



Circuit breaker size S2 for motor protection, CLASS 10 A-release 54...65 A N-release 845 A screw 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>	S2
<b>size of contactor can be combined company-specific</b>	S2
product extension auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state	26 W
• at AC in hot operating state per pole	8.7 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 Sinus
<b>mechanical service life (switching cycles)</b>	
• of the main contacts typical	20 000
• of auxiliary contacts typical	20 000
electrical endurance (switching cycles) typical	20 000
<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
<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</b>	54 ... 65 A

<b>current-dependent overload release</b>	
<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>	65 A
operational current at AC-3 at 400 V rated value	65 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>	18 500 W 30 000 W 45 000 W 55 000 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
<b>operational current of auxiliary contacts at AC-15</b>	
<ul style="list-style-type: none"> <li>at 24 V</li> <li>at 230 V</li> </ul>	2 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> <li>at 110 V</li> <li>at 125 V</li> <li>at 220 V</li> </ul>	1 A 0.15 A 0 A 0 A 0 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 30 kA 4 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 65 kA 8 kA 4 kA
response value current of instantaneous short-circuit trip unit	845 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>	65 A 62 A
<b>yielded mechanical performance [hp]</b>	
<ul style="list-style-type: none"> <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> <li>at 575/600 V rated value</li> </ul> </li> </ul>	20 hp 25 hp 50 hp 60 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> <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	fuse 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 240 V</li> <li>at 400 V</li> <li>at 500 V</li> <li>at 690 V</li> </ul>	none required 160 125 100
<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>	140 mm
<b>width</b>	55 mm
<b>depth</b>	149 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 50 mm</li> <li>upwards 50 mm</li> <li>at the side 10 mm</li> </ul> </li> <li>for live parts at 400 V               <ul style="list-style-type: none"> <li>downwards 50 mm</li> <li>upwards 50 mm</li> <li>at the side 10 mm</li> </ul> </li> <li>for grounded parts at 500 V               <ul style="list-style-type: none"> <li>downwards 50 mm</li> <li>upwards 50 mm</li> <li>at the side 10 mm</li> </ul> </li> <li>for live parts at 500 V               <ul style="list-style-type: none"> <li>downwards 50 mm</li> <li>upwards 50 mm</li> <li>at the side 10 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 10 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 10 mm</li> <li>forwards 0 mm</li> </ul> </li> </ul>	
<b>Connections/ Terminals</b>	
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>	screw-type terminals screw-type terminals
<b>arrangement of electrical connectors for main current circuit</b>	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 ... 35 mm<sup>2</sup>), 1x (1 ... 50 mm<sup>2</sup>)</li> <li>finely stranded with core end processing 2x (1 ... 25 mm<sup>2</sup>), 1x (1 ... 35 mm<sup>2</sup>)</li> </ul> </li> <li>at AWG cables for main contacts 2x (18 ... 2), 1x (18 ... 1)</li> </ul>	
<b>type of connectable conductor cross-sections</b>	

<ul style="list-style-type: none"> <li>for auxiliary 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 auxiliary contacts</li> </ul>	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14)
<ul style="list-style-type: none"> <li>tightening torque for main contacts with screw-type terminals</li> <li>tightening torque for auxiliary contacts with screw-type terminals</li> </ul>	3 ... 4.5 N·m  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 2
<b>design of the thread of the connection screw</b>	
<ul style="list-style-type: none"> <li>for main contacts</li> <li>of the auxiliary and control contacts</li> </ul>	M6 M3

Safety related data	
<b>B10 value</b>	
<ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul>	5 000
<b>proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> <li>with high demand rate acc. to SN 31920</li> </ul>	50 % 50 %
<b>failure rate [FIT]</b>	
<ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> </ul>	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	
General Product Approval	For use in hazardous locations



[KC](#)



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

[Type Test Certificates/Test Report](#)

[Type Test Certificates/Test Report](#)

[Type Test Certificates/Test Report](#)

Test Certificates	Marine / Shipping				
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping	other	Railway
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[Confirmation](#)



[Confirmation](#)

## Railway

[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=3RV2031-4JA15>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4JA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JA15>

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

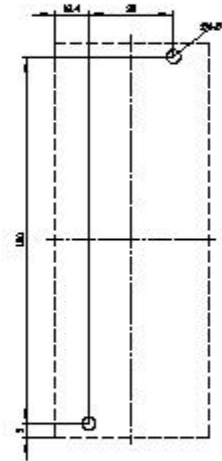
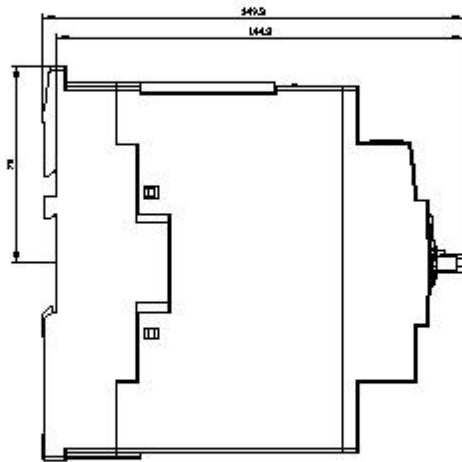
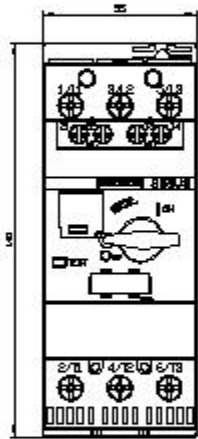
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2031-4JA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4JA15&lang=en)

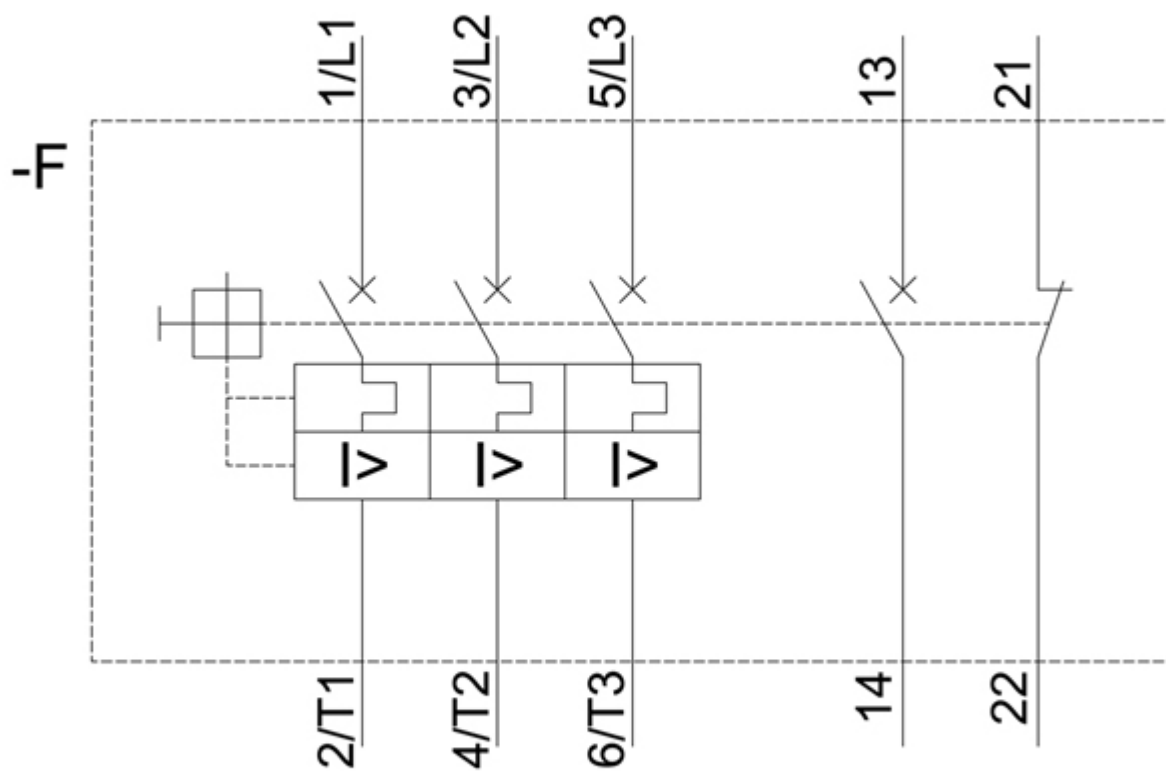
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4JA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4JA15&objecttype=14&gridview=view1>





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