



Circuit breaker size S3 for motor protection, CLASS 10 A-release 75...93 A
N-release 1300 A screw terminal Increased switching capacity 100 kA

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	39 W
• at AC in hot operating state per pole	13 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 (switching cycles)	
• of the main contacts typical	25 000
• of auxiliary contacts typical	25 000
electrical endurance (switching 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	75 ... 93 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	93 A

operational current	
• at AC-3 at 400 V rated value	93 A
• at AC-3e at 400 V rated value	93 A
operating power	
• at AC-3	
— at 230 V rated value	22 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	22 kW
— at 400 V rated value	45 kW
— at 500 V rated value	55 kW
— at 690 V rated value	90 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	15 1/h
Protective and monitoring functions	
product function	
• ground fault detection	No
• phase failure detection	Yes
trip class	
design of the overload release	
breaking capacity maximum short-circuit current (Icu)	
• 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	10 kA
• at AC at 690 V rated value	6 kA
breaking capacity operating short-circuit current (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	50 kA
• at 500 V rated value	5 kA
• at 690 V rated value	3 kA
response value current of instantaneous short-circuit trip unit	1 300 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	93 A
• at 600 V rated value	93 A
yielded mechanical performance [hp]	
• 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	
product function short circuit protection	
design of the short-circuit trip	
Installation/ mounting/ dimensions	
mounting position	
fastening method	
height	
width	
depth	
required spacing	
• 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 mm²)
 2x (2.5 ... 50 mm²), 1x (10 ... 70 mm²)
 2x (2.5 ... 35 mm²), 1x (2.5 ... 50 mm²)
 2x (10 ... 35 mm²), 1x (10 ... 50 mm²)

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 y

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



[Confirmation](#)



[KC](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping



Marine / Shipping

other

Railway



[Confirmation](#)



[Confirmation](#)

[Vibration and Shock](#)

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=3RV2042-4YA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4YA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4YA10>

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

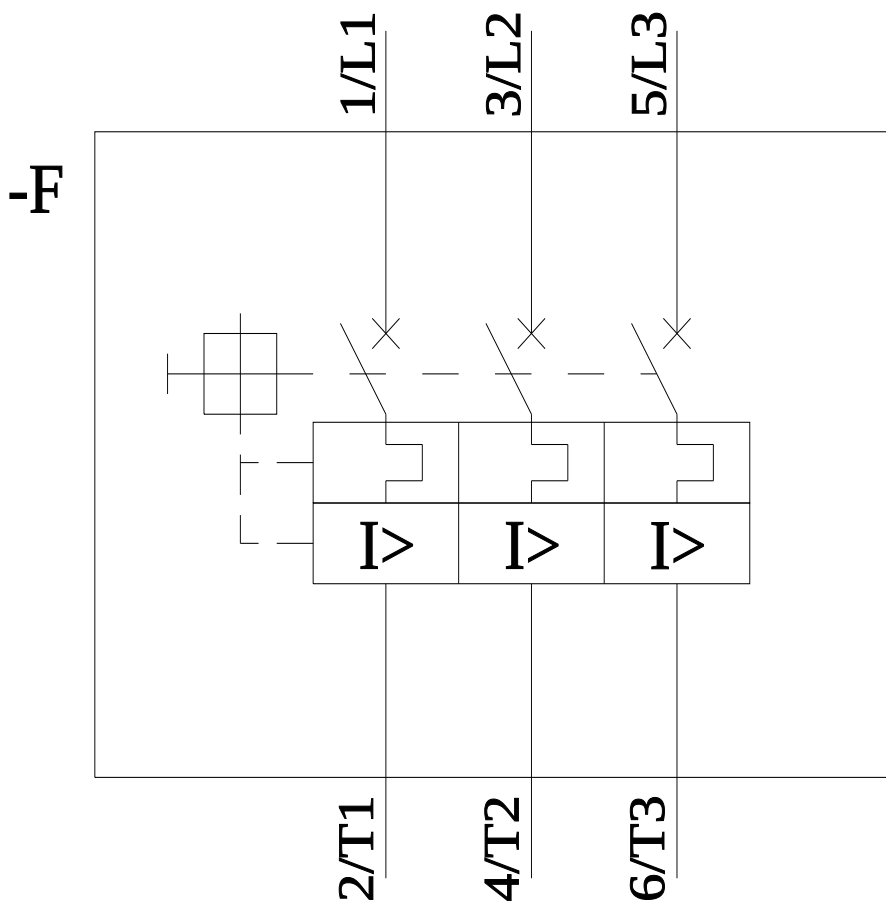
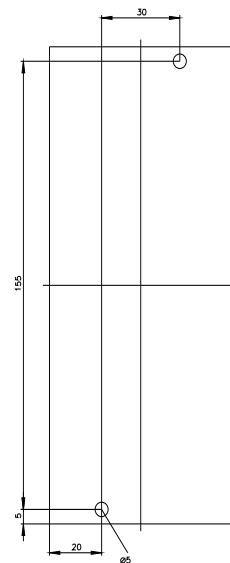
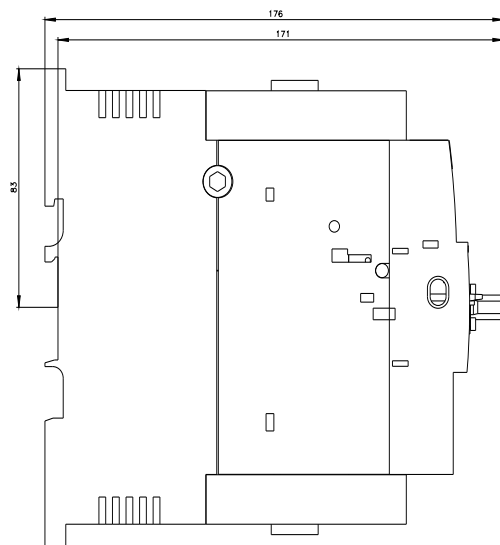
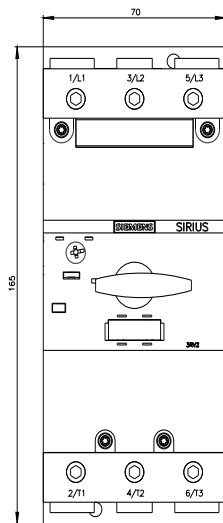
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4YA10&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4YA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2042-4YA10&objecttype=14&gridview=view1>



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