

Contactor assembly for star-delta (wye-delta) start AC-3, 75 kW/400 V 230 V AC, 50/60 Hz Size S3, screw terminal electrical and mechanical interlock 3 NO+3 NC



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 3RT2045-1AL20 • 2 of the supplied contactor 3RT2045-1AL20 • 3 of the supplied contactor 3RT2035-1AL20 • of the supplied RS assembly kit 3RA2943-2C • of the supplied function module for wye-delta circuits 3RA2816-0EW20

General technical data	
Size of contactor	S3
Product extension	No
• Auxiliary switch	
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
Degree of protection NEMA rating	other
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 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	125 A
— at ambient temperature 60 °C rated value	105 A
• at AC-3	
— at 400 V rated value	115 A
Operating power	
• at AC-3	
— at 400 V rated value	55 kW
— at 690 V rated value	90 kW
Operating frequency	
• at AC-1 maximum	900 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	1 000 1/h
• at AC-4 maximum	300 1/h

Control circuit/ Control

Type of voltage of the control supply voltage	AC
Control supply voltage 1 at AC	

• at 50 Hz rated value • at 60 Hz rated value	230 V 230 V
Operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz • at 60 Hz	0.8 ... 1.1 0.85 ... 1.1
Apparent pick-up power of magnet coil at AC	
• at 50 Hz • at 60 Hz	698 V·A 594 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz • at 60 Hz	0.62 0.55
Apparent holding power of magnet coil at AC	
• at 50 Hz • at 60 Hz	52 V·A 38 V·A
Inductive power factor with the holding power of the coil	
• at 50 Hz • at 60 Hz	0.35 0.41

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 • at 400 V	6 A 3 A
Operating current of auxiliary contacts at DC-13	
• at 24 V • at 60 V • at 110 V • at 220 V	10 A 2 A 1 A 0.3 A

UL/CSA ratings

Contact rating of auxiliary contacts according to UL	A600 / Q600
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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 NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A

- 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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail
Height	180 mm
Width	220 mm
Depth	244 mm
Required spacing	
• with side-by-side mounting — forwards 10 mm — Backwards 0 mm — upwards 10 mm — downwards 10 mm — at the side 10 mm • for grounded parts — forwards 10 mm — Backwards 0 mm — upwards 10 mm — at the side 10 mm — downwards 10 mm • for live parts — forwards 10 mm — Backwards 0 mm — upwards 10 mm — downwards 10 mm — at the side 10 mm	

Connections/ Terminals

Type of electrical connection	
• for main current circuit • for auxiliary and control current circuit	screw-type terminals screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts — single or multi-stranded — finely stranded with core end processing — finely stranded without core end processing • at AWG conductors for main contacts	2x (2.5 ... 16 mm²), 2x (10 ... 50 mm²), 1x (10 ... 70 mm²) 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²) 2x (10 ... 35 mm²), 1x (10 ... 50 mm²) 2x (10 ... 1/0), 1x (10 ... 2/0)
Type of connectable conductor cross-sections	
• for auxiliary contacts	

- single or multi-stranded 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)
- finely stranded with core end processing 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
- 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	other
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[Miscellaneous](#)

[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=3RA2444-8XF32-1AL2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2444-8XF32-1AL2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2444-8XF32-1AL2>

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

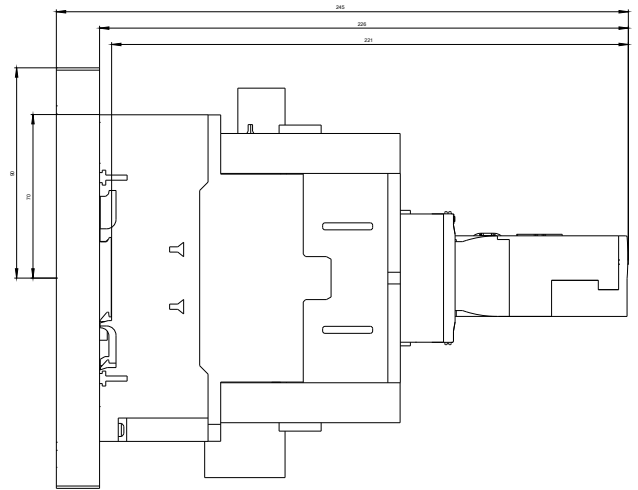
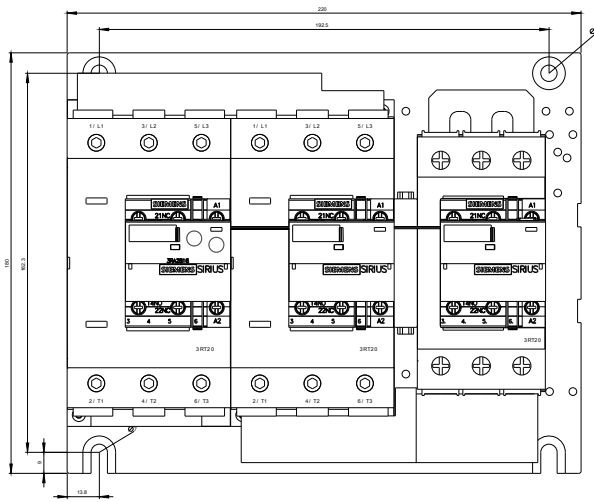
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2444-8XF32-1AL2&lang=en

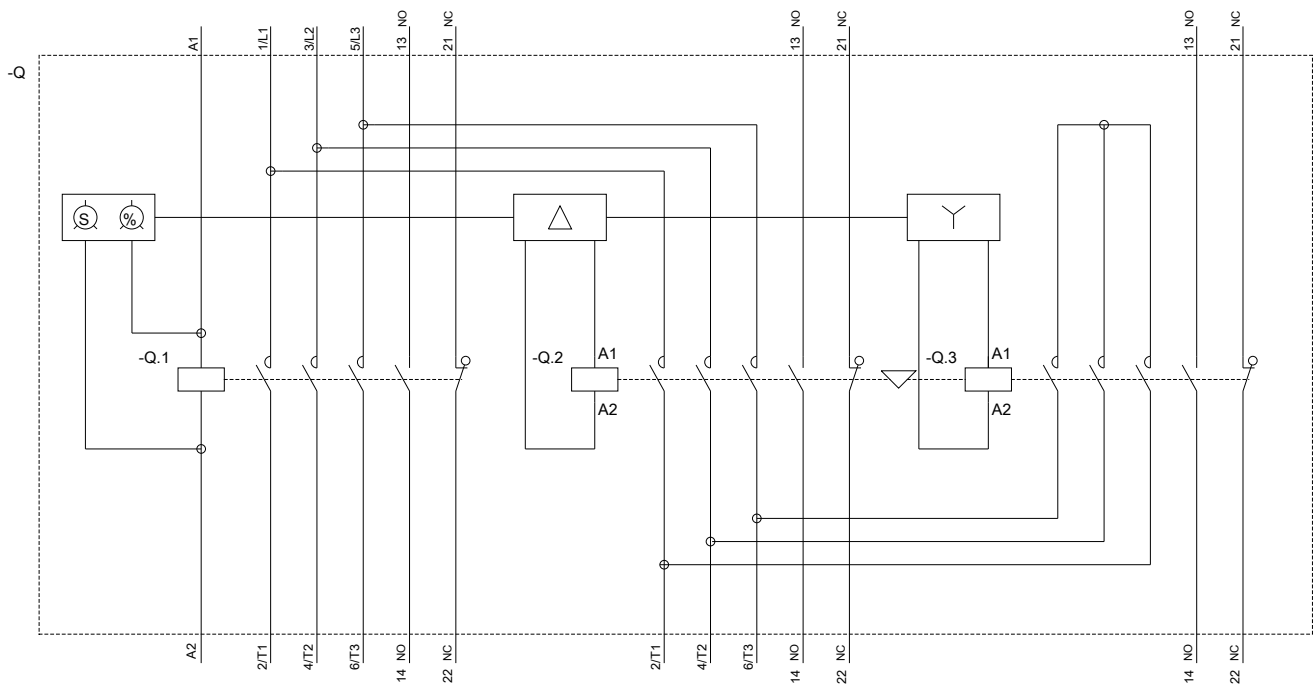
Characteristic: Tripping characteristics, I_{Δt}, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2444-8XF32-1AL2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2444-8XF32-1AL2&objecttype=14&gridview=view1>





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