

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	
• of the supplied contactor	3RT2027-1BB40
• of the supplied circuit-breakers	3RV2021-4EA10
• of the supplied link module	3RA2921-1BA00

General technical data	
Size of the circuit-breaker	S0
Size of load feeder	S0
Insulation voltage	
• with degree of pollution 3 at AC rated value	690 V
Surge voltage resistance rated value	6 kV
Protection class IP	
• on the front	IP20
• of the terminal	IP20
Shock resistance	
• 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

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 current 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	
• at 480 V rated value	14 A
Yielded mechanical performance [hp]	
• for three-phase AC motor	
— at 220/230 V rated value	10 hp

— at 460/480 V rated value	20 hp
— at 575/600 V rated value	25 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 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	
• for grounded parts	
— forwards	20 mm
— Backwards	0 mm
— upwards	50 mm
— at the side	20 mm
— downwards	10 mm
• for live parts	
— 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
Type of connectable conductor cross-sections	
• for main contacts	
— stranded	1 ... 10 mm ² , 2x (2.5 ... 6 mm ²)
• at AWG conductors for main contacts	2x (16 ... 12), 2x (14 ... 8)
Connectable conductor cross-section for main contacts	
• finely stranded with core end processing	1 ... 6 mm ²

Safety related data

B10 value	
• with high demand rate acc. to SN 31920	1 000 000
Proportion of dangerous failures	
• with high demand rate acc. to SN 31920	73 %

Certificates/ approvals

General Product Approval			For use in hazardous locations	Declaration of Conformity	
					Miscellaneous
CSA	UL		ATEX	EG-Konf.	

Test Certificates		Marine / Shipping			
Type Test Certificates/Test Report	Special Test Certificate				
		ABS	BUREAU VERITAS	LRS	PRS

Marine / Shipping			other	Railway
			Confirmation	Vibration and Shock
RINA	RMRS	DNV-GL DNVGL.COM/AF		

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, ...)

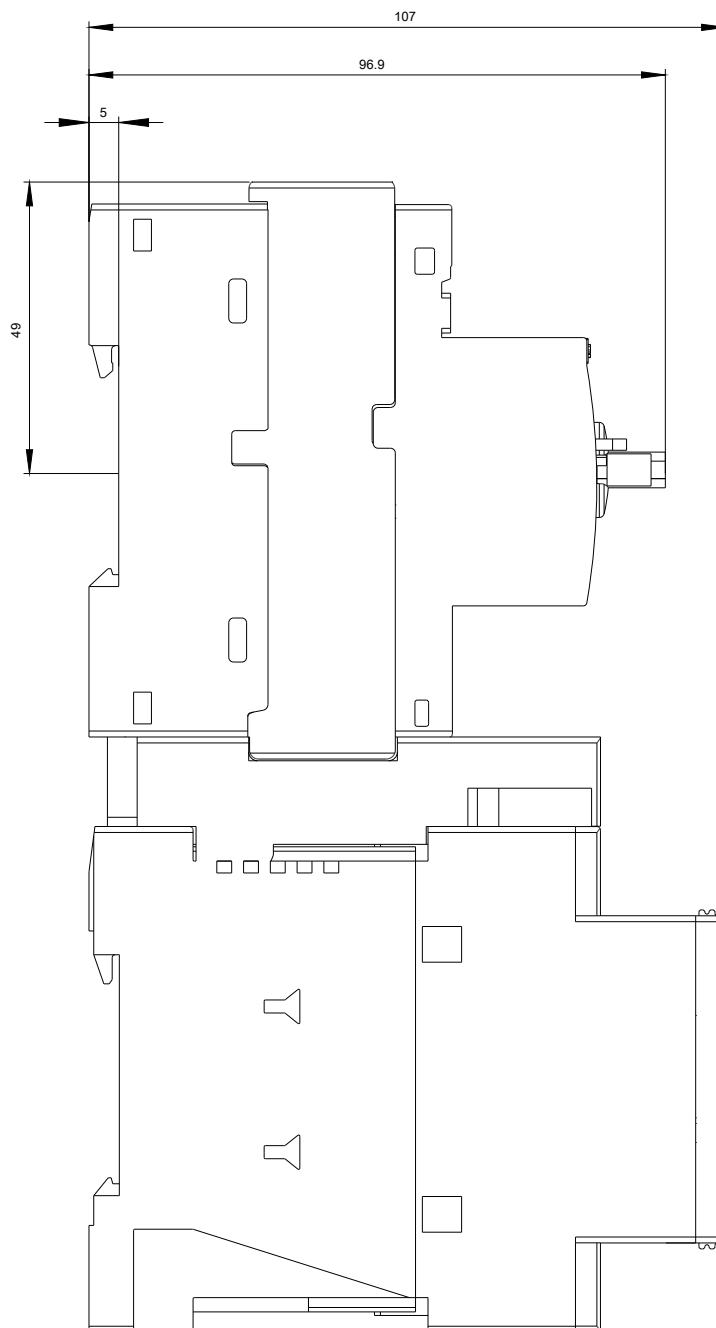
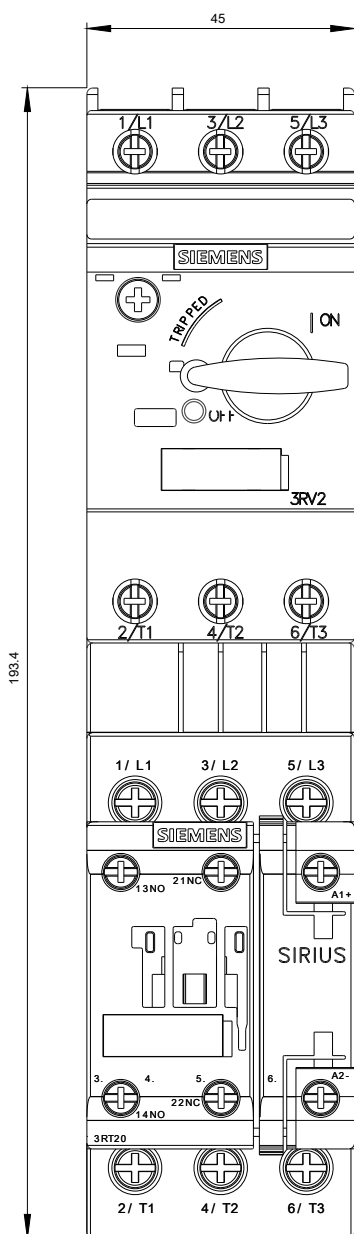
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-4EA27-0BB4&lang=en

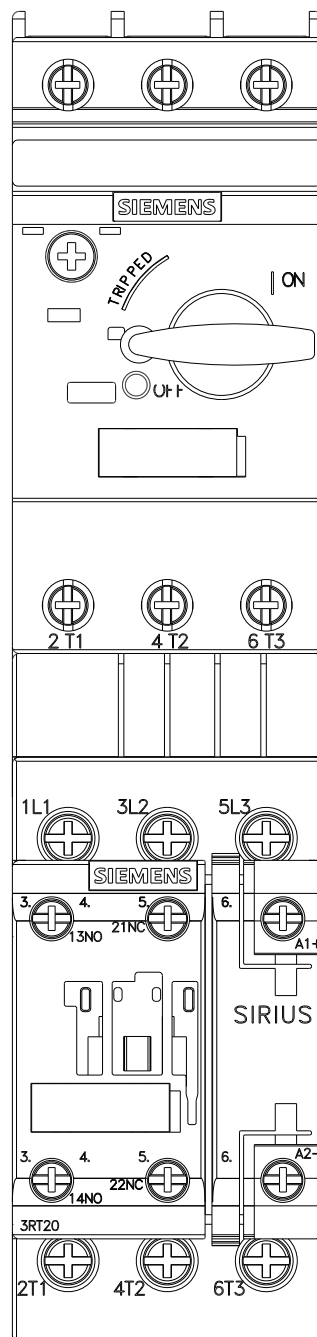
Characteristic: Tripping characteristics, I_t, Let-through current

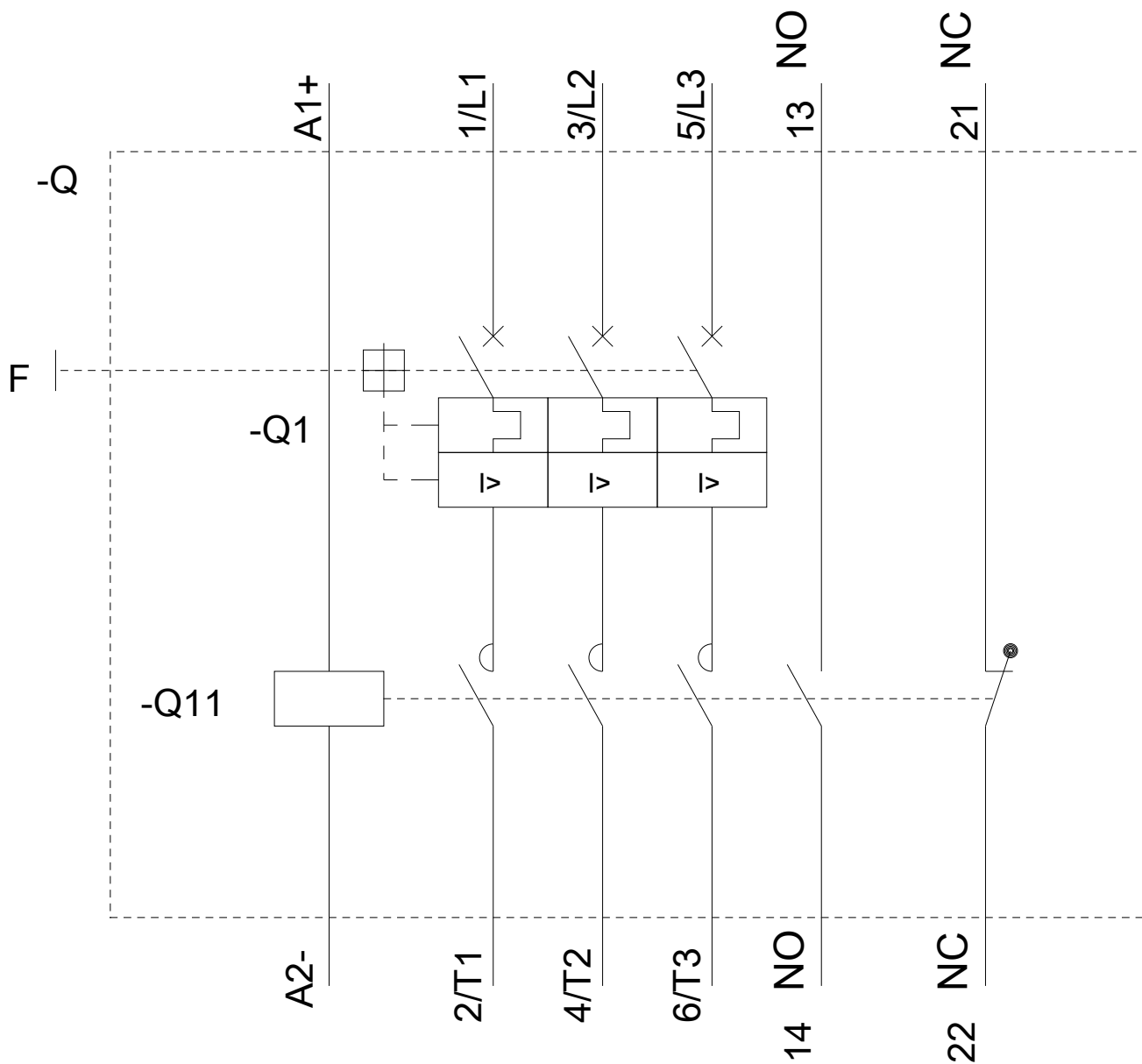
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-4EA27-0BB4/char>

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>







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