



Circuit breaker size S3 for motor protection, Class 20 A-release 80...100 A  
N-release 1300 A screw terminal Increased switching capacity 100 kA

<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>	S3
<b>size of contactor can be combined company-specific</b>	S3
product extension auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• at AC in hot operating state	44 W
• at AC in hot operating state per pole	14.7 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
<b>surge voltage resistance rated value</b>	8 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	25 000
• of auxiliary contacts typical	25 000
electrical endurance (switching cycles) typical	25 000
<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 current-dependent overload release</b>	80 ... 100 A
• operating voltage rated value	690 V
• operating voltage at AC-3 rated value maximum	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz

<b>operational current rated value</b>	100 A
operational current at AC-3 at 400 V rated value	100 A
operating power at AC-3	
• at 230 V rated value	30 000 W
• at 400 V rated value	45 000 W
• at 690 V rated value	90 000 W
operating frequency at AC-3 maximum	15 1/h
<b>Protective and monitoring functions</b>	
<b>product function</b>	
• ground fault detection	No
• phase failure detection	Yes
<b>trip class</b>	Class 20
<b>design of the overload release</b>	thermal
<b>breaking capacity operating short-circuit current (Ics) at AC</b>	
• at 240 V rated value	100 kA
• at 400 V rated value	50 kA
• at 500 V rated value	5 kA
• at 690 V rated value	3 kA
<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	10 kA
• at AC at 690 V rated value	6 kA
response value current of instantaneous short-circuit trip unit	1 300 A
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	100 A
• at 600 V rated value	100 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	7.5 hp
— at 230 V rated value	20 hp
• for 3-phase AC motor	
— at 200/208 V rated value	30 hp
— at 220/230 V rated value	40 hp
— at 460/480 V rated value	75 hp
— at 575/600 V rated value	100 hp
<b>Short-circuit protection</b>	
<b>product function short circuit protection</b>	Yes
<b>design of the short-circuit trip</b>	magnetic
<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>	165 mm
<b>width</b>	70 mm
<b>depth</b>	176 mm
<b>required spacing</b>	
• for grounded parts at 400 V	
— downwards	70 mm
— upwards	70 mm
— at the side	10 mm
• for live parts at 400 V	
— downwards	70 mm
— upwards	70 mm
— at the side	10 mm

<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> <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>	110 mm 110 mm 10 mm  110 mm 110 mm 10 mm  150 mm 150 mm 0 mm 30 mm 0 mm  150 mm 150 mm 0 mm 30 mm 0 mm
<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> </ul>	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</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> </ul>	2x (2.5 ... 16 mm <sup>2</sup> ) 2x (2,5 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> ) 2x (2.5 ... 35 mm <sup>2</sup> ), 1x (2.5 ... 50 mm <sup>2</sup> ) 2x (10 ... 35 mm <sup>2</sup> ), 1x (10 ... 50 mm <sup>2</sup> )
<ul style="list-style-type: none"> <li>• <b>tightening torque</b> <ul style="list-style-type: none"> <li>— for main contacts for ring cable lug</li> </ul> </li> </ul>	4.5 ... 6 N·m
<b>outer diameter of the usable ring cable lug maximum</b>	19 mm
<ul style="list-style-type: none"> <li>• tightening torque for main contacts with screw-type terminals</li> </ul>	4.5 ... 6 N·m
<b>Safety related data</b>	
<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>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
<b>Certificates/ approvals</b>	
<b>General Product Approval</b>	<b>Declaration of Conformity</b>



KC



[Miscellaneous](#)

Declaration of Conformity	Test Certificates	Marine / Shipping			
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EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS

Marine / Shipping	other				
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PRS



RINA



RMRS



DNV-GL

[Confirmation](#)

[Confirmation](#)

other	Railway				
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VDE

[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?mlfb=3RV2042-4MB10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4MB10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4MB10>

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

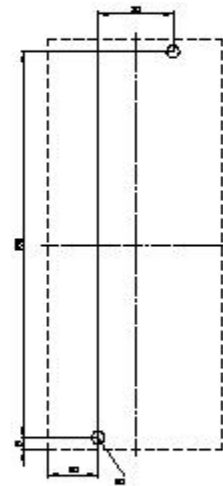
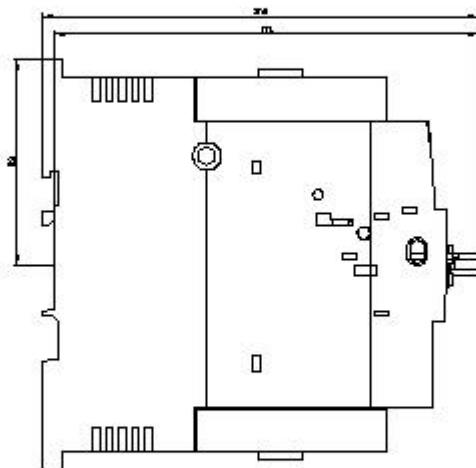
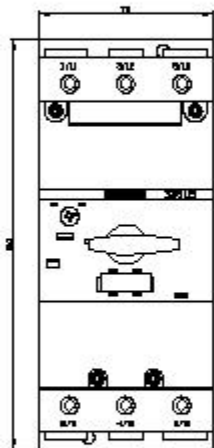
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2042-4MB10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4MB10&lang=en)

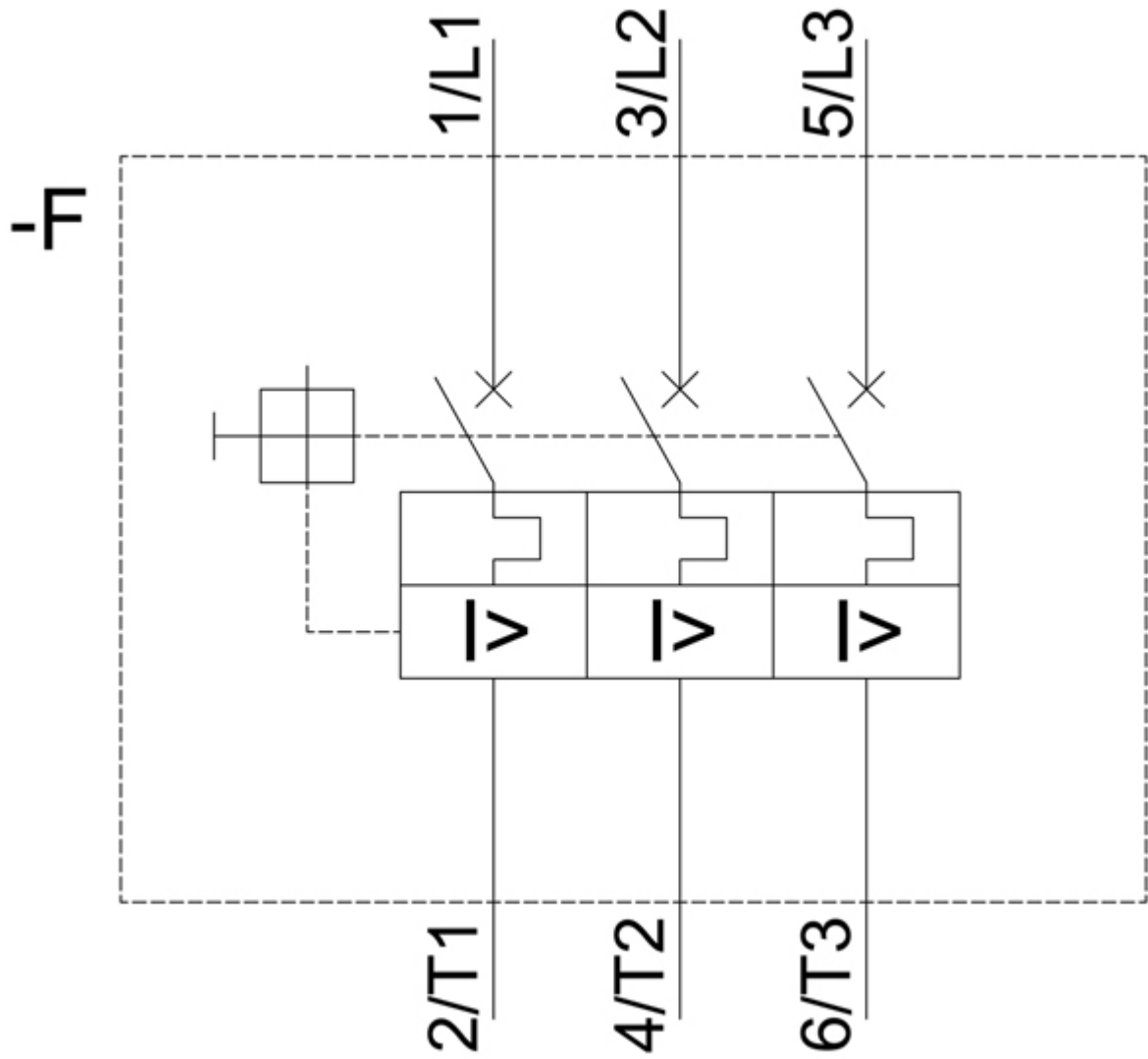
Characteristic: Tripping characteristics, I<sup>t</sup>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4MB10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4MB10&objecttype=14&gridview=view1>





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