



Circuit breaker size S0 for motor protection, CLASS 10 A-release 9...12 A N-release 163 A Spring-type terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV2
General technical data	
size of the circuit-breaker	S0
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	9.25 W
• at AC in hot operating state per pole	3.1 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation in networks with grounded star point	
• between main and auxiliary circuit	400 V
• between main and auxiliary circuit	400 V
shock resistance acc. to IEC 60068-2-27	25g / 11 ms
mechanical service life (switching cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (switching cycles) typical	100 000
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 acc. to IEC 81346-2	Q
Substance Prohibition (Date)	01.10.2009 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
• ambient temperature during operation	-20 ... +60 °C
• ambient temperature during storage	-50 ... +80 °C
• ambient temperature 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

adjustable current response value current of the current-dependent overload release	9 ... 12.5 A
- operating voltage rated value - operating voltage at AC-3 rated value maximum	690 V 690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	12.5 A
operational current at AC-3 at 400 V rated value	12.5 A
operating power at AC-3	
- at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value	3 000 W 5 500 W 7 500 W 7 500 W
operating frequency at AC-3 maximum	15 1/h
Auxiliary circuit	
design of the auxiliary switch	transverse
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
- at 24 V - at 120 V - at 125 V - at 230 V	2 A 0.5 A 0.5 A 0.5 A
operational current of auxiliary contacts at DC-13	
- at 24 V - at 60 V	1 A 0.15 A
Protective and monitoring functions	
product function	
- ground fault detection - phase failure detection	No Yes
trip class	CLASS 10
design of the overload release	thermal
breaking capacity operating short-circuit current (Ics) at AC	
- at 240 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value	100 kA 100 kA 42 kA 4 kA
breaking capacity maximum short-circuit current (Icu)	
- at AC at 240 V rated value - at AC at 400 V rated value - at AC at 500 V rated value - at AC at 690 V rated value	100 kA 100 kA 42 kA 6 kA
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	12.5 A 12.5 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	0.5 hp 2 hp 3 hp 3 hp 7.5 hp 10 hp

contact rating of auxiliary contacts according to UL	C300 / R300
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the fuse link for short-circuit protection of the auxiliary switch required	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400 \text{ A}$)
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
height	119 mm
width	45 mm
depth	97 mm
required spacing - for grounded parts at 400 V — downwards 30 mm — upwards 30 mm — at the side 9 mm - for live parts at 400 V — downwards 30 mm — upwards 30 mm — at the side 9 mm - for grounded parts at 500 V — downwards 30 mm — upwards 30 mm — at the side 9 mm - for live parts at 500 V — downwards 30 mm — upwards 30 mm — at the side 9 mm - for grounded parts at 690 V — downwards 50 mm — upwards 50 mm — backwards 0 mm — at the side 30 mm — forwards 0 mm - for live parts at 690 V — downwards 50 mm — upwards 50 mm — backwards 0 mm — at the side 30 mm — forwards 0 mm	
Connections/ Terminals	
product function removable terminal for auxiliary and control circuit	No
type of electrical connection - for main current circuit - for auxiliary and control circuit	spring-loaded terminals spring-loaded terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections - for main contacts — solid or stranded 2x (1 ... 10 mm²) — finely stranded with core end processing 2x (1 ... 6 mm²) — finely stranded without core end processing 2x (1 ... 6 mm²) - at AWG cables for main contacts 2x (18 ... 8)	
type of connectable conductor cross-sections for auxiliary contacts	

— solid or stranded	2x (0.5 ... 2.5 mm ²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm ²)
— finely stranded without core end processing	2x (0.5 ... 1.5 mm ²)
• at AWG cables for auxiliary contacts	2x (20 ... 14)
design of screwdriver shaft	Diameter 3 mm
size of the screwdriver tip	3,0 x 0,5 mm
Safety related data	
B10 value	
• with high demand rate acc. to SN 31920	5 000
proportion of dangerous failures	
• with low demand rate acc. to SN 31920	50 %
• with high demand rate acc. to SN 31920	50 %
failure rate [FIT]	
• with low demand rate acc. to SN 31920	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
display version for switching status	Handle
Certificates/ approvals	
General Product Approval	
For use in hazardous locations	



[KC](#)



For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
--------------------------------	---------------------------	-------------------	-------------------



[Miscellaneous](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping



other	Railway
-------	---------

[Confirmation](#)



[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=3RV2021-1KA25>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1KA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1KA25>

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

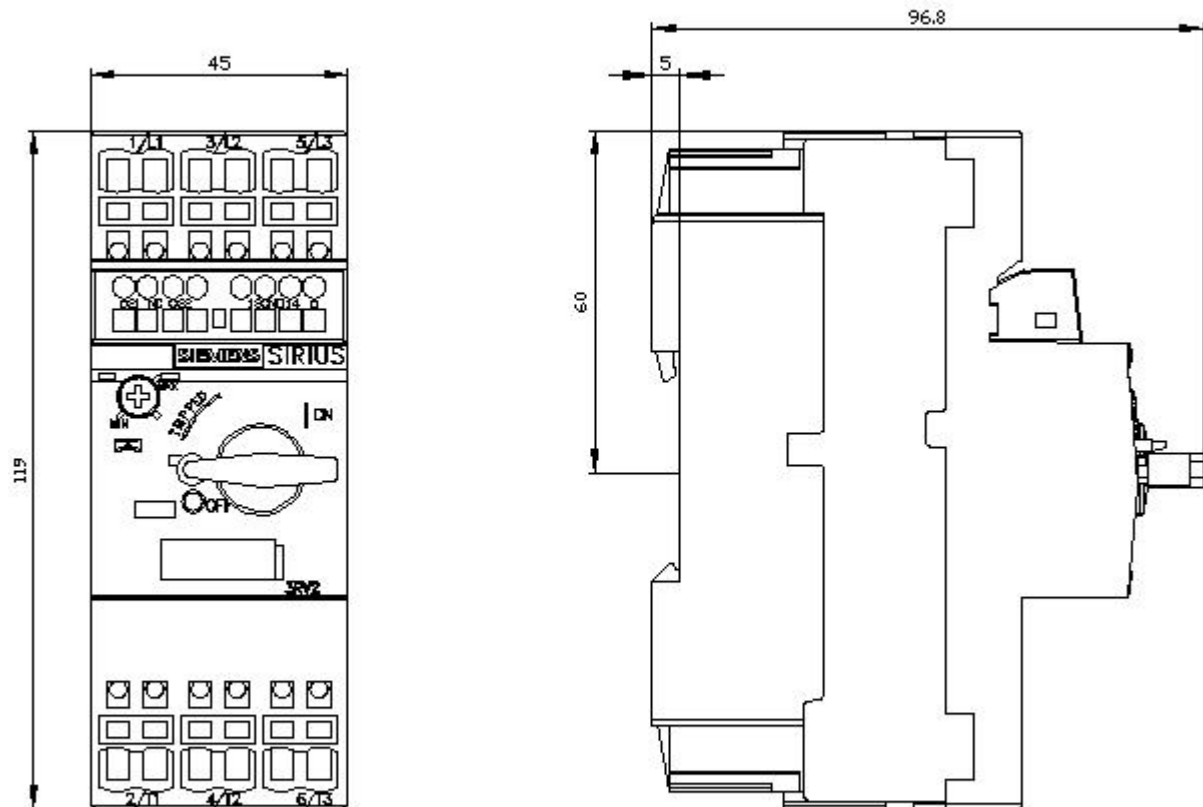
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1KA25&lang=en

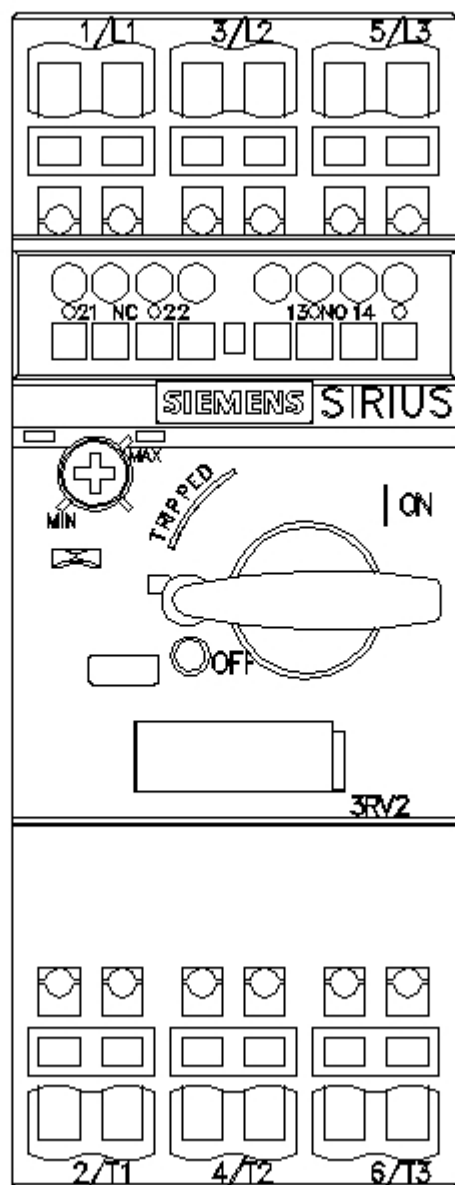
Characteristic: Tripping characteristics, I_t, Let-through current

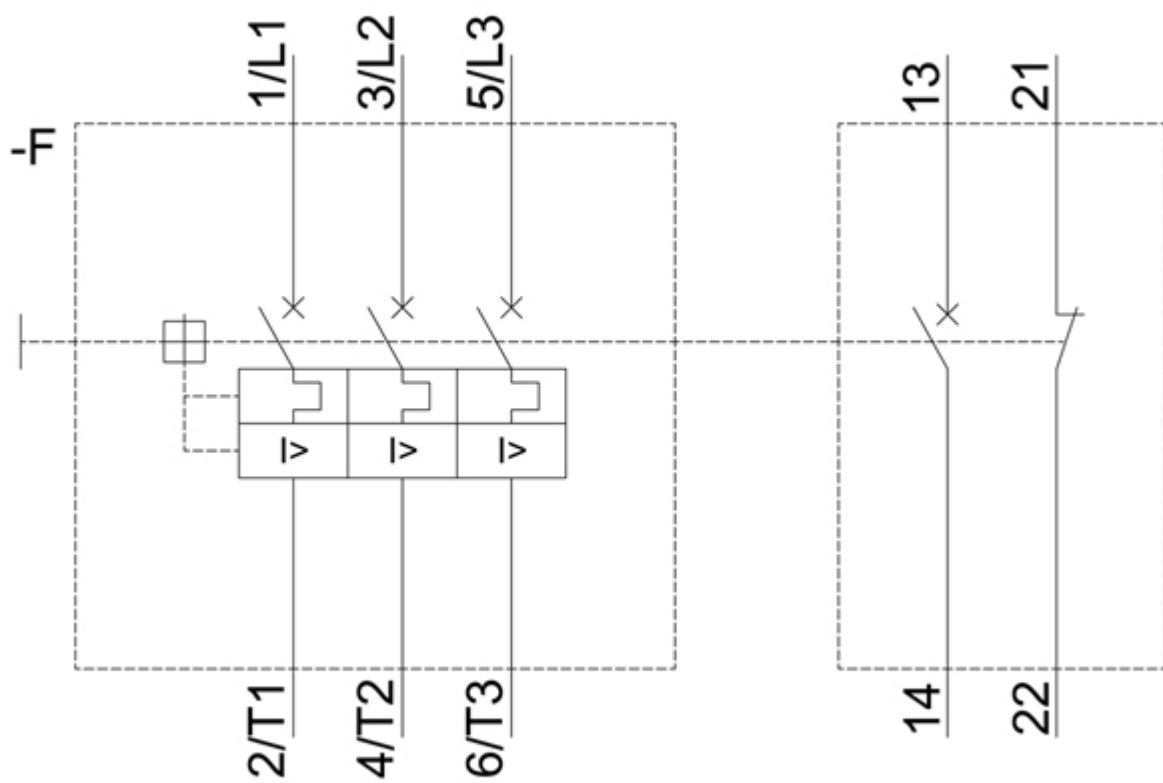
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1KA25/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1KA25&objecttype=14&gridview=view1>







last modified:

12/15/2020 