



Circuit breaker size S00 for motor protection, CLASS 10 A-release 2.8...4 A  
N release 52 A Screw terminal Standard switching capacity

<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>	3RV1
<b>General technical data</b>	
<b>size of the circuit-breaker</b>	S00
<b>size of contactor can be combined company-specific</b>	S00
product extension auxiliary switch	Yes
<b>power loss [W] for rated value of the current</b>	
• 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
<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
<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
<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>	2.8 ... 4 A

<ul style="list-style-type: none"> <li>operating voltage rated value</li> </ul>	690 V
<ul style="list-style-type: none"> <li>operating voltage at AC-3 rated value maximum</li> </ul>	690 V
<b>operating frequency rated value</b>	50 ... 60 Hz
<b>operational current rated value</b>	4 A
operational current at AC-3 at 400 V rated value	4 A
operating power at AC-3	
<ul style="list-style-type: none"> <li>at 230 V rated value</li> </ul>	750 W
<ul style="list-style-type: none"> <li>at 400 V rated value</li> </ul>	1 500 W
<ul style="list-style-type: none"> <li>at 500 V rated value</li> </ul>	2 200 W
<ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul>	3 000 W
operating frequency at AC-3 maximum	15 1/h
<b>Auxiliary circuit</b>	
number of CO contacts for auxiliary contacts	0
<b>Protective and monitoring functions</b>	
<b>product function</b>	
<ul style="list-style-type: none"> <li>ground fault detection</li> </ul>	No
<ul style="list-style-type: none"> <li>phase failure detection</li> </ul>	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> </ul>	100 kA
<ul style="list-style-type: none"> <li>at 400 V rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>at 500 V rated value</li> </ul>	3 kA
<ul style="list-style-type: none"> <li>at 690 V rated value</li> </ul>	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> </ul>	100 kA
<ul style="list-style-type: none"> <li>at AC at 400 V rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>at AC at 500 V rated value</li> </ul>	3 kA
<ul style="list-style-type: none"> <li>at AC at 690 V rated value</li> </ul>	2 kA
response value current of instantaneous short-circuit trip unit	52 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> </ul>	4 A
<ul style="list-style-type: none"> <li>at 600 V rated value</li> </ul>	4 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> <li>at 575/600 V rated value</li> </ul> </li> </ul>	0.125 hp 0.33 hp 0.75 hp 0.75 hp 2 hp 3 hp
<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 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 gL/gG 40 A gL/gG 35 A gL/gG 35 A
<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>	90 mm

<b>width</b>	45 mm
<b>depth</b>	75 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 20 mm</li> <li>— upwards 20 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 20 mm</li> <li>— upwards 20 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 20 mm</li> <li>— upwards 20 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 20 mm</li> <li>— upwards 20 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 20 mm</li> <li>— upwards 20 mm</li> <li>— backwards 0 mm</li> <li>— at the side 9 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>● for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards 20 mm</li> <li>— upwards 20 mm</li> <li>— backwards 0 mm</li> <li>— at the side 9 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> </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 or stranded 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>), 2x (1 ... 4 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</li> </ul> </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 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>● tightening torque for main contacts with screw-type terminals 0.8 ... 1.2 N·m</li> <li>● tightening torque for auxiliary contacts with screw-type terminals 0.8 ... 1.2 N·m</li> </ul>	
<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 M3</li> </ul>	
<b>Safety related data</b>	
<b>B10 value</b>	
<ul style="list-style-type: none"> <li>● with high demand rate acc. to SN 31920 5 000</li> </ul>	
<b>proportion of dangerous failures</b>	
<ul style="list-style-type: none"> <li>● with low demand rate acc. to SN 31920 50 %</li> <li>● with high demand rate acc. to SN 31920 50 %</li> </ul>	
<b>failure rate [FIT]</b>	

• with low demand rate acc. to SN 31920	50 FIT
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
display version for switching status	Rocker switch

### Certificates/ approvals

General Product Approval	For use in hazardous locations
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Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Marine / Shipping	other
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[Miscellaneous](#)

[Confirmation](#)

other	Railway
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[Special Test Certificate](#)

### 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=3RV1011-1EA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1EA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1EA10>

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

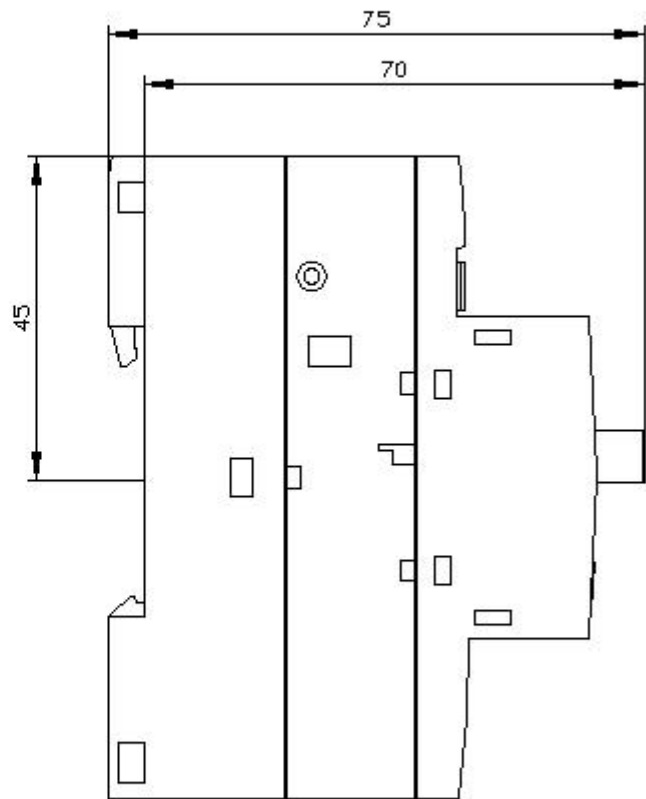
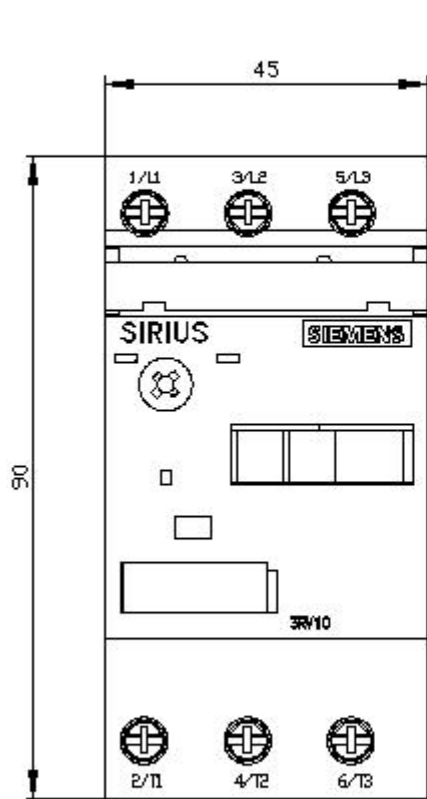
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV1011-1EA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1EA10&lang=en)

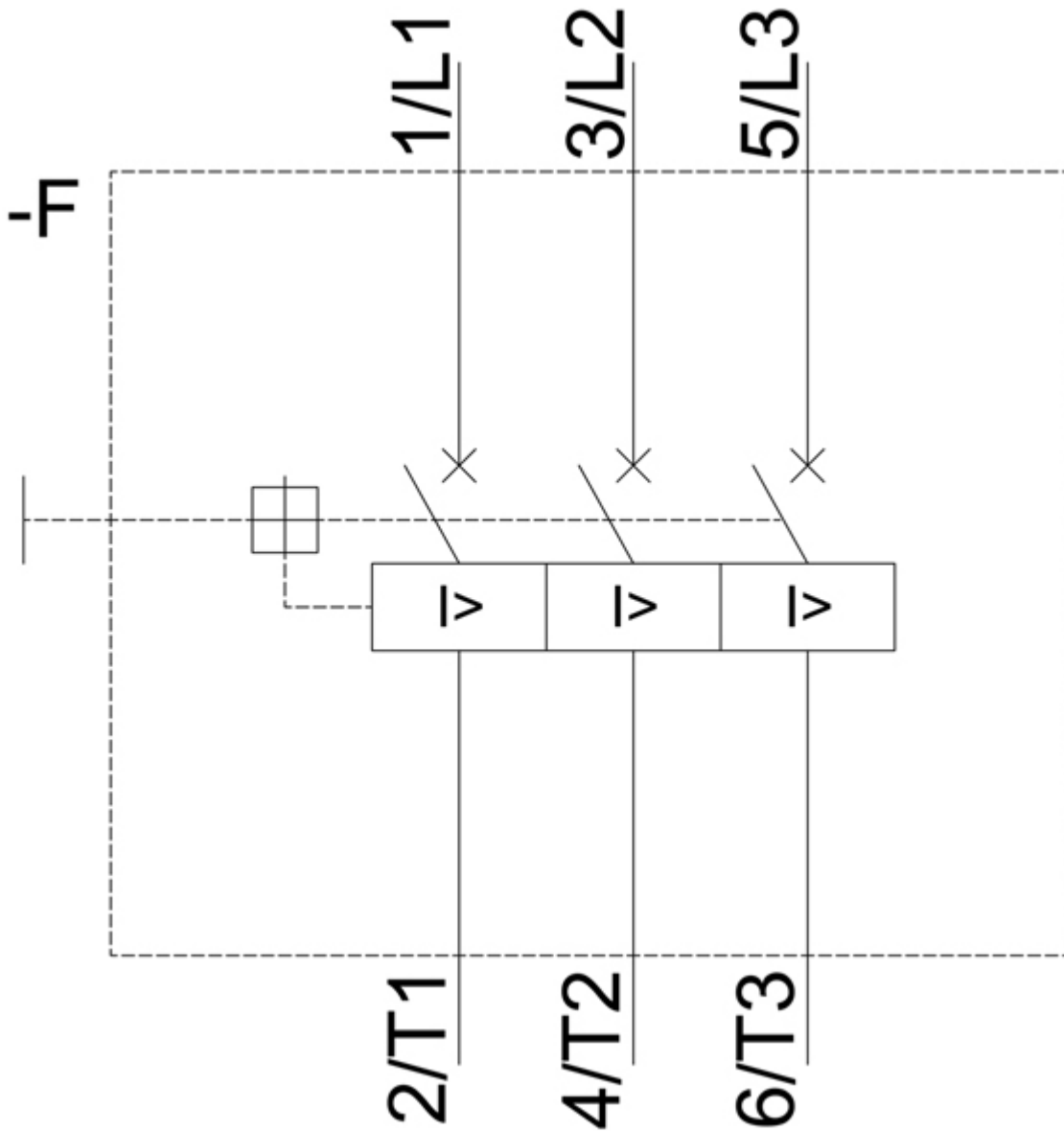
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1EA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1EA10&objecttype=14&gridview=view1>





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