



Circuit breaker size S0 for motor protection, CLASS 10 A-release 13...20 A N-release 260 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	10.5 W
• at AC in hot operating state per pole	3.5 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
<b>surge voltage resistance rated value</b>	6 kV
shock resistance according 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 according to IEC 81346-2</b>	Q
<b>Substance Prohibitance (Date)</b>	10/01/2009
<b>Ambient conditions</b>	
installation altitude at height above sea level maximum	2 000 m
<b>ambient temperature</b>	
• 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>	
<b>number of poles for main current circuit</b>	3
<b>adjustable current response value current of the current-dependent overload release</b>	13 ... 20 A
<b>operating voltage</b>	
• 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>	20 A
<b>operational current</b>	
• at AC-3 at 400 V rated value	20 A
• at AC-3e at 400 V rated value	20 A
<b>operating power</b>	
• at AC-3	
— at 230 V rated value	5.5 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	11 kW
— at 690 V rated value	15 kW
• at AC-3e	
— at 230 V rated value	5.5 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	11 kW
— at 690 V rated value	15 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	55 kA
• at AC at 500 V rated value	10 kA
• at AC at 690 V rated value	4 kA
<b>breaking capacity operating short-circuit current (Ics) at AC</b>	
• at 240 V rated value	100 kA
• at 400 V rated value	25 kA
• at 500 V rated value	5 kA
• at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	260 A
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	20 A
• at 600 V rated value	20 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	1.5 hp
— at 230 V rated value	3 hp
• for 3-phase AC motor	

— at 200/208 V rated value	7.5 hp	
— at 220/230 V rated value	5 hp	
— at 460/480 V rated value	10 hp	
<b>contact rating of auxiliary contacts according to UL</b>	C300 / R300	
<b>Short-circuit protection</b>		
<b>product function short circuit protection</b>	Yes	
<b>design of the short-circuit trip</b>	magnetic	
<b>design of the fuse link</b>	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A)	
<ul style="list-style-type: none"> <li>● for short-circuit protection of the auxiliary switch required</li> </ul>		
<b>design of the fuse link for IT network for short-circuit protection of the main circuit</b>	gL/gG 63 A gL/gG 50 A gL/gG 50 A	
<ul style="list-style-type: none"> <li>● at 400 V</li> </ul>		
<ul style="list-style-type: none"> <li>● at 500 V</li> </ul>		
<ul style="list-style-type: none"> <li>● at 690 V</li> </ul>		
<b>Installation/ mounting/ dimensions</b>		
<b>mounting position</b>	any	
<b>fastening method</b>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715	
<b>height</b>	119 mm	
<b>width</b>	45 mm	
<b>depth</b>	97 mm	
<b>required spacing</b>	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	
<ul style="list-style-type: none"> <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> </ul>		
<ul style="list-style-type: none"> <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> </ul>		
<ul style="list-style-type: none"> <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> </ul>		
<ul style="list-style-type: none"> <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> </ul>		
<ul style="list-style-type: none"> <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> </ul>		
<ul style="list-style-type: none"> <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>		
<b>Connections/ Terminals</b>		
<b>type of electrical connection</b>		spring-loaded terminals spring-loaded terminals
<ul style="list-style-type: none"> <li>● for main current circuit</li> <li>● for auxiliary and control circuit</li> </ul>		
<b>arrangement of electrical connectors for main current circuit</b>		Top and bottom
<b>type of connectable conductor cross-sections</b>		2x (1 ... 10 mm <sup>2</sup> ) 2x (1 ... 6 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>● for main contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> </ul> </li> </ul>		
<ul style="list-style-type: none"> <li>— finely stranded with core end processing</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 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**



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

**Marine / Shipping**



**Marine / Shipping      other      Railway**



[Confirmation](#)



[Vibration and Shock](#)

[Confirmation](#)

**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?mfb=3RV2021-4BA25>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4BA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4BA25>

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

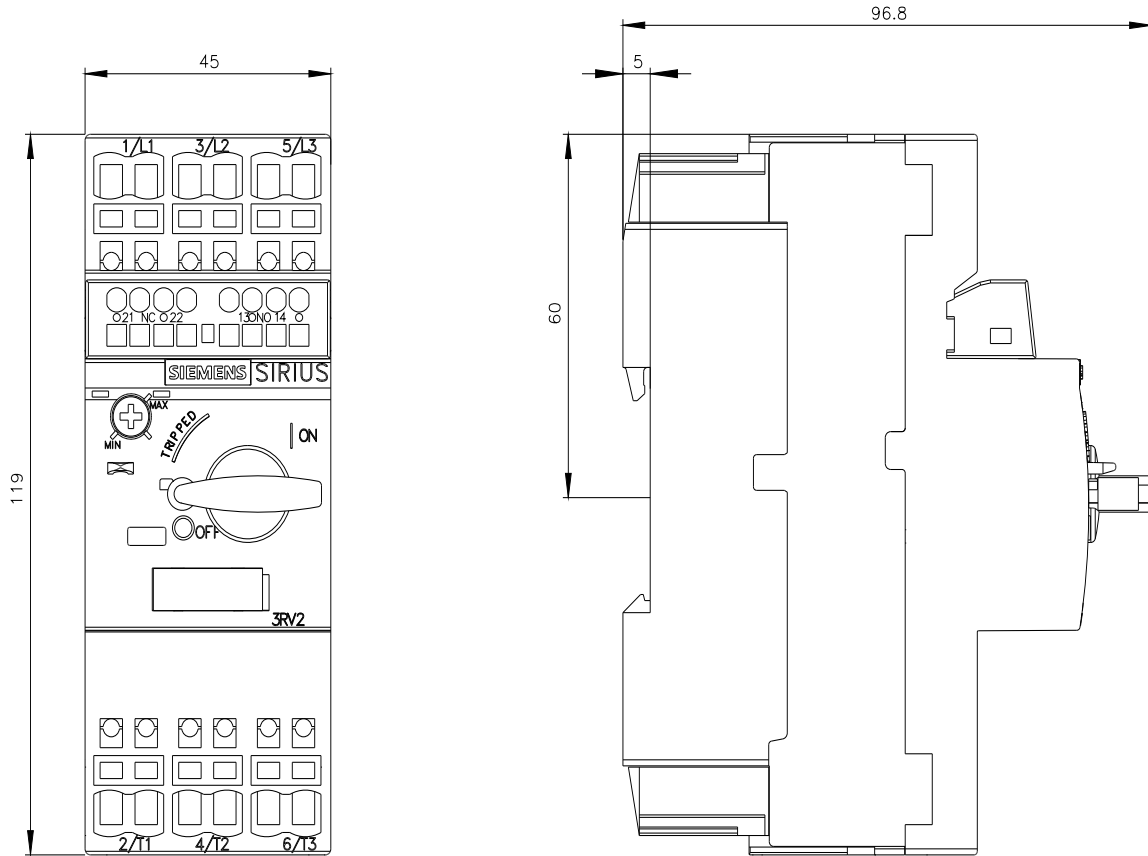
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4BA25&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4BA25&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4BA25/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4BA25&objecttype=14&gridview=view1>



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