

Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0
 27.0...32.0 A 24 V DC 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 standard rail or screw mounting
product type designation	3RA21
manufacturer's article number	
<ul style="list-style-type: none"> • of the supplied contactor 	3RT2027-1BB40
<ul style="list-style-type: none"> • of the supplied circuit-breakers 	3RV2021-4EA10
<ul style="list-style-type: none"> • of the supplied link module 	3RA2921-1BA00

General technical data	
size of the circuit-breaker	S0
size of load feeder	S0
insulation voltage	
<ul style="list-style-type: none"> • with degree of pollution 3 at AC rated value 	690 V
surge voltage resistance rated value	6 kV
protection class IP	
<ul style="list-style-type: none"> • on the front 	IP20
<ul style="list-style-type: none"> • of the terminal 	IP20
shock resistance	
<ul style="list-style-type: none"> • acc. to IEC 60068-2-27 	6g / 11 ms

mechanical service life (switching 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

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 pick-up value of the current-dependent overload release	27 ... 32 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	29 A
operating power	
• at AC-3	
— at 400 V rated value	15 000 W

Control circuit/ Control

type of voltage of the control supply voltage	DC
control supply voltage at DC	
• rated value	24 V
holding power of magnet coil at DC	5.9 W

Auxiliary circuit

product extension auxiliary switch	Yes
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Protective and monitoring functions

trip class	CLASS 10
design of the overload release	thermal (bimetallic)

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 	14 A
yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for three-phase AC motor <ul style="list-style-type: none"> — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	10 hp 20 hp 25 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 acc. to IEC 60947-4-1 rated value 	150 000 A

Installation/ mounting/ dimensions

mounting position	vertical
mounting type	screw and snap-on mounting onto 35 mm standard mounting rail
height	193 mm
width	45 mm
depth	107 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 	20 mm 0 mm 50 mm 20 mm 10 mm 20 mm 0 mm 50 mm 10 mm 20 mm

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 • at AWG conductors for main contacts 	1 ... 10 mm ² , 2x (2.5 ... 6 mm ²) 2x (16 ... 12), 2x (14 ... 8)
connectable conductor cross-section for main contacts	
<ul style="list-style-type: none"> • finely stranded with core end processing 	1 ... 6 mm ²

Safety related data

B10 value	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	1 000 000
proportion of dangerous failures	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	73 %

Certificates/ approvals

General Product Approval	For use in hazardous locations	Declaration of Conformity
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CSA



UL



ATEX



EG-Konf.

[Miscellaneous](#)

Test Certificates	Marine / Shipping
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS



LRS



PRS

Marine / Shipping	other	Railway
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RINA



RMRS



DNVGL.COM/AF

[Confirmation](#)

[Vibration and Shock](#)

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=3RA2120-4EA27-0BB4>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-4EA27-0BB4>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-4EA27-0BB4>

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

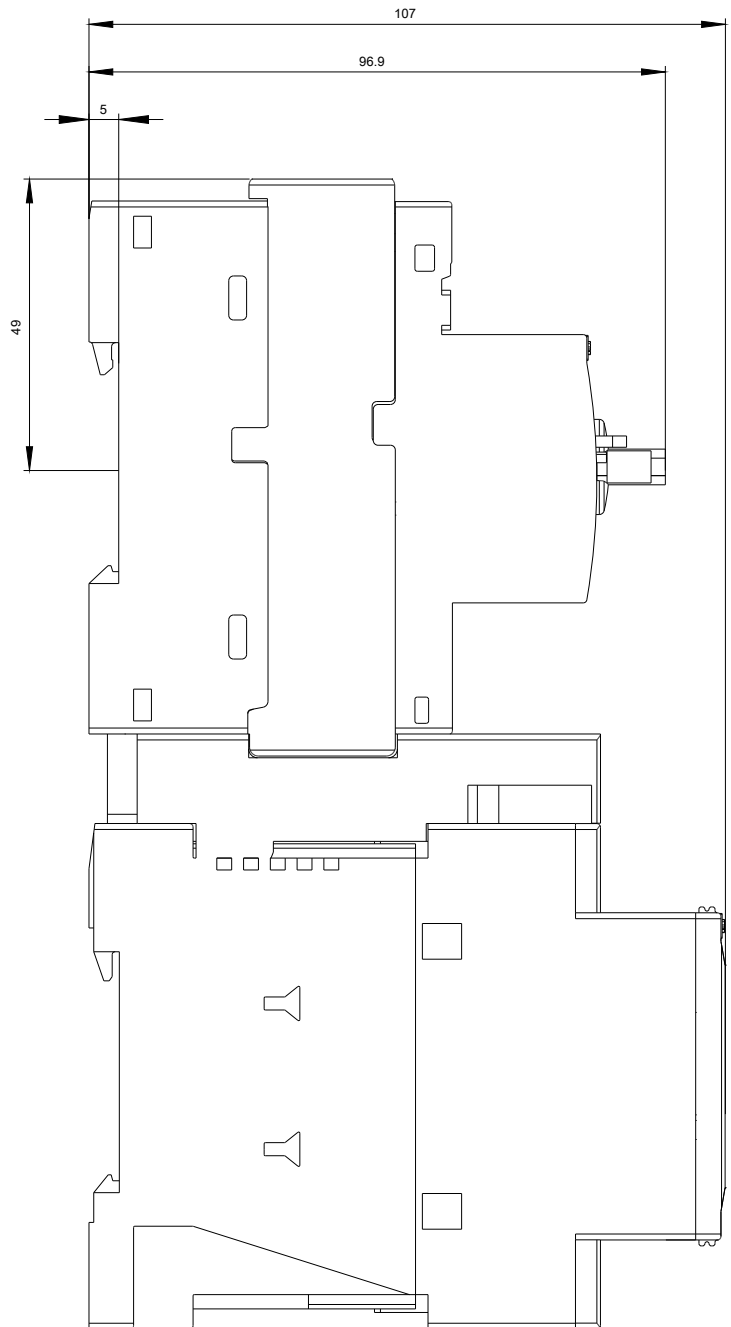
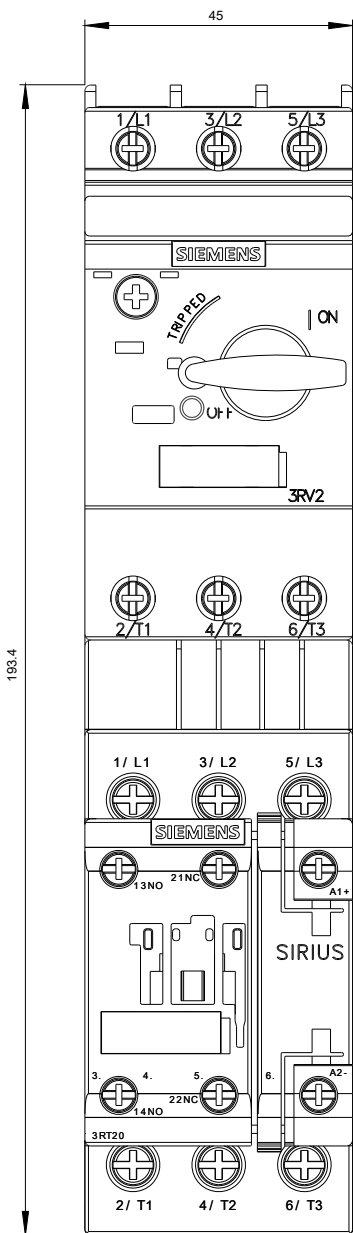
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-4EA27-0BB4&lang=en

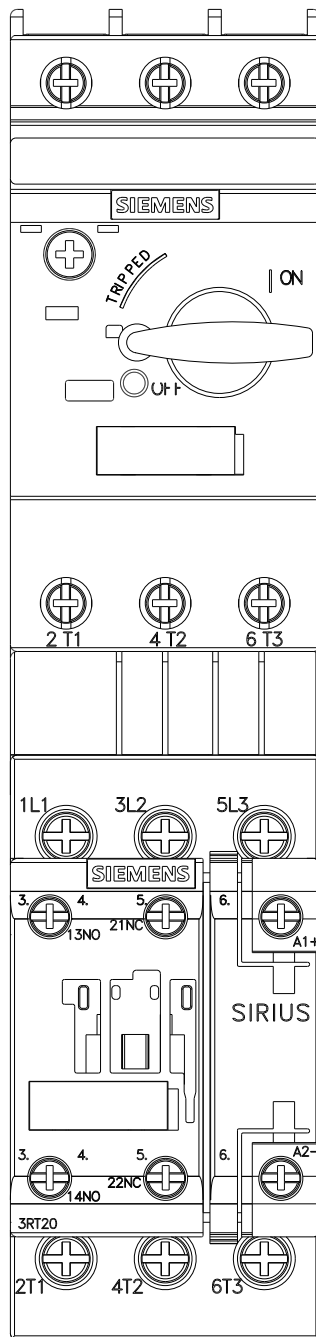
Characteristic: Tripping characteristics, I_t, Let-through current

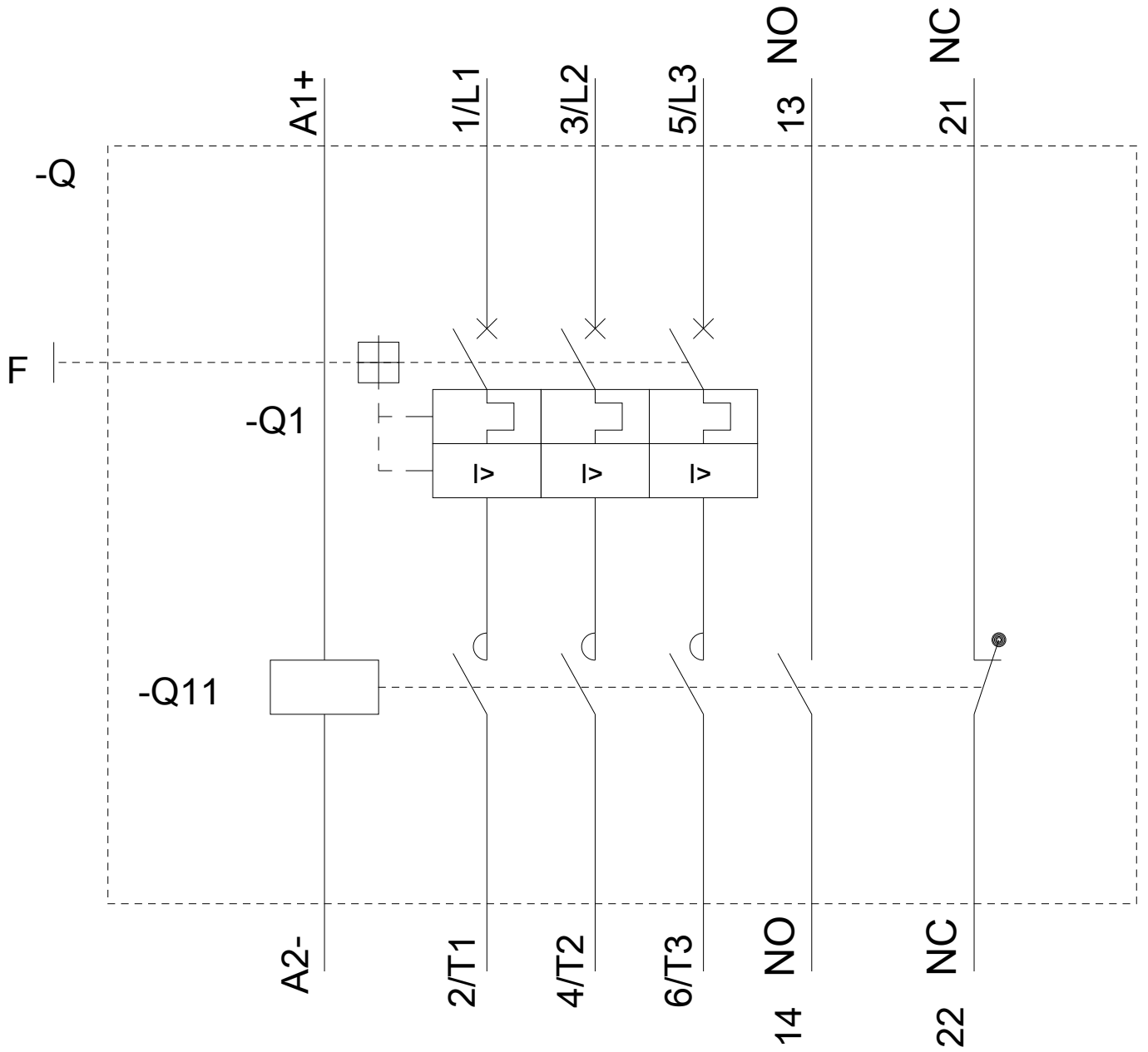
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-4EA27-0BB4/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2120-4EA27-0BB4&objecttype=14&gridview=view1>







last modified:

09/08/2020