



Circuit breaker size S0 for motor protection, CLASS 10 A-release 10...16 A N-release 208 A Spring-type terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

<b>product brand name</b>	SIRIUS
<b>product designation</b>	Circuit breaker
<b>design of the product</b>	For motor protection
<b>product type designation</b>	3RV2
<b>General technical data</b>	
<b>size of the circuit-breaker</b>	S0
<b>size of contactor can be combined company-specific</b>	S00, S0
product extension auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• 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
<b>surge voltage resistance rated value</b>	6 kV
<b>maximum permissible voltage for safe isolation in networks with grounded star point</b>	
• 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
<b>mechanical service life (switching cycles)</b>	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (switching cycles) typical	100 000
<b>type of protection according to ATEX directive 2014/34/EU</b>	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
<b>reference code acc. to IEC 81346-2</b>	Q
Substance Prohibitance (Date)	01.10.2009 00:00:00
<b>Ambient conditions</b>	
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
<b>temperature compensation</b>	-20 ... +60 °C
relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
<b>number of poles for main current circuit</b>	3

<b>adjustable current response value current of the current-dependent overload release</b>	10 ... 16 A
<ul style="list-style-type: none"> <li>operating voltage rated value</li> <li>operating voltage at AC-3 rated value maximum</li> </ul>	690 V 690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	16 A
operational current at AC-3 at 400 V rated value	16 A
operating power at AC-3 <ul style="list-style-type: none"> <li>at 230 V rated value</li> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul>	4 000 W 7 500 W 7 500 W 11 000 W
operating frequency at AC-3 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> <ul style="list-style-type: none"> <li>at 24 V</li> <li>at 120 V</li> <li>at 125 V</li> <li>at 230 V</li> </ul>	2 A 0.5 A 0.5 A 0.5 A
<b>operational current of auxiliary contacts at DC-13</b> <ul style="list-style-type: none"> <li>at 24 V</li> <li>at 60 V</li> </ul>	1 A 0.15 A
<b>Protective and monitoring functions</b>	
<b>product function</b> <ul style="list-style-type: none"> <li>ground fault detection</li> <li>phase failure detection</li> </ul>	No Yes
<b>trip class</b>	CLASS 10
<b>design of the overload release</b>	thermal
<b>breaking capacity operating short-circuit current (Ics) at AC</b> <ul style="list-style-type: none"> <li>at 240 V rated value</li> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>at 690 V rated value</li> </ul>	100 kA 25 kA 5 kA 2 kA
<b>breaking capacity maximum short-circuit current (Icu)</b> <ul style="list-style-type: none"> <li>at AC at 240 V rated value</li> <li>at AC at 400 V rated value</li> <li>at AC at 500 V rated value</li> <li>at AC at 690 V rated value</li> </ul>	100 kA 55 kA 10 kA 4 kA
response value current of instantaneous short-circuit trip unit	208 A
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b> <ul style="list-style-type: none"> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul>	16 A 16 A
<b>yielded mechanical performance [hp]</b> <ul style="list-style-type: none"> <li>for single-phase AC motor <ul style="list-style-type: none"> <li>at 110/120 V rated value</li> <li>at 230 V rated value</li> </ul> </li> <li>for 3-phase AC motor <ul style="list-style-type: none"> <li>at 200/208 V rated value</li> <li>at 220/230 V rated value</li> <li>at 460/480 V rated value</li> </ul> </li> </ul>	1 hp 2 hp 3 hp 5 hp 10 hp
<b>contact rating of auxiliary contacts according to UL</b>	C300 / R300

Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
<b>design of the fuse link</b> <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 $I_k < 400$ A)
<b>design of the fuse link for IT network for short-circuit protection of the main circuit</b> <ul style="list-style-type: none"> <li>at 400 V</li> <li>at 500 V</li> <li>at 690 V</li> </ul>	gL/gG 63 A gL/gG 50 A gL/gG 40 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
<b>required spacing</b> <ul style="list-style-type: none"> <li>for grounded parts at 400 V               <ul style="list-style-type: none"> <li>downwards 30 mm</li> <li>upwards 30 mm</li> <li>at the side 9 mm</li> </ul> </li> <li>for live parts at 400 V               <ul style="list-style-type: none"> <li>downwards 30 mm</li> <li>upwards 30 mm</li> <li>at the side 9 mm</li> </ul> </li> <li>for grounded parts at 500 V               <ul style="list-style-type: none"> <li>downwards 30 mm</li> <li>upwards 30 mm</li> <li>at the side 9 mm</li> </ul> </li> <li>for live parts at 500 V               <ul style="list-style-type: none"> <li>downwards 30 mm</li> <li>upwards 30 mm</li> <li>at the side 9 mm</li> </ul> </li> <li>for grounded parts at 690 V               <ul style="list-style-type: none"> <li>downwards 50 mm</li> <li>upwards 50 mm</li> <li>backwards 0 mm</li> <li>at the side 30 mm</li> <li>forwards 0 mm</li> </ul> </li> <li>for live parts at 690 V               <ul style="list-style-type: none"> <li>downwards 50 mm</li> <li>upwards 50 mm</li> <li>backwards 0 mm</li> <li>at the side 30 mm</li> <li>forwards 0 mm</li> </ul> </li> </ul>	
Connections/ Terminals	
product function removable terminal for auxiliary and control circuit	No
<b>type of electrical connection</b> <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals spring-loaded terminals
arrangement of electrical connectors for main current circuit	Top and bottom
<b>type of connectable conductor cross-sections</b> <ul style="list-style-type: none"> <li>for main contacts               <ul style="list-style-type: none"> <li>solid or stranded 2x (1 ... 10 mm<sup>2</sup>)</li> <li>finely stranded with core end processing 2x (1 ... 6 mm<sup>2</sup>)</li> </ul> </li> </ul>	

— finely stranded without core end processing	2x (1 ... 6 mm <sup>2</sup> )
• at AWG cables for main contacts	2x (18 ... 8)
<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid or stranded	2x (0.5 ... 2.5 mm <sup>2</sup> )
— finely stranded with core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> )
— finely stranded without core end processing	2x (0.5 ... 1.5 mm <sup>2</sup> )
• at AWG cables for auxiliary contacts	2x (20 ... 14)
<b>design of screwdriver shaft</b>	Diameter 3 mm
<b>size of the screwdriver tip</b>	3,0 x 0,5 mm

**Safety related data**

<b>B10 value</b>	
• with high demand rate acc. to SN 31920	5 000
<b>proportion of dangerous failures</b>	
• with low demand rate acc. to SN 31920	50 %
• with high demand rate acc. to SN 31920	50 %
<b>failure rate [FIT]</b>	
• with low demand rate acc. to SN 31920	50 FIT
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	10 y
<b>protection class IP on the front acc. to IEC 60529</b>	IP20
<b>touch protection on the front acc. to IEC 60529</b>	finger-safe, for vertical contact from the front
display version for switching status	Handle

**Certificates/ approvals**

<b>General Product Approval</b>	<b>For use in hazardous locations</b>
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[KC](#)



<b>For use in hazardous locations</b>	<b>Declaration of Conformity</b>	<b>Test Certificates</b>	<b>Marine / Shipping</b>
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[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=3RV2021-4AA25>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4AA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4AA25>

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

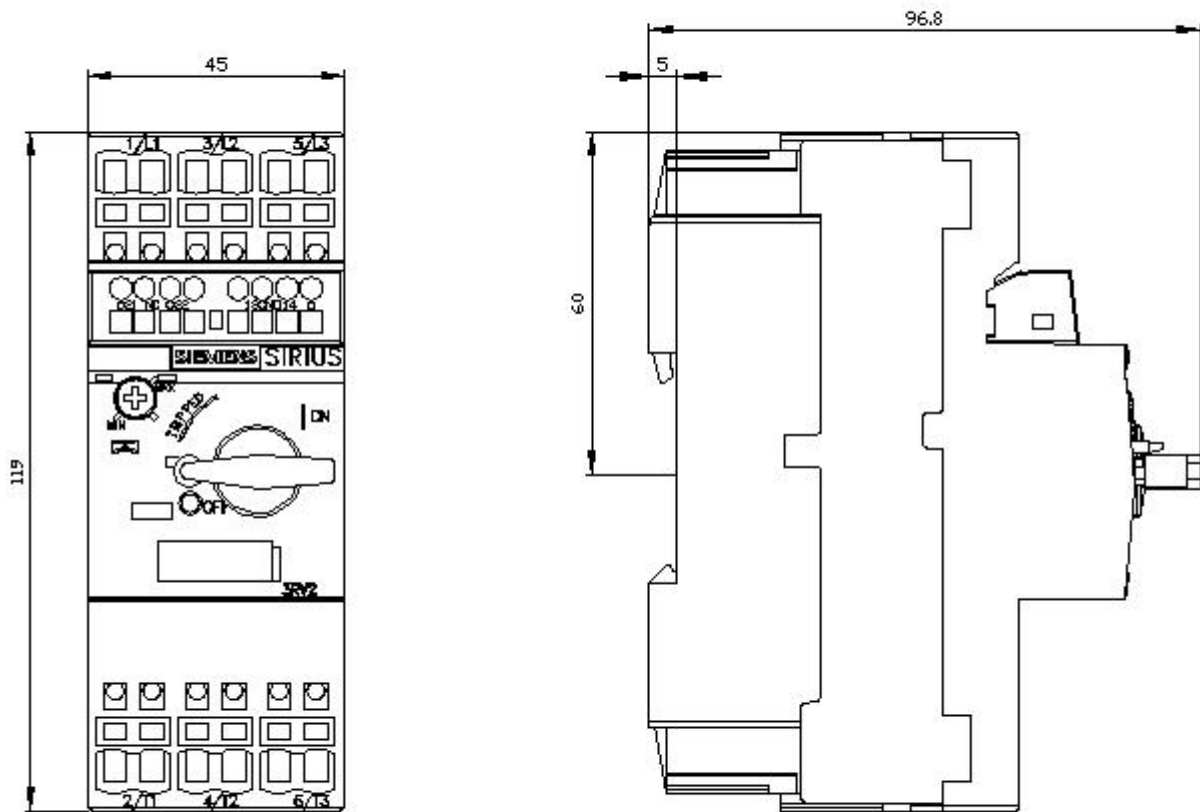
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4AA25&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4AA25&lang=en)

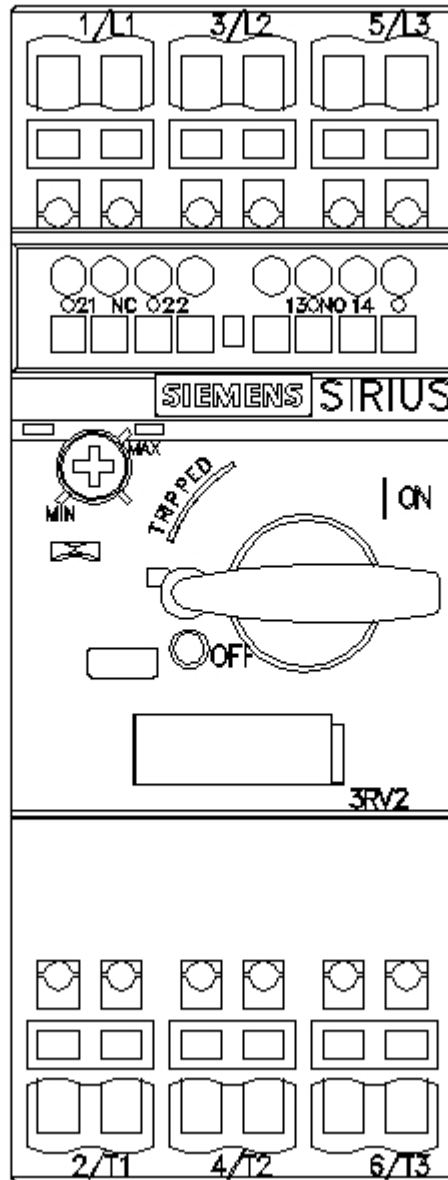
Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current

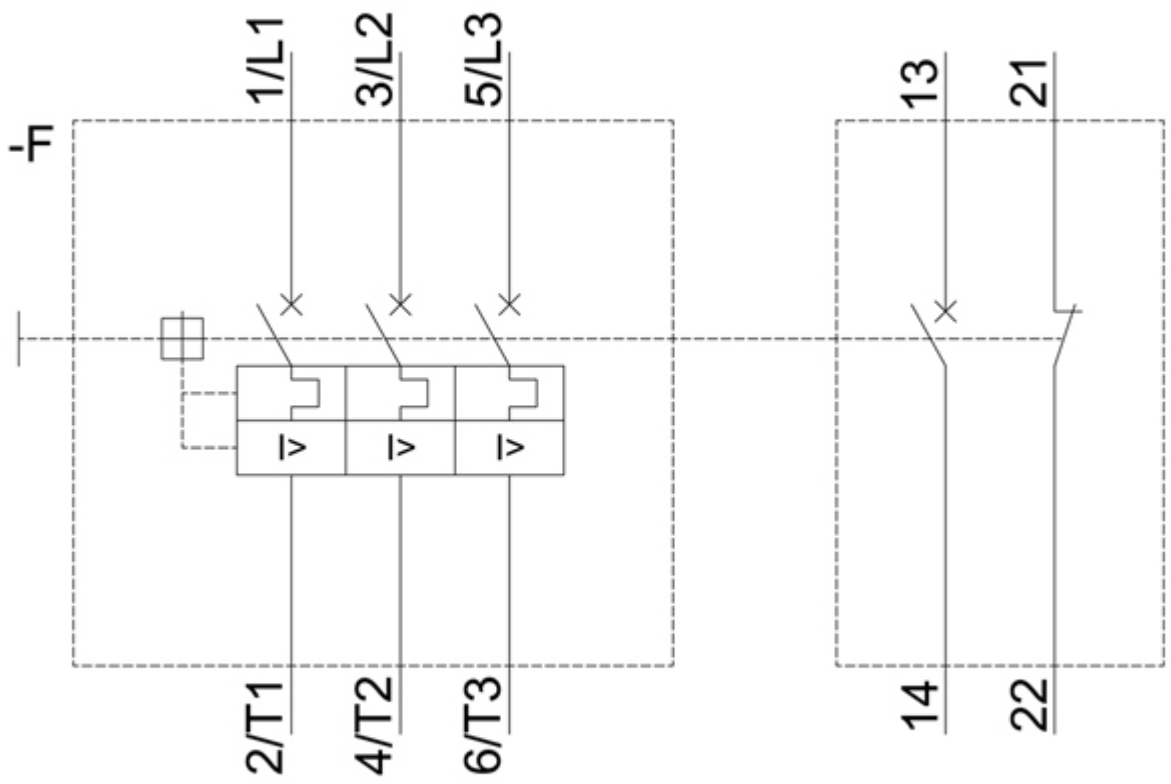
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4AA25/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4AA25&objecttype=14&gridview=view1>







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