



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 5.50...8.00 A 24 V DC screw terminal for 60 mm busbar systems (also fulfills type of coordination 1) Type of coordination 2, I_q = 150 kA 1 NO+1 NC (contactor)

product brand name	SIRIUS
product designation	Direct (on-line) starter
design of the product	for 60 mm busbars
product type designation	3RA21
manufacturer's article number	
<ul style="list-style-type: none"> • of the supplied contactor • of the supplied circuit-breakers • of the supplied busbar adapter • of the supplied link module 	3RT2024-1BB40 3RV2011-1HA10 8US1251-5NT10 3RA2921-1BA00
General technical data	
size of the circuit-breaker	S00
size of load feeder	S0
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
degree of protection NEMA rating	other
shock resistance according to IEC 60068-2-27	6g / 11 ms
mechanical service life (switching cycles) of contactor typical	10 000 000
type of assignment	2
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
Substance Prohibitation (Date)	10/01/2009
Ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-20 ... +60 °C -50 ... +80 °C -50 ... +80 °C
temperature compensation	-20 ... +60 °C
relative humidity during operation	10 ... 95 %
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	5.5 ... 8 A
operating voltage	
<ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum 	690 V 690 V

operating frequency rated value	50 ... 60 Hz
operational current at AC-3 at 400 V rated value	6.5 A
operating power at AC-3	
• at 400 V rated value	3 000 W
Control circuit/ Control	
type of voltage of the control supply voltage	DC
control supply voltage at DC	
• rated value	24 V
• rated value	24 ... 24 V
holding power of magnet coil at DC	5.9 W
Auxiliary circuit	
product extension auxiliary switch	Yes
Protective and monitoring functions	
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	8 A
yielded mechanical performance [hp]	
• for 3-phase AC motor	
— at 220/230 V rated value	2 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	5 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
conditional short-circuit current (I_q)	
• at 400 V according to IEC 60947-4-1 rated value	150 000 A
Installation/ mounting/ dimensions	
mounting position	vertical
fastening method	for snapping onto 60 mm busbar systems
height	260 mm
width	45 mm
depth	165 mm
required spacing	
• for grounded parts	
— forwards	20 mm
— backwards	0 mm
— upwards	50 mm
— at the side	20 mm
— downwards	10 mm
• for live parts	
— forwards	20 mm
— backwards	0 mm
— upwards	50 mm
— downwards	10 mm
— at the side	20 mm
Connections/ Terminals	
type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— stranded	1 ... 10 mm ² , 2x (2.5 ... 6 mm ²)
• at AWG cables for main contacts	2x (16 ... 12), 2x (14 ... 8)
connectable conductor cross-section for main contacts finely stranded with core end processing	1 ... 6 mm ²
Safety related data	
B10 value with high demand rate according to SN 31920	1 000 000

proportion of dangerous failures	73 %
<ul style="list-style-type: none"> with high demand rate according to SN 31920 	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Communication/ Protocol	
protocol is supported	
<ul style="list-style-type: none"> PROFINET IO protocol PROFIsafe protocol 	No
protocol is supported AS-Interface protocol	No

Certificates/ approvals

General Product Approval	For use in hazardous locations	Declaration of Conformity
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[Confirmation](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other	Railway
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[Confirmation](#)

[Vibration and Shock](#)

Dangerous Good

[Transport Information](#)

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=3RA2120-1HD24-0BB4>
- Cax online generator
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1HD24-0BB4>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1HD24-0BB4>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1HD24-0BB4&lang=en
- Characteristic: Tripping characteristics, I²t, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1HD24-0BB4/char>
- Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1HD24-0BB4&objecttype=14&gridview=view1>

last modified: 2/16/2022