



Circuit breaker size S0 for motor protection, Class 10 A-release 9...12 A N-release 163 A Screw terminal Standard switching capacity Multi-unit packaging Pack = 24 units

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV2
<b>General technical data</b>	
size of the circuit-breaker	S0
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	9.25 W
• at AC in hot operating state per pole	3.1 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
shock resistance acc. to IEC 60068-2-27	25g / 11 ms
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
Substance Prohibitance (Date)	01.10.2009 00:00:00
<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

<b>adjustable current response value current of the current-dependent overload release</b>	9 ... 12.5 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>	12.5 A
operational current at AC-3 at 400 V rated value	12.5 A
operating power at AC-3	
• at 230 V rated value	3 kW
• at 400 V rated value	5.5 kW
• at 500 V rated value	7.5 kW
• at 690 V rated value	7.5 kW
operating frequency at AC-3 maximum	15 1/h
<b>Auxiliary circuit</b>	
<b>number of NC contacts for auxiliary contacts</b>	0
<b>number of NO contacts for auxiliary contacts</b>	0
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	42 kA
• at 690 V rated value	4 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	42 kA
• at AC at 690 V rated value	6 kA
response value current of instantaneous short-circuit trip unit	163 A
<b>UL/CSA ratings</b>	
<b>full-load current (FLA) for 3-phase AC motor</b>	
• at 480 V rated value	12.5 A
• at 600 V rated value	12.5 A
<b>yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	0.5 hp
— at 230 V rated value	2 hp
• for 3-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	7.5 hp
— at 575/600 V rated value	10 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>	97 mm
<b>width</b>	45 mm

<b>depth</b>	97 mm
<b>required spacing</b>	
• for grounded parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 400 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for grounded parts at 500 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 500 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for grounded parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
• for live parts at 690 V	
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm

<b>Connections/ Terminals</b>	
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 (1 ... 2,5 mm <sup>2</sup> ), 2x (2,5 ... 10 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 2,5 mm <sup>2</sup> ), 2x (2,5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup>
• at AWG cables for main contacts	2x (16 ... 12), 2x (14 ... 8)
• tightening torque for main contacts with screw-type terminals	2 ... 2.5 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>	
• for main contacts	M4

<b>Safety related data</b>	
<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>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

touch protection on the front acc. to IEC 60529

finger-safe, for vertical contact from the front

display version for switching status

Handle

## Certificates/ approvals

## 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=3RV2021-1KA10-Z W96>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1KA10-Z W96>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1KA10-Z W96>

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

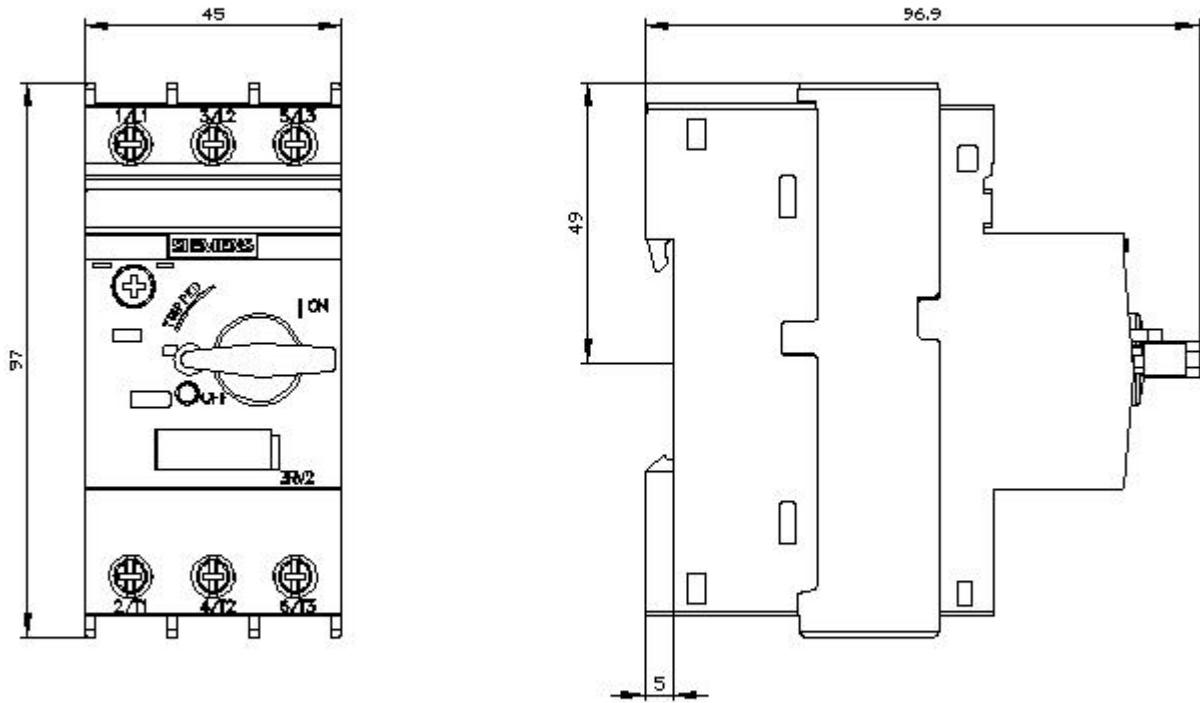
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-1KA10-Z W96&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1KA10-Z W96&lang=en)

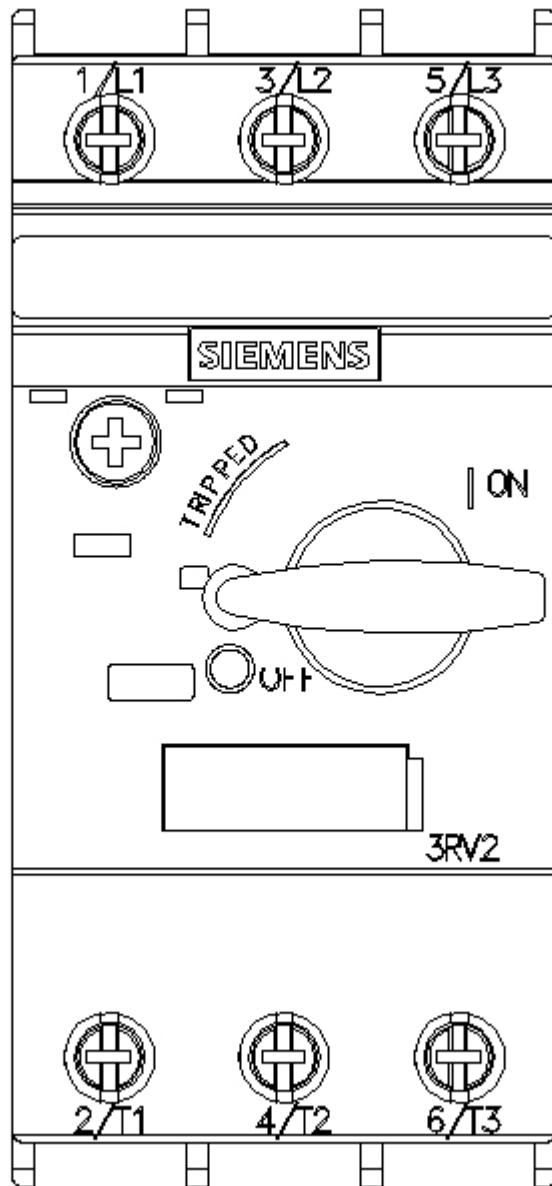
Characteristic: Tripping characteristics,  $I^2t$ , Let-through current

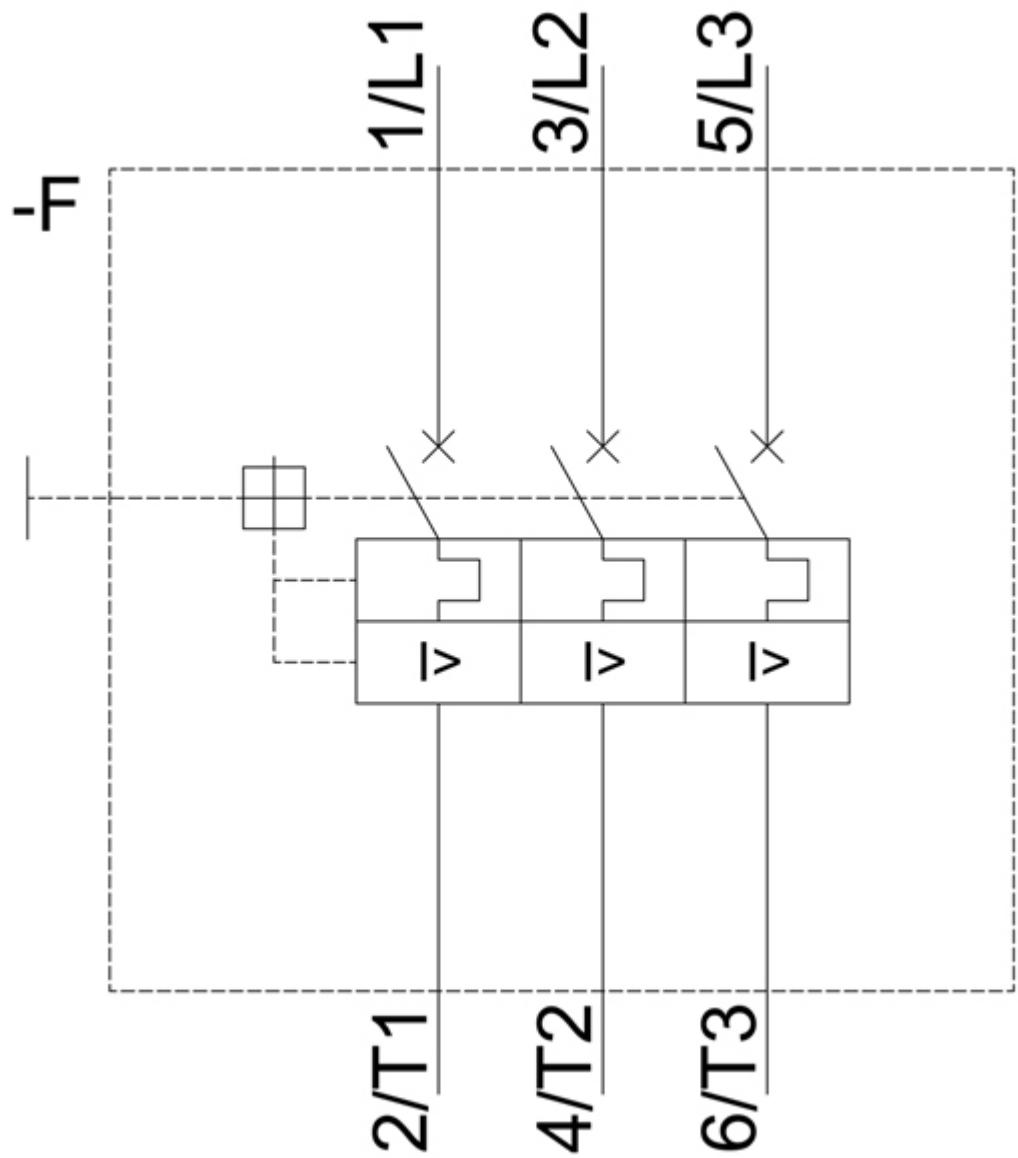
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1KA10-Z W96/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1KA10-Z W96&objecttype=14&gridview=view1>







last modified:

12/15/2020 