

Data sheet

3RA2120-1HQ27-0AK6

Fuseless motor starter Direct start 600VAC Size NEMA 1 5.5-8Amp 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	
• of the supplied contactor	3RT2027-1AK60-0UA0
• of the supplied circuit-breakers	3RV2021-1HA10
• of the supplied busbar adapter	8US1251-5NT10
• of the supplied link module	3RA2921-1AA00
General technical data	
size of the circuit-breaker	S0
size of load feeder	NEMA 1
product extension auxiliary switch	Yes
insulation voltage with degree of pollution 3 at AC rated value	690 V
degree of pollution	3
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	6g / 11 ms
mechanical service life (operating cycles) of contactor typical	10 000 000
type of assignment	2
SVHC substance name	Lead - 7439-92-1
Weight	0.51 kg
Ambient conditions	
ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-55 ... +80 °C
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	
• rated value	600 V
• at AC-3 rated value maximum	600 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
• at 500 V rated value	4 000 W
• at 690 V rated value	5 500 W
Control circuit/ Control	
control supply voltage at AC	
• at 50 Hz rated value	110 V
• at 50 Hz rated value	88 ... 121 V
• at 60 Hz rated value	120 V
• at 60 Hz rated value	96 ... 132 V
apparent holding power of magnet coil at AC	9.4 VA
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	104 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	7.92 A
• at 600 V rated value	6.33 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	3 hp
• for 3-phase AC motor	
— at 200/208 V rated value	2 hp
— 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	153 000 A
Installation/ mounting/ dimensions	
mounting position	vertical
fastening method	for snapping onto 60 mm busbar systems
height	260 mm
width	45 mm
depth	155 mm
required spacing	
• for grounded parts	
— forwards	10 mm
— backwards	0 mm
— upwards	30 mm
— at the side	9 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— backwards	0 mm
— upwards	30 mm
— downwards	10 mm
— at the side	9 mm
Connections/ Terminals	
type of electrical connection for main current circuit	screw-type terminals
type of connectable conductor cross-sections for main contacts	1 ... 10 mm ² , 2x (2.5 ... 6 mm ²)
connectable conductor cross-section for main contacts finely stranded with core end processing	1 ... 6 mm ²
Safety related data	
proportion of dangerous failures with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Approvals Certificates	
General Product Approval	For use in hazardous locations



Confirmation



other

Environment

Confirmation

Environmental Confirmations

Further information

Information on the packaging

[Information on the packaging](https://support.industry.siemens.com/cs/ww/en/view/109813875)

[Information- and Downloadcenter \(Catalogs, Brochures....\)](https://support.industry.siemens.com/www/en/view/10001007)

information- and Downloadcenter
<https://www.siemens.com/ig10>

<https://www.siemens.com/nc10>
Industry Mall (Online ordering system)

Industry Mall (Online ordering system)
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2120-1HQ27-0AK6>

<https://mail.industry.se>

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3PA2120-1HQ27-0AK6>

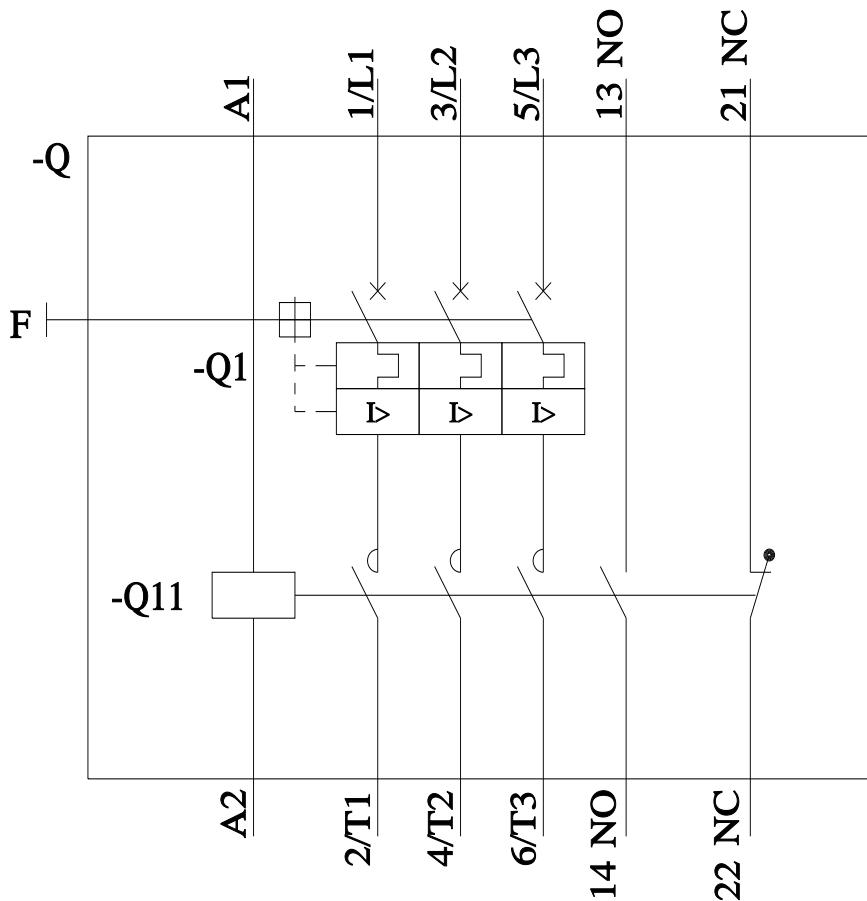
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en> | Service & Support (Manuals, Certificates, Characteristics, FAQs, ...)

Service & Support (Manuals, Certificates, Characteristics, FAQs,...)
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1HQ27-0AK6>
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

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http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3BA2120-1HQ2

Characteristic: Tripping characteristics I^2t / let-through current

Characteristic: Tripping characteristics, I_T, Let-through current
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1HQ27-0AK6/char>
Further characteristics (e.g. electrical endurance, switching frequency)
<http://www.automation.siemens.com/bildb/index.aspx?view=Search&mifh=3RA2120-1HQ27-0AK6&objecttype=14&gridview=view1>



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