

Fuseless motor starter Direct start 600VAC Size NEMA 1 3.5-5A  
110/120VAC 50/60HZ screw connection For snapping onto 60 mm  
busbar systems Type of coordination 2 IQ = 150 KA Also full fills type  
Of coordination 1 1NO+1NC (contactor)

<b>Product brand name</b>	SIRIUS
<b>Product designation</b>	non-fused motor starter 3RA2
<b>Design of the product</b>	direct starter
<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>	<p><a href="#">3RT2027-1AK60-0UA0</a></p> <p><a href="#">3RV2021-1FA10</a></p> <p><a href="#">8US1251-5NT10</a></p> <p><a href="#">3RA2921-1AA00</a></p>

### General technical data

<b>Size of the circuit-breaker</b>	S0
<b>Size of load feeder</b>	NEMA 1
<b>Product extension</b>	
<ul style="list-style-type: none"> <li>• Auxiliary switch</li> </ul>	Yes
<b>Insulation voltage</b>	
<ul style="list-style-type: none"> <li>• with degree of pollution 3 at AC rated value</li> </ul>	690 V
<b>Degree of pollution</b>	3
<b>Surge voltage resistance rated value</b>	6 kV
<b>Protection class IP</b>	
<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	IP20 IP00
<b>Shock resistance</b>	
<ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>	6g / 11 ms
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>	10 000 000
<b>Type of assignment</b>	2

### Main circuit

<b>Number of poles for main current circuit</b>	3
<b>Design of the switching contact</b>	electromechanical
<b>Adjustable pick-up value current of the current-dependent overload release</b>	3.5 ... 5 A
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> </ul>	600 V 600 V
<b>Operating frequency rated value</b>	50 ... 60 Hz

<b>Operating current</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>	3.6 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> <li>— at 500 V rated value</li> </ul> </li> </ul>	1 500 W 2 200 W

### Control circuit/ Control

<b>Control supply voltage at AC</b>	
<ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>	110 V 88 ... 121 V 120 V 96 ... 132 V
<b>Apparent holding power of magnet coil at AC</b>	9.4 V·A
<b>Inductive power factor with the holding power of the coil</b>	0.28

### Auxiliary circuit

<b>Number of NC contacts for auxiliary contacts</b>	1
<b>Number of NO contacts for auxiliary contacts</b>	1

### Protective and monitoring functions

<b>Trip class</b>	CLASS 10
<b>Design of the overload release</b>	thermal (bimetallic)
<b>Response value current</b>	
<ul style="list-style-type: none"> <li>• of instantaneous short-circuit trip unit</li> </ul>	65 A

### UL/CSA ratings

<b>Full-load current (FLA) for three-phase AC motor</b>	
<ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>	4.8 A 4.55 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> <li>— at 230 V rated value</li> </ul> </li> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul>	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 hp

### Short-circuit protection

<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 acc. to IEC 60947-4-1 rated value</li> </ul>	153 000 A

### Installation/ mounting/ dimensions

<b>Mounting position</b>	vertical
<b>Mounting type</b>	for snapping onto 60 mm busbar systems
<b>Height</b>	260 mm
<b>Width</b>	45 mm
<b>Depth</b>	155 mm
<b>Required spacing</b>	
<ul style="list-style-type: none"> <li>for grounded parts <ul style="list-style-type: none"> <li>forwards</li> <li>Backwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> </ul> </li> <li>for live parts <ul style="list-style-type: none"> <li>forwards</li> <li>Backwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> </ul>	10 mm 0 mm 30 mm 9 mm 10 mm  10 mm 0 mm 30 mm 10 mm 9 mm

### Connections/ Terminals

<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>for main current circuit</li> </ul>	screw-type terminals
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>stranded</li> </ul> </li> <li>at AWG conductors for main contacts</li> </ul>	1 ... 10 mm <sup>2</sup> , 2x (2.5 ... 6 mm <sup>2</sup> ) 2x (16 ... 12), 2x (14 ... 8)
<b>Connectable conductor cross-section for main contacts</b>	
<ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>	1 ... 6 mm <sup>2</sup>

### Safety related data

<b>B10 value</b>	
<ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul>	1 000 000
<b>Proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul>	73 %

### Certificates/ approvals

General Product Approval	For use in hazardous locations	Declaration of Conformity	other
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[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=3RA2120-1FQ27-0AK6>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1FQ27-0AK6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1FQ27-0AK6>

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

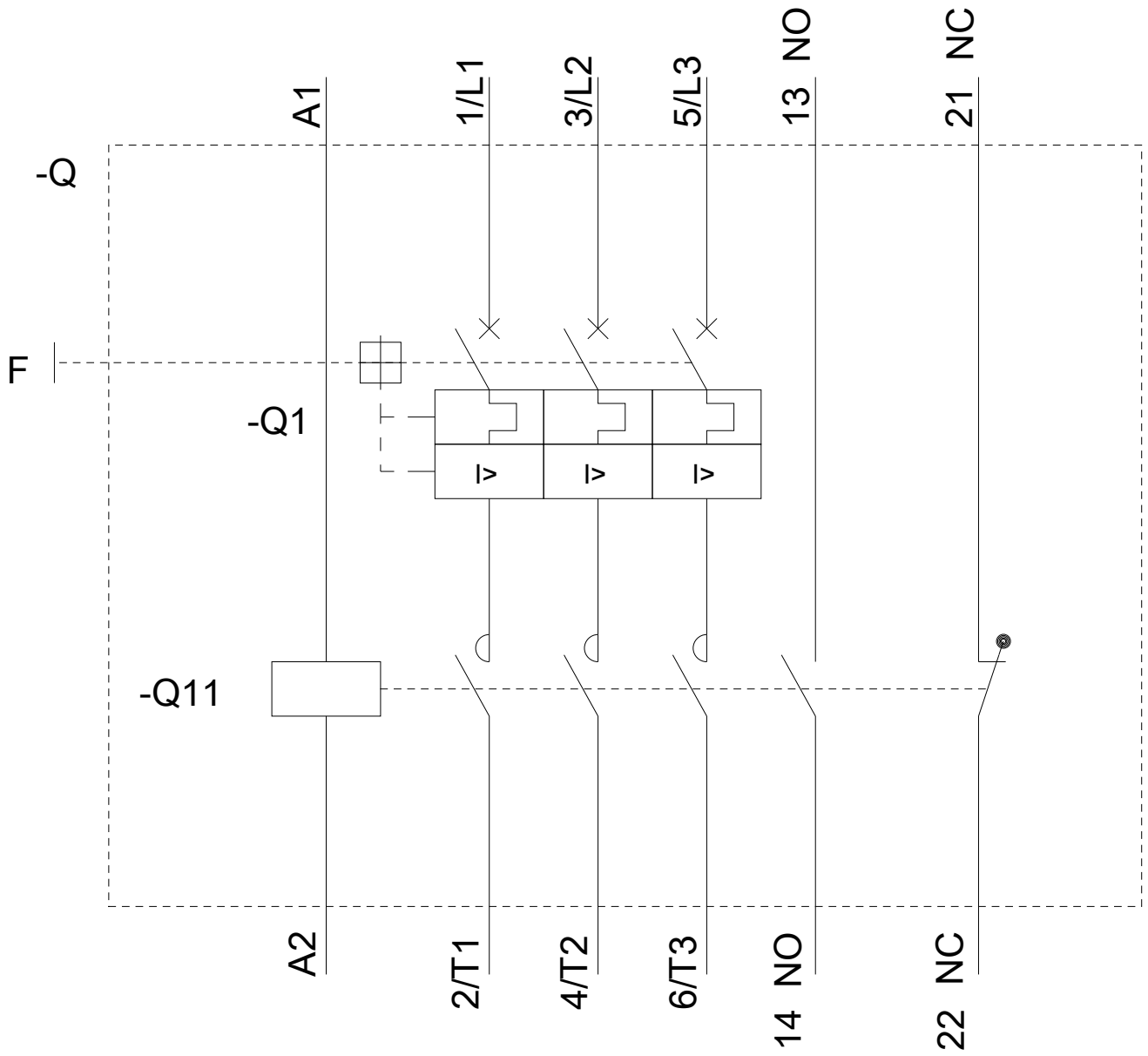
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2120-1FQ27-0AK6&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1FQ27-0AK6&lang=en)

### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1FQ27-0AK6/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1FQ27-0AK6&objecttype=14&gridview=view1>



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