

Contactor assembly for star-delta (wye-delta) start AC-3, 55 kW/400 V, 24-33 V AC/DC 3-pole, size S2 screw terminals electrical and mechanical interlock 3 NO + 3 NC integrated



Product brand name	SIRIUS
Product designation	Contactor assembly for star-delta (wye-delta) start
Product type designation	3RA24
Manufacturer's article number	• 1 of the supplied contactor 3RT2037-1NB30 • 2 of the supplied contactor 3RT2037-1NB30 • 3 of the supplied contactor 3RT2035-1NB30 • of the supplied RS assembly kit 3RA2933-2BB1 • of the supplied function module for wye-delta circuits 3RA2816-0EW20
General technical data	
Size of contactor	S2
Product extension	No
Insulation voltage	690 V
• with degree of pollution 3 at AC rated value	
Degree of pollution	3
Surge voltage resistance rated value	6 kV
Protection class IP	

• on the front	IP20
Shock resistance at rectangular impulse	
• at AC	7.7g / 5 ms, 4.5g / 10 ms
• at DC	7.7g / 5 ms, 4.5g / 10 ms
Shock resistance with sine pulse	
• at AC	12g / 5 ms, 7g / 10 ms
• at DC	12g / 5 ms, 7g / 10 ms
Mechanical service life (switching cycles)	
• of contactor typical	10 000 000
• of the contactor with added auxiliary switch block typical	10 000 000
Reference code acc. to DIN EN 81346-2	Q

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

Main circuit

Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Number of NC contacts for main contacts	0
Operating voltage	
• at AC-3 rated value maximum	690 V
Operating current	
• at AC-1 at 400 V	
— at ambient temperature 40 °C rated value	115 A
— at ambient temperature 60 °C rated value	100 A
• at AC-2 at 400 V rated value	115 A
• at AC-3	
— at 400 V rated value	115 A
Operating power	
• at AC-2 at 400 V rated value	55 kW
• at AC-3	
— at 400 V rated value	55 kW
• at AC-4 at 400 V rated value	48.5 kW
No-load switching frequency	1 500 1/h
Operating frequency	
• at AC-1 maximum	800 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	700 1/h

- at AC-4 maximum

200 1/h

Control circuit/ Control

Type of voltage of the control supply voltage	AC/DC
Control supply voltage 1 at AC	
• at 50 Hz	20 ... 33 V
• at 60 Hz	20 ... 33 V
Control supply voltage 1	
• at DC	20 ... 33 V
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 ... 1.1
• at 60 Hz	0.85 ... 1.1
Design of the surge suppressor	with varistor
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	82 V·A
• at 60 Hz	82 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.64
• at 60 Hz	0.5
Apparent holding power of magnet coil at AC	
• at 50 Hz	6 V·A
• at 60 Hz	6 V·A
Inductive power factor with the holding power of the coil	
• at 50 Hz	0.36
• at 60 Hz	0.39
Closing power of magnet coil at DC	28 W
Holding power of magnet coil at DC	4 W

Auxiliary circuit

Number of NC contacts for auxiliary contacts	
• instantaneous contact	3
Number of NO contacts for auxiliary contacts	
• instantaneous contact	3
Operating current of auxiliary contacts at AC-12 maximum	10 A
Operating current of auxiliary contacts at AC-15	
• at 230 V	6 A
• at 400 V	3 A
Operating current of auxiliary contacts at DC-13	
• at 24 V	10 A
• at 60 V	2 A
• at 110 V	1 A

• at 220 V	0.3 A
Contact reliability of auxiliary contacts	< 1 error per 100 million operating cycles
UL/CSA ratings	
Contact rating of auxiliary contacts according to UL	A600 / Q600
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 NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 125 A 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
Mounting type	screw fixing
Height	142 mm
Width	177.5 mm
Depth	223 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	10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 10 mm
Connections/ Terminals	
Type of electrical connection for main current circuit	screw-type terminals

• for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²)
— single or multi-stranded	2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²)
— finely stranded with core end processing	2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²)
• at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
Type of connectable conductor cross-sections	
• for auxiliary contacts	
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²)
— finely stranded with core end processing	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²)
• at AWG conductors for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)

Safety related data	
B10 value	
• with high demand rate acc. to SN 31920	1 000 000
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	40 %
• with high demand rate acc. to SN 31920	73 %
Failure rate [FIT]	
• with low demand rate acc. to SN 31920	100 FIT
T1 value for proof test interval or service life acc. to IEC 61508	20 y

Communication/ Protocol	
Product function Bus communication	No
Protocol is supported	
• AS-Interface protocol	No
Product function Control circuit interface with IO link	No

Certificates/ approvals				
General Product Approval	Declaration of Conformity	Test Certificates	Marine / Shipping	other



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



[Confirmation](#)

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=3RA2437-8XF32-1NB3

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2437-8XF32-1NB3>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2437-8XF32-1NB3>

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

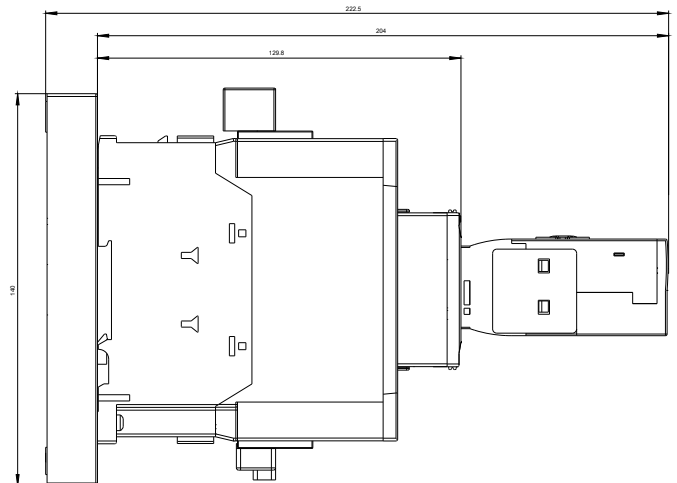
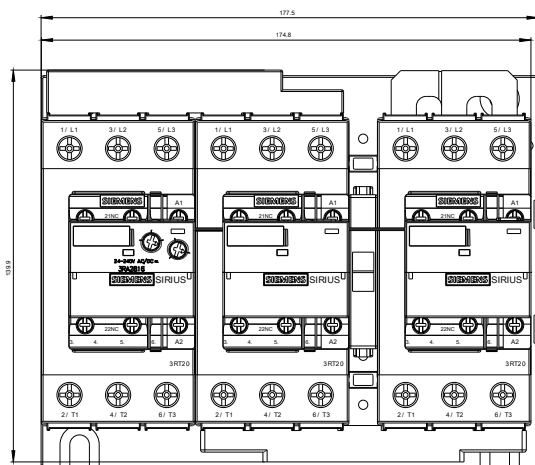
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2437-8XF32-1NB3&lang=en

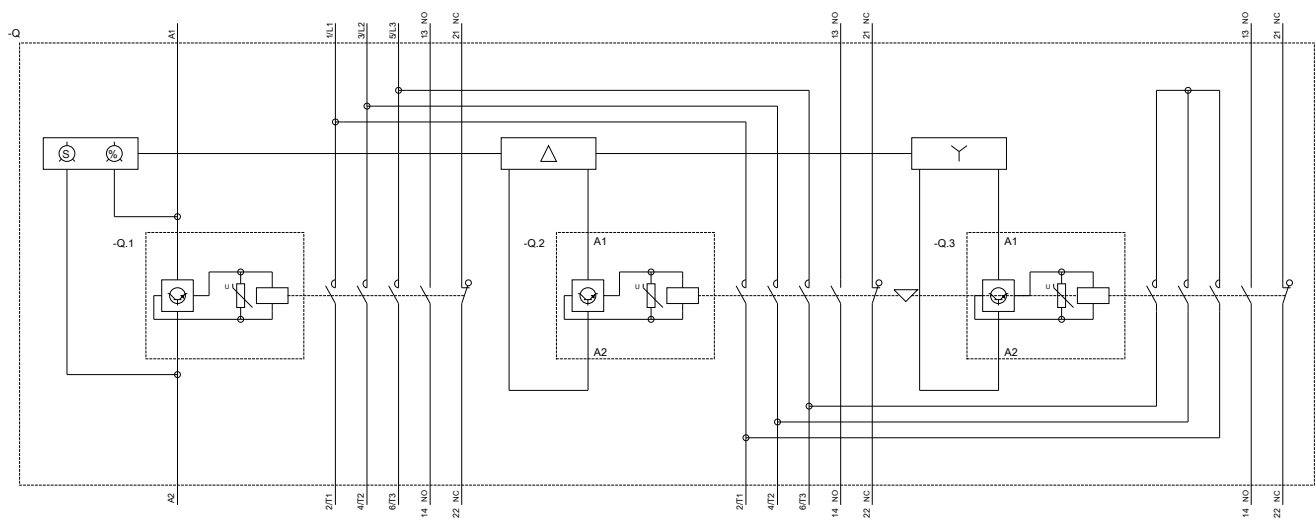
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2437-8XF32-1NB3/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2437-8XF32-1NB3&objecttype=14&gridview=view1>





last modified:

05/04/2020