

CIRCUIT-BREAKER SZ S0, FOR TRANSFORMER PROT. A-
RELEASE 13...20A, N-RELEASE 325A, SPRING-L. CONNECTION,
STANDARD SW. CAPACITY



product brandname	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] total typical	8 W
Insulation voltage with degree of pollution 3 rated value	690 V
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
• in networks with grounded star point between main and auxiliary circuit	400 V
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Protection class IP	

• on the front	IP20
• of the terminal	IP20
Mechanical service life (switching cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
Electrical endurance (switching cycles)	
• typical	100 000
Protection against electrical shock	finger-safe
Equipment marking acc. to DIN EN 81346-2	Q

Ambient conditions

Ambient temperature	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
Temperature compensation	-20 ... +60 °C

Main circuit

Number of poles for main current circuit	3
Adjustable pick-up value current of the current-dependent overload release	13 ... 20 A
Operating voltage	
• rated value	690 V
• at AC-3 rated value maximum	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	20 A
Operating current	
• at AC-3	
— at 400 V rated value	20 A
Operating power	
• at AC-3	
— at 230 V rated value	5 500 W
— at 400 V rated value	7 500 W
— at 500 V rated value	11 000 W
— at 690 V rated value	15 000 W
Operating frequency	
• at AC-3 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
Operational 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
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
Breaking capacity short-circuit current (Icn)	
• at 1 current path at DC at 150 V rated value	10 kA
• with 2 current paths in series at DC at 300 V rated value	10 kA
• with 3 current paths in series at DC at 450 V rated value	10 kA

UL/CSA ratings

Full-load current (FLA) for three-phase AC motor	
• at 480 V rated value	20 A
• at 600 V rated value	20 A
Yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	1.5 hp
— at 230 V rated value	3 hp
• for three-phase AC motor	
— at 200/208 V rated value	5 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp

Short-circuit protection

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
- at 500 V
- at 690 V

gL/gG 63 A
gL/gG 50 A
gL/gG 50 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	119 mm
Width	45 mm
Depth	96 mm
Required spacing	
• with side-by-side mounting — forwards — Backwards — upwards — downwards — at the side • for grounded parts — forwards — Backwards — upwards — at the side — downwards • for live parts — forwards — Backwards — upwards — downwards — at the side	0 mm 0 mm 50 mm 50 mm 0 mm 0 mm 0 mm 50 mm 30 mm 50 mm 0 mm 0 mm 50 mm 50 mm 30 mm

Connections/Terminals

Product function	
• removable terminal for auxiliary and control circuit	No
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 — single or multi-stranded — finely stranded with core end processing	2x (1 ... 10 mm ²) 2x (1 ... 6 mm ²)

— finely stranded without core end processing	2x (1 ... 6 mm ²)
• at AWG conductors for main contacts	2x (18 ... 8)
Design of screwdriver shaft	Diameter 3 mm

Safety related data

B10 value	
• with high demand rate acc. to SN 31920	5 000
Proportion of dangerous failures	
• with low demand rate acc. to SN 31920	50 %
• with high demand rate acc. to SN 31920	50 %
Failure rate [FIT]	
• with low demand rate acc. to SN 31920	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
Display version	
• for switching status	Handle

Certificates/approvals

General Product Approval	Declaration of Conformity
 CCC  CSA  UL KC  EAC  EG-Konf.	

Test Certificates	Shipping Approval
Type Test Certificates/Test Report Special Test Certificate	 ABS  BUREAU VERITAS  LRS  PRS

Shipping Approval	other
 RINA  RMRS	Environmental Confirmations Confirmation  VDE Miscellaneous

Railway
Vibration and Shock

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2421-4BA20>

Cax online generator

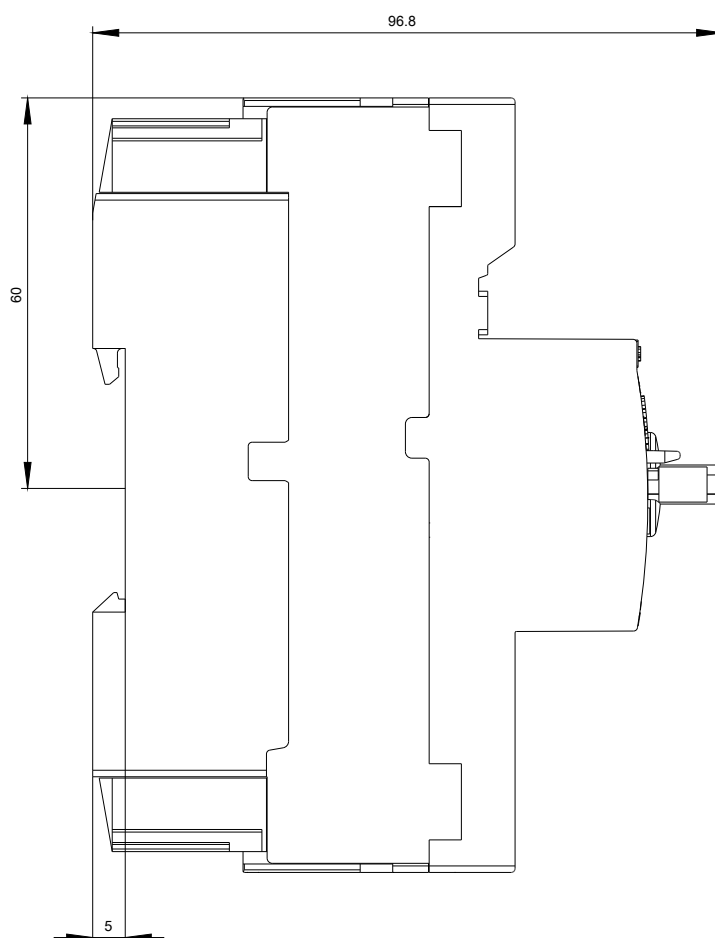
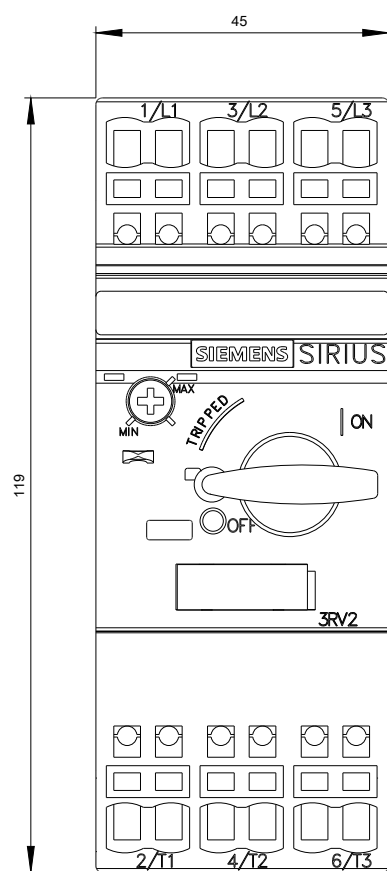
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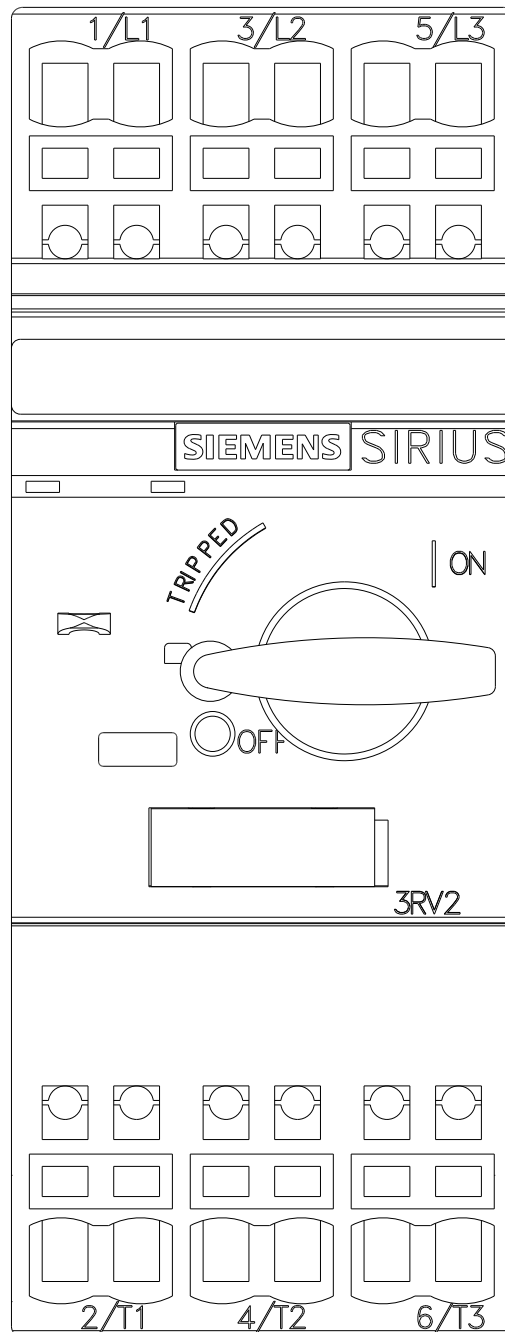
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

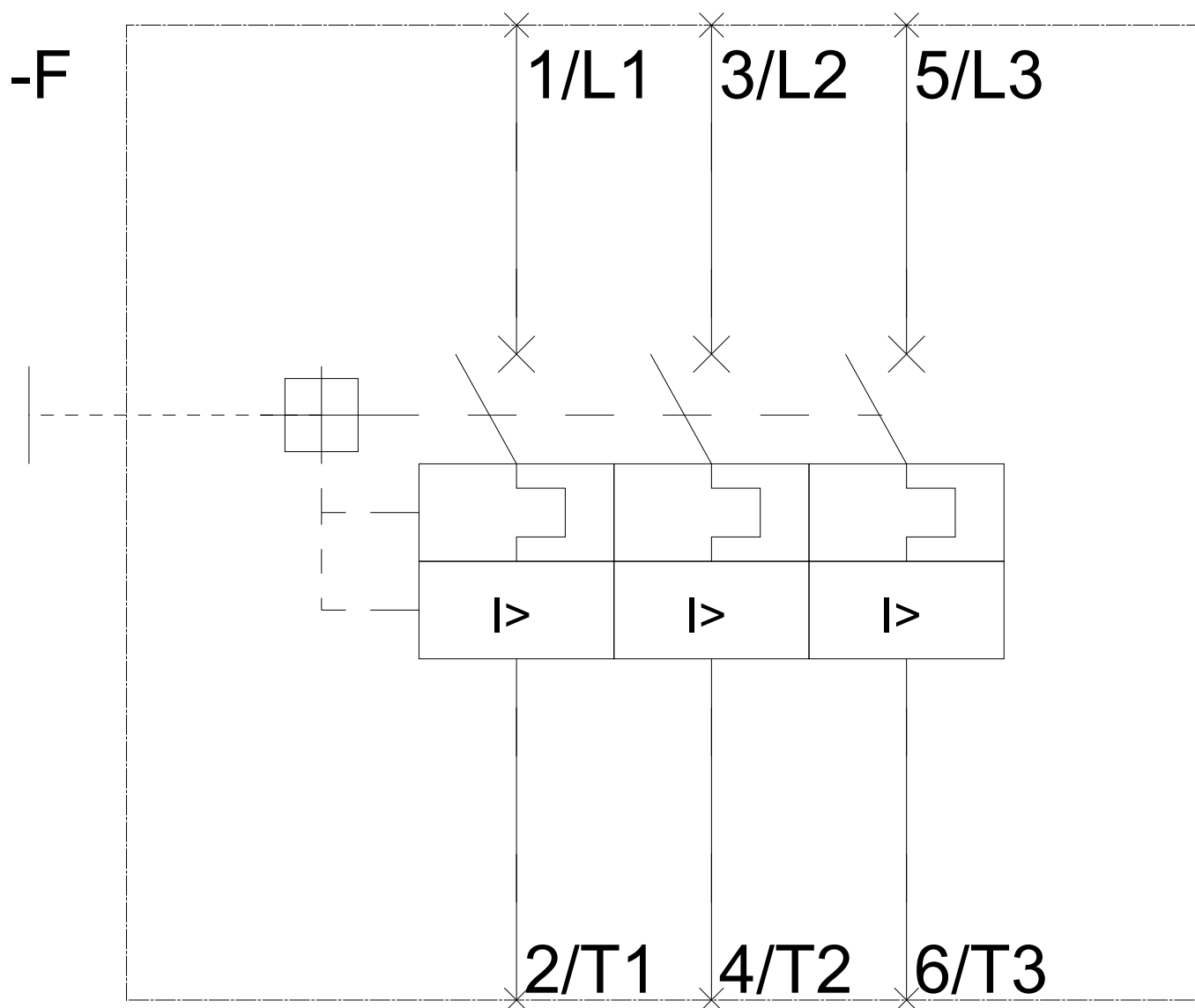
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2421-4BA20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2421-4BA20&lang=en







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