



Circuit breaker size S3 for motor protection, CLASS 10 A-release 80...100 A N-release 1300 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	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
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
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 according to IEC 81346-2	Q
Substance Prohibitance (Date)	03/01/2017

### Ambient conditions

installation altitude at height above sea level maximum	2 000 m
ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
relative humidity during operation	10 ... 95 %

### Main circuit

number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	80 ... 100 A
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	100 A

<b>operational current</b>	
• at AC-3 at 400 V rated value	100 A
• at AC-3e at 400 V rated value	100 A
<b>operating power</b>	
• at AC-3	
— at 230 V rated value	30 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	90 kW
• at AC-3e	
— at 230 V rated value	30 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	90 kW
<b>operating frequency</b>	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h

### Protective and monitoring functions

<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>maximum short-circuit current breaking capacity (Icu)</b>	
• 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
<b>operating short-circuit current breaking capacity (Ics) at AC</b>	
• 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	1 300 A

### UL/CSA ratings

<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

### Short-circuit protection

<b>product function short circuit protection</b>	Yes
<b>design of the short-circuit trip</b>	magnetic

### Installation/ mounting/ dimensions

<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

### Connections/ Terminals

#### type of electrical connection

- for main current circuit

screw-type terminals

#### arrangement of electrical connectors for main current circuit

Top and bottom

#### type of connectable conductor cross-sections

- for main contacts
  - solid
  - solid or stranded
  - finely stranded with core end processing
  - finely stranded without core end processing

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>)

#### tightening torque

- for main contacts for ring cable lug

4.5 ... 6 N·m

#### outer diameter of the usable ring cable lug maximum

19 mm

#### tightening torque

- for main contacts with screw-type terminals

4.5 ... 6 N·m

### Safety related data

#### B10 value

- with high demand rate according to SN 31920

5 000

#### proportion of dangerous failures

- with low demand rate according to SN 31920
- with high demand rate according to SN 31920

50 %  
50 %

T1 value for proof test interval or service life according to IEC 61508

10 a

#### protection class IP on the front according to IEC 60529

IP20

touch protection on the front according to IEC 60529  
display version for switching status

finger-safe, for vertical contact from the front  
Handle

### Certificates/ approvals

General Product Approval

For use in hazardous locations



[Confirmation](#)



[KC](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



### Marine / Shipping



### other

[Confirmation](#)



### Railway

[Confirmation](#)

[Vibration and Shock](#)

### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RV2041-4MA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4MA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4MA10>

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

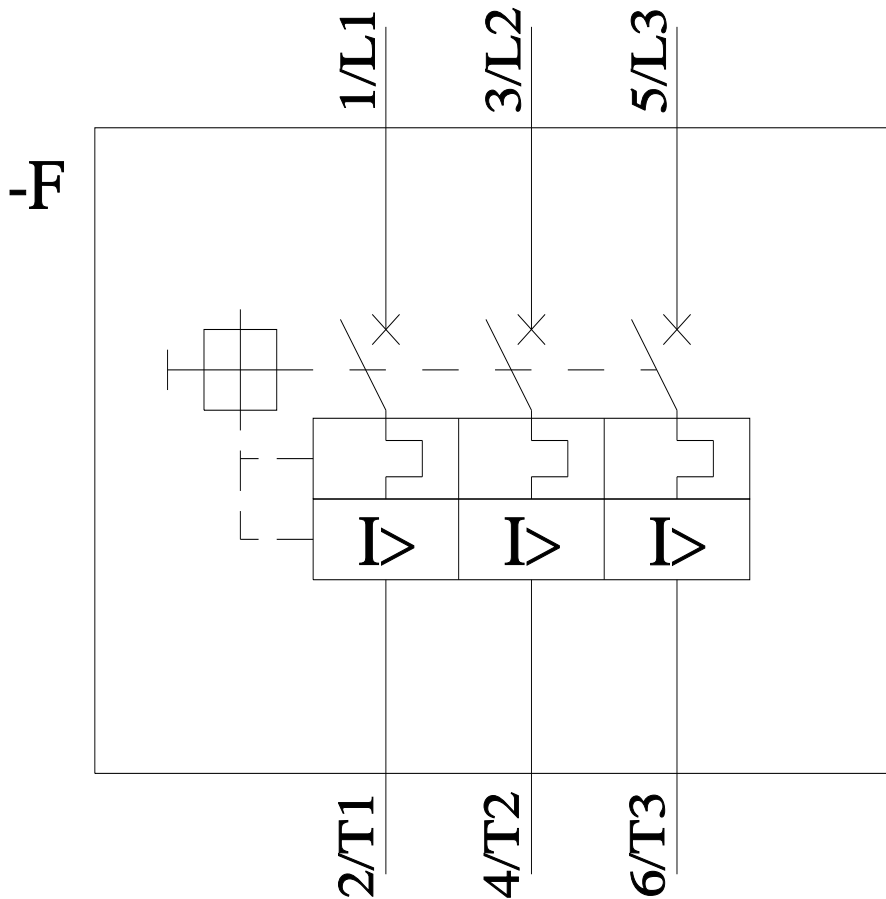
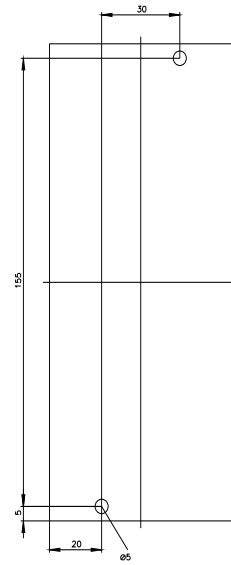
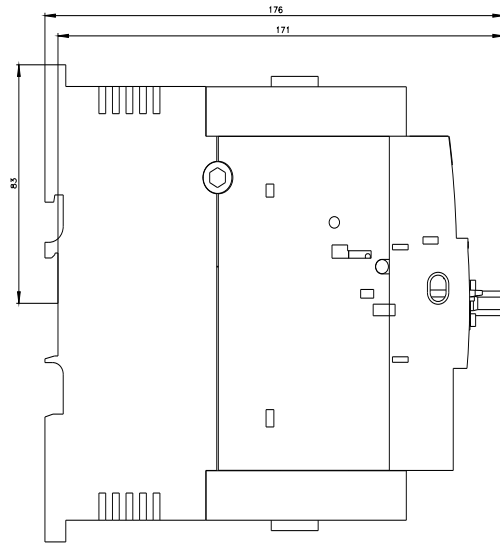
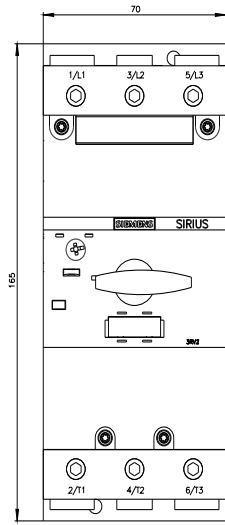
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2041-4MA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4MA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4MA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4MA10&objecttype=14&gridview=view1>



last modified:

11/21/2022

