



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 16...22 A 230 V AC  
Spring-type terminal for 60 mm busbar systems (also fulfills type of coordination 1)  
Type of coordination 2, I<sub>q</sub> = 150 kA 1 NO+1 NC (contactor)

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Direct (on-line) starter
<b>design of the product</b>	for 60 mm busbars
<b>product type designation</b>	3RA21
<b>manufacturer's article number</b>	
<ul style="list-style-type: none"> <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> </ul>	<a href="#">3RT2027-2AP00</a> <a href="#">3RV2021-4CA20</a> <a href="#">8US1251-5NT11</a> <a href="#">3RA2921-2AA00</a>
<b>General technical data</b>	
<b>size of the circuit-breaker</b>	S0
<b>size of load feeder</b>	S0
<b>power loss [W] for rated value of the current</b>	
<ul style="list-style-type: none"> <li>• at AC in hot operating state per pole</li> <li>• without load current share typical</li> </ul>	5.8 W 9.8 W
<b>type of calculation of power loss current-dependent</b>	quadratic
insulation voltage with degree of pollution 3 at AC rated value	690 V
<b>surge voltage resistance rated value</b>	6 kV
<b>degree of protection NEMA rating</b>	other
<b>shock resistance according to IEC 60068-2-27</b>	6 g / 11 ms
mechanical service life (operating cycles) of contactor typical	10 000 000
<b>type of coordination</b>	2
<b>reference code according to IEC 81346-2:2019</b>	Q
<b>Substance Prohibition (day/month/year)</b>	10/01/2009
<b>Net Weight</b>	1.451 kg
<b>Ambient conditions</b>	
<b>ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>	-20 ... +60 °C -50 ... +80 °C -50 ... +80 °C
<b>temperature compensation</b>	-20 ... +60 °C
relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3
<b>design of the switching contact</b>	electromechanical
<b>adjustable current response value current of the current-dependent overload release</b>	16 ... 22 A
<b>operating voltage</b>	
<ul style="list-style-type: none"> <li>• rated value</li> </ul>	690 V

<ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>	690 V
<ul style="list-style-type: none"> <li>• at AC-3e rated value maximum</li> </ul>	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current</b>	
<ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> </ul>	22 A
<ul style="list-style-type: none"> <li>• at AC-3e at 400 V rated value</li> </ul>	22 A
<b>operating power</b>	
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>	11 000 W
<ul style="list-style-type: none"> <li>• at AC-3e <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>	11 000 W
<b>Control circuit/ Control</b>	
<b>type of voltage of the control supply voltage</b>	AC
<b>control supply voltage at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>	230 V
<b>apparent holding power of magnet coil at AC</b>	9.8 VA
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	9.8 VA
<b>inductive power factor with the holding power of the coil</b>	0.25
<ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>	0.25
<b>Auxiliary circuit</b>	
<b>product extension auxiliary switch</b>	Yes
<b>Protective and monitoring functions</b>	
<b>trip class</b>	CLASS 10
<b>design of the overload release</b>	thermal (bimetallic)
response value current of instantaneous short-circuit trip unit	286 A
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
<ul style="list-style-type: none"> <li>• at 480 V rated value</li> </ul>	22 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	22 A
<b>yielded mechanical performance [hp]</b>	
<ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> </ul> </li> </ul>	1.5 hp
<ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul>	3 hp
<ul style="list-style-type: none"> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> </ul> </li> </ul>	7.5 hp
<ul style="list-style-type: none"> <li>— at 220/230 V rated value</li> </ul>	7.5 hp
<ul style="list-style-type: none"> <li>— at 460/480 V rated value</li> </ul>	15 hp
<b>Short-circuit protection</b>	
<b>product function short circuit protection</b>	Yes
<b>design of the short-circuit trip</b>	magnetic
<b>conditional short-circuit current (I<sub>q</sub>)</b>	
<ul style="list-style-type: none"> <li>• at 400 V according to IEC 60947-4-1 rated value</li> </ul>	150 000 A
<b>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	vertical
<b>fastening method</b>	for snapping onto 60 mm busbar systems
<b>height</b>	260 mm
<b>width</b>	45 mm
<b>depth</b>	165 mm
<b>required spacing</b>	
<ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>	20 mm
<ul style="list-style-type: none"> <li>— backwards</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>— upwards</li> </ul>	50 mm
<ul style="list-style-type: none"> <li>— at the side</li> </ul>	20 mm
<ul style="list-style-type: none"> <li>— downwards</li> </ul>	10 mm
<ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>	20 mm
<ul style="list-style-type: none"> <li>— backwards</li> </ul>	0 mm
<ul style="list-style-type: none"> <li>— upwards</li> </ul>	50 mm

— downwards	10 mm
— at the side	20 mm

### Connections/ Terminals

<b>type of electrical connection</b>	
• for main current circuit	spring-loaded terminals
• for auxiliary and control circuit	spring-loaded terminals

### Safety related data

product function suitable for safety function	Yes
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### Electrical Safety

<b>touch protection on the front according to IEC 60529</b>	finger-safe, for vertical contact from the front
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### Communication/ Protocol

<b>protocol is supported</b>	
• PROFINET IO protocol	No
• PROFI-safe protocol	No
protocol is supported AS-Interface protocol	No

### Approvals Certificates

Environment	General Product Approval
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[Environmental Confirmations](#)



For use in hazardous locations

Test Certificates

Maritime application



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Maritime application

other



[Confirmation](#)

[Confirmation](#)

other

Railway



[Special Test Certificate](#)

### 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=3RA2120-4CH27-0AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-4CH27-0AP0>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2120-4CH27-0AP0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-4CH27-0AP0&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-4CH27-0AP0>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



