SIEMENS

Data sheet 3RV2021-4FA10

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 34...40A, N-RELEASE 480A, SCREW TERMINAL, STANDARD SWITCHING CAPACITY,



product brandname	SIRIUS
Product designation	Circuit breaker
Design of the product	For motor 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	14 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
 in networks with grounded star point between main and auxiliary circuit 	400 V
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
Type of protection	Increased safety
Protection against electrical shock	finger-safe
Equipment marking acc. to DIN EN 81346-2	Q
Ambient conditions	
Ambient temperature	
during operation	-20 +40 °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-	34 40 A
dependent overload release	
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	40 A
Operating current	
• at AC-3	
— at 400 V rated value	40 A
Operating power	
● at AC-3	
— at 230 V rated value	11 000 W
— at 400 V rated value	18 500 W
— at 500 V rated value	22 000 W
— at 690 V rated value	39 000 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 (lcs) at AC			
• at 240 V rated value	100 kA		
• at 400 V rated value	10 kA		
• at 500 V rated value	3 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	20 kA		
• at AC at 500 V rated value	6 kA		
• at AC at 690 V rated value	3 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		
JL/CSA ratings			
Full-load current (FLA) for three-phase AC motor			
• at 480 V rated value	40 A		
• at 600 V rated value	40 A		
Yielded mechanical performance [hp]			
• for single-phase AC motor			
— at 110/120 V rated value	3 hp		
— at 230 V rated value	7.5 hp		
• for three-phase AC motor			
— at 200/208 V rated value	10 hp		
— at 220/230 V rated value	10 hp		
— at 460/480 V rated value	30 hp		
Short-circuit protection			
Product function Short circuit protection	Voc		

Product function Short circuit protection

Design of the short-circuit trip

Yes

magnetic

Design of the fuse link for IT network for short-circuit protection of the main circuit	
• at 400 V	gG 63 A
● at 500 V	gG 63 A
● at 690 V	gG 63 A

Mounting position	any	
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rai according to DIN EN 60715	
leight	97 mm	
Vidth	45 mm	
Depth	96 mm	
Required spacing		
with side-by-side mounting		
— forwards	0 mm	
— Backwards	0 mm	
— upwards	70 mm	
— downwards	70 mm	
— at the side	9 mm	
• for grounded parts		
— forwards	0 mm	
— Backwards	0 mm	
— upwards	70 mm	
— at the side	30 mm	
— downwards	70 mm	
• for live parts		
— forwards	0 mm	
— Backwards	0 mm	
— upwards	70 mm	
— downwards	70 mm	
— at the side	30 mm	

Connections/Terminals	
Product function	
 removable terminal for auxiliary and control circuit 	No
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	
— single or multi-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	
 at AWG conductors 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	

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

For use in hazardous locations













For use in hazardous	Declaration of Conformity	Test Certificates	Shipping Approval
locations			





Type Test
Certificates/Test
Report

Special Test
Certificate



other



Shipping Approval



LRS







Environmental Confirmations

Confirmation

other Railway



Miscellaneous

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=3RV2021-4FA10

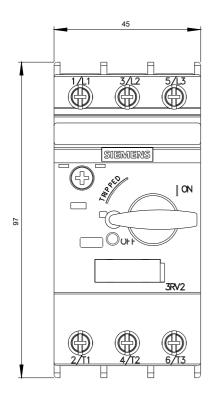
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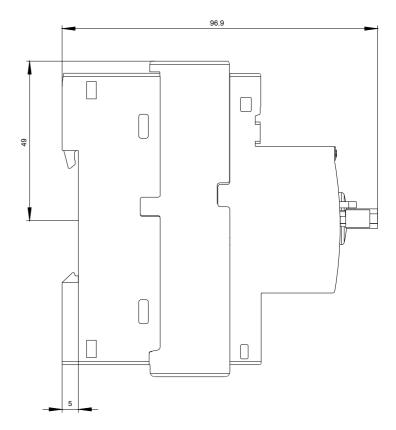
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4FA10

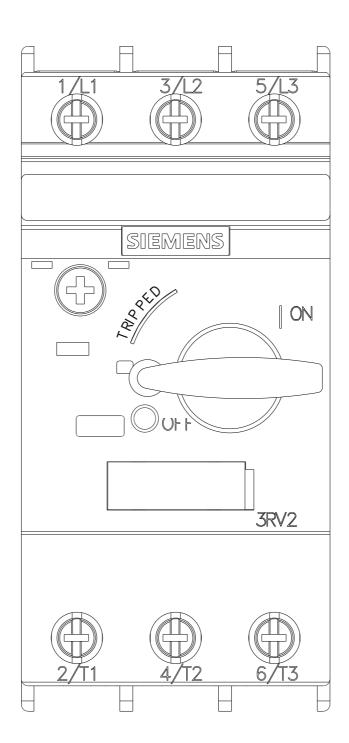
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

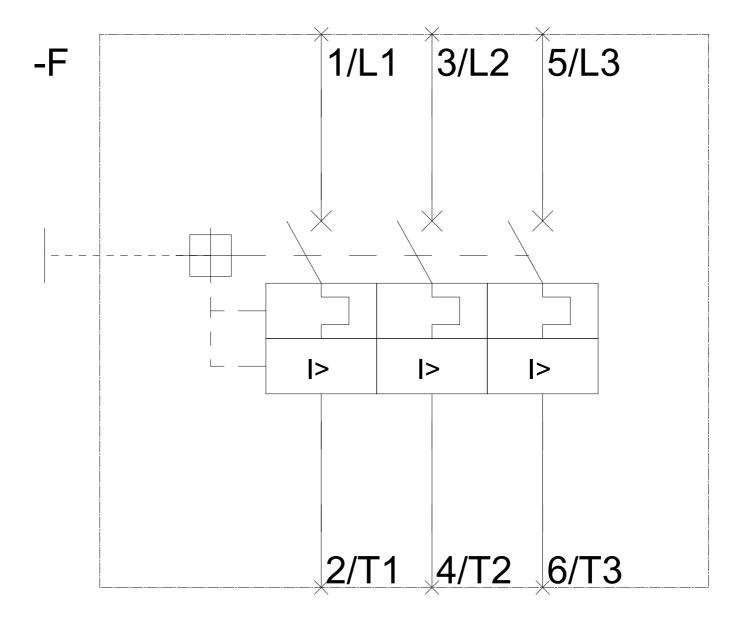
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4FA10

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4FA10&lang=en









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