SIEMENS

Data sheet 3RV2421-4AA10



Circuit breaker size S0 for transformer protection A-release 10...16 A N-release 286 A screw terminal Standard switching capacity



product designation	SIRIUS
	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 	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
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 Prohibitance (Date)	10/01/2009
SVHC substance name	Lead - 7439-92-1
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-	10 16 A
dependent overload release	
dependent overload release operating voltage	
	20 690 V
operating voltage	20 690 V 690 V
operating voltage • rated value	

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operational current rated value	16 A
operational current	40.4
at AC-3 at 400 V rated value	16 A
at AC-3e at 400 V rated value	16 A
operating power	
• at AC-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
• at AC-3e	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
operating frequency	
• at AC-3 maximum	15 1/h
• at AC-3e maximum	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	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	55 kA
• at AC at 500 V rated value	10 kA
• at AC at 690 V rated value	4 kA
operating short-circuit current breaking capacity (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	25 kA
• at 500 V rated value	5 kA
• at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	286 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	16 A
at 600 V rated value	16 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	1 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	5 hp
— at 460/480 V rated value	10 hp
Short-circuit protection	, e p
product function short circuit protection	Yes
design of the short-circuit trip	
	magnetic
design of the fuse link for IT network for short-circuit protection of the main circuit	
• at 400 V	gL/gG 63 A
• at 500 V	gL/gG 50 A
• at 690 V	gL/gG 40 A
Installation/ mounting/ dimensions	
mounting position	any
meaning position	uny

fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	97 mm
width	45 mm
depth	97 mm
required spacing	- O7 Hilli
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	3 11111
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
for grounded parts at 500 V	3 11111
— downwards	30 mm
	30 mm
— upwards	
— at the side	9 mm
for live parts at 500 V — downwards	30 mm
	30 mm
— upwards — at the side	30 mm 9 mm
	5 ((()))
for grounded parts at 690 V	50 mm
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
• for live parts at 690 V	F0
— downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
Connections/ Terminals	
type of electrical connection	acray has tarreinale
• 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 or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
 for 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
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	D 111 1 0
	Pozidriv size 2
design of the thread of the connection screw	Pozidriv size 2
design of the thread of the connection screw • for main contacts	Pozidriv size 2 M4
• for main contacts	
for main contacts	
for main contacts Safety related data	M4
for main contacts Safety related data product function suitable for safety function	M4
for main contacts Safety related data product function suitable for safety function suitability for use	M4 Yes
for main contacts Safety related data product function suitable for safety function suitability for use safety-related switching on	Yes No
for main contacts Safety related data product function suitable for safety function suitability for use safety-related switching on safety-related switching OFF service life maximum	Yes No Yes
for main contacts Safety related data product function suitable for safety function suitability for use safety-related switching on safety-related switching OFF service life maximum test wear-related service life necessary	M4 Yes No Yes 10 a
for main contacts Safety related data product function suitable for safety function suitability for use safety-related switching on safety-related switching OFF service life maximum test wear-related service life necessary proportion of dangerous failures	Yes No Yes 10 a Yes
for main contacts Safety related data product function suitable for safety function suitability for use safety-related switching on safety-related switching OFF service life maximum test wear-related service life necessary	M4 Yes No Yes 10 a

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
T1 value	
 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
Display	
display version for switching status	Handle
Approvals Certificates	
General Product Approval	





Confirmation





<u>KC</u>

General Product Ap-

Test Certificates

Marine / Shipping



Type Test Certificates/Test Report

Special Test Certific-







Marine / Shipping







Miscellaneous

other

Confirmation



Railway

Environment

Special Test Certificate

Confirmation



Siemens **EcoTech**



Environmental Confirmations

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=3RV2421-4AA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2421-4AA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2421-4AA10

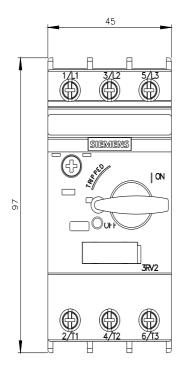
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

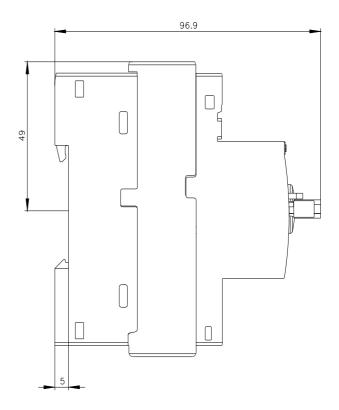
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2421-4AA10&lang=en

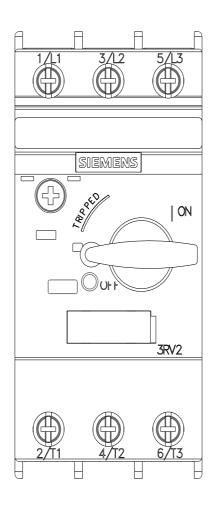
Characteristic: Tripping characteristics, I2t, Let-through current

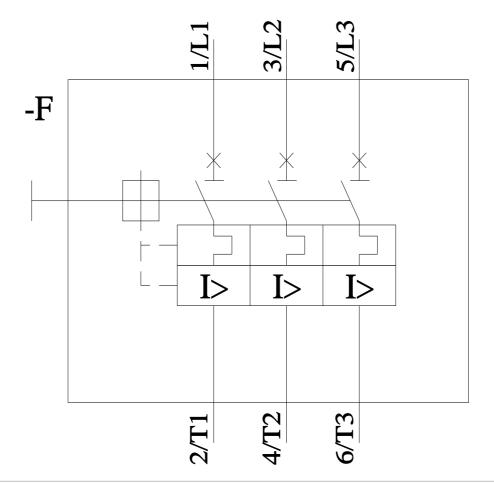
https://support.industry.siemens.com/cs/ww/en/ps/3RV2421-4AA10/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2421-4AA10&objecttype=14&gridview=view1









last modified: 4/12/2024 🖸