## **SIEMENS**

## **Data sheet**

## 3RA2120-1DA23-0BB4



Fuseless motor starter Direct start 600VAC Size S0 2.2-3.2A 24V DC screw connection For screw mounting Or 35 mm rail-mounting Type of coordination 2 IQ = 150 KA Also full fills type Of coordination 1 1NO+1NC (contactor)

product designation   non-fused motor starter 3RA2   design of the product   direct starter	product brand name	SIRIUS
manufacturer's article number  of the supplied contactor of the supplied circuit-breakers of the supplied link module 3RA2921-1BA00  General technical data size of the circuit-breaker size of the circuit-breaker S0 size of the circuit-breaker S0 size of toad feeder S0 product extension auxiliary switch yes insulation voltage with degree of pollution 3 at AC rated value degree of pollution 3 surge voltage resistance rated value 6 kW shock resistance according to IEC 60068-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical 10 0000 000  type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg  Ambient conditions ambient temperature • during operation • during storage • during transport  Main circuit  number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • rated val	product designation	non-fused motor starter 3RA2
of the supplied circuit-breakers of the supplied circuit-breakers of the supplied link module  SRA2921-IBA00  General technical data  size of the circuit-breaker size of	design of the product	direct starter
of the supplied circuit-breakers of the supplied link module  3RA2921-IBA00  General technical data  size of the circuit-breaker  size of load feeder  product extension auxillary switch insulation voltage with degree of pollution 3 at AC rated value  degree of pollution  3 surge voltage resistance rated value  690 V  degree of pollution  3 surge voltage resistance according to IEC 60068-2-27  mechanical service life (operating cycles) of contactor typical  type of coordination  2 Substance Prohibitance (Date)  Weight  0,95 kg  Ambient conditions  ambient temperature  during operation  during storage  during transport  Auring transport  Main circuit  number of poles for main current circuit  design of the switching contact  adjustable current response value current of the current-dependent overload release  operating voltage  a rated value  a ta AC-3 rated value  at AC-3 rated value  operation current at AC-3 at 400 V rated value  2 y A 500 W  control supply voltage at DC rated value  1 100 W  control supply voltage at DC rated value  control circuit/ Control  control supply voltage at DC rated value	manufacturer's article number	
of the supplied link module  General technical data  size of the circuit-breaker  Size of toad feeder  product extension auxiliary switch  finsulation voltage with degree of pollution 3 at AC rated value  degree of pollution  surge voltage resistance rated value  shock resistance according to IEC 60068-2-27  mechanical service life (operating cycles) of contactor typical  type of coordination  Substance Prohibitance (Date)  Weight  0.95 kg  Ambient conditions  ambient temperature  during operation during storage during itransport  during itransport  solution and current circuit  design of the switching contact  design of the switching contact  electromechanical  adjustable current response value current of the current- dependent overload release  operating voltage  at AC-3 rated value  at AC-3 rated value  at 400 V rated value  at 400 V rated value  at 500 V rated value  control supply voltage at DC rated value  control supply voltage at DC rated value	<ul> <li>of the supplied contactor</li> </ul>	3RT2023-1BB40
Second   S	<ul> <li>of the supplied circuit-breakers</li> </ul>	3RV2011-1DA10
size of the circuit-breaker S00  size of load feeder S0  product extension auxiliary switch Yes insulation voltage with degree of pollution 3 at AC rated value 690 V  degree of pollution 3  surge voltage resistance rated value 6 kV  shock resistance according to IEC 60068-2-27 6g /11 ms mechanical service life (operating cycles) of contactor typical 10 000 000  type of coordination 2  Substance Prohibitance (Date) 03/01/2017  Weight 0.95 kg  Ambient conditions  ambient temperature  • during operation -20 +60 °C • during storage -55 +80 °C  Main circuit  number of poles for main current circuit design of the switching contact electromechanical adjustable current response value current of the current-dependent overload release operating voltage  • rated value  • at AC-3 rated value maximum 690 V  operating frequency rated value 50 60 Hz  operating power at AC-3  • at 400 V rated value  • at 500 V rated value  control supply voltage at DC rated value	<ul> <li>of the supplied link module</li> </ul>	3RA2921-1BA00
size of load feeder product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value degree of pollution surge voltage resistance rated value shock resistance according to IEC 60068-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical 10 0000 000 type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg  Ambient conditions ambient temperature during operation during storage during transport 04 during storage during transport 05 -55 +80 °C 05 +80 °C 05 +80 °C 06 during of the switching contact design of the switching contact design of the switching contact dependent overload release  operating voltage at AC-3 rated value maximum 09erating frequency rated value 09erating frequency rated value 09erating frequency rated value 100 0000 0000 00000 00000 00000 00000 00000 0000	General technical data	
product extension auxiliary switch insulation voltage with degree of pollution 3 at AC rated value degree of pollution 3 surge voltage resistance rated value shock resistance according to IEC 60068-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg Ambient conditions ambient temperature during operation during operation during transport -50 +60 °C during transport -55 +80 °C  Main circuit number of poles for main current circuit design of the switching contact dependent overload release operating voltage rated value at AC-3 rated value maximum operating frequency rated value operating frequency rated value at 400 V rated value 1 100 W at 500 W Control circuit/ Control control supply voltage at DC rated value 24 V	size of the circuit-breaker	S00
insulation voltage with degree of pollution 3 at AC rated value degree of pollution 3 surge voltage resistance rated value 6 kV shock resistance according to IEC 60068-2-27 6g / 11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg Ambient conditions ambient temperature	size of load feeder	SO
degree of pollution  surge voltage resistance rated value shock resistance according to IEC 60068-2-27 69 / 11 ms mechanical service life (operating cycles) of contactor typical 10 000 000 type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg  Ambient conditions ambient temperature during operation during storage during transport -50 +80 °C  Main circuit number of poles for main current circuit design of the switching contact degree for extended release operating voltage rated value at AC-3 rated value maximum service frequency rated value operating frequency rated value at 4C-3 at 400 V rated value 1 100 W at 4500 V rated value at 4500 V rated value 1 100 W control circuit/ Control control supply voltage at DC rated value 24 V	product extension auxiliary switch	Yes
surge voltage resistance rated value 6 kV  shock resistance according to IEC 60068-2-27 6g / 11 ms  mechanical service life (operating cycles) of contactor typical 10 000 000  type of coordination 2  Substance Prohibitance (Date) 03/01/2017  Weight 0.95 kg  Ambient conditions  ambient temperature  • during operation -20 +60 °C • during storage -50 +80 °C • during transport -55 +80 °C  Main circuit  number of poles for main current circuit 3 design of the switching contact electromechanical adjustable current response value current of the current-dependent overload release operating voltage  • rated value 690 V  • at AC-3 rated value maximum 690 V  operating frequency rated value 50 60 Hz  operating power at AC-3  • at 400 V rated value 150 W  Control circuit/ Control  control supply voltage at DC rated value 24 V	insulation voltage with degree of pollution 3 at AC rated value	690 V
shock resistance according to IEC 60068-2-27  mechanical service life (operating cycles) of contactor typical type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg  Ambient conditions  amblent temperature • during operation • during storage • during transport  -20 +60 °C • during transport  -55 +80 °C  Main circuit number of poles for main current circuit design of the switching contact dependent overload release operating voltage • at AC-3 rated value maximum operating frequency rated value operating program at AC-3 • at 400 V rated value • at 500 V vated value • at 500 V vated value • at 400 V rated value • at 500 V vated value	degree of pollution	3
mechanical service life (operating cycles) of contactor typical type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg  Ambient conditions ambient temperature oduring operation during storage during transport  Main circuit number of poles for main current circuit design of the switching contact dependent overload release operating voltage rated value operation durine at AC-3 at 400 V rated value at 500 V V rated value 24 V	surge voltage resistance rated value	6 kV
type of coordination 2 Substance Prohibitance (Date) 03/01/2017 Weight 0.95 kg  Ambient conditions  ambient temperature  • during operation -20 +60 °C • during storage -50 +80 °C • during transport -55 +80 °C  Main circuit  number of poles for main current circuit 3 design of the switching contact electromechanical adjustable current response value current of the current- dependent overload release  operating voltage  • rated value - at AC-3 rated value maximum 690 V operating frequency rated value 50 60 Hz operating power at AC-3 • at 400 V rated value 1 100 W • at 500 V rated value 1 100 W • at 500 V rated value 1 100 W • at 500 V rated value 1 1500 W  Control circuit/ Control control supply voltage at DC rated value 24 V	shock resistance according to IEC 60068-2-27	6g / 11 ms
Substance Prohibitance (Date)  Weight  0.95 kg  Ambient conditions  ambient temperature  • during operation • during storage • during transport  -50 +80 °C  • during transport  -55 +80 °C  Main circuit  number of poles for main current circuit  design of the switching contact adjustable current response value current of the current- dependent overload release  operating voltage • rated value • at AC-3 rated value maximum  operating frequency rated value  operating power at AC-3  • at 400 V rated value • at 500 V rated value	mechanical service life (operating cycles) of contactor typical	10 000 000
Weight 0.95 kg  Ambient conditions  ambient temperature  • during operation -20 +60 °C  • during storage -50 +80 °C  • during transport -55 +80 °C  Main circuit  number of poles for main current circuit 3  design of the switching contact electromechanical adjustable current response value current of the current- dependent overload release  operating voltage  • rated value 690 V  • at AC-3 rated value maximum 690 V  operating frequency rated value 50 60 Hz operating power at AC-3  • at 400 V rated value 1 100 W  • at 500 V rated value 1 100 W  • at 500 V rated value 1 100 W  • at 500 V rated value 1 100 W  • at 500 V rated value 24 V	type of coordination	2
ambient temperature  • during operation • during storage • during transport  -50 +80 °C  • during transport  -55 +80 °C  Main circuit  number of poles for main current circuit  design of the switching contact adjustable current response value current of the current-dependent overload release  operating voltage • rated value • at AC-3 rated value maximum  operating frequency rated value  operating frequency rated value  operating power at AC-3  • at 400 V rated value • at 500 V rated value • at 500 V rated value  • at 500 V rated value	Substance Prohibitance (Date)	03/01/2017
ambient temperature  • during operation  • during storage  • during transport  -50 +80 °C  • during transport  -55 +80 °C  Main circuit  number of poles for main current circuit  design of the switching contact  adjustable current response value current of the current- dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  690 V  operating frequency rated value  operating frequency rated value  operating power at AC-3  • at 400 V rated value  • at 500 V rated value  1 100 W  • at 500 V rated value  24 V	Weight	0.95 kg
• during operation     • during storage     • during transport      • dur	Ambient conditions	
• during storage     • during transport  Main circuit  number of poles for main current circuit  design of the switching contact  adjustable current response value current of the current- dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  operating frequency rated value  operating power at AC-3  • at 400 V rated value  • at 500 V rated value	ambient temperature	
• during transport     -55 +80 °C  Main circuit  number of poles for main current circuit  design of the switching contact  adjustable current response value current of the current- dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  operating frequency rated value  operating power at AC-3  operating power at AC-3  • at 400 V rated value  • at 500 V rated value  1 100 W  • at 500 V rated value  24 V  control circuit/ Control  control supply voltage at DC rated value  24 V	<ul> <li>during operation</li> </ul>	-20 +60 °C
Main circuit  number of poles for main current circuit  design of the switching contact  adjustable current response value current of the current- dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  operating frequency rated value  operating a to C-3 at 400 V rated value  • at 400 V rated value  • at 500 V rated value  • at 500 V rated value  24 V  control supply voltage at DC rated value  24 V	during storage	-50 +80 °C
number of poles for main current circuit  design of the switching contact  adjustable current response value current of the current- dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  operating frequency rated value  operating at AC-3 at 400 V rated value  operating power at AC-3  • at 400 V rated value  • at 500 V rated value  1 100 W  • at 500 V rated value  24 V  control supply voltage at DC rated value  24 V	during transport	-55 +80 °C
design of the switching contact  adjustable current response value current of the current- dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  operating frequency rated value  operating requency rated value  operational current at AC-3 at 400 V rated value  operating power at AC-3  • at 400 V rated value  1 100 W  • at 500 V rated value  1 500 W  Control circuit/ Control  control supply voltage at DC rated value  24 V	Main circuit	
adjustable current response value current of the current- dependent overload release  operating voltage  • rated value  • at AC-3 rated value maximum  operating frequency rated value  operational current at AC-3 at 400 V rated value  operating power at AC-3  • at 400 V rated value  1 100 W  • at 500 V rated value  1 500 W  Control circuit/ Control  control supply voltage at DC rated value  2.2 3.2 A  2.2 3.2 A  2.2 3.2 A  2.2 3.2 A  2.3 3.2 A  2.4 V	number of poles for main current circuit	3
dependent overload release  operating voltage  • rated value • at AC-3 rated value maximum 690 V  operating frequency rated value 50 60 Hz  operational current at AC-3 at 400 V rated value 2.7 A  operating power at AC-3 • at 400 V rated value 1 100 W • at 500 V rated value 1 500 W  Control circuit/ Control  control supply voltage at DC rated value 24 V	design of the switching contact	electromechanical
<ul> <li>rated value</li> <li>at AC-3 rated value maximum</li> <li>690 V</li> <li>operating frequency rated value</li> <li>50 60 Hz</li> <li>operational current at AC-3 at 400 V rated value</li> <li>2.7 A</li> <li>operating power at AC-3 <ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>1 500 W</li> </ul> </li> <li>Control circuit/ Control</li> <li>control supply voltage at DC rated value</li> <li>24 V</li> </ul>		2.2 3.2 A
at AC-3 rated value maximum     690 V     operating frequency rated value     50 60 Hz     operational current at AC-3 at 400 V rated value     2.7 A     operating power at AC-3     at 400 V rated value     1 100 W     at 500 V rated value     1 500 W  Control circuit/ Control     control supply voltage at DC rated value  24 V	operating voltage	
operating frequency rated value 50 60 Hz operational current at AC-3 at 400 V rated value 2.7 A  operating power at AC-3  • at 400 V rated value 1 100 W  • at 500 V rated value 1 500 W  Control circuit/ Control control supply voltage at DC rated value 24 V	rated value	690 V
operational current at AC-3 at 400 V rated value 2.7 A  operating power at AC-3  • at 400 V rated value 1 100 W  • at 500 V rated value 1 500 W  Control circuit/ Control  control supply voltage at DC rated value 24 V	at AC-3 rated value maximum	690 V
operating power at AC-3  • at 400 V rated value  • at 500 V rated value  1 500 W  Control circuit/ Control  control supply voltage at DC rated value  24 V	operating frequency rated value	50 60 Hz
at 400 V rated value  at 500 V rated value  1 500 W  Control circuit/ Control  control supply voltage at DC rated value  24 V	operational current at AC-3 at 400 V rated value	2.7 A
at 500 V rated value  Control circuit/ Control  control supply voltage at DC rated value  24 V	operating power at AC-3	
Control circuit/ Control  control supply voltage at DC rated value 24 V	• at 400 V rated value	1 100 W
control supply voltage at DC rated value 24 V	at 500 V rated value	1 500 W
	Control circuit/ Control	
holding power of magnet coil at DC 5.9 W	control supply voltage at DC rated value	24 V
	holding power of magnet coil at DC	5.9 W

Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
Protective and monitoring functions	
trip class	CLASS 10
design of the overload release	thermal (bimetallic)
response value current of instantaneous short-circuit trip unit	41.6 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	2.8 A
at 600 V rated value	3.16 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
<ul> <li>— at 110/120 V rated value</li> </ul>	0.1 hp
— at 230 V rated value	0.25 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
<ul> <li>at 200/208 V rated value</li> </ul>	0.5 hp
<ul> <li>at 220/230 V rated value</li> </ul>	0.75 hp
— at 460/480 V rated value	1.5 hp
— at 575/600 V rated value	2 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
conditional short-circuit current (Iq)	
<ul> <li>at 400 V according to IEC 60947-4-1 rated value</li> </ul>	153 000 A
Installation/ mounting/ dimensions	
mounting position	vertical
fastening method	Snap-mounted to DIN rail or screw-mounted with additional push-in lug
height	193.1 mm
width	45 mm
depth	107 mm
required spacing	
<ul> <li>for grounded parts</li> </ul>	
— forwards	10 mm
— backwards	0 mm
— upwards	30 mm
— at the side	9 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— backwards	0 mm
— upwards	30 mm
— downwards	10 mm
— at the side	9 mm
Connections/ Terminals	
type of electrical connection for main current circuit	screw-type terminals
type of connectable conductor cross-sections for main contacts stranded	1 10 mm², 2x (2.5 6 mm²)
connectable conductor cross-section for main contacts finely stranded with core end processing	1 6 mm²
Safety related data	
proportion of dangerous failures with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000
Electrical Safety	
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
Approvals Certificates	
General Product Approval	For use in hazard- ous locations other













**Dangerous goods** 

Environment

**Transport Information** 

Environmental Confirmations

## Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information for data generation and storage

https://support.industry.siemens.com/cs/ww/en/view/109995012

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=3RA2120-1DA23-0BB4

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RA2120-1DA23-0BB4}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1DA23-0BB4

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

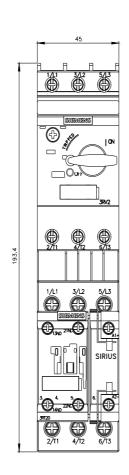
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA2120-1DA23-0BB4&lang=en

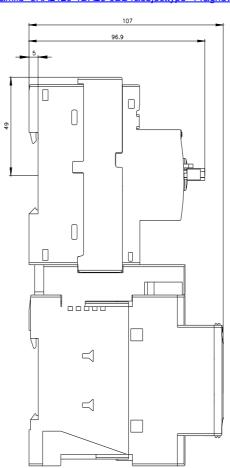
Characteristic: Tripping characteristics, I2t, Let-through current

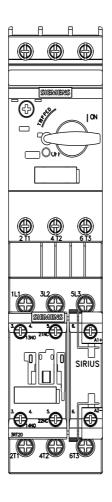
https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1DA23-0BB4/char

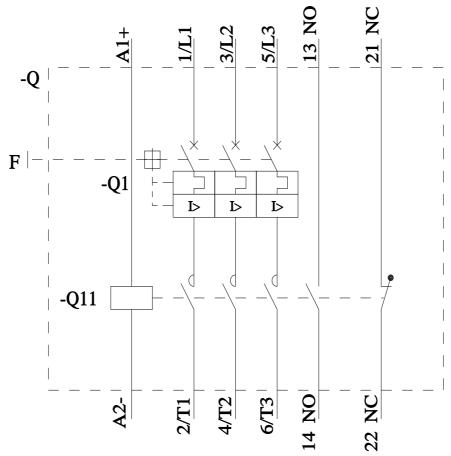
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1DA23-0BB4&objecttype=14&gridview=view1









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