operating frequency at AC-1 maximum	900 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	110 V

• at 60 Hz rated value	120 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.8 ... 1.1
apparent pick-up power of magnet coil at AC	326 V·A
• at 50 Hz	326 V·A
• at 60 Hz	326 V·A
inductive power factor with closing power of the coil	0.62
• at 50 Hz	22
• at 60 Hz	22
apparent holding power of magnet coil at AC	22 V·A
• at 50 Hz	0.62 V·A
• at 60 Hz	0.62 V·A
inductive power factor with the holding power of the coil	0.38
• at 50 Hz	0.36
• at 60 Hz	0.36
closing delay	
• at AC	13 ... 50 ms
opening delay	
• at AC	11 ... 20 ms
arcing time	10 ... 20 ms
control version of the switch operating mechanism	AC
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	6 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	
yielded mechanical performance [hp]	
• for 3-phase AC motor at 460/480 V rated value	25 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	gG: 250 A (690 V, 100 kA) gR: 250 A (690 V, 100 kA)

• for short-circuit protection of the auxiliary switch required	fuse gG: 10 A
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 standard mounting rail according to DIN EN 60715
• side-by-side mounting	Yes
height	140 mm
width	70 mm
depth	152 mm
required spacing	
• with side-by-side mounting — forwards — backwards — upwards — downwards — at the side • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — downwards — at the side	0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 0 mm 10 mm 10 mm 10 mm 0 mm 0 mm 10 mm 10 mm 10 mm
Connections/ Terminals	
type of electrical connection	
• for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil	screw-type terminals screw-type terminals Screw-type terminals Screw-type terminals
type of connectable conductor cross-sections	
• for main contacts — solid — stranded — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts	2x (2.5 ... 16 mm²) 2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 16 mm²); [2x (6 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²)] 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²) 2x (10 ... 1/0), 1x (10 ... 2)
type of connectable conductor cross-sections	
• for auxiliary contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²) 2x (20 ... 16), 2x (18 ... 14)
AWG number as coded connectable conductor cross section for main contacts	10 ... 2
Safety related data	
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
Certificates/ approvals	
General Product Approval	



[Confirmation](#)



[KC](#)



EMC	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
-----	---------------------------------------	---------------------------	-------------------



[Type Examination Certificate](#)



[UK Declaration of Conformity](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Marine / Shipping



other	Railway	Dangerous Good
-------	---------	----------------

[Confirmation](#)

[Vibration and Shock](#)

[Transport Information](#)

Further information

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=3RT2544-1AK60>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2544-1AK60>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2544-1AK60>

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

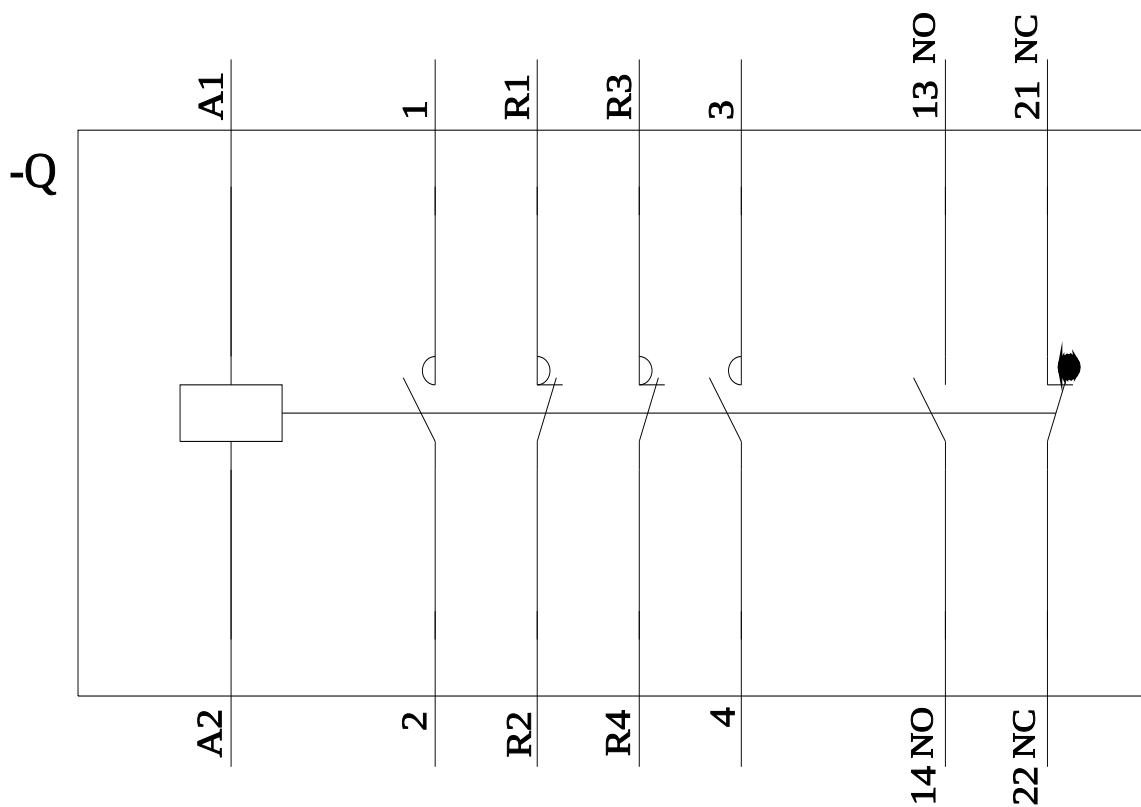
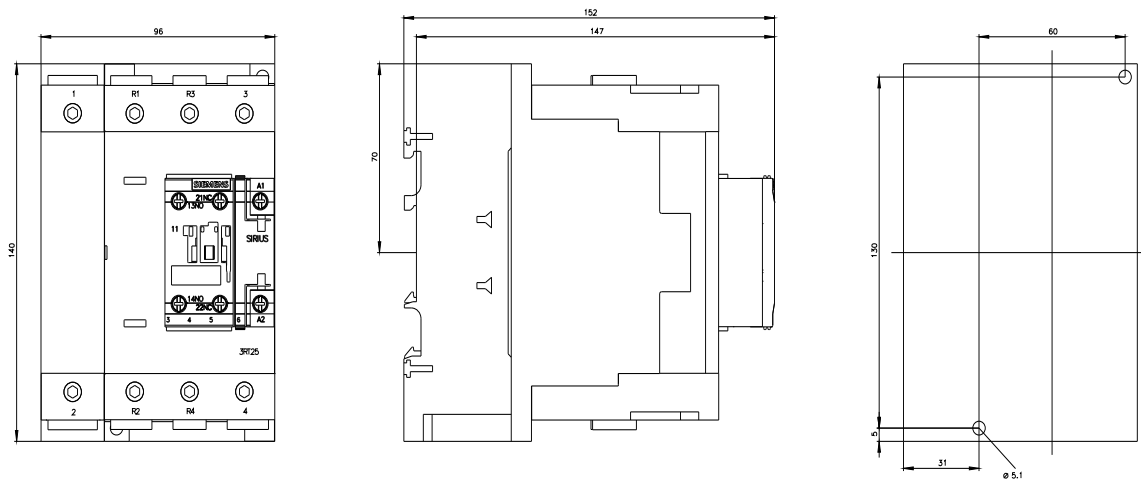
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2544-1AK60&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2544-1AK60/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2544-1AK60&objecttype=14&gridview=view1>



last modified:

12/1/2021

