## 3RA2345-8XB30-1AL2

**Data sheet** 



Reversing contactor assembly, AC-3, 37 kW 400 V, 230 V AC/50/60 Hz 3-pole, Size S3 screw terminal electrical and mechanical interlock 2 NO integrated

product type designation product type designation anufacture's article number  • 1 of the supplied contactor • 2 of the supplied RS assembly kit  SRA2943-2AA1  General technical data  size of contactor product extension auxiliary switch  Yes  shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC  shock resistance with sine pulse • of contactor typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical  anuble of contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  10 000 000  20	product brand name	SIRIUS	
manufacturer's article number  • 1 of the supplied contactor • 2 of the supplied contactor • 3RT2045-1AL20 • of the supplied contactor • of the supplied RS assembly kit 3RA2943-2AA1  General technical data size of contactor  shock resistance at rectangular impulse • at AC • at AC  shock resistance with sine pulse • at AC  mechanical service life (switching cycles) • of contactor typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2  Quibstance Prohibitance (Date)  ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage  Main circuit number of POC contacts for main contacts number of NC contacts for main contacts 0 operating voltage at AC-3 rated value maximum • at AC-3 • at 400 V rated value • at 600 V rated value • at 600 V rated value • at 500 V rated value	product designation	Reversing contactor assembly	
• 1 of the supplied contactor • 2 of the supplied RS assembly kit  General technical data  size of contactor product extension auxiliary switch • at AC  shock resistance at rectangular impulse • at AC  mechanical service life (switching cycles) • of contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  anbient conditions  installation altitude at height above sea level maximum ambient temperature • during operation • during storage  Main circuit number of NC contacts for main contacts operating voltage at AC-3 rated value maximum  operational current at AC-3 • at 400 V rated value • at 690 V rated value • at 600 V rated value	product type designation	3RA23	
of the supplied contactor     of the supplied RS assembly kit  Ceneral technical data  size of contactor     product extension auxiliary switch     shock resistance at rectangular impulse         ot at AC	manufacturer's article number		
of the supplied RS assembly kit  General technical data  size of contactor  product extension auxiliary switch  shock resistance at rectangular impulse  at AC  shock resistance with sine pulse  at AC  for g / 5 ms, 4.0 g / 10 ms  shock resistance with sine pulse  at AC  to 6,7 g / 5 ms, 6.3 g / 10 ms  mechanical service life (switching cycles)  of contactor typical  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Qu Substance Prohibitance (Date)  installation altitude at height above sea level maximum  ambient temperature  during operation  during storage  storage  during storage  Main circuit  number of NO contacts for main contacts  number of NO contacts for main contacts  operating voltage at AC-3 rated value maximum  at 400 V rated value  at 690 V rated value  at	<ul> <li>1 of the supplied contactor</li> </ul>	3RT2045-1AL20	
Sa   Sa   Sa   Sa   Sa   Sa   Sa   Sa	<ul> <li>2 of the supplied contactor</li> </ul>	3RT2045-1AL20	
size of contactor  product extension auxiliary switch  shock resistance at rectangular impulse  at AC  shock resistance with sine pulse  at AC  for g / 5 ms, 4.0 g / 10 ms  shock resistance with sine pulse  at AC  shock resistance with sine pulse  at AC  of contactor life (switching cycles)  of contactor typical  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quustance Prohibitance (Date)  mabient conditions  installation altitude at height above sea level maximum  ambient temperature  during operation  during storage  during storage  during of NC contacts for main current circuit  number of NO contacts for main contacts  number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  at 400 V rated value  at 500 V rated value  at 600 V rated value	<ul> <li>of the supplied RS assembly kit</li> </ul>	3RA2943-2AA1	
product extension auxiliary switch shock resistance at rectangular impulse • at AC • at AC  mechanical service life (switching cycles) • of contactor typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Qusue Career Car	General technical data		
shock resistance at rectangular impulse  at AC  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  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quadric reference code according to IEC 81346-2  Quadric reference reference code according to IEC 81346-2  Quadric reference reference code according to IEC 81346-2  Quadric reference code according to IEC 81346-2  Quadric reference refere	size of contactor	S3	
• at AC  shock resistance with sine pulse  • at AC  nechanical service life (switching cycles)  • of contactor typical  • of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quustance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  during storage  Anioricuit  number of poles for main current circuit  number of NC contacts for main contacts  operating voltage at AC-3 rated value • at 400 V rated value • at 500 V rated value • 45 kW	product extension auxiliary switch	Yes	
shock resistance with sine pulse  at AC  mechanical service life (switching cycles)  of contactor typical  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quantification altitude at height above sea level maximum  ambient temperature  of during operation of utring storage  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  number of NC contacts for main contacts  operation altiture at AC-3  of at 400 V rated value  at AC-3  — at 400 V rated value  37 kW  — at 500 V rated value  37 kW  — at 500 V rated value  37 kW  — at 500 V rated value  37 kW  45 kW	shock resistance at rectangular impulse		
at AC  mechanical service life (switching cycles)  of contactor typical  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quantification altitude at height above sea level maximum  ambient temperature  of during operation of uning storage  Main circuit  number of poles for main current circuit  number of NC contacts for main contacts operating voltage at AC-3 rated value maximum  operational current at AC-3  o at 400 V rated value  of at AC-3  — at 400 V rated value — at 500 V rated value — at 500 V rated value — at 400 V rated value  of the contacts of the contact of the contact of the contact	• at AC	6.7 g / 5 ms, 4.0 g / 10 ms	
mechanical service life (switching cycles)  of contactor typical  of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Quantification according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  of during operation of uring storage  of NC contacts for main current circuit  number of NC contacts for main contacts  number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  of at 400 V rated value  at 400 V rated value  at AC-3  operating power  at AC-3  —at 400 V rated value  at AC-3  —at 400 V rated value  at AC-3  —at 400 V rated value  37 kW  —at 500 V rated value  45 kW	shock resistance with sine pulse		
of contactor typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation during storage  of C  Main circuit  number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum at 400 V rated value at 400 V rated value operating power of AC C3  — at 400 V rated value — at 500 V rated value	• at AC	10.6 g / 5 ms, 6.3 g / 10 ms	
of the contactor with added auxiliary switch block typical  reference code according to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  o during operation of uduring storage  Main circuit  number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  at 400 V rated value o at 690 V rated value operating power  o at AC-3  — at 400 V rated value  37 kW — at 500 V rated value  45 kW	mechanical service life (switching cycles)		
reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 03/01/2017  Ambient conditions installation altitude at height above sea level maximum 2 000 m  ambient temperature	of contactor typical	10 000 000	
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  • during storage  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 640 V rated value	typical	10 000 000	
installation altitude at height above sea level maximum  ambient temperature  during operation during storage  60 °C  turing storage  60 °C  Main circuit  number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  operational current at AC-3  at 400 V rated value at 690 V rated value at 690 V rated value at AC-3  at 400 V rated value at AC-3	reference code according to IEC 81346-2	Q	
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  60 °C  -55 +80 °C   Main circuit  number of poles for main current circuit  number of NO contacts for main contacts 3 number of NC contacts for main contacts 0 operating voltage at AC-3 rated value maximum 1 000 V operational current at AC-3  • at 400 V rated value 80 A  • at 690 V rated value 58 A  operating power  • at AC-3  — at 400 V rated value 37 kW — at 500 V rated value 45 kW	Substance Prohibitance (Date)	03/01/2017	
ambient temperature  • during operation • during storage  -55 +80 °C  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts 3 number of NC contacts for main contacts 0 operating voltage at AC-3 rated value maximum 1 000 V operational current at AC-3 • at 400 V rated value 80 A • at 500 V rated value 58 A  operating power • at AC-3 — at 400 V rated value 37 kW — at 500 V rated value 45 kW	Ambient conditions		
<ul> <li>during operation</li> <li>during storage</li> <li>-55 +80 °C</li> </ul> Main circuit <ul> <li>number of poles for main current circuit</li> <li>number of NO contacts for main contacts</li> <li>number of NC contacts for main contacts</li> <li>operating voltage at AC-3 rated value maximum</li> <li>1 000 V</li> </ul> operational current at AC-3 <ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>at 690 V rated value</li> <li>at AC-3</li> </ul> operating power <ul> <li>at AC-3</li> <li>at 400 V rated value</li> <li>at AC-3</li> </ul> Operating power <ul> <li>at AC-3</li> <li>at 400 V rated value</li> <li>45 kW</li> </ul> 37 kW <ul> <li>at 500 V rated value</li> <li>45 kW</li> </ul>	installation altitude at height above sea level maximum	2 000 m	
<ul> <li>during storage</li> <li>-55 +80 °C</li> </ul> Main circuit <ul> <li>number of poles for main current circuit</li> <li>number of NO contacts for main contacts</li> <li>number of NC contacts for main contacts</li> <li>operating voltage at AC-3 rated value maximum</li> <li>1 000 V</li> </ul> operational current at AC-3 <ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>at AC-3</li> <li>at AC-3</li> <li>at 400 V rated value</li> <li>58 A</li> </ul> operating power <ul> <li>at AC-3</li> <li>at 400 V rated value</li> <li>37 kW</li> <li>at 500 V rated value</li> <li>45 kW</li> </ul>	ambient temperature		
Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  1 000 V  operational current at AC-3  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  • at AC-3  — at 400 V rated value  • at AC-3  — at 400 V rated value  • at 500 V rated value  45 kW	<ul> <li>during operation</li> </ul>	60 °C	
number of poles for main current circuit  number of NO contacts for main contacts  number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  operational current at AC-3  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  operating power  • at AC-3  — at 400 V rated value  37 kW  — at 500 V rated value  45 kW			
number of NO contacts for main contacts  number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  operational current at AC-3  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  operating power  • at AC-3  — at 400 V rated value  37 kW  — at 500 V rated value  45 kW	during storage	-55 +80 °C	
number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum  operational current at AC-3  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  • at AC-3  — at 400 V rated value  37 kW  — at 500 V rated value  45 kW		-55 +80 °C	
operating voltage at AC-3 rated value maximum  operational current at AC-3  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  operating power  • at AC-3  — at 400 V rated value  37 kW — at 500 V rated value  45 kW	Main circuit		
operational current at AC-3      • at 400 V rated value	Main circuit number of poles for main current circuit	3	
<ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>58 A</li> <li>operating power</li> <li>at AC-3         <ul> <li>at 400 V rated value</li> <li>37 kW</li> <li>at 500 V rated value</li> <li>45 kW</li> </ul> </li> </ul>	Main circuit number of poles for main current circuit number of NO contacts for main contacts	3 3	
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>58 A</li> <li>operating power</li> <li>at AC-3         <ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>45 kW</li> </ul> </li> </ul>	Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  number of NC contacts for main contacts	3 3 0	
● at 690 V rated value 58 A  operating power  ● at AC-3  — at 400 V rated value 37 kW  — at 500 V rated value 45 kW	Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  number of NC contacts for main contacts  operating voltage at AC-3 rated value maximum	3 3 0	
operating power   ● at AC-3  — at 400 V rated value  — at 500 V rated value  45 kW	Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum operational current at AC-3	3 3 0 1 000 V	
● at AC-3  — at 400 V rated value 37 kW  — at 500 V rated value 45 kW	Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum operational current at AC-3  • at 400 V rated value	3 3 0 1 000 V 80 A	
<ul> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>45 kW</li> </ul>	number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum operational current at AC-3  • at 400 V rated value • at 500 V rated value	3 3 0 1 000 V 80 A 80 A	
— at 500 V rated value 45 kW	number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum operational current at AC-3  • at 400 V rated value • at 500 V rated value • at 690 V rated value	3 3 0 1 000 V 80 A 80 A	
	number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum operational current at AC-3  • at 400 V rated value • at 500 V rated value • at 690 V rated value operating power	3 3 0 1 000 V 80 A 80 A	
— at 690 V rated value 55 kW	Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum operational current at AC-3	3 3 0 1 000 V 80 A 80 A 58 A	
	Main circuit number of poles for main current circuit number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum operational current at AC-3  • at 400 V rated value • at 500 V rated value • at 690 V rated value  operating power • at AC-3  — at 400 V rated value	3 3 0 1 000 V 80 A 80 A 58 A	

at AC-4 at 400 V rated value	37 kW
operating frequency at AC-3 maximum	1 000 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	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	348 VA
● at 60 Hz	296 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.62
● at 60 Hz	0.55
apparent holding power of magnet coil at AC	
• at 50 Hz	25 VA
● at 60 Hz	18 VA
inductive power factor with the holding power of the	
coil	
● at 50 Hz	0.35
● at 60 Hz	0.41
Auxiliary circuit	
number of NC contacts for auxiliary contacts	
per direction of rotation	0
number of NO contacts for auxiliary contacts	
<ul> <li>per direction of rotation</li> </ul>	1
instantaneous contact	2
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul> <li>at 480 V rated value</li> </ul>	77 A
at 600 V rated value	62 A
yielded mechanical performance [hp] for 3-phase AC	
motor	
<ul><li>at 200/208 V rated value</li></ul>	25 hp
• at 220/230 V rated value	30 hp
• at 460/480 V rated value	60 hp
• at 575/600 V rated value	60 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the fuse link	
<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
<ul><li>— with type of coordination 1 required</li></ul>	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 355 A
<ul> <li>— with type of assignment 2 required</li> </ul>	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A
for short-circuit protection of the auxiliary switch	fuse gG: 10 A
required	
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
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
height	160 mm
width	150 mm
depth	152 mm
required spacing	
<ul> <li>with side-by-side mounting</li> </ul>	
— forwards	10 mm
— backwards	0 mm
— upwards	10 mm
— downwards	10 mm

-4 41 : - ! -	40
— at the side	10 mm
• for grounded parts	40
— 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	
<ul> <li>for main current circuit</li> </ul>	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
<ul> <li>for main contacts</li> </ul>	
<ul><li>— solid or stranded</li></ul>	2x (2.5 16 mm²), 2x (10 50 mm²), 1x (10 70 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (2.5 35 mm²), 1x (2.5 50 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (10 35 mm²), 1x (10 50 mm²)
<ul> <li>at AWG cables for main contacts</li> </ul>	2x (10 1/0), 1x (10 2/0)
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
<ul> <li>— solid or stranded</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)
Safety related data	
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	73 %
T1 value for proof test interval or service life according to IEC 61508	20 y
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
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** 

Confirmation









Type Test Certificates/Test Report

## Marine / Shipping













 Other
 Dangerous Good

 Confirmation
 Transport Information tion

## **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=3RA2345-8XB30-1AL2

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2345-8XB30-1AL2

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA2345-8XB30-1AL2

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

http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA2345-8XB30-1AL2&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RA2345-8XB30-1AL2/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2345-8XB30-1AL2&objecttype=14&gridview=view1

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