

Reversing contactor assembly AC-3,4 kW/400 V, AC48 V, 50/60 Hz 3-pole, Size S00 Spring-type terminal electrical and mechanical interlock



product brand name	SIRIUS
product designation	Reversing contactor assembly
product type designation	3RA23
<ul style="list-style-type: none"> • Manufacturer's article number 1 of the supplied contactor • Manufacturer's article number 2 of the supplied contactor • Manufacturer's article number of the supplied RH assembly kit 	3RT2016-2AH02 3RT2016-2AH02 3RA2913-2AA2

General technical data	
Size of contactor	S00
<ul style="list-style-type: none"> • product extension auxiliary switch 	Yes
insulation voltage	690 V
<ul style="list-style-type: none"> • with degree of pollution 3 at AC rated value 	690 V
surge voltage resistance rated value	6 kV
protection class IP	IP20
<ul style="list-style-type: none"> • on the front 	IP20
Shock resistance at rectangular impulse	6,7g / 5 ms, 4,2g / 10 ms
<ul style="list-style-type: none"> • at AC 	6,7g / 5 ms, 4,2g / 10 ms

• at DC	6,7g / 5 ms, 4,2g / 10 ms
Shock resistance with sine pulse	
• at AC	10,5g / 5 ms, 6,6g / 10 ms
• at DC	10,5g / 5 ms, 6,6g / 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
• ambient temperature 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-3 at 400 V rated value	9 A
Operating current	
• at 1 current path at DC-1 — at 24 V rated value	20 A
— at 110 V rated value	2.1 A
• with 2 current paths in series at DC-1 — at 24 V rated value	20 A
— at 110 V rated value	12 A
• with 3 current paths in series at DC-1 — at 24 V rated value	20 A
— at 110 V rated value	20 A
Operating current	
• at 1 current path at DC-3 at DC-5 — at 24 V rated value	20 A
— at 110 V rated value	0.15 A
• with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value	20 A
— at 110 V rated value	0.35 A
• with 3 current paths in series at DC-3 at DC-5	

— at 24 V rated value	20 A
— at 110 V rated value	20 A
• operating power at AC-3	
— at 400 V rated value	4 kW
— at 500 V rated value	4.5 kW
— at 690 V rated value	5.5 kW
• Operating power at AC-4 at 400 V rated value	4 kW
No-load switching frequency	1 500 1/h
operating frequency at AC-3 maximum	750 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	48 V
• at 60 Hz rated value	48 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
Apparent pick-up power of magnet coil at AC	
• at 50 Hz	27 V·A
Inductive power factor with closing power of the coil	
• at 50 Hz	0.8
Apparent holding power of magnet coil at AC	
• at 50 Hz	4.2 V·A
Inductive power factor with the holding power of the coil	
• at 50 Hz	0.25

Auxiliary circuit

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

full-load current (FLA) for three-phase AC motor	
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<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	<p>7.6 A</p> <p>9 A</p>
yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	<p>0.33 hp</p> <p>1 hp</p> <p>2 hp</p> <p>3 hp</p> <p>5 hp</p> <p>7.5 hp</p>
contact rating of auxiliary contacts according to UL	A600 / Q600

Short-circuit protection

<ul style="list-style-type: none"> • Design of the fuse link for short-circuit protection of the main circuit with type of coordination 1 required • Design of the fuse link for short-circuit protection of the main circuit with type of assignment 2 required • design of the fuse link for short-circuit protection of the auxiliary switch required 	<p>gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 35 A</p> <p>gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 20 A</p> <p>fuse gG: 10 A</p>
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Installation/ mounting/ dimensions

<ul style="list-style-type: none"> • mounting position 	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
<ul style="list-style-type: none"> • mounting type 	screw and snap-on mounting onto 35 mm standard mounting rail
height	84 mm
width	90 mm
depth	83 mm
required spacing	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — backwards — upwards — at the side — downwards 	<p>6 mm</p> <p>0 mm</p> <p>6 mm</p> <p>6 mm</p> <p>6 mm</p> <p>6 mm</p> <p>6 mm</p> <p>0 mm</p> <p>6 mm</p> <p>6 mm</p> <p>6 mm</p>

• for live parts	
— forwards	6 mm
— backwards	0 mm
— upwards	6 mm
— downwards	6 mm
— at the side	6 mm

Connections/ Terminals

type of electrical connection

• for main current circuit	spring-loaded terminals
• for auxiliary and control current circuit	spring-loaded terminals
• type of connectable conductor cross-sections for main contacts solid	2x (0.5 ... 4 mm ²)
• type of connectable conductor cross-sections for main contacts single or multi-stranded	2x (0,5 ... 4 mm ²)
• type of connectable conductor cross-sections for main contacts finely stranded with core end processing	2x (0.5 ... 2.5 mm ²)
• type of connectable conductor cross-sections for main contacts finely stranded without core end processing	2x (0.5 ... 2.5 mm ²)
• type of connectable conductor cross-sections at AWG conductors for main contacts	1x (20 ... 12)
• type of connectable conductor cross-sections for auxiliary contacts single or multi-stranded	2x (0.5 ... 2.5 mm ²)
• type of connectable conductor cross-sections for auxiliary contacts finely stranded with core end processing	2x (0.5 ... 1.5 mm ²)
• type of connectable conductor cross-sections for auxiliary contacts finely stranded without core end processing	2x (0.5 ... 1.5 mm ²)
• type of connectable conductor cross-sections at AWG conductors for auxiliary contacts	2x (20 ... 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	75 %
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	Yes
• 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	
				Miscellaneous	Special Test Certificate
CSA	UL		EG-Konf.		

Test Certificates	Marine / Shipping				
Type Test Certificates/Test Report					
	ABS	BUREAU VERITAS	LRS	PRS	RINA

Marine / Shipping	other	Railway
	Confirmation	Vibration and Shock
		
RMRS		

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=3RA2316-8XB30-2AH0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2316-8XB30-2AH0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2316-8XB30-2AH0>

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

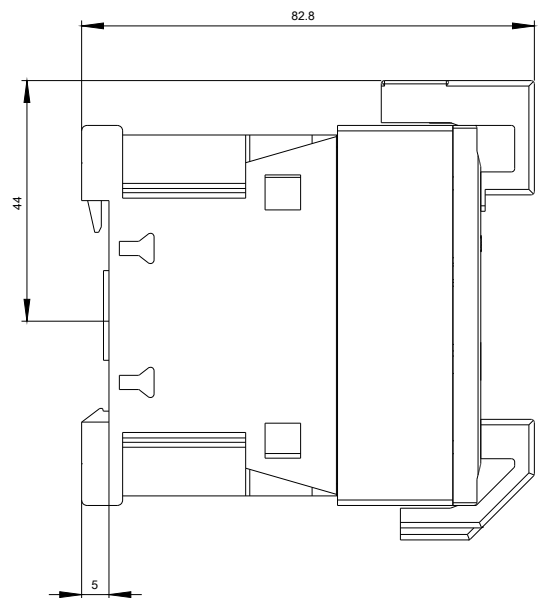
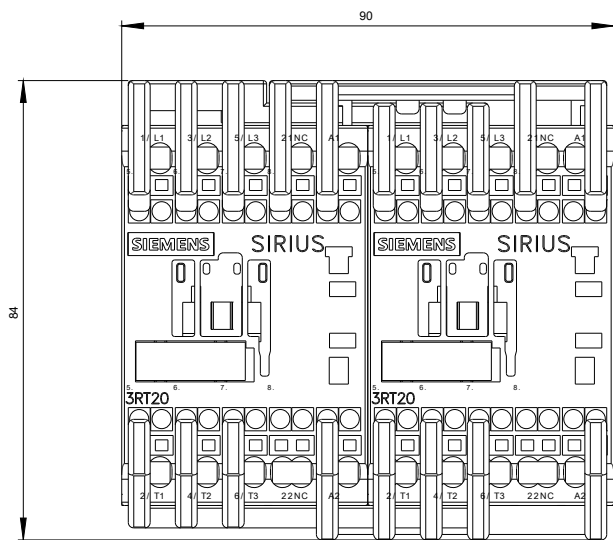
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2316-8XB30-2AH0&lang=en

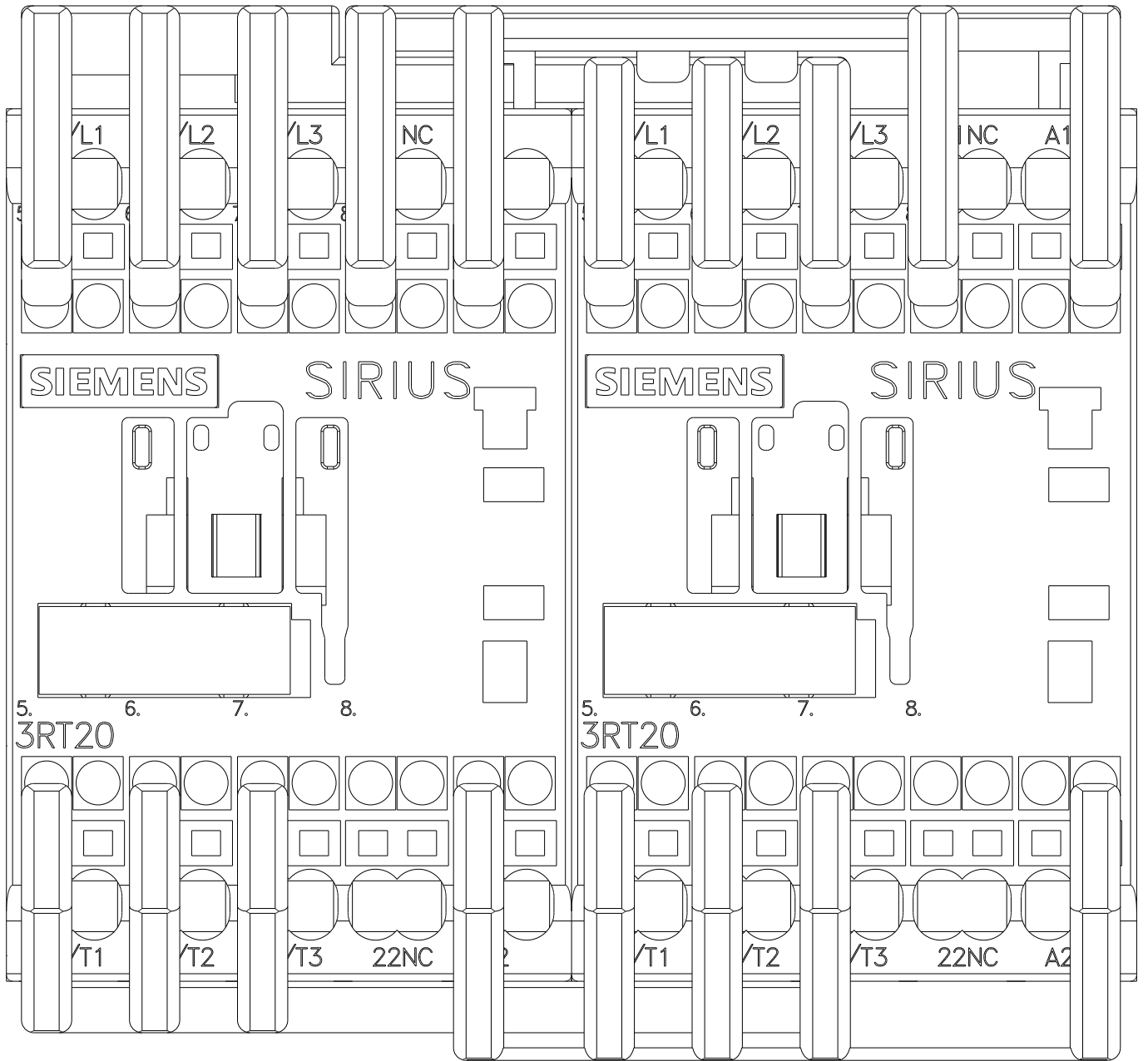
Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2316-8XB30-2AH0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2316-8XB30-2AH0&objecttype=14&gridview=view1>







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