## 3RA2120-1FD24-0AP0

**Data sheet** 



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 3.50...5.00 A 230 V AC screw terminal for 60 mm busbar systems (also fulfills type of coordination 1) Type of coordination 2, Iq = 150 kA 1 NO+1 NC (contactor)

product designation  design of the product  product type designation  manufacturer's article number  of the supplied contactor  of the supplied circuit-breakers  of the supplied busbar adapter  of the supplied link module  Bus1251-5NT10  array of the supplied link module  General technical data  size of the circuit-breaker  size of load feeder  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  shock resistance according to IEC 60068-2-27  grey bushars  por 60 mm busbars  3RA21  sary 2011-1FA10  8US1251-5NT10  3RA2921-1AA00  So  surge of the circuit-breaker  so  so  size of load feeder  so  feyo V  degree of protection NEMA rating  shock resistance according to IEC 60068-2-27  feyo 11 ms  mechanical service life (switching cycles) of contactor  10 000 000	product brand name	SIRIUS
product type designation manufacturer's article number  • of the supplied contactor • of the supplied circuit-breakers • of the supplied busbar adapter • of the supplied busbar adapter • of the supplied link module  • of the supplied link module  General technical data  size of the circuit-breaker  size of load feeder  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  degree of protection NEMA rating shock resistance according to IEC 60068-2-27  sarticle number  3RA21  3RA21  3RT2024-1AP00  3RX2021-1AP00  8US1251-5NT10  3RA2921-1AA00  8US1251-5NT10  5RO  690  500  690  690  690  690  690  697  697  6	product designation	Direct (on-line) starter
manufacturer's article number  of the supplied contactor of the supplied circuit-breakers of the supplied busbar adapter of the supplied busbar adapter of the supplied link module surge of the circuit-breaker size of the circuit-breaker size of load feeder insulation voltage with degree of pollution 3 at AC rated value surge voltage resistance rated value  6 kV degree of protection NEMA rating shock resistance according to IEC 60068-2-27  6g / 11 ms	design of the product	for 60 mm busbars
<ul> <li>of the supplied contactor</li> <li>of the supplied circuit-breakers</li> <li>of the supplied busbar adapter</li> <li>of the supplied link module</li> <li>3RA2921-1AA00</li> </ul> General technical data <ul> <li>size of the circuit-breaker</li> <li>size of load feeder</li> <li>insulation voltage with degree of pollution 3 at AC rated value</li> <li>surge voltage resistance rated value</li> <li>degree of protection NEMA rating</li> <li>shock resistance according to IEC 60068-2-27</li> <li>6g / 11 ms</li> </ul>	product type designation	3RA21
<ul> <li>of the supplied circuit-breakers</li> <li>of the supplied busbar adapter</li> <li>of the supplied link module</li> <li>3RA2921-1AA00</li> </ul> General technical data <ul> <li>size of the circuit-breaker</li> <li>size of load feeder</li> <li>insulation voltage with degree of pollution 3 at AC rated value</li> <li>surge voltage resistance rated value</li> <li>degree of protection NEMA rating</li> <li>shock resistance according to IEC 60068-2-27</li> <li>6g / 11 ms</li> </ul>	manufacturer's article number	
<ul> <li>of the supplied busbar adapter</li> <li>of the supplied link module</li> <li>3RA2921-1AA00</li> </ul> General technical data size of the circuit-breaker <ul> <li>size of load feeder</li> <li>insulation voltage with degree of pollution 3 at AC rated value</li> <li>surge voltage resistance rated value</li> <li>degree of protection NEMA rating</li> <li>shock resistance according to IEC 60068-2-27</li> <li>6g / 11 ms</li> </ul>	<ul> <li>of the supplied contactor</li> </ul>	3RT2024-1AP00
● of the supplied link module  General technical data  size of the circuit-breaker  Size of load feeder  Size of	<ul> <li>of the supplied circuit-breakers</li> </ul>	3RV2011-1FA10
Size of the circuit-breaker Size of load feeder Size of load feede	<ul> <li>of the supplied busbar adapter</li> </ul>	<u>8US1251-5NT10</u>
size of the circuit-breaker  size of load feeder  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  degree of protection NEMA rating  shock resistance according to IEC 60068-2-27  S00  690 V  68V  68V  69 / 11 ms	<ul> <li>of the supplied link module</li> </ul>	3RA2921-1AA00
size of load feeder  insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  degree of protection NEMA rating shock resistance according to IEC 60068-2-27  S0  690 V  other  6 kV  6 kV	General technical data	
insulation voltage with degree of pollution 3 at AC rated value  surge voltage resistance rated value  degree of protection NEMA rating shock resistance according to IEC 60068-2-27  69 / 11 ms	size of the circuit-breaker	S00
value  surge voltage resistance rated value  degree of protection NEMA rating  shock resistance according to IEC 60068-2-27  6g / 11 ms	size of load feeder	S0
degree of protection NEMA rating other shock resistance according to IEC 60068-2-27 6g / 11 ms		690 V
shock resistance according to IEC 60068-2-27 6g / 11 ms	surge voltage resistance rated value	6 kV
	degree of protection NEMA rating	other
mechanical service life (switching cycles) of contactor 10,000,000	shock resistance according to IEC 60068-2-27	6g / 11 ms
typical	mechanical service life (switching cycles) of contactor typical	10 000 000
type of assignment 2	type of assignment	2
type of protection according to ATEX directive Ex II (2) GD 2014/34/EU		Ex II (2) GD
certificate of suitability according to ATEX directive DMT 02 ATEX F 001 2014/34/EU		DMT 02 ATEX F 001
Substance Prohibitance (Date) 10/01/2009	Substance Prohibitance (Date)	10/01/2009
Ambient conditions	Ambient conditions	
ambient temperature	ambient temperature	
• during operation -20 +60 °C	during operation	-20 +60 °C
• during storage -50 +80 °C	during storage	-50 +80 °C
• during transport -50 +80 °C	during transport	-50 +80 °C
temperature compensation -20 +60 °C	temperature compensation	-20 +60 °C
relative humidity during operation 10 95 %	relative humidity during operation	10 95 %
Main circuit	Main circuit	
number of poles for main current circuit 3	number of poles for main current circuit	3
design of the switching contact electromechanical	design of the switching contact	electromechanical
adjustable current response value current of the current-dependent overload release 3.5 5 A	•	3.5 5 A
operating voltage	operating voltage	
• rated value 690 V	rated value	690 V
• at AC-3 rated value maximum 690 V	<ul> <li>at AC-3 rated value maximum</li> </ul>	000.1/

operating frequency rated value	50 60 Hz
operational current at AC-3 at 400 V rated value	3.6 A
operating power at AC-3	
<ul> <li>at 400 V rated value</li> </ul>	1 500 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	230 V
at 50 Hz rated value	230 230 V
apparent holding power of magnet coil at AC	8.5 VA
Auxiliary circuit	
product extension auxiliary switch	Yes
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Protective and monitoring functions	01.4.00.40
trip class	CLASS 10
design of the overload release	thermal (bimetallic)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	4.8 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
<ul> <li>at 200/208 V rated value</li> </ul>	1 hp
<ul> <li>at 220/230 V rated value</li> </ul>	1 hp
<ul> <li>at 460/480 V rated value</li> </ul>	3 hp
— at 575/600 V rated value	3 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
conditional short-circuit current (Iq)	
at 400 V according to IEC 60947-4-1 rated value	150 000 A
Installation/ mounting/ dimensions	
	vertical
mounting position	vertical for spanning onto 60 mm bushar systems
mounting position fastening method	for snapping onto 60 mm busbar systems
mounting position fastening method height	for snapping onto 60 mm busbar systems 260 mm
mounting position fastening method height width	for snapping onto 60 mm busbar systems 260 mm 45 mm
mounting position fastening method height width depth	for snapping onto 60 mm busbar systems 260 mm
mounting position fastening method height width depth required spacing	for snapping onto 60 mm busbar systems 260 mm 45 mm
mounting position fastening method height width depth required spacing • for grounded parts	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm
mounting position fastening method height width depth required spacing	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 20 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 20 mm 10 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 20 mm 10 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — backwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 10 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — upwards — upwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 0 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — backwards — backwards — upwards — downwards • for wards — forwards — backwards — backwards — upwards — downwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm  20 mm 10 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side — downwards — forwards — backwards — backwards — backwards — upwards — downwards — at the side	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 0 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — backwards — backwards — upwards — downwards • for wards — forwards — backwards — backwards — upwards — downwards	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm  20 mm 0 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side — downwards — forwards — backwards — backwards — backwards — upwards — downwards — at the side	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm  20 mm 0 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side — downwards — torwards — backwards — backwards — at the side — downwards — torwards — backwards — at the side Connections/ Terminals	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm  20 mm 10 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side Connections/ Terminals type of electrical connection	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 0 mm 10 mm 20 mm 0 mm 20 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — to live parts — forwards — backwards — upwards — to a the side Connections/ Terminals  type of electrical connection • for main current circuit	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 0 mm 50 mm 20 mm 0 mm 50 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side Connections/ Terminals  type of electrical connection • for auxiliary and control circuit Safety related data	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 0 mm 50 mm 20 mm 0 mm 50 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — a the side — downwards • for live parts — forwards — backwards — upwards — at the side  Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit  Safety related data  B10 value with high demand rate according to SN 31920	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 10 mm 50 mm 2 mm 50 mm 50 mm 50 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit  Safety related data  B10 value with high demand rate according to SN 31920 proportion of dangerous failures	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 10 mm 50 mm 2 mm 50 mm 50 mm 50 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — backwards — upwards — to hackwards — at the side  Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit  Safety related data  B10 value with high demand rate according to SN 31920 proportion of dangerous failures • with high demand rate according to SN 31920	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 10 mm 50 mm 10 mm screw-type terminals screw-type terminals 1 000 000  73 %
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — at the side Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit  Safety related data  B10 value with high demand rate according to SN 31920 proportion of dangerous failures • with high demand rate according to IEC 60529	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 20 mm 10 mm 50 mm 50 mm 10 mm 50 mm 10 mm 50 mm 10 mm 50 mm 10 mm
mounting position fastening method height width depth required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts — forwards — backwards — upwards — backwards — upwards — to hackwards — at the side  Connections/ Terminals  type of electrical connection • for main current circuit • for auxiliary and control circuit  Safety related data  B10 value with high demand rate according to SN 31920 proportion of dangerous failures • with high demand rate according to SN 31920	for snapping onto 60 mm busbar systems 260 mm 45 mm 155 mm  20 mm 0 mm 50 mm 10 mm 10 mm 50 mm 10 mm screw-type terminals screw-type terminals 1 000 000  73 %

<ul> <li>PROFINET IO protocol</li> </ul>	No
<ul> <li>PROFIsafe protocol</li> </ul>	No
protocol is supported AS-Interface protocol	No

Certificates/ approvals

**General Product Approval** 

For use in hazardous locations Declaration of Conformity



Confirmation



EAC





Declaration of Conformity

**Test Certificates** 

Marine / Shipping



Special Test Certificate

Type Test Certificates/Test Report







Marine / Shipping

other









Environmental Confirmations Confirmation

Railway

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=3RA2120-1FD24-0AP0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1FD24-0AP0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1FD24-0AP0

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

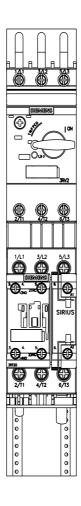
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RA2120-1FD24-0AP0&lang=en

Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1FD24-0AP0/char

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RA2120-1FD24-0AP0\&objecttype=14\&gridview=view1}$ 



last modified: 2/16/2022 🖸