



Circuit breaker size S0 for motor protection, CLASS 10 A-release 1.8...2.5 A N-release 33 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	7.25 W
• at AC in hot operating state per pole	2.4 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
shock resistance according 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 according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °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	1.8 ... 2.5 A
operating voltage	
• rated value	20 ... 690 V
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V

operating frequency rated value	50 ... 60 Hz
operational current rated value	2.5 A
operational current	
• at AC-3 at 400 V rated value	2.5 A
• at AC-3e at 400 V rated value	2.5 A
operating power	
• at AC-3	
— at 230 V rated value	0.4 kW
— at 400 V rated value	0.8 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
• at AC-3e	
— at 230 V rated value	0.4 kW
— at 400 V rated value	0.8 kW
— at 500 V rated value	1.1 kW
— at 690 V rated value	1.5 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e 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	2 A
• at 120 V	0.5 A
• at 125 V	0.5 A
• at 230 V	0.5 A
operational current of auxiliary contacts at DC-13	
• at 24 V	1 A
• at 60 V	0.15 A
Protective and monitoring functions	
product function	
• ground fault detection	No
• phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
breaking capacity maximum short-circuit current (Icu)	
• at AC at 240 V rated value	100 kA
• at AC at 400 V rated value	100 kA
• at AC at 500 V rated value	100 kA
• at AC at 690 V rated value	10 kA
breaking capacity operating short-circuit current (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	100 kA
• at 500 V rated value	100 kA
• at 690 V rated value	10 kA
response value current of instantaneous short-circuit trip unit	33 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	2.5 A
• at 600 V rated value	2.5 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 230 V rated value	0.17 hp
• for 3-phase AC motor	
— at 200/208 V rated value	0.5 hp

— at 220/230 V rated value	0.5 hp	
— at 460/480 V rated value	1 hp	
— at 575/600 V rated value	1.5 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	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I _k < 400 A)	
<ul style="list-style-type: none"> for short-circuit protection of the auxiliary switch required 		
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		
<ul style="list-style-type: none"> for grounded parts at 400 V <ul style="list-style-type: none"> downwards upwards at the side for live parts at 400 V <ul style="list-style-type: none"> downwards upwards at the side for grounded parts at 500 V <ul style="list-style-type: none"> downwards upwards at the side for live parts at 500 V <ul style="list-style-type: none"> downwards upwards at the side for grounded parts at 690 V <ul style="list-style-type: none"> downwards upwards backwards at the side forwards for live parts at 690 V <ul style="list-style-type: none"> downwards upwards backwards at the side forwards 		
		30 mm
		30 mm
		9 mm
		30 mm
		30 mm
		9 mm
		30 mm
		30 mm
		9 mm
		30 mm
		30 mm
		9 mm
		50 mm
		50 mm
		0 mm
		30 mm
		0 mm
		50 mm
	50 mm	
	0 mm	
	30 mm	
	0 mm	
Connections/ Terminals		
type of electrical connection	spring-loaded terminals spring-loaded terminals	
<ul style="list-style-type: none"> for main current circuit for auxiliary and control circuit 		
arrangement of electrical connectors for main current circuit	Top and bottom	
type of connectable conductor cross-sections	2x (1 ... 10 mm ²) 2x (1 ... 6 mm ²) 2x (1 ... 6 mm ²) 2x (18 ... 8)	
<ul style="list-style-type: none"> for main contacts <ul style="list-style-type: none"> solid or stranded finely stranded with core end processing finely stranded without core end processing at AWG cables for main contacts 		
type of connectable conductor cross-sections		
<ul style="list-style-type: none"> 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 according to SN 31920	5 000
proportion of dangerous failures	
• with low demand rate according to SN 31920	50 %
• with high demand rate according to SN 31920	50 %
failure rate [FIT]	
• with low demand rate according to SN 31920	50 FIT
T1 value for proof test interval or service life according to IEC 61508	10 y
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
display version for switching status	Handle

Certificates/ approvals

General Product Approval



[Confirmation](#)



[KC](#)



For use in hazardous locations	Declaration of Conformity	Test Certificates
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Marine / Shipping



Marine / Shipping	other	Railway
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[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=3RV2021-1CA25>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1CA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1CA25>

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

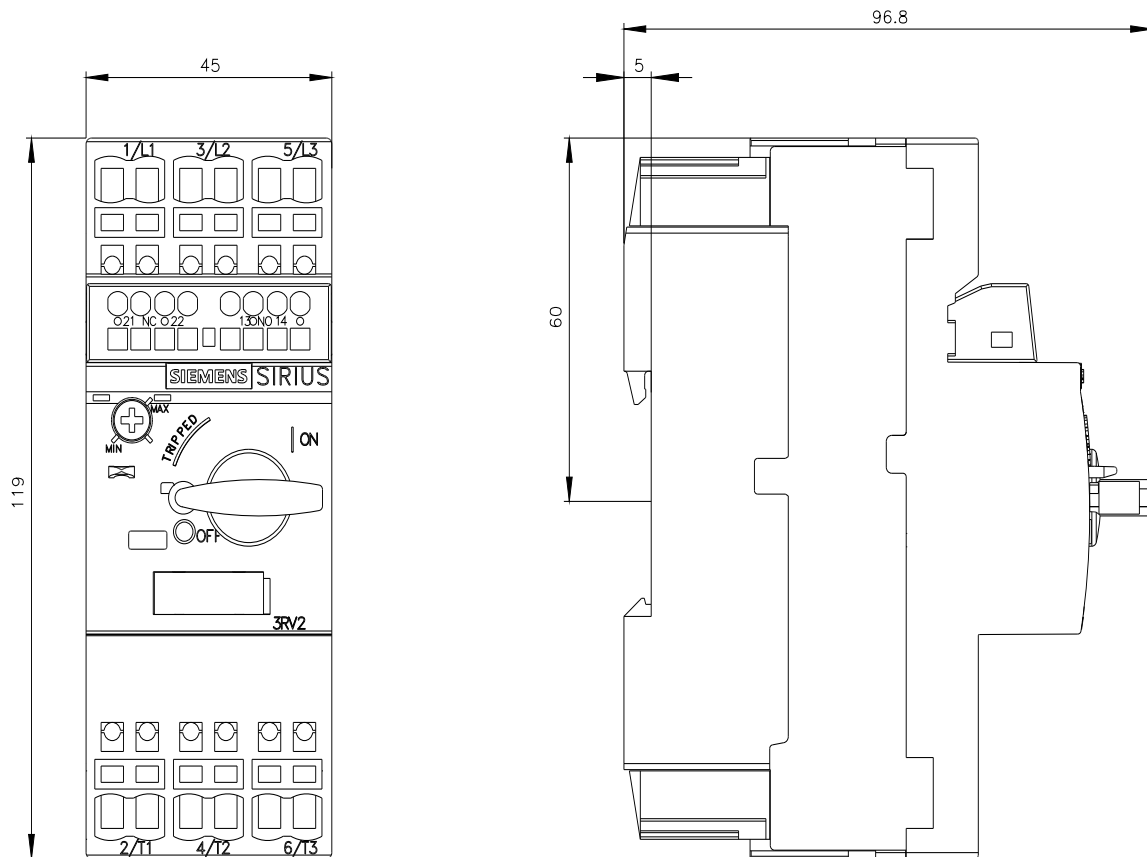
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1CA25&lang=en

Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1CA25/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1CA25&objecttype=14&gridview=view1>



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