



Circuit breaker size S0 for motor protection, CLASS 10 A-release 1.8...2.5 A N-release 33 A screw 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
<b>General technical data</b>	
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
<b>Ambient conditions</b>	
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 %
<b>Main circuit</b>	
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

<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	2.5 A
<b>operational current</b>	
• at AC-3 at 400 V rated value	2.5 A
• at AC-3e at 400 V rated value	2.5 A
<b>operating power</b>	
• 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
<b>operating frequency</b>	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
<b>Auxiliary circuit</b>	
<b>design of the auxiliary switch</b>	transverse
<b>number of NC contacts for auxiliary contacts</b>	1
<b>number of NO contacts for auxiliary contacts</b>	1
number of CO contacts for auxiliary contacts	0
<b>operational current of auxiliary contacts at AC-15</b>	
• at 24 V	2 A
• at 120 V	0.5 A
• at 125 V	0.5 A
• at 230 V	0.5 A
<b>operational current of auxiliary contacts at DC-13</b>	
• at 24 V	1 A
• at 60 V	0.15 A
<b>Protective and monitoring functions</b>	
<b>product function</b>	
• ground fault detection	No
• phase failure detection	Yes
<b>trip class</b>	CLASS 10
<b>design of the overload release</b>	thermal
<b>breaking capacity maximum short-circuit current (Icu)</b>	
• 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
<b>breaking capacity operating short-circuit current (Ics) at AC</b>	
• 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
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	2.5 A
• at 600 V rated value	2.5 A
<b>yielded mechanical performance [hp]</b>	
• 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 <ul style="list-style-type: none"><li>for short-circuit protection of the auxiliary switch required</li></ul>	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 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	97 mm
width	45 mm
depth	97 mm
required spacing <ul style="list-style-type: none"><li>with side-by-side mounting at the side</li><li>for grounded parts at 400 V<ul style="list-style-type: none"><li>downwards</li><li>upwards</li><li>at the side</li></ul></li><li>for live parts at 400 V<ul style="list-style-type: none"><li>downwards</li><li>upwards</li><li>at the side</li></ul></li><li>for grounded parts at 500 V<ul style="list-style-type: none"><li>downwards</li><li>upwards</li><li>at the side</li></ul></li><li>for live parts at 500 V<ul style="list-style-type: none"><li>downwards</li><li>upwards</li><li>at the side</li></ul></li><li>for grounded parts at 690 V<ul style="list-style-type: none"><li>downwards</li><li>upwards</li><li>backwards</li><li>at the side</li><li>forwards</li></ul></li><li>for live parts at 690 V<ul style="list-style-type: none"><li>downwards</li><li>upwards</li><li>backwards</li><li>at the side</li><li>forwards</li></ul></li></ul>	0 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 <ul style="list-style-type: none"><li>for main current circuit</li><li>for auxiliary and control circuit</li></ul>	screw-type terminals screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections <ul style="list-style-type: none"><li>for main contacts<ul style="list-style-type: none"><li>solid or stranded</li><li>finely stranded with core end processing</li></ul></li><li>at AWG cables for main contacts</li></ul>	2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²) 2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm² 2x (16 ... 12), 2x (14 ... 8)
type of connectable conductor cross-sections <ul style="list-style-type: none"><li>for auxiliary contacts</li></ul>	

— solid or stranded	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
— finely stranded with core end processing	2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
• at AWG cables for auxiliary contacts	2x (20 ... 16), 2x (18 ... 14)
<b>tightening torque</b>	
• for main contacts with screw-type terminals	2 ... 2.5 N·m
• for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m
<b>design of screwdriver shaft</b>	Diameter 5 to 6 mm
<b>size of the screwdriver tip</b>	Pozidriv size 2
<b>design of the thread of the connection screw</b>	
• for main contacts	M4
• of the auxiliary and control contacts	M3

Safety related data	
<b>B10 value</b>	
• with high demand rate according to SN 31920	5 000
<b>proportion of dangerous failures</b>	
• with low demand rate according to SN 31920	50 %
• with high demand rate according to SN 31920	50 %
<b>failure rate [FIT]</b>	
• 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
<b>protection class IP on the front according to IEC 60529</b>	IP20
<b>touch protection on the front according to IEC 60529</b>	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
		
ATEX	IECEx	EG-Konf.
		
		<a href="#">Special Test Certificate</a>
		<a href="#">Type Test Certificates/Test Report</a>

#### Marine / Shipping



Marine / Shipping	other	Railway
	<a href="#">Confirmation</a>	
		<a href="#">Vibration and Shock</a>
		<a href="#">Confirmation</a>

#### 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=3RV2021-1CA15>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1CA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1CA15>

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

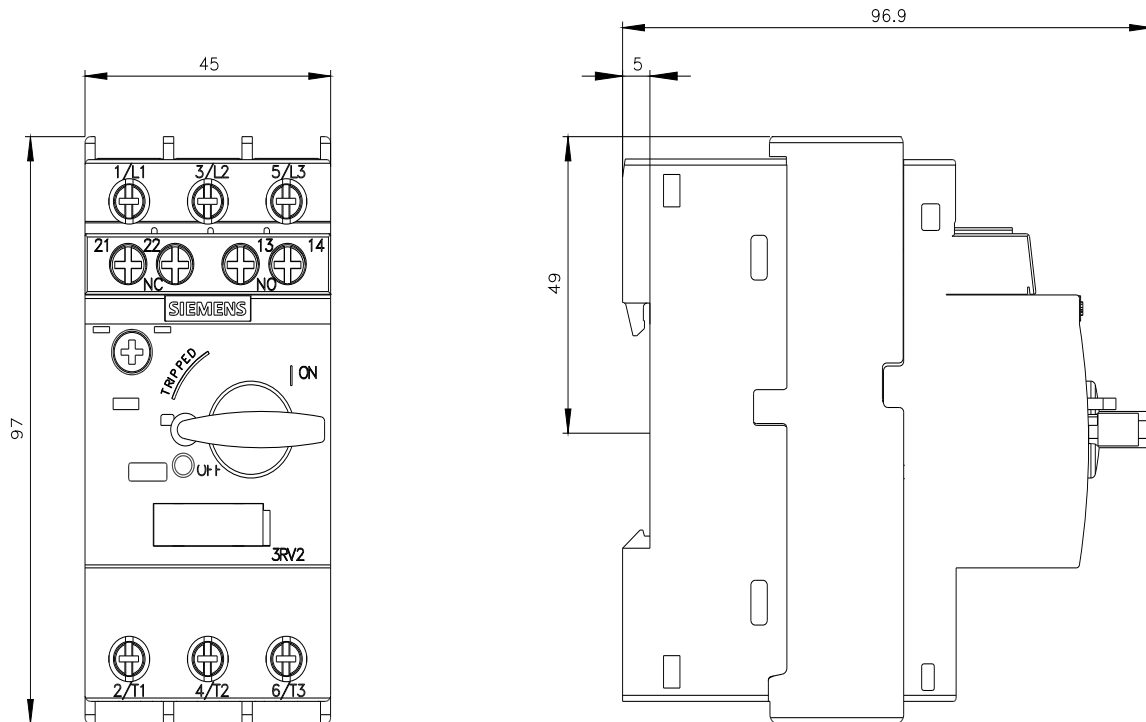
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-1CA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1CA15&lang=en)

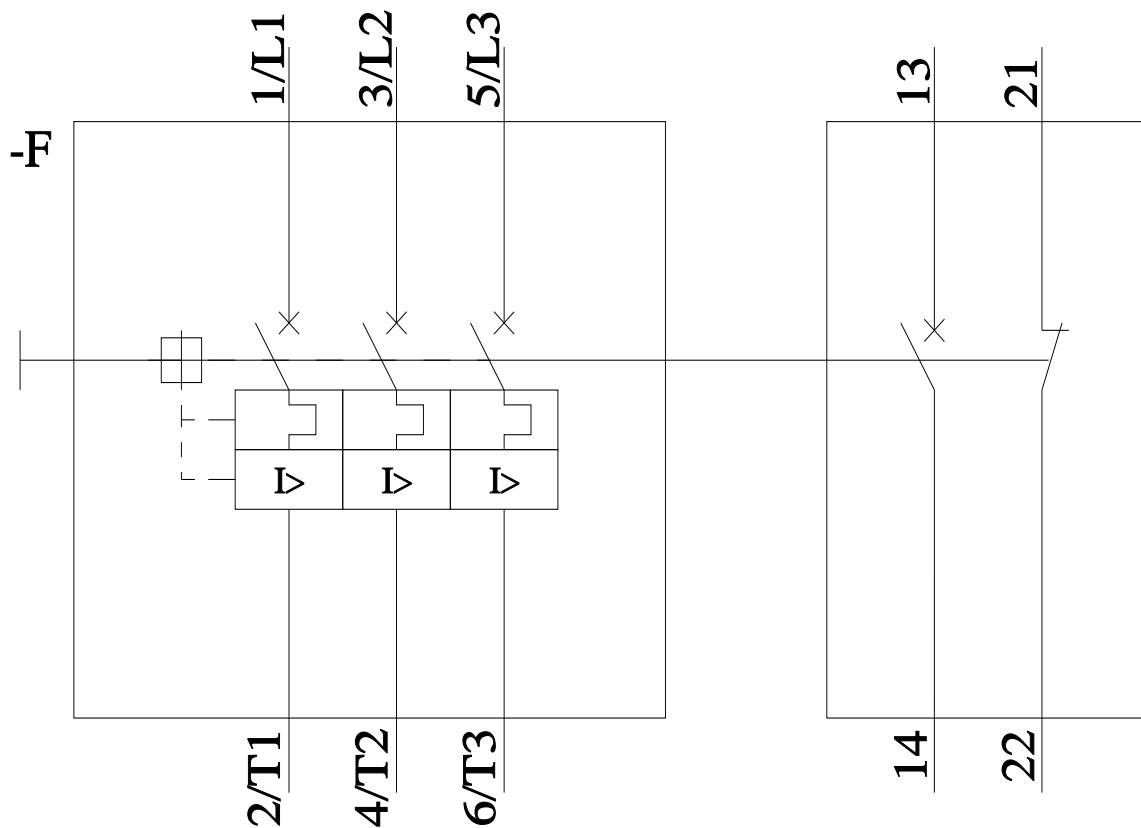
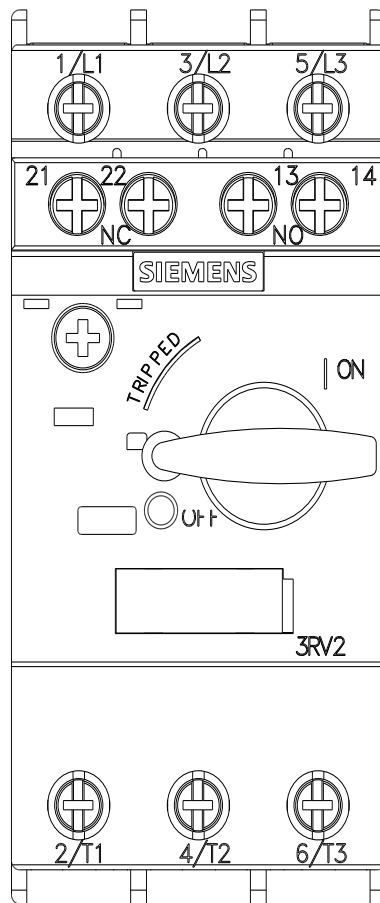
**Characteristic: Tripping characteristics,  $I^2t$ , Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1CA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1CA15&objecttype=14&gridview=view1>





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