



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 13...20 A 230 V AC screw terminal for 60 mm busbar systems (also fulfills type of coordination 1) Type of coordination 2, I_q = 150 kA 1 NO+1 NC (contactor)

product brand name	SIRIUS
product designation	Direct (on-line) starter
design of the product	for 60 mm busbars
product type designation	3RA21
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 	3RT2027-1AP00 3RV2021-4BA10 8US1251-5NT10 3RA2921-1AA00
General technical data	
size of the circuit-breaker	S0
size of load feeder	S0
power loss [W] for rated value of the current	
<ul style="list-style-type: none"> • at AC in hot operating state per pole • without load current share typical 	5.8 W 9.8 W
type of calculation of power loss current-dependent	quadratic
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
degree of protection NEMA rating	other
shock resistance according to IEC 60068-2-27	6 g / 11 ms
mechanical service life (operating cycles) of contactor typical	10 000 000
type of coordination	2
reference code according to IEC 81346-2:2019	Q
Substance Prohibitance (day/month/year)	10/01/2009
SVHC substance name	Lead CAS-No. 7439-92-1
Net Weight	1.276 kg
Ambient conditions	
ambient temperature	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	-20 ... +60 °C -50 ... +80 °C -50 ... +80 °C
temperature compensation	-20 ... +60 °C
relative humidity during operation	10 ... 95 %
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	13 ... 20 A
operating voltage	

<ul style="list-style-type: none"> • rated value 	690 V
<ul style="list-style-type: none"> • at AC-3 rated value maximum 	690 V
<ul style="list-style-type: none"> • at AC-3e rated value maximum 	690 V
operating frequency rated value	50 ... 60 Hz
operational current	
<ul style="list-style-type: none"> • at AC-3 at 400 V rated value 	20 A
<ul style="list-style-type: none"> • at AC-3e at 400 V rated value 	20 A
operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	7 500 W
<ul style="list-style-type: none"> • at AC-3e <ul style="list-style-type: none"> — at 400 V rated value 	7 500 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
<ul style="list-style-type: none"> • at 50 Hz rated value 	230 V
apparent holding power of magnet coil at AC	9.8 VA
<ul style="list-style-type: none"> • at 50 Hz 	9.8 VA
inductive power factor with the holding power of the coil	0.25
<ul style="list-style-type: none"> • at 50 Hz 	0.25
Auxiliary circuit	
product extension auxiliary switch	Yes
Protective and monitoring functions	
trip class	CLASS 10
design of the overload release	thermal (bimetallic)
response value current of instantaneous short-circuit trip unit	260 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value 	20 A
<ul style="list-style-type: none"> • at 600 V rated value 	20 A
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 	1.5 hp
<ul style="list-style-type: none"> — at 230 V rated value 	3 hp
<ul style="list-style-type: none"> • for 3-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value 	7.5 hp
<ul style="list-style-type: none"> — at 220/230 V rated value 	7.5 hp
<ul style="list-style-type: none"> — at 460/480 V rated value 	15 hp
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 according to IEC 60947-4-1 rated value 	150 000 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	
<ul style="list-style-type: none"> • for grounded parts <ul style="list-style-type: none"> — forwards 	20 mm
<ul style="list-style-type: none"> — backwards 	0 mm
<ul style="list-style-type: none"> — upwards 	50 mm
<ul style="list-style-type: none"> — at the side 	20 mm
<ul style="list-style-type: none"> — downwards 	10 mm
<ul style="list-style-type: none"> • for live parts <ul style="list-style-type: none"> — forwards 	20 mm
<ul style="list-style-type: none"> — backwards 	0 mm

— upwards	50 mm
— downwards	10 mm
— at the side	20 mm

Connections/ Terminals

type of electrical connection	
• for main current circuit	screw-type terminals
• for auxiliary and control circuit	screw-type terminals

Safety related data

product function suitable for safety function	Yes
Electrical Safety	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front

Communication/ Protocol

protocol is supported	
• PROFINET IO protocol	No
• PROFIsafe 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
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Maritime application	other
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[Confirmation](#)

[Confirmation](#)

other	Railway
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[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=3RA2120-4BD27-0AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-4BD27-0AP0>

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

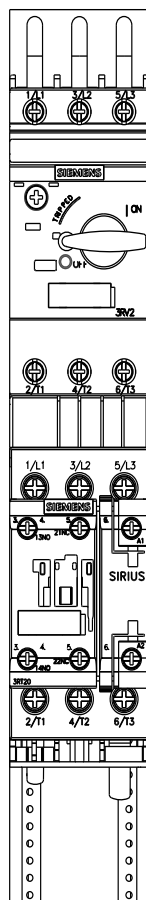
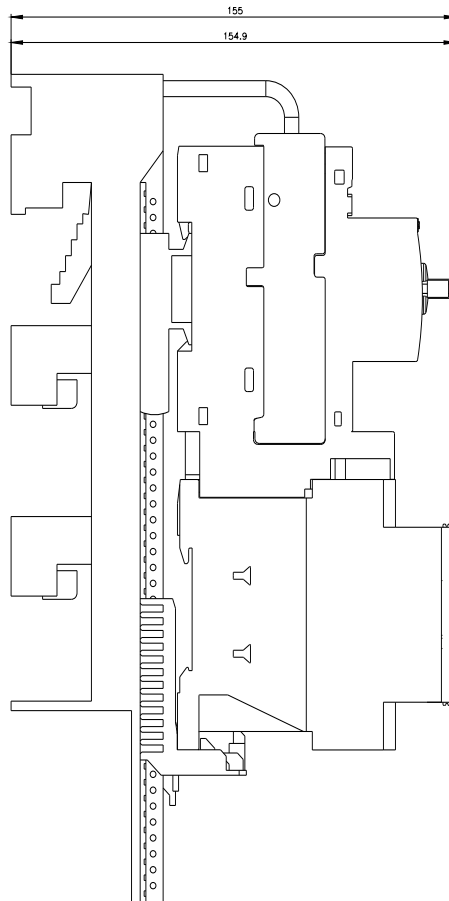
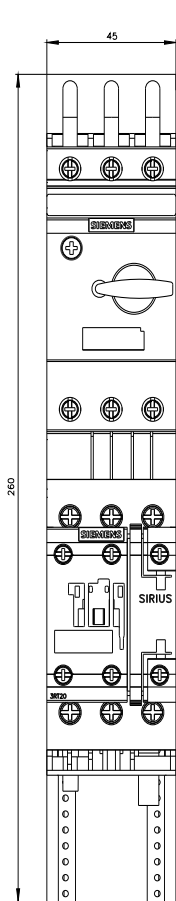
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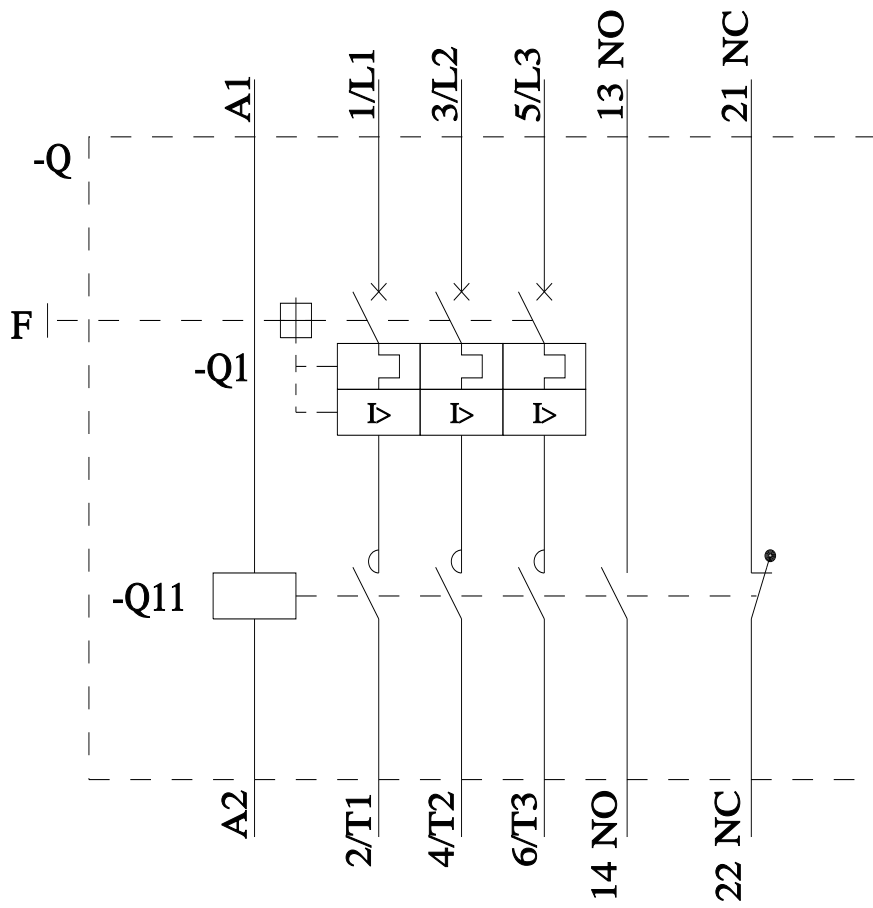
Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-4BD27-0AP0>

Characteristic curves

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