

Reversing contactor assembly AC-3,4 kW/400 V, AC24 V, 50/60 Hz 3-pole, Size S00 screw terminal electrical and mechanical interlock



product brand name	SIRIUS
Product designation	Reversing contactor assembly
Product type designation	3RA23
Manufacturer's article number	<ul style="list-style-type: none"> • 1 of the supplied contactor 3RT2016-1AB02 • 2 of the supplied contactor 3RT2016-1AB02 • of the supplied RH assembly kit 3RA2913-2AA1

General technical data	
Size of contactor	S00
Product extension	<ul style="list-style-type: none"> • Auxiliary switch Yes • Insulation voltage with degree of pollution 3 at AC rated value 690 V
Surge voltage resistance rated value	6 kV
<ul style="list-style-type: none"> • protection class IP on the front IP20 	
Shock resistance at rectangular impulse	<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	

<ul style="list-style-type: none"> • at AC 	10,5g / 5 ms, 6,6g / 10 ms
<ul style="list-style-type: none"> • at DC 	10,5g / 5 ms, 6,6g / 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-3 <ul style="list-style-type: none"> — at 400 V rated value 	9 A
Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value 	20 A 2.1 A 20 A 12 A 20 A 20 A
Operating current	
<ul style="list-style-type: none"> • at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value 	20 A 0.15 A 20 A 0.35 A 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
• 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	24 V
• at 60 Hz rated value	24 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
• operating current of auxiliary contacts at AC-15 at 400 V	3 A
• operating current of auxiliary contacts at DC-13 at 24 V	10 A
• Operating current of auxiliary contacts at DC-13 at 60 V	2 A
• Operating current of auxiliary contacts at DC-13 at 110 V	1 A
• Operating current of auxiliary contacts at DC-13 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	
<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

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 	<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>

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
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail
Height	68 mm
Width	90 mm
Depth	73 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 	<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>

— downwards	6 mm
• 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	screw-type terminals
• Type of electrical connection for auxiliary and control current circuit	screw-type terminals
Type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²), 2x 4 mm ²
— single or multi-stranded	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x (0,5 ... 4 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 main contacts	2x (20 ... 16), 2x (18 ... 14)
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	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 Type Test Certificates/Test Report

Test Certificates	Marine / Shipping				
Special Test Certificate					

Marine / Shipping	other	Railway
	Confirmation	Vibration and Shock
		

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=3RA2316-8XB30-1AB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2316-8XB30-1AB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2316-8XB30-1AB0>

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

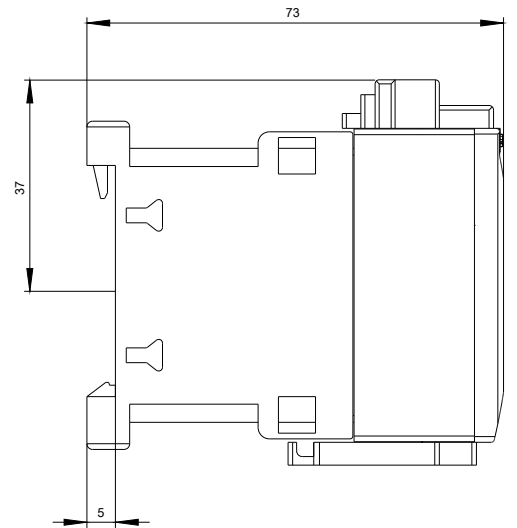
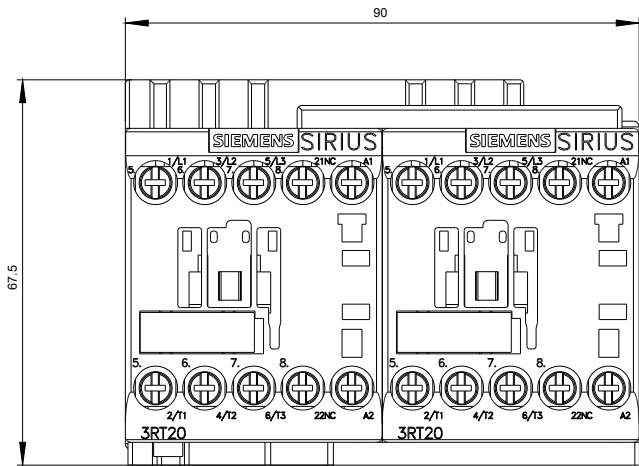
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2316-8XB30-1AB0&lang=en

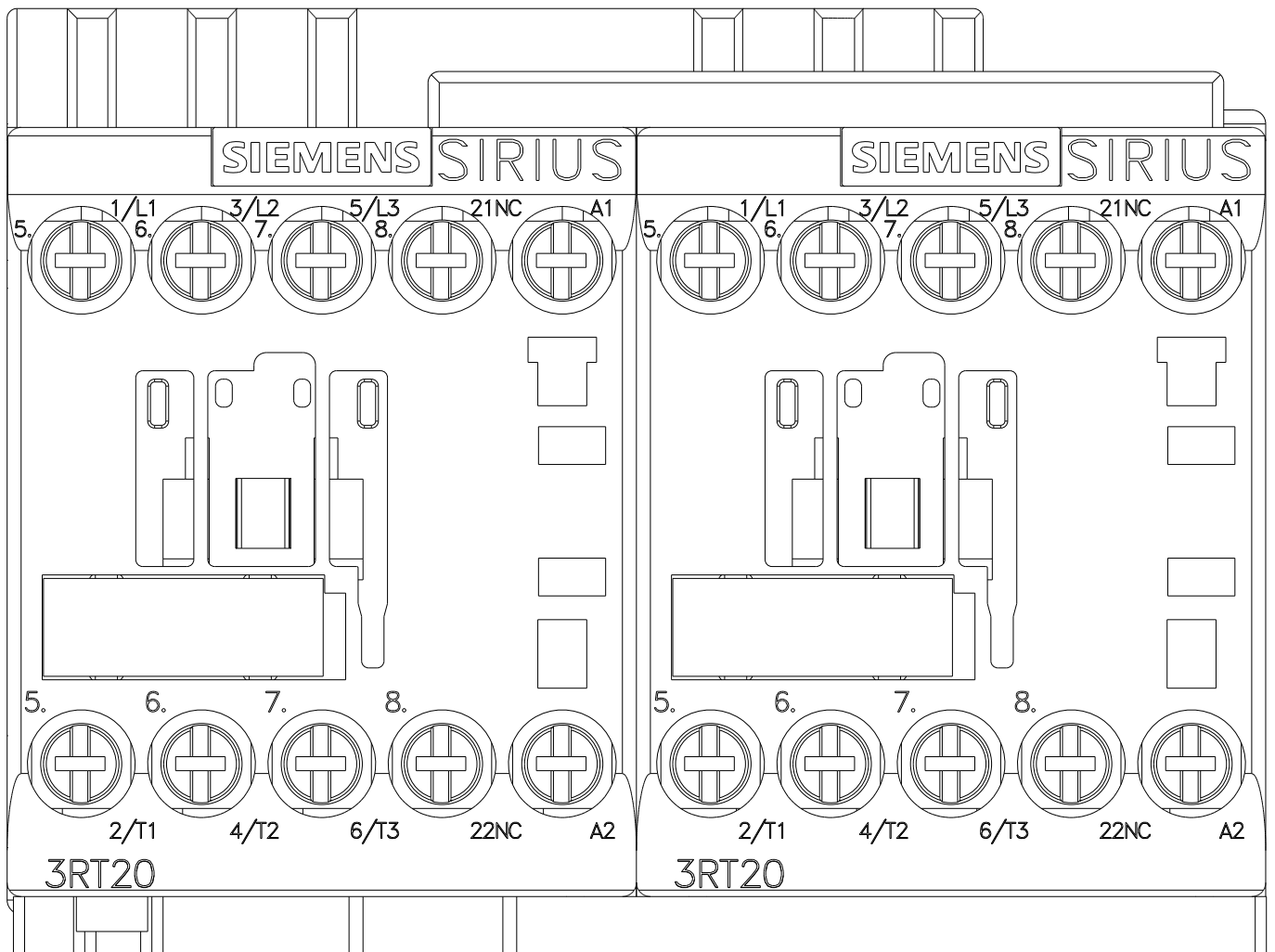
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2316-8XB30-1AB0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2316-8XB30-1AB0&objecttype=14&gridview=view1>







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