

Fuseless motor starter Direct start 600VAC Size S0 2.2-3.2A
 220/240VAC 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 	3RT2023-1AP60 3RV2011-1DA10 8US1251-5NT10 3RA2921-1AA00

General technical data	
Size of the circuit-breaker	S00
Size of load feeder	S0
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 	IP20

• of the terminal	IP00
Shock resistance	
• acc. to IEC 60068-2-27	6g / 11 ms
Mechanical service life (switching cycles)	
• 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	2.2 ... 3.2 A
Operating voltage	
• rated value	690 V
• at AC-3 rated value maximum	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current	
• at AC-3	
— at 400 V rated value	2.7 A
Operating power	
• at AC-3	
— at 400 V rated value	1 100 W
— at 500 V rated value	1 500 W

Control circuit/ Control

Control supply voltage at AC	
• at 50 Hz rated value	220 V
• at 50 Hz rated value	176 ... 242 V
• at 60 Hz rated value	240 V
• at 60 Hz rated value	192 ... 264 V
Apparent holding power of magnet coil at AC	7.2 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	
• of instantaneous short-circuit trip unit	41.6 A

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
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<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	<p>2.8 A</p> <p>3.16 A</p>
Yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — 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 	<p>0.1 hp</p> <p>0.25 hp</p> <p>0.5 hp</p> <p>0.75 hp</p> <p>1.5 hp</p> <p>2 hp</p>

Short-circuit protection

Product function Short circuit protection	Yes
Design of the short-circuit trip	magnetic
Conditional short-circuit current (I_q)	
<ul style="list-style-type: none"> • 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 — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side 	<p>10 mm</p> <p>0 mm</p> <p>30 mm</p> <p>9 mm</p> <p>10 mm</p> <p>10 mm</p> <p>0 mm</p> <p>30 mm</p> <p>10 mm</p> <p>9 mm</p>

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 mm ² , 2x (2.5 ... 6 mm ²)

• at AWG conductors 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 acc. to SN 31920	1 000 000
Proportion of dangerous failures	
• with high demand rate acc. to SN 31920	73 %

Certificates/ approvals

General Product Approval	For use in hazardous locations	Declaration of Conformity	other
			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=3RA2120-1DD23-0AP6>
- Cax online generator**
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1DD23-0AP6>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1DD23-0AP6>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1DD23-0AP6&lang=en
- Characteristic: Tripping characteristics, I²t, Let-through current**
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1DD23-0AP6/char>
- Further characteristics (e.g. electrical endurance, switching frequency)**
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1DD23-0AP6&objecttype=14&gridview=view1>







last modified:

03/10/2020