



Circuit breaker size S00 for motor protection, CLASS 10 A-release 1.1...1.6 A N-release 21 A Screw terminal Standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV1
<b>General technical data</b>	
size of the circuit-breaker	S00
size of contactor can be combined company-specific	S00
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• 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
surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation in networks with grounded star point	
• between main and auxiliary circuit	400 V
• between main and auxiliary circuit	400 V
mechanical service life (switching cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (switching cycles) typical	100 000
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
reference code acc. to IEC 81346-2	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
temperature compensation	-20 ... +60 °C
relative humidity during operation	10 ... 95 %
<b>Main circuit</b>	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	1.1 ... 1.6 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>	1.6 A
operational current at AC-3 at 400 V rated value	1.6 A
operating power at AC-3	
• at 230 V rated value	250 W
• at 400 V rated value	550 W
• at 500 V rated value	750 W
• at 690 V rated value	750 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>	
• 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 operating short-circuit current (Ics) at AC</b>	
• at 240 V rated value	100 kA
• at 400 V rated value	100 kA
• at 500 V rated value	100 kA
• at 690 V rated value	2 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	100 kA
• at AC at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	21 A
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	1.6 A
• at 600 V rated value	1.6 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 230 V rated value	0.1 hp
• for 3-phase AC motor	
— at 460/480 V rated value	0.75 hp
— at 575/600 V rated value	0.75 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>	
• at 240 V	none required
• at 400 V	gL/gG 20 A
• at 500 V	gL/gG 20 A
• at 690 V	gL/gG 20 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>	

• for grounded parts at 400 V	20 mm
— downwards	20 mm
— upwards	9 mm
— at the side	
• for live parts at 400 V	
— downwards	20 mm
— upwards	20 mm
— at the side	9 mm
• for grounded parts at 500 V	
— downwards	20 mm
— upwards	20 mm
— at the side	9 mm
• for live parts at 500 V	
— downwards	20 mm
— upwards	20 mm
— at the side	9 mm
• for grounded parts at 690 V	
— downwards	20 mm
— upwards	20 mm
— backwards	0 mm
— at the side	9 mm
— forwards	0 mm
• for live parts at 690 V	
— downwards	20 mm
— upwards	20 mm
— backwards	0 mm
— at the side	9 mm
— forwards	0 mm

#### Connections/ Terminals

product function removable terminal for auxiliary and control circuit	No
<b>type of electrical connection</b>	
• for main current circuit	screw-type terminals
<b>arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>type of connectable conductor cross-sections</b>	
• for main contacts	
— 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> )
— finely stranded with core end processing	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )

<b>type of connectable conductor cross-sections</b>	
• for auxiliary contacts	
— solid or stranded	2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )
• tightening torque for main contacts with screw-type terminals	0.8 ... 1.2 N·m
• tightening torque for auxiliary contacts with screw-type terminals	0.8 ... 1.2 N·m

<b>size of the screwdriver tip</b>	Pozidriv 2
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<b>design of the thread of the connection screw</b>	
• for main contacts	M3

#### 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>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

Rocker switch

#### Certificates/ approvals

##### General Product Approval

##### For use in hazardous locations



CSA



CCC



UL



IECEx



ATEX

#### Declaration of Conformity

#### Test Certificates

#### Marine / Shipping

##### Miscellaneous



EG-Konf.

##### [Special Test Certificate](#)

##### [Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS

#### Marine / Shipping

#### other



LRS



RINA



RMRS



##### [Confirmation](#)

##### [Miscellaneous](#)

#### other

#### Railway



VDE

##### [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=3RV1011-1AA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1AA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1AA10>

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

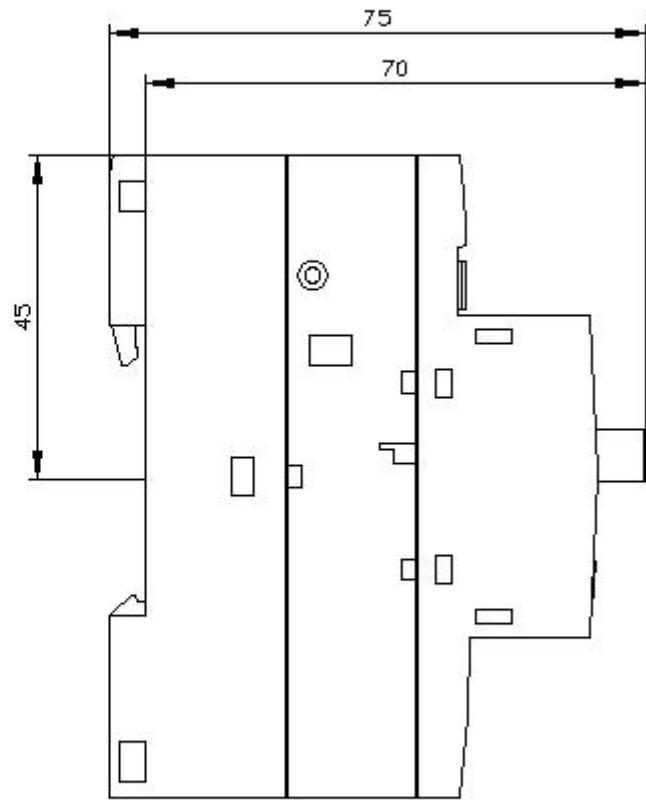
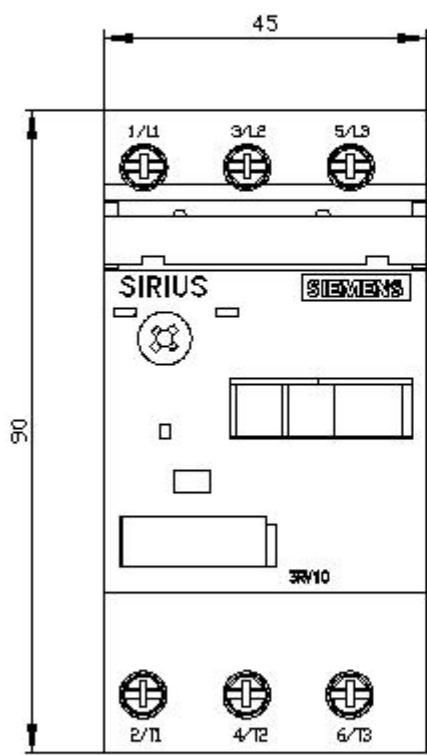
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV1011-1AA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1AA10&lang=en)

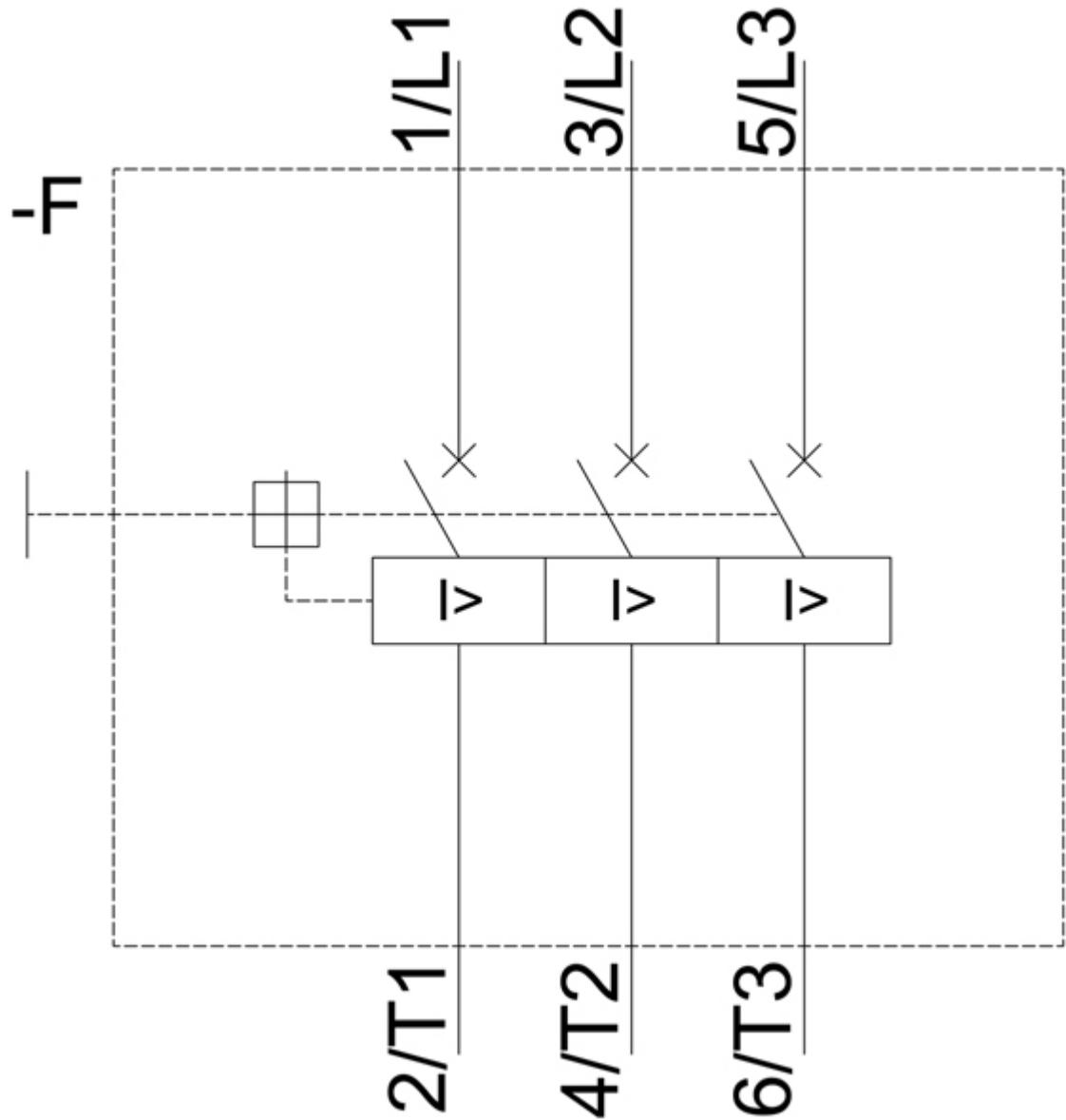
Characteristic: Tripping characteristics, I<sup>t</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1AA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1AA10&objecttype=14&gridview=view1>





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