



Circuit breaker size S3 for motor protection, CLASS 10 A-release 57...75 A N-release 975 A screw terminal Standard switching capacity



product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV2

### General technical data

size of the circuit-breaker	S3
size of contactor can be combined company-specific	S3
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	38 W
• at AC in hot operating state per pole	12.7 W
insulation voltage with degree of pollution 3 at AC rated value	1 000 V
surge voltage resistance rated value	8 kV
shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
mechanical service life (operating cycles)	
• of the main contacts typical	25 000
• of auxiliary contacts typical	25 000
electrical endurance (operating cycles) typical	25 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	03/01/2017
SVHC substance name	Lead - 7439-92-1
Weight	2.235 kg

### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-20 ... +60 °C

- during storage
- during transport

relative humidity during operation	10 ... 95 %
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### Environmental footprint

Environmental Product Declaration(EPD)	Yes
global warming potential [CO <sub>2</sub> eq] total	283.24 kg
global warming potential [CO <sub>2</sub> eq] during manufacturing	18.5 kg
global warming potential [CO <sub>2</sub> eq] during sales	1.24 kg
global warming potential [CO <sub>2</sub> eq] during operation	265 kg
global warming potential [CO <sub>2</sub> eq] after end of life	-1.5 kg
Siemens Eco Profile (SEP)	Siemens EcoTech

Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	57 ... 75 A
type of voltage for main current circuit	AC
operating voltage	
• rated value	20 ... 690 V
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	75 A
operational current	
• at AC-3 at 400 V rated value	75 A
• at AC-3e at 400 V rated value	75 A
operating power	
• at AC-3	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
• at AC-3e	
— at 230 V rated value	22 kW
— at 400 V rated value	37 kW
— at 500 V rated value	45 kW
— at 690 V rated value	55 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Auxiliary circuit	
type of voltage for auxiliary and control circuit	AC/DC
number of NC contacts for auxiliary contacts	0
number of NO contacts for auxiliary contacts	0
number of CO contacts for auxiliary contacts	0
Protective and monitoring functions	
product function	
• ground fault detection	No
• phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	
• at AC at 240 V rated value	100 kA
• at AC at 400 V rated value	65 kA
• at AC at 500 V rated value	8 kA
• at AC at 690 V rated value	5 kA
operating short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	30 kA
• at 500 V rated value	4 kA
• at 690 V rated value	3 kA
response value current of instantaneous short-circuit trip unit	975 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	75 A
• at 600 V rated value	75 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	7.5 hp
— at 230 V rated value	15 hp
• for 3-phase AC motor	
— at 200/208 V rated value	25 hp
— at 220/230 V rated value	30 hp

— at 460/480 V rated value	60 hp
— at 575/600 V rated value	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>Installation/ mounting/ dimensions</b>	
<b>mounting position</b>	any
<b>fastening method</b>	screw and snap-on mounting onto 35 mm DIN 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>	
• with side-by-side mounting at the side	0 mm
• 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
• for grounded parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— at the side	10 mm
• for live parts at 500 V	
— downwards	110 mm
— upwards	110 mm
— at the side	10 mm
• for grounded parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— at the side	30 mm
• for live parts at 690 V	
— downwards	150 mm
— upwards	150 mm
— at the side	30 mm
<b>Connections/ Terminals</b>	
<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	2x (2.5 ... 16 mm <sup>2</sup> )
— solid or stranded	2x (2.5 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> )
— finely stranded with core end processing	2x (2.5 ... 35 mm <sup>2</sup> ), 1x (2.5 ... 50 mm <sup>2</sup> )
— finely stranded without core end processing	2x (10 ... 35 mm <sup>2</sup> ), 1x (10 ... 50 mm <sup>2</sup> )
<b>tightening torque</b>	
• for main contacts for ring cable lug	4.5 ... 6 N·m
<b>outer diameter of the usable ring cable lug maximum</b>	19 mm
<b>tightening torque</b>	
• for main contacts with screw-type terminals	4.5 ... 6 N·m
<b>Safety related data</b>	
<b>product function suitable for safety function</b>	Yes
<b>suitability for use</b>	
• safety-related switching on	No
• safety-related switching OFF	Yes
<b>service life maximum</b>	10 a
<b>test wear-related service life necessary</b>	Yes
<b>proportion of dangerous failures</b>	

• with low demand rate according to SN 31920	40 %
• with high demand rate according to SN 31920	50 %
<b>B10 value with high demand rate according to SN 31920</b>	5 000
failure rate [FIT] with low demand rate according to SN 31920	50 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
<b>T1 value</b>	
• for proof test interval or service life according to IEC 61508	10 a
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
<b>Display</b>	
display version for switching status	Handle
<b>Approvals Certificates</b>	
General Product Approval	



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General Product Approval	For use in hazardous locations	Test Certificates	Maritime application
		<a href="#">Special Test Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>

Maritime application	other

other	Railway	Environment

Environment

Further information
Information on the packaging <a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a>
Information for data generation and storage <a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">https://support.industry.siemens.com/cs/ww/en/view/109995012</a>
Information- and Downloadcenter (Catalogs, Brochures,...) <a href="https://www.siemens.com/ic10">https://www.siemens.com/ic10</a>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2041-4KA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4KA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4KA10>

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

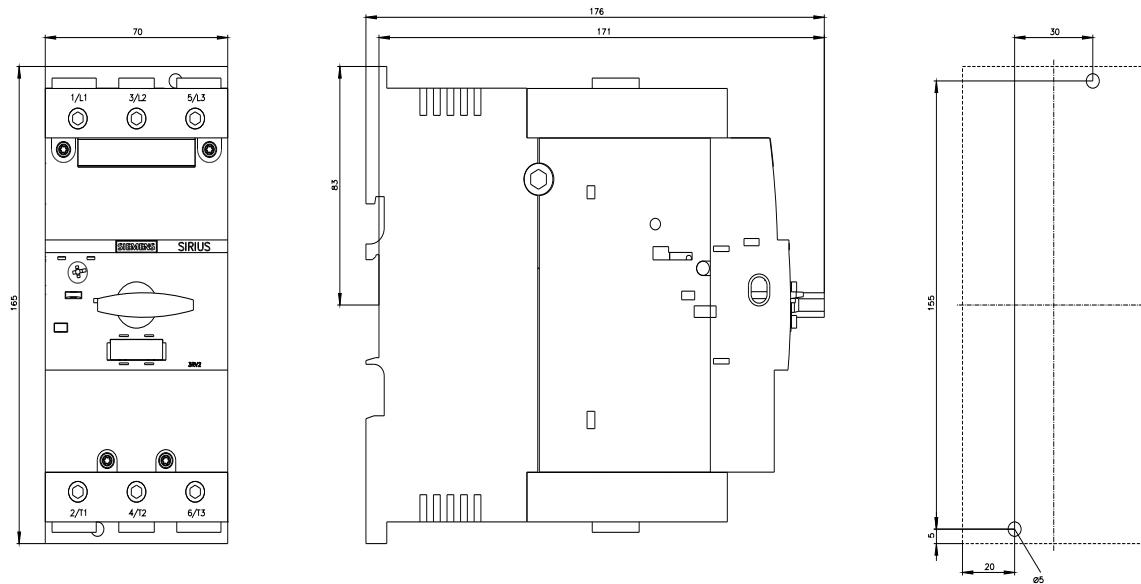
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2041-4KA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4KA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4KA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4KA10&objecttype=14&gridview=view1>





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