## **SIEMENS**

## **Data sheet**



Reversing contactor assembly, AC-3, 45 kW 400 V, 110 V AC/50/60 Hz 3-pole, Size S3 screw terminal electrical and mechanical interlock 2 NO integrated

product designation product type designation anufacturer's article number  • 1 of the supplied contactor • 2 of the supplied contactor • 2 of the supplied contactor • 3RT2046-1AG20 • 2 of the supplied contactor • 3RT2046-1AG20 • 2 of the supplied contactor • 3RT2046-1AG20 • 3RT2046-1AG20  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 • at AC  to fit (switching cycles) • of contactor typical • of the contactor with added auxiliary switch block typical reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  arbient conditions installation altitude at height above sea level maximum arbient temperature • during operation • during storage  All increuit number of NC contacts for main contacts number of NC contacts for main contacts 10 number of NC contacts for main contacts 11	product brand name	SIRIUS
manufacturer's article number  • 1 of the supplied contactor • 2 of the supplied Contactor • 2 of the supplied RS assembly kit 3R72945-1AG20 • 2 of the supplied RS assembly kit 3R72943-2AA1  General technical data size of contactor S3 product extension auxiliary switch shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC 10.6 g / 5 ms, 4.0 g / 10 ms  shock resistance with sine pulse • at AC The contactor with added auxiliary switch block typical reference code acc. to IEC 81346-2 Quuberlance Prohibitance (Date) 01.03.2017  Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage  Main circuit number of poles for main current circuit 3 number of NC contacts for main contacts 10 operating voltage at AC-3 rated value maximum operating power • at 400 V rated value • at 609 V rated value - at 500 V rated value - 55 kW	product designation	Reversing contactor assembly
• 1 of the supplied contactor • 2 of the supplied RS assembly kit  General technical data size of contactor • at AC shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC  of the contactor typical • of contactor with added auxiliary switch block typical reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date)  Ambient 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 • at 400 V rated value • at 60-3 — at 400 V rated value • at 60-3 — at 400 V rated value • at 60-0 V rated value • at 60-0 V rated value • at 600 V rated value	product type designation	3RA23
Of the supplied contactor     of the supplied RS assembly kit     3RA2943-2AA1  Size of contactor     product extension auxiliary switch     shock resistance at rectangular impulse         • at AC	manufacturer's article number	
of the supplied RS assembly kit  General technical data size of contactor product extension auxiliary switch	<ul> <li>1 of the supplied contactor</li> </ul>	3RT2046-1AG20
Sa	<ul> <li>2 of the supplied contactor</li> </ul>	3RT2046-1AG20
size of contactor product extension auxiliary switch shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC 10.6 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 of the contactor with added auxiliary switch block typical reference code acc. to IEC 81346-2 Quantities Qua	<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  • at AC  mechanical service life (switching cycles)  • of contactor typical  • of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  reference code acc. to IEC 81346-2  Quantification auxiliary switch block typical  10 000 000  10 000 000  10 000 000  10 000 00	General technical data	
shock resistance at rectangular impulse	size of contactor	S3
■ at AC     shock resistance with sine pulse     ■ at AC	product extension auxiliary switch	Yes
shock resistance with sine pulse	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 acc. to IEC 81346-2  Quabitance Prohibitance (Date)  Ambient conditions  Installation altitude at height above sea level maximum  ambient temperature     oduring operation     oduring storage  during operation     oduring storage  Main circuit  number of NO contacts for main current circuit  number of NC contacts for main contacts     operating voltage at AC-3 rated value maximum  operational current at AC-3     oat 400 V rated value     at 500 V rated value     operating power     at 400 V rated value     at 500 V rated value     operating power     at 400 V rated value     at 500 V rated value	• 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 acc. to IEC 81346-2  Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  • during storage  • during storage  -55 +80 °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  operational current at AC-3  • at 400 V rated value  • at 690 V rated value  • at 690 V rated value  • at 400 V rated value  • at 400 V rated value  • at 600 V rated value  • at 400 V rated value  • at 400 V rated value  • at 600 V rated value  • at 600 V rated value  • at 600 V rated value  • at 400 V rated value  • at 400 V rated value  • at 600 V rated value  • at 600 V rated value  • at 600 V rated value  • at 400 V rated value  • at 600 V rated value	shock resistance with sine pulse	
of contactor typical     of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Q Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature     o during operation     o during storage  -55 +80 °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  operational current at AC-3     o at 400 V rated value     at 500 V rated value  operating power  at 400 V rated value  operating power	• at AC	10.6 g / 5 ms, 6.3 g / 10 ms
• of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  -55 +80 °C  Main circuit  number of poles for main current circuit 3 number of NC 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 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 • at 500 V rated value • at 500 V rated value • at 690 V rated value • at 690 V rated value • at AC-3  - at 400 V rated value • at 500 V rated value • 55 kW	mechanical service life (switching cycles)	
reference code acc. to IEC 81346-2 Q Substance Prohibitance (Date) 01.03.2017  Ambient conditions installation altitude at height above sea level maximum 2 000 m  ambient temperature  • during operation 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 1 000 V operational current at AC-3 • at 400 V rated value 95 A • at 690 V rated value 95 A operating power • at AC-3 — at 400 V rated value 45 kW operating power • at AC-3 — at 400 V rated value 45 kW — at 500 V rated value 55 kW	<ul> <li>of contactor typical</li> </ul>	10 000 000
Substance Prohibitance (Date)  Ambient conditions  installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  60 °C • during storage  Main circuit  number of poles 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  • 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 AC-3  — at 400 V rated value  55 kW	•	10 000 000
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  Addin 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  — at 400 V rated value  • at AC-3  — at 400 V rated value  • at AC-3  — at 400 V rated value  • 55 kW	reference code acc. to IEC 81346-2	Q
installation altitude at height above sea level maximum  ambient temperature  • during operation • during storage  Addin 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 • at AC-3  — at 400 V rated value  • at AC-3  — at 400 V rated value  • at AC-3  — at 400 V rated value  • at AC-3  — at 400 V rated value  • at SOO V rated value  • at AC-3  — at 400 V rated value  • at SOO V rated value  • at SOO V rated value  • at AC-3  — at 400 V rated value  • 55 kW	Substance Prohibitance (Date)	01.03.2017
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 95 A • at 500 V rated value 95 A • at 690 V rated value 78 A  operating power • at AC-3 — at 400 V rated value 45 kW — at 500 V rated value 55 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>operational current at AC-3</li> <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> </ul> Operating power <ul> <li>at AC-3</li> <li>at 400 V rated value</li> <li>45 kW</li> <li>at 500 V rated value</li> <li>55 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> </ul> 78 A operating power <ul> <li>at AC-3</li> <li>at 400 V rated value</li> <li>55 kW</li> </ul> 45 kW - at 500 V rated value <ul> <li>55 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  operational current at AC-3  • at 400 V rated value  • at 500 V rated value  operating power  • at AC-3  — at 400 V rated value  45 kW  — at 500 V rated value  55 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  45 kW  — at 500 V rated value  55 kW	<ul><li>during storage</li></ul>	-55 +80 °C
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  45 kW  — at 500 V rated value  55 kW	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 500 V rated value  • at 690 V rated value  operating power  • at AC-3  — at 400 V rated value  45 kW  — at 500 V rated value  55 kW		
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  78 A  operating power  • at AC-3  — at 400 V rated value  45 kW  — at 500 V rated value  55 kW	number of poles for main current circuit	3
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>78 A</li> <li>operating power</li> <li>at AC-3</li> <li>at 400 V rated value</li> <li>45 kW</li> <li>at 500 V rated value</li> <li>55 kW</li> </ul>	number of NO contacts for main contacts	3
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>78 A</li> <li>operating power</li> <li>at AC-3</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>55 kW</li> </ul>	number of NO contacts for main contacts number of NC contacts for main contacts	3 0
● at 690 V rated value 78 A  operating power  ● at AC-3  — at 400 V rated value 45 kW  — at 500 V rated value 55 kW	number of NO contacts for main contacts number of NC contacts for main contacts operating voltage at AC-3 rated value maximum	3 0
operating power           ● at AC-3           — at 400 V rated value         45 kW           — at 500 V rated value         55 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	3 0 1 000 V
<ul> <li>at AC-3         <ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> </ul> </li> <li>45 kW</li> <li>55 kW</li> </ul>	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 0 1 000 V 95 A
<ul> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>45 kW</li> <li>55 kW</li> </ul>	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 0 1 000 V 95 A 95 A
— at 500 V rated value 55 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	3 0 1 000 V 95 A 95 A
	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 0 1 000 V 95 A 95 A
— at 690 V rated value 75 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	3 0 1 000 V 95 A 95 A 78 A
	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 0 1 000 V 95 A 95 A 78 A

at AC-4 at 400 V rated value	45 kW
operating frequency at AC-3 maximum	850 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	110 V
at 60 Hz rated value	110 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 V·A
● at 60 Hz	296 V·A
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 V·A
• at 60 Hz	18 V·A
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	
per direction of rotation	1
instantaneous contact	2
	۷
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	96 A
at 600 V rated value	77 A
yielded mechanical performance [hp] for 3-phase AC	
motor	30 hp
• at 200/208 V rated value	30 hp
• at 220/230 V rated value	30 hp
• at 460/480 V rated value	75 hp
at 575/600 V rated value	75 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>	
— with type of coordination 1 required	gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 355 A
— with type of assignment 2 required	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	
with side-by-side mounting	
— forwards	10 mm
— backwards	0 mm
— upwards	10 mm
— downwards	10 mm
dominaldo	TV THILE

— at the side	10 mm
<ul> <li>for grounded parts</li> </ul>	
— forwards	10 mm
— backwards	0 mm
— upwards	10 mm
— at the side	10 mm
— downwards	10 mm
<ul> <li>for live parts</li> </ul>	
— 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	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>	
— solid or stranded	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>	
— solid or stranded	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	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate acc. to SN 31920</li> </ul>	73 %
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. 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 Marine / Shipping

**General Product Approval Declaration of Conformity** Test Certificates Marine / Shipping







**UK Declaration of** Conformity

Type Test Certificates/Test Report



Marine / Shipping other











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=3RA2346-8XB30-1AG2

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RA2346-8XB30-1AG2}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA2346-8XB30-1AG2

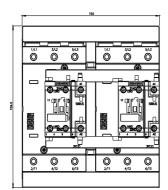
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

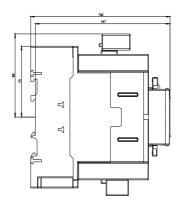
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA2346-8XB30-1AG2&lang=en

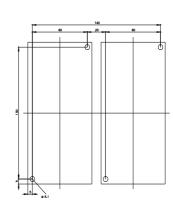
Characteristic: Tripping characteristics, I2t, Let-through current

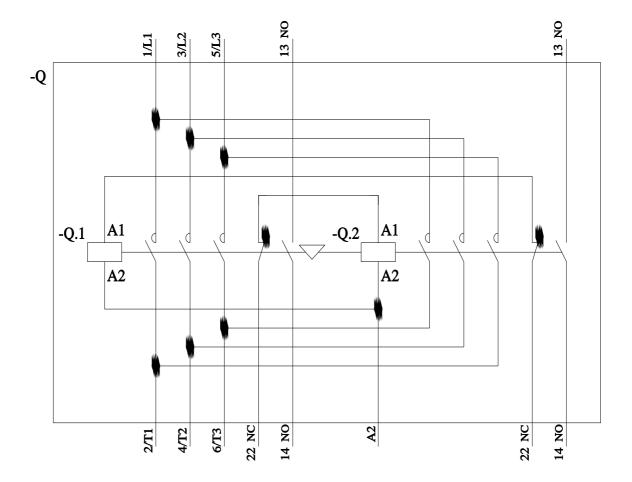
https://support.industry.siemens.com/cs/ww/en/ps/3RA2346-8XB30-1AG2/char

Further characteristics (e.g. electrical endurance, switching frequency)
<a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2346-8XB30-1AG2&objecttype=14&gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2346-8XB30-1AG2&objecttype=14&gridview=view1</a>









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