



Circuit breaker size S0 for transformer protection A-release 16...22 A N-release 364 A Spring-type terminal Standard switching capacity

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

General technical data

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	10.5 W
• at AC in hot operating state per pole	3.5 W
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
shock resistance according to IEC 60068-2-27	25g / 11 ms
mechanical service life (operating cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (operating cycles) typical	100 000
reference code according to IEC 81346-2	Q
Substance Prohibition (Date)	10/01/2009

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	16 ... 22 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	22 A
operational current	
• at AC-3 at 400 V rated value	22 A
• at AC-3e at 400 V rated value	22 A
operating power	

• at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value • at AC-3e — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value	5.5 kW 11 kW 11 kW 18.5 kW
operating frequency • at AC-3 maximum • at AC-3e maximum	15 1/h 15 1/h
Auxiliary circuit	
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 • phase failure detection trip class design of the overload release maximum short-circuit current breaking capacity (Icu) • at AC at 240 V rated value • at AC at 400 V rated value • at AC at 500 V rated value • at AC at 690 V rated value operating short-circuit current breaking capacity (Ics) at AC • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value response value current of instantaneous short-circuit trip unit	No Yes CLASS 10 thermal 100 kA 55 kA 10 kA 4 kA 100 kA 25 kA 5 kA 2 kA 364 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value	22 A 22 A 1.5 hp 3 hp 7.5 hp 7.5 hp 15 hp
Short-circuit protection	
product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit • at 400 V • at 500 V • at 690 V	Yes magnetic gL/gG 63 A gL/gG 50 A gL/gG 50 A
Installation/ mounting/ dimensions	
mounting position fastening method height width depth	any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 119 mm 45 mm 97 mm

required spacing

• with side-by-side mounting at the side	0 mm
• 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

Connections/ Terminals**type of electrical connection**

- for main current circuit

spring-loaded terminals

arrangement of electrical connectors for main current circuit

Top and bottom

type of connectable conductor cross-sections

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

2x (1 ... 10 mm²)2x (1 ... 6 mm²)2x (1 ... 6 mm²)

2x (18 ... 8)

design of screwdriver shaft

Diameter 3 mm

size of the screwdriver tip

3,0 x 0,5 mm

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 %

failure rate [FIT]

- with low demand rate according to SN 31920

50 FIT

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 statusfinger-safe, for vertical contact from the front
Handle**Certificates/ approvals****General Product Approval**



[Confirmation](#)



[KC](#)



Declaration of Conformity	Test Certificates	Marine / Shipping
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EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



DNV

Marine / Shipping	other
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LRS



PRS



RINA



RMRS

[Confirmation](#)



VDE

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=3RV2421-4CA20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2421-4CA20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2421-4CA20>

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

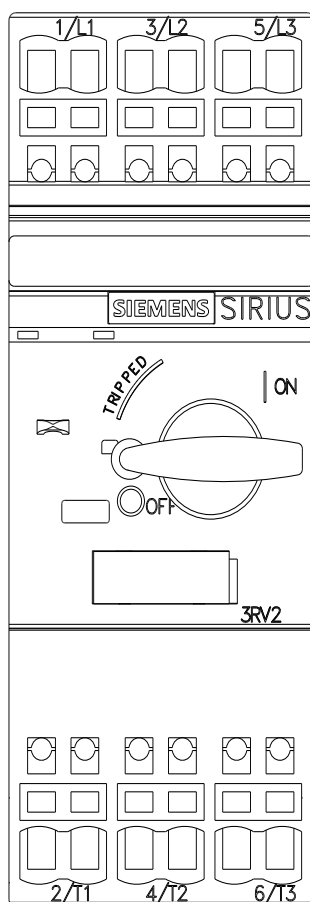
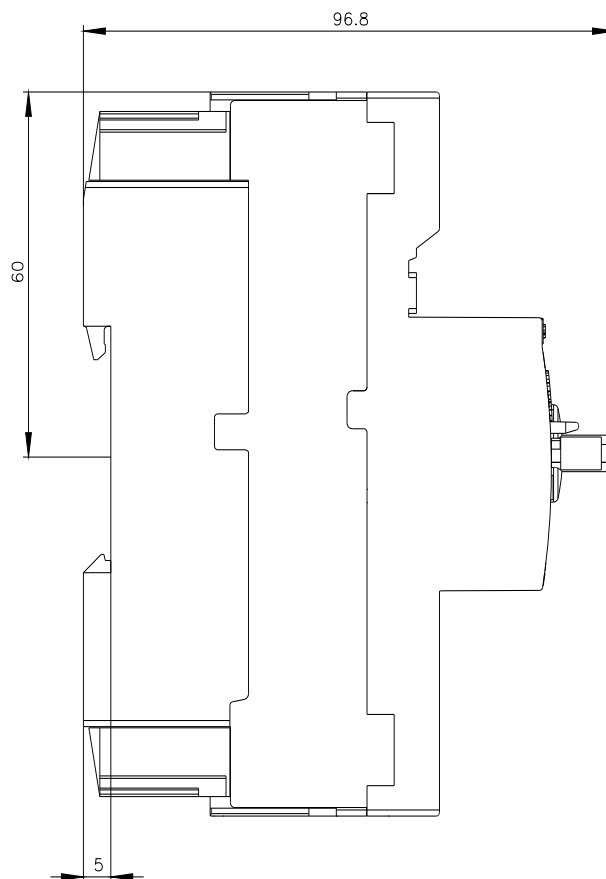
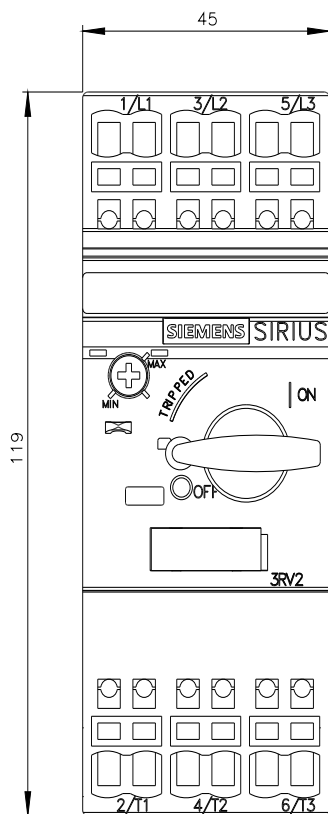
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2421-4CA20&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2421-4CA20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2421-4CA20&objecttype=14&gridview=view1>





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11/21/2022 [↗](#)