



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 9.00...12.5 A 230 V AC screw terminal for installation on standard mounting rail (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 DIN-rail or screw mounting
product type designation	3RA21
manufacturer's article number	
• of the supplied contactor	3RT2024-1AP00
• of the supplied circuit-breakers	3RV2011-1KA10
• of the supplied link module	3RA2921-1AA00
General technical data	
size of the circuit-breaker	S00
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
reference code according to IEC 81346-2:2019	Q
Substance Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
Weight	0.82 kg
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 %
Environmental footprint	
Environmental Product Declaration (EPD)	Yes
global warming potential [CO ₂ eq] total	92.1 kg
global warming potential [CO ₂ eq] during manufacturing	5.27 kg
global warming potential [CO ₂ eq] during operation	87.6 kg
global warming potential [CO ₂ eq] after end of life	-0.84 kg
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	9 ... 12.5 A
operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum	690 V 690 V 690 V
operating frequency rated value	50 ... 60 Hz
operational current • at AC-3 at 400 V rated value • at AC-3e at 400 V rated value	12 A 12 A
operating power • at AC-3 — at 400 V rated value • at AC-3e — at 400 V rated value	5 500 W 5 500 W
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC • at 50 Hz rated value	230 V
apparent holding power of magnet coil at AC • at 50 Hz	7.6 VA 7.6 VA
inductive power factor with the holding power of the coil • at 50 Hz	0.25 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	163 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	11 A 10 A
yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value	0.75 hp 2 hp 3 hp 3 hp 7.5 hp 10 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	150 000 A
Installation/ mounting/ dimensions	
mounting position	vertical
fastening method	screw and snap-on mounting onto 35 mm DIN rail
height	193 mm
width	45 mm
depth	97 mm
required spacing • for grounded parts — forwards — backwards — upwards — at the side — downwards • for live parts	20 mm 0 mm 50 mm 20 mm 10 mm

— forwards	20 mm
— 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
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Electrical Safety

touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
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Communication/ Protocol

protocol is supported

- | | |
|------------------------|----|
| • PROFINET IO protocol | No |
| • PROFIsafe protocol | No |

protocol is supported AS-Interface protocol	No
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Approvals Certificates

General Product Approval

For use in hazardous locations



[Confirmation](#)



Test Certificates

Marine / Shipping

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping

other

Railway

Environment



[Confirmation](#)

[Special Test Certificate](#)



Environment

[Environmental Conformations](#)

Further information

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=3RA2120-1KA24-0AP0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1KA24-0AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1KA24-0AP0>

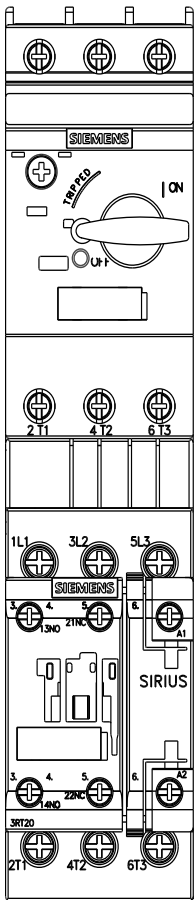
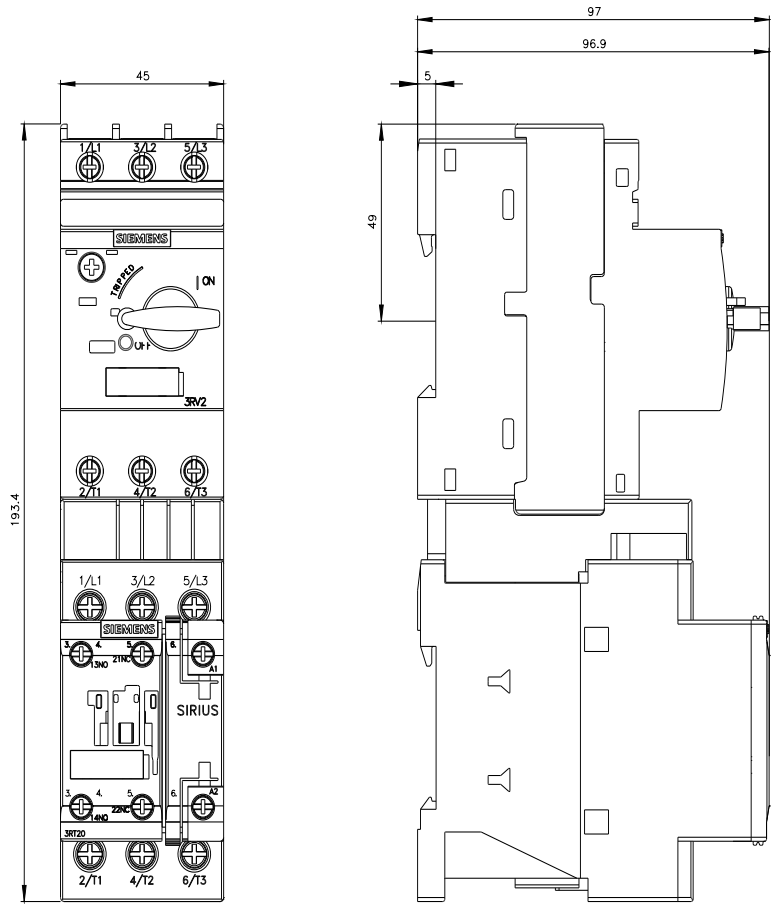
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1KA24-0AP0&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1KA24-0AP0/char>

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





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