

Contactor assembly for star-delta (wye-delta) start AC-3, 15/18.5 kW/400 V 230 V AC, 50/60 Hz, 3-pole Size S0, screw terminal 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	<ul style="list-style-type: none"> • 1 of the supplied contactor 3RT2026-1AL20 • 2 of the supplied contactor 3RT2026-1AL20 • 3 of the supplied contactor 3RT2024-1AL20 • of the supplied RS assembly kit 3RA2923-2BB1 • of the supplied function module for wye-delta circuits 3RA2816-0EW20

General technical data	
Size of contactor	S0
Product extension	No
<ul style="list-style-type: none"> • Auxiliary switch 	
Insulation voltage	690 V
<ul style="list-style-type: none"> • with degree of pollution 3 rated value 	
Degree of pollution	3
Surge voltage resistance rated value	6 kV
Protection class IP	

<ul style="list-style-type: none"> • on the front 	IP20
Shock resistance	12.5g / 5 ms and 7.8g / 10 ms
Shock resistance at rectangular impulse	
<ul style="list-style-type: none"> • at AC 	7,5g / 5 ms, 4,7g / 10 ms
<ul style="list-style-type: none"> • at DC 	10g / 5 ms, 7,5g / 10 ms
Shock resistance with sine pulse	
<ul style="list-style-type: none"> • at AC 	11,8g / 5 ms, 7,4g / 10 ms
<ul style="list-style-type: none"> • at DC 	15g / 5 ms, 10g / 10 ms
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of contactor typical 	10 000 000
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • maximum 	2 000 m
Ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
Operating current	
<ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value — at ambient temperature 60 °C rated value 	40 A 35 A
<ul style="list-style-type: none"> • at AC-2 at 400 V rated value 	32 A
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	40 A
Operating power	
<ul style="list-style-type: none"> • at AC-2 at 400 V rated value 	15 kW
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value — at 690 V rated value 	18.5 kW 19 kW 19 kW
<ul style="list-style-type: none"> • at AC-4 at 400 V rated value 	3.5 kW
No-load switching frequency	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-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	230 V
• at 60 Hz rated value	230 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	
• at 50 Hz	65 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.82
Apparent holding power of magnet coil at AC	
• at 50 Hz	8.5 V·A
Inductive power factor with the holding power of the coil	
• at 50 Hz	0.25

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
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Short-circuit protection

Design of the fuse link <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — 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: 100 A gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 35 A fuse gG: 10 A
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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	101 mm
Width	135 mm
Depth	171 mm
Required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards 6 mm — Backwards 0 mm — upwards 6 mm — downwards 6 mm — at the side 6 mm • for grounded parts <ul style="list-style-type: none"> — forwards 6 mm — Backwards 0 mm — upwards 6 mm — at the side 6 mm — downwards 6 mm • for live parts <ul style="list-style-type: none"> — forwards 6 mm — Backwards 0 mm — upwards 6 mm — downwards 6 mm — at the side 6 mm 	

Connections/Terminals

Type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit 	screw-type terminals screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid 2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) — single or multi-stranded 2x (1 ... 2,5 mm²), 2x (2,5 ... 10 mm²) 	

<ul style="list-style-type: none"> — finely stranded with core end processing • at AWG conductors for main contacts 	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (16 ... 12), 2x (14 ... 8)
Type of connectable conductor cross-sections <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts 	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)

Safety related data

B10 value <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 	1 000 000
Proportion of dangerous failures <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 	40 % 75 %
Failure rate [FIT] <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • 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
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[Special Test Certificate](#)



Marine / Shipping	other	Railway
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[Confirmation](#)

[Vibration and Shock](#)

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2425-8XF32-1AL2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2425-8XF32-1AL2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2425-8XF32-1AL2>

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

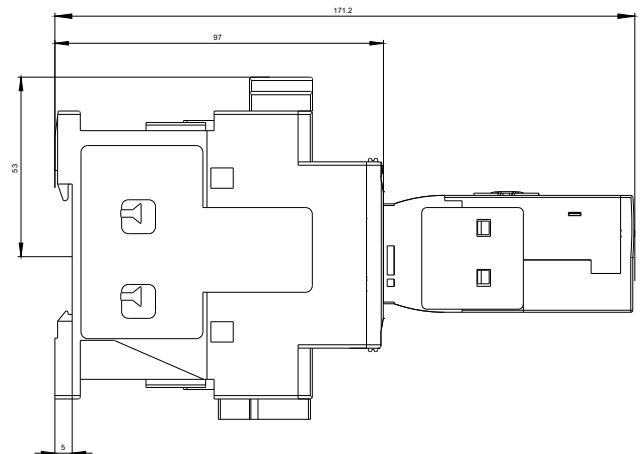
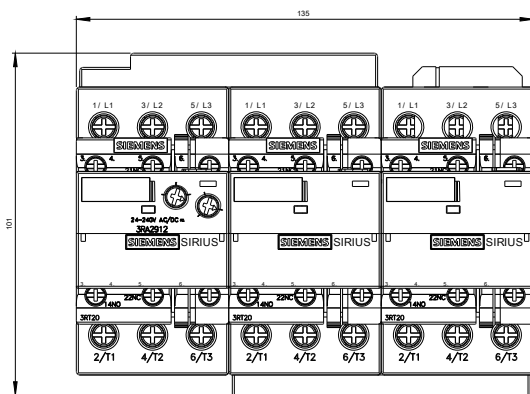
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2425-8XF32-1AL2&lang=en

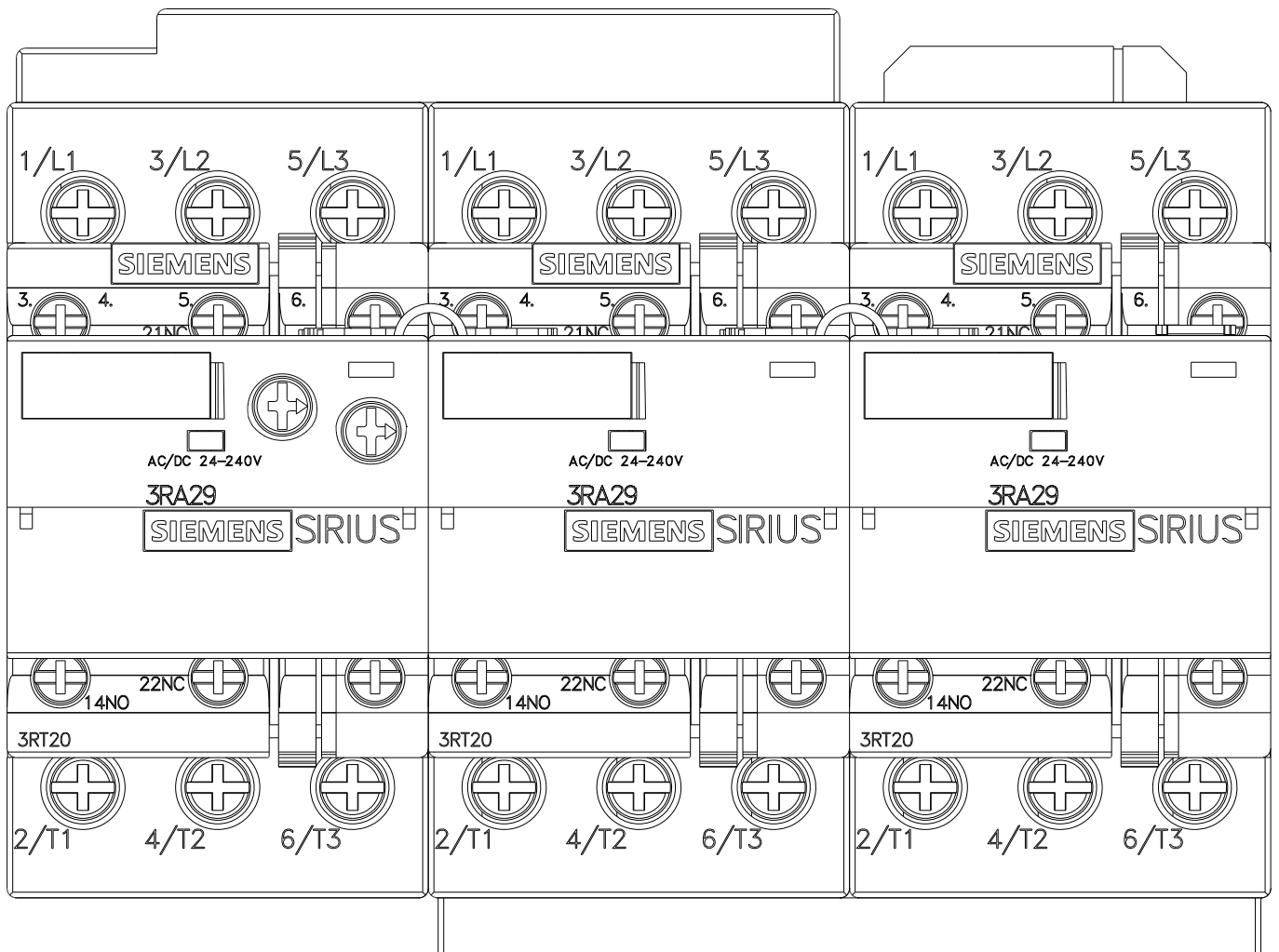
Characteristic: Tripping characteristics, I²t, Let-through current

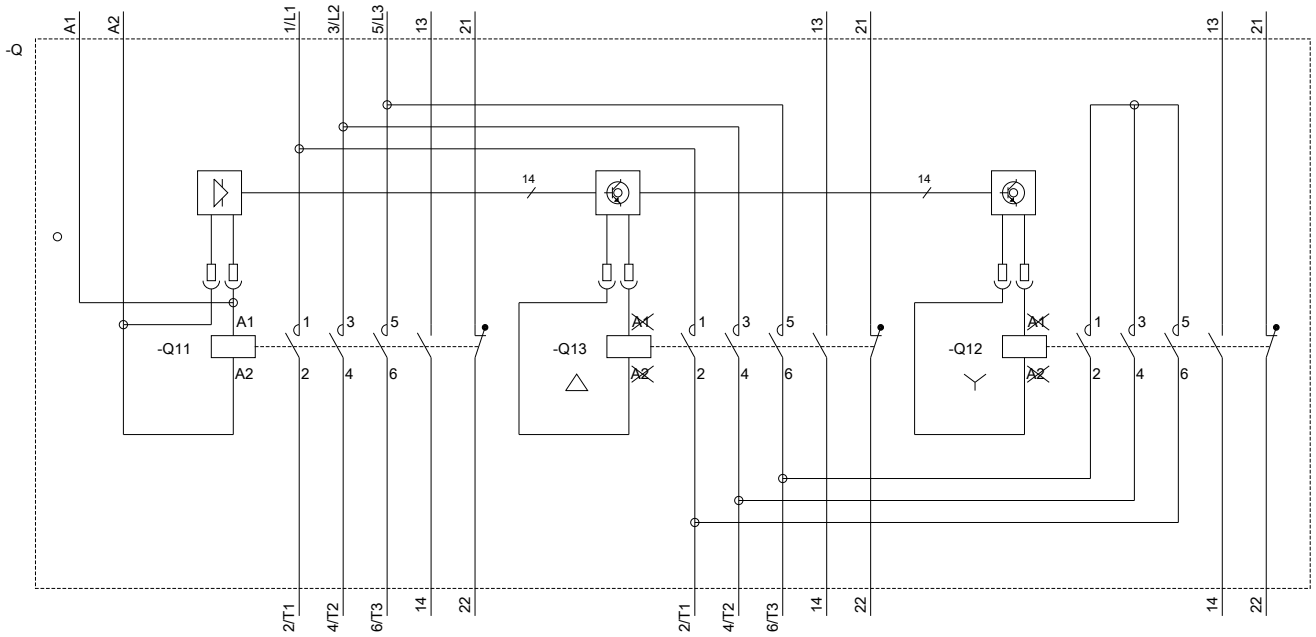
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2425-8XF32-1AL2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2425-8XF32-1AL2&objecttype=14&gridview=view1>







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