SIEMENS

Data sheet 3RV2421-4AA20

CIRCUIT-BREAKER SZ S0, FOR TRANSFORMER PROT. A-RELEASE 10...16A, N-RELEASE 286A, SPRING-L. CONNECTION, STANDARD SW. CAPACITY

product brand name		SIRIUS
Product designation		3RV2 circuit breaker

General technical data:		
Active power loss total typical	W	7
Insulation voltage		
• with degree of pollution 3 Rated value	V	690
Shock resistance		
• acc. to IEC 60068-2-27		25g / 11 ms
Surge voltage resistance Rated value	kV	6
Mechanical service life (switching cycles)		
• of the main contacts typical		100 000
• of the auxiliary contacts typical		100 000
Electrical endurance (switching cycles)		
• typical		100 000
Temperature compensation	°C	-20 ... +60
Protection class IP		
• on the front		IP20
• of the terminal		IP20
Equipment marking		
• acc. to DIN EN 81346-2		Q

Main circuit:		
Number of poles for main current circuit		3
Adjustable response value current of the current-dependent overload release	A	10 ... 16
Operating voltage		

• Rated value	V	690
• at AC-3 Rated value maximum	V	690
Operating frequency Rated value	Hz	50 ... 60
Operating current Rated value	A	16
Operating current		
• at AC-3		
— at 400 V Rated value	A	16
Operating power		
• at AC-3		
— at 230 V Rated value	W	4 000
— at 400 V Rated value	W	7 500
— at 500 V Rated value	W	7 500
— at 690 V Rated value	W	11 000
Operating frequency		
• at AC-3 maximum	1/h	15
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
Product expansion Auxiliary switch		Yes
Protective and monitoring functions:		
Trip class		CLASS 10
Design of the overload circuit breaker		thermal
Operational short-circuit current breaking capacity (Ics) with AC		
• at 240 V Rated value	kA	100
• at 400 V Rated value	kA	25
• at 500 V Rated value	kA	5
• at 690 V Rated value	kA	2
Maximum short-circuit current breaking capacity (Icu)		
• with AC at 240 V Rated value	kA	100
• with AC at 400 V Rated value	kA	55
• with AC at 500 V Rated value	kA	10
• with AC at 690 V Rated value	kA	4
Breaking capacity short-circuit current (Icn)		
• with 1 current path for DC at 150 V Rated value	kA	10
• with 2 current paths in series for DC at 300 V Rated value	kA	10

• with 3 current paths in series for DC at 450 V Rated value	kA	10
Response value current of the instantaneous short-circuit release	A	286

UL/CSA ratings:		
Full-load current (FLA) for three-phase AC motor		
• at 480 V Rated value	A	16
• at 600 V Rated value	A	16
yielded mechanical performance [hp]		
• for single-phase AC motor at 110/120 V Rated value	metric hp	1
• for single-phase AC motor at 230 V Rated value	metric hp	2
• for three-phase AC motor at 200/208 V Rated value	metric hp	3
• for three-phase AC motor at 220/230 V Rated value	metric hp	5
• for three-phase AC motor at 460/480 V Rated value	metric hp	10

Short-circuit:		
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
Mounting type		screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	mm	119
Width	mm	45
Depth	mm	96
Required spacing		
• with side-by-side mounting		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— downwards	mm	50
— at the side	mm	0
• for grounded parts		

— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— at the side	mm	30
— downwards	mm	50
• for live parts		
— forwards	mm	0
— Backwards	mm	0
— upwards	mm	50
— downwards	mm	50
— at the side	mm	30

Connections/ Terminals:		
Type of electrical connection		
• for main current circuit		spring-loaded terminals
Arrangement of electrical connectors for main current circuit		Top and bottom
Product function		
• removable terminal for auxiliary and control circuit		No
Type of connectable conductor cross-section		
• for main contacts		
— single or multi-stranded		2x (1 ... 10 mm²)
— finely stranded with core end processing		2x (1 ... 6 mm²)
— finely stranded without core end processing		2x (1 ... 6 mm²)
• for AWG conductors for main contacts		2x (18 ... 8)
Design of screwdriver shaft		Diameter 5 to 6 mm

Safety related data:		
B10 value with high demand rate acc. to SN 31920		50 000
Proportion of dangerous failures		
• with low demand rate acc. to SN 31920	%	40
• with high demand rate acc. to SN 31920	%	40
Failure rate [FIT] with low demand rate acc. to SN 31920	FIT	50
T1 value for proof test interval or service life acc. to IEC 61508	y	10
Protection against electrical shock		finger-safe

Mechanical data:		
Size of the circuit-breaker		S0

Ambient conditions:

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

Display:

Display version		
• for switching status		Handle

Certificates/ approvals:

General Product Approval			Declaration of Conformity	Test Certificates	
CCC	CSA	EAC	EG-Konf.	Special Test Certificate	Declaration of the Compliance with the order

Test Certificates	Shipping Approval				
Type Test Certificates/Test Report	ABS	BUREAU VERITAS	DNV	GL	LRS

Shipping Approval			other		
PRS	RINA	RMRS	Environmental Confirmations	Confirmation	VDE

other
other

Further information

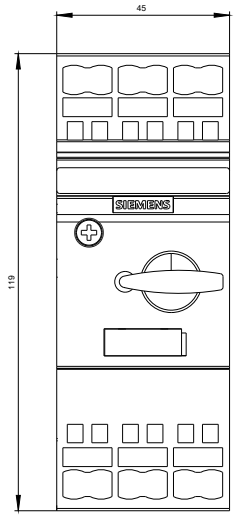
Information- and Downloadcenter (Catalogs, Brochures,…)
http://www.siemens.com/industrial-controls/catalogs

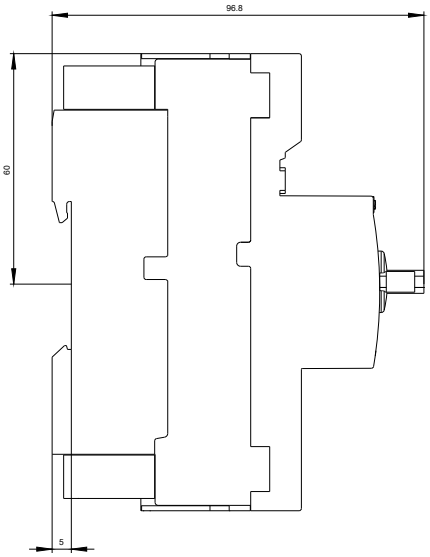
Industry Mall (Online ordering system)
http://www.siemens.com/industrymall

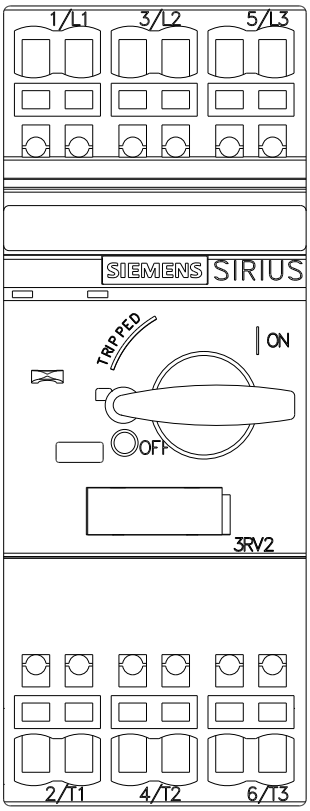
Cax online generator
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV24214AA20

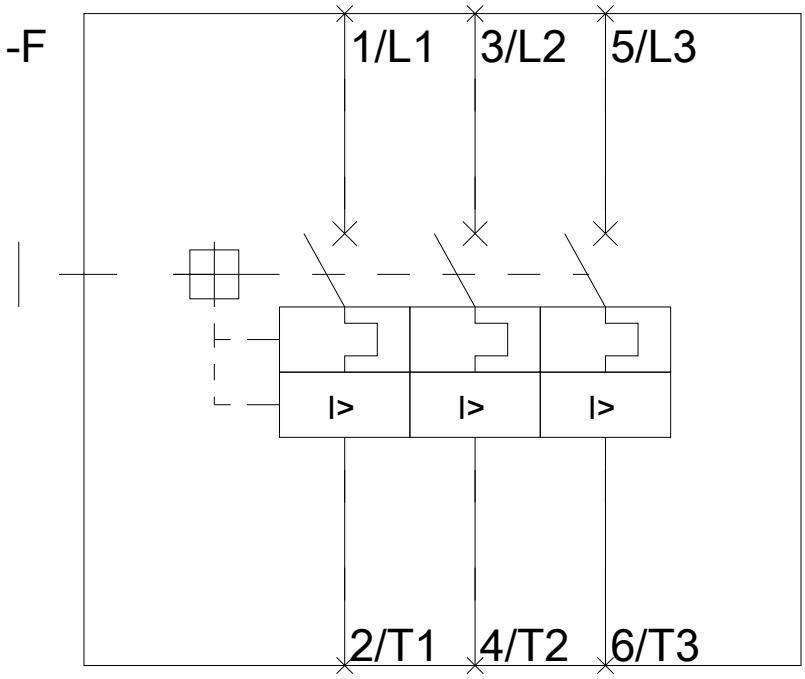
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
http://support.automation.siemens.com/WW/view/en/3RV24214AA20/all

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV24214AA20&lang=en









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