

Fuseless motor starter Direct start 600VAC Size NEMA 1 1.8-2.5A
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)

Product brand name	SIRIUS
Product designation	non-fused motor starter 3RA2
Design of the product	direct starter
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 	3RT2027-1AK60-0UA0 3RV2021-1CA10 8US1251-5NT10 3RA2921-1AA00

General technical data

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

Main circuit

Number of poles for main current circuit	3
Design of the switching contact	electromechanical
Adjustable pick-up value current of the current-dependent overload release	1.8 ... 2.5 A
Operating voltage	
<ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum 	600 V 600 V
Operating frequency rated value	50 ... 60 Hz

Operating current	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	1.9 A
Operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value 	750 W 1 100 W

Control circuit/ Control

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

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	
<ul style="list-style-type: none"> • of instantaneous short-circuit trip unit 	32.5 A

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	2.15 A 2.24 A
Yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	0.17 hp 0.5 hp 0.5 hp 1 hp 1.5 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 acc. to IEC 60947-4-1 rated value

153 000 A

Installation/ mounting/ dimensions

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

Connections/ Terminals

Type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit 	screw-type terminals
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — stranded 1 ... 10 mm², 2x (2.5 ... 6 mm²) • at AWG conductors for main contacts 2x (16 ... 12), 2x (14 ... 8) 	
Connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> • finely stranded with core end processing 1 ... 6 mm² 	

Safety related data

B10 value	
<ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 1 000 000 	
Proportion of dangerous failures	
<ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 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=3RA2120-1CQ27-0AK6>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1CQ27-0AK6>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1CQ27-0AK6>

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

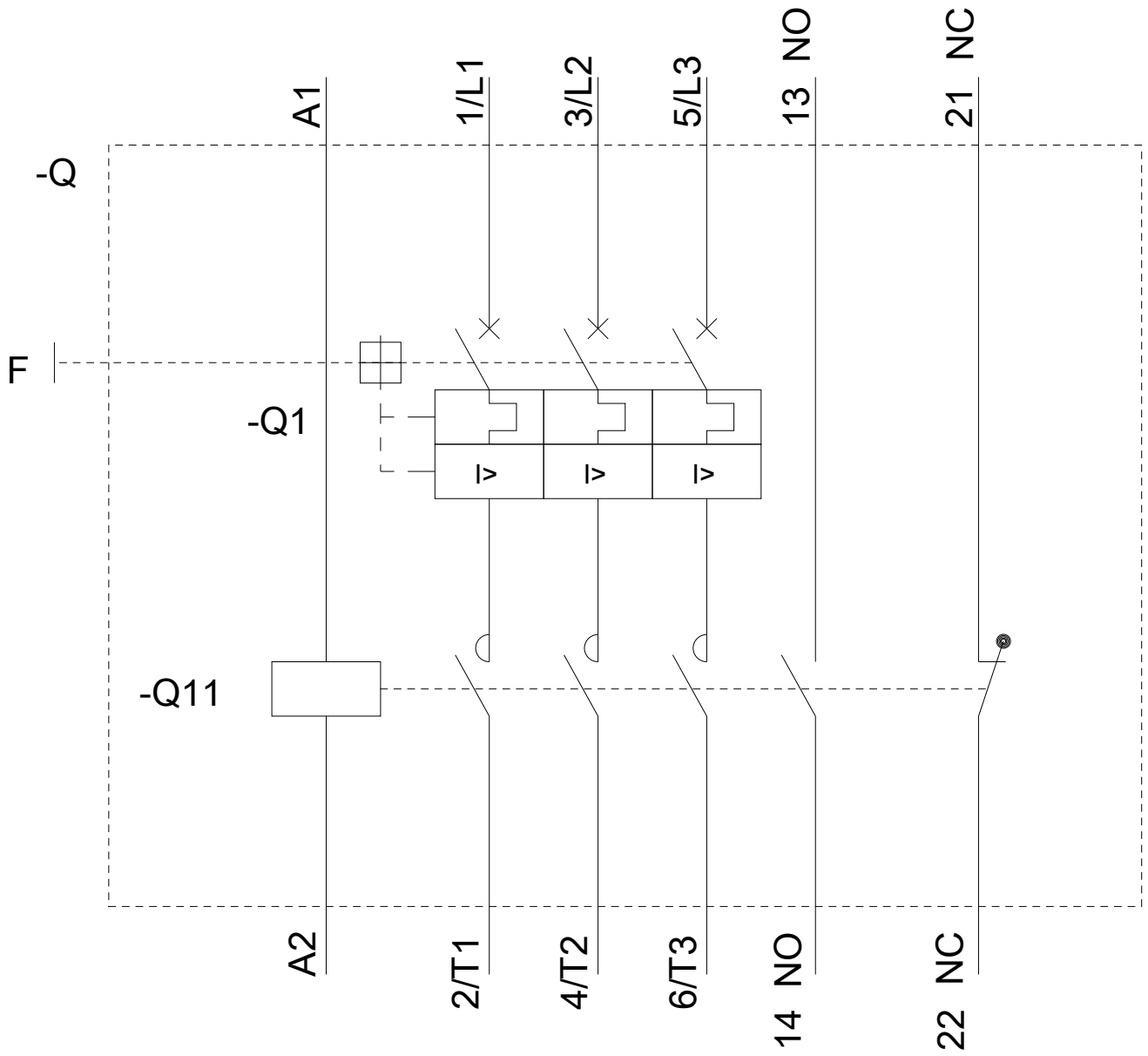
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1CQ27-0AK6&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1CQ27-0AK6/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1CQ27-0AK6&objecttype=14&gridview=view1>



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