



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 5.50...8.00 A 230 V AC Spring-type 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	
• of the supplied contactor	3RT2024-2AP00
• of the supplied circuit-breakers	3RV2021-1HA20
• of the supplied busbar adapter	8US1251-5NT11
• of the supplied link module	3RA2921-2AA00
General technical data	
size of the circuit-breaker	S0
size of load feeder	S0
power loss [W] for rated value of the current	
• at AC in hot operating state per pole	3.4 W
• without load current share typical	7.6 W
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	6g / 11 ms
mechanical service life (operating cycles) of contactor typical	10 000 000
type of assignment	2
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
reference code according to IEC 81346-2:2019	Q
Substance Prohibition (Date)	03/01/2017
Ambient conditions	
ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-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	5.5 ... 8 A
operating voltage	
• rated value	690 V
• 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 	8 A
<ul style="list-style-type: none"> • at AC-3e at 400 V rated value 	8 A
operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	3 000 W
<ul style="list-style-type: none"> • at AC-3e <ul style="list-style-type: none"> — at 400 V rated value 	3 000 kW
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
<ul style="list-style-type: none"> • at 50 Hz rated value 	230 ... 230 V
apparent holding power of magnet coil at AC	7.6 VA
<ul style="list-style-type: none"> • at 50 Hz 	7.6 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	104 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value 	8 A
<ul style="list-style-type: none"> • at 600 V rated value 	8 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 	0.33 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 230 V rated value 	1 hp
<ul style="list-style-type: none"> • for 3-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value 	2 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 220/230 V rated value 	3 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 460/480 V rated value 	5 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 575/600 V rated value 	7.5 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	165 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"> <ul style="list-style-type: none"> — backwards 	0 mm
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — upwards 	50 mm
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at the side 	20 mm
<ul style="list-style-type: none"> <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"> <ul style="list-style-type: none"> — backwards 	0 mm
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — upwards 	50 mm

- downwards
- at the side

10 mm
20 mm

Connections/ Terminals

type of electrical connection

- for main current circuit
- for auxiliary and control circuit

spring-loaded terminals
spring-loaded terminals

Safety related data

B10 value with high demand rate according to SN 31920

1 000 000

proportion of dangerous failures

- with high demand rate according to SN 31920

73 %

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
- PROFI-safe protocol

No

No

protocol is supported AS-Interface protocol

No

Certificates/ approvals

General Product Approval

For use in hazard-
ous locations

Declaration of Conformity

[Confirmation](#)



Test Certificates

Marine / Shipping

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping

other

Railway

Environment



[Confirmation](#)

[Vibration and Shock](#)

[Environmental Confirmations](#)

Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RA2120-1HH24-0AP0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1HH24-0AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1HH24-0AP0>

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

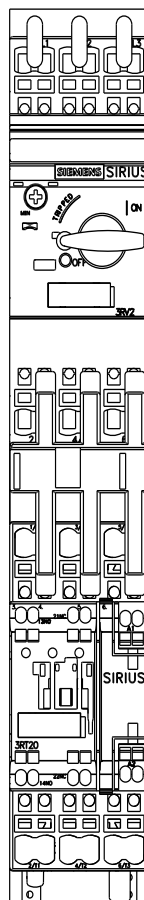
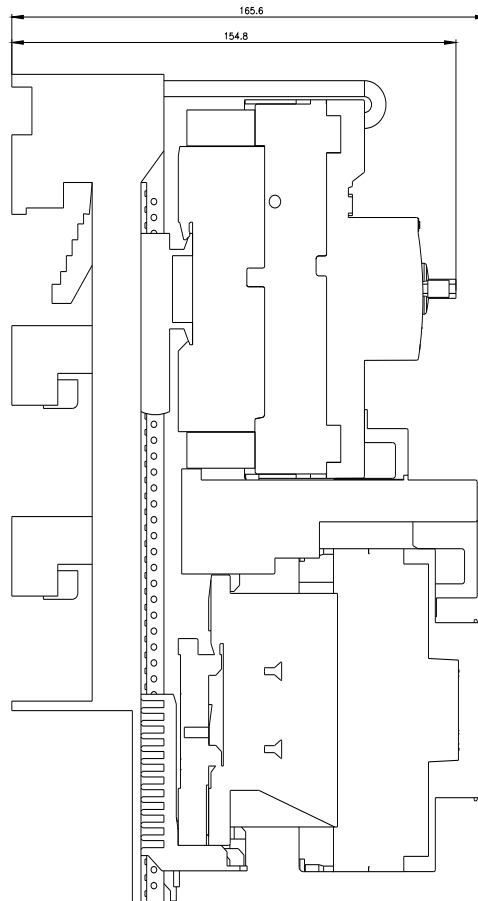
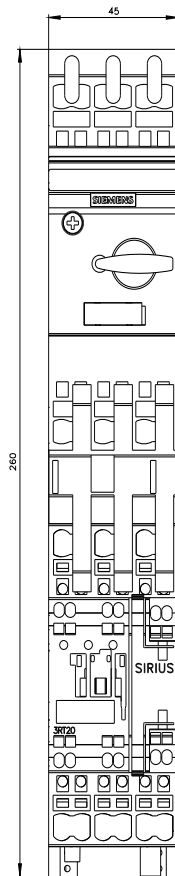
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1HH24-0AP0&lang=en

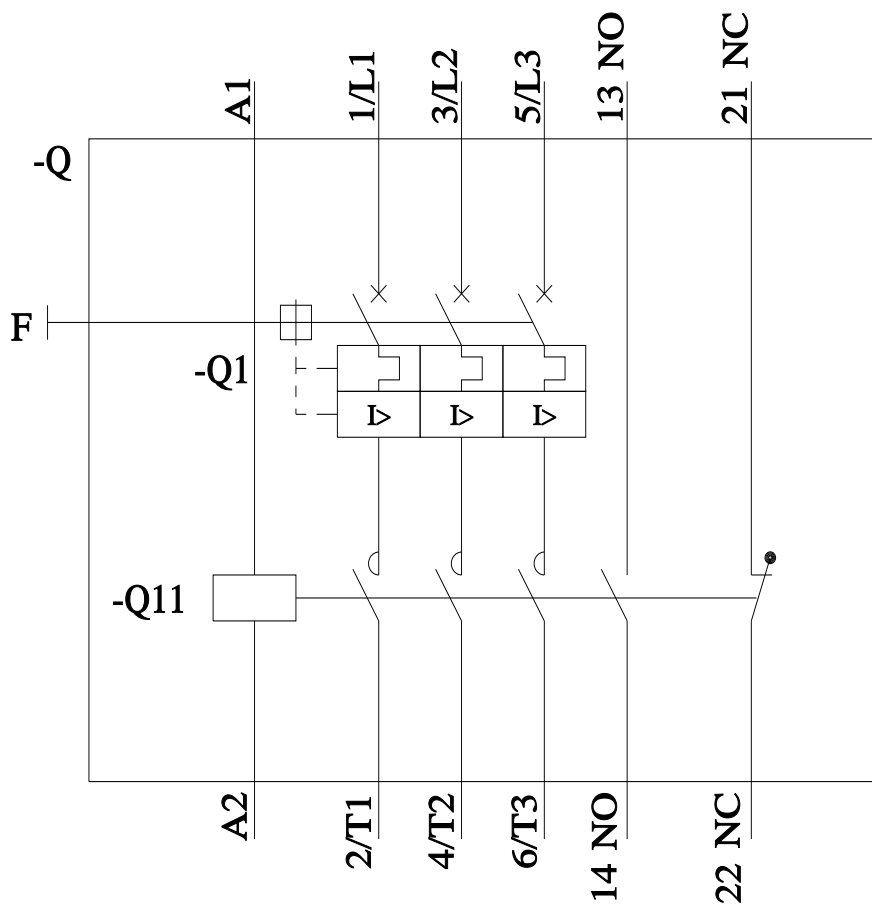
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1HH24-0AP0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-1HH24-0AP0&objecttype=14&gridview=view1>





last modified:

4/17/2023 