

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 16...22A, N-RELEASE 286A, SPRING-L. CONNECTION, STANDARD SW. 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	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
• in networks with grounded star point between main and auxiliary circuit	400 V
Protection class IP	

<ul style="list-style-type: none"> • on the front • of the terminal 	<p>IP20</p> <p>IP20</p>
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of the main contacts typical • of auxiliary contacts typical 	<p>100 000</p> <p>100 000</p>
Electrical endurance (switching cycles)	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • during operation • during storage • during transport 	<p>-20 ... +60 °C</p> <p>-50 ... +80 °C</p> <p>-50 ... +80 °C</p>
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	16 ... 22 A
Operating voltage	
<ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum 	<p>690 V</p> <p>690 V</p>
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	22 A
Operating current	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	22 A
Operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value 	<p>5 500 W</p> <p>11 000 W</p> <p>11 000 W</p> <p>18 500 W</p>
Operating frequency	
<ul style="list-style-type: none"> • at AC-3 maximum 	15 1/h

Auxiliary circuit

Number of NC contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	0
Number of NO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	0

Number of CO contacts	
<ul style="list-style-type: none"> • for auxiliary contacts 	0
Protective and monitoring functions	
Product function	
<ul style="list-style-type: none"> • Ground fault detection • Phase failure detection 	No Yes
Trip class	CLASS 10
Design of the overload release	thermal
Operational short-circuit current breaking capacity (Ics) at AC	
<ul style="list-style-type: none"> • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value 	100 kA 25 kA 5 kA 2 kA
Maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • 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 	100 kA 55 kA 10 kA 4 kA
Breaking capacity short-circuit current (Icn)	
<ul style="list-style-type: none"> • at 1 current path at DC at 150 V rated value • with 2 current paths in series at DC at 300 V rated value • with 3 current paths in series at DC at 450 V rated value 	10 kA 10 kA 10 kA
UL/CSA ratings	
Full-load current (FLA) for three-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	22 A 22 A
Yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value 	1.5 hp 3 hp 5 hp 7.5 hp 15 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	
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — 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	
<ul style="list-style-type: none"> • removable terminal for auxiliary and control circuit 	No
Type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit 	spring-loaded terminals
Arrangement of electrical connectors for main current circuit	Top and bottom
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded 	2x (1 ... 10 mm ²)

— finely stranded with core end processing	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	For use in hazardous locations
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[KC](#)



For use in hazardous locations	Test Certificates	Shipping Approval
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[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Shipping Approval	other
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[Confirmation](#)

[Environmental Confirmations](#)



other	Railway
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[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=3RV2021-4CA20>

Cax online generator

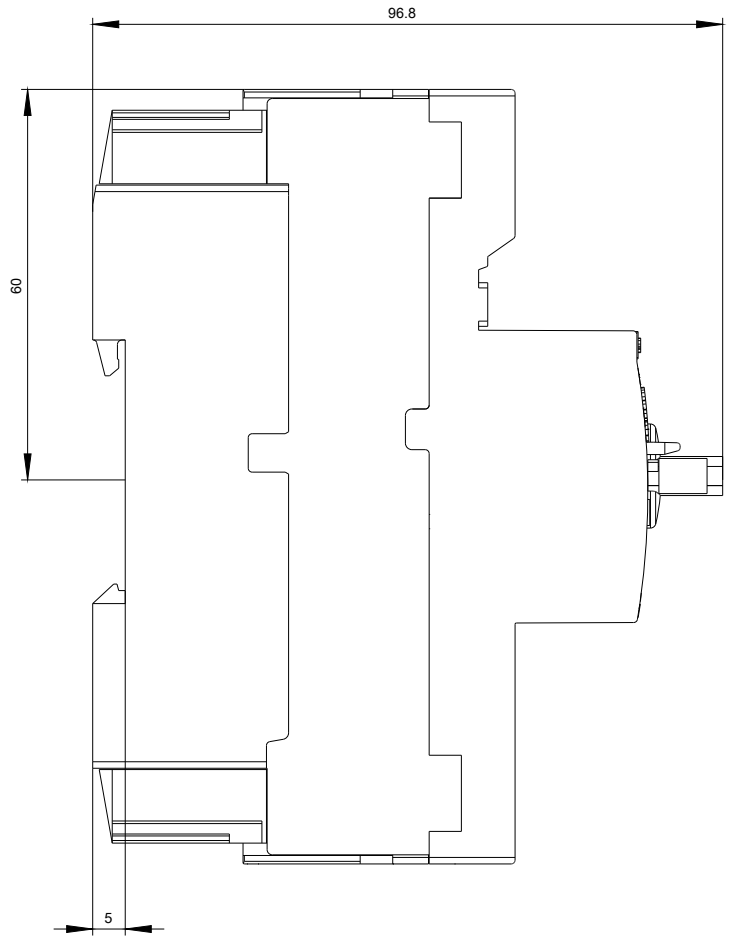
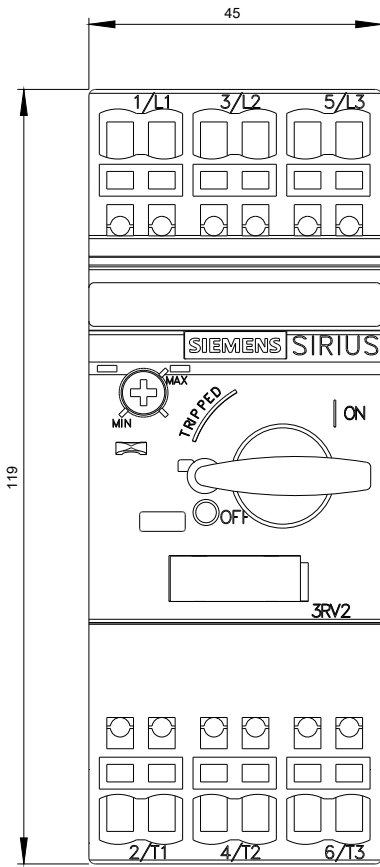
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4CA20>

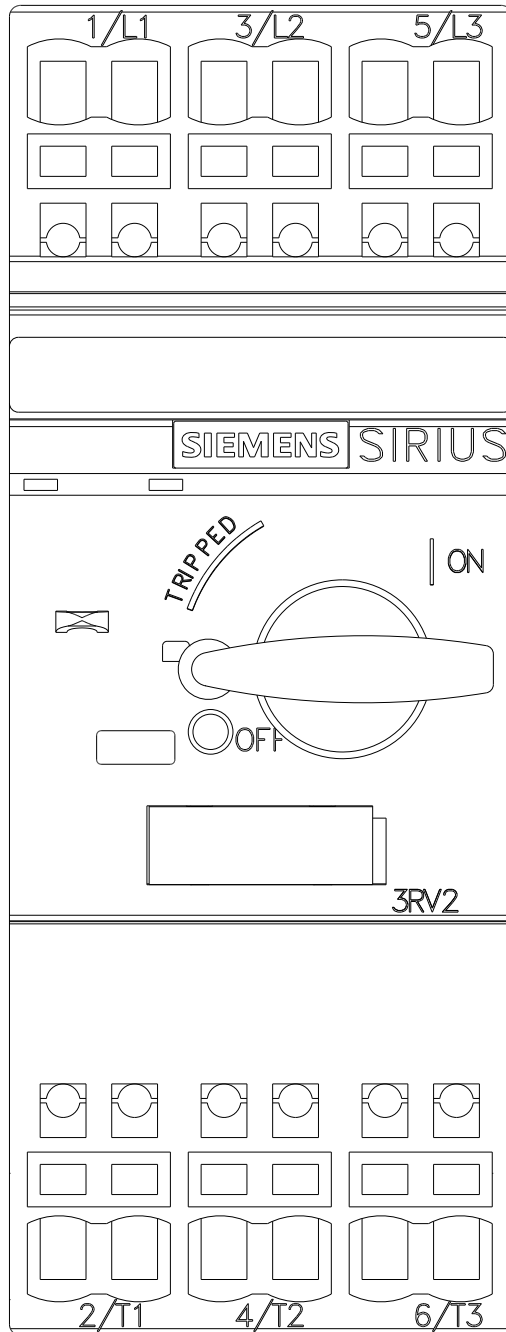
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

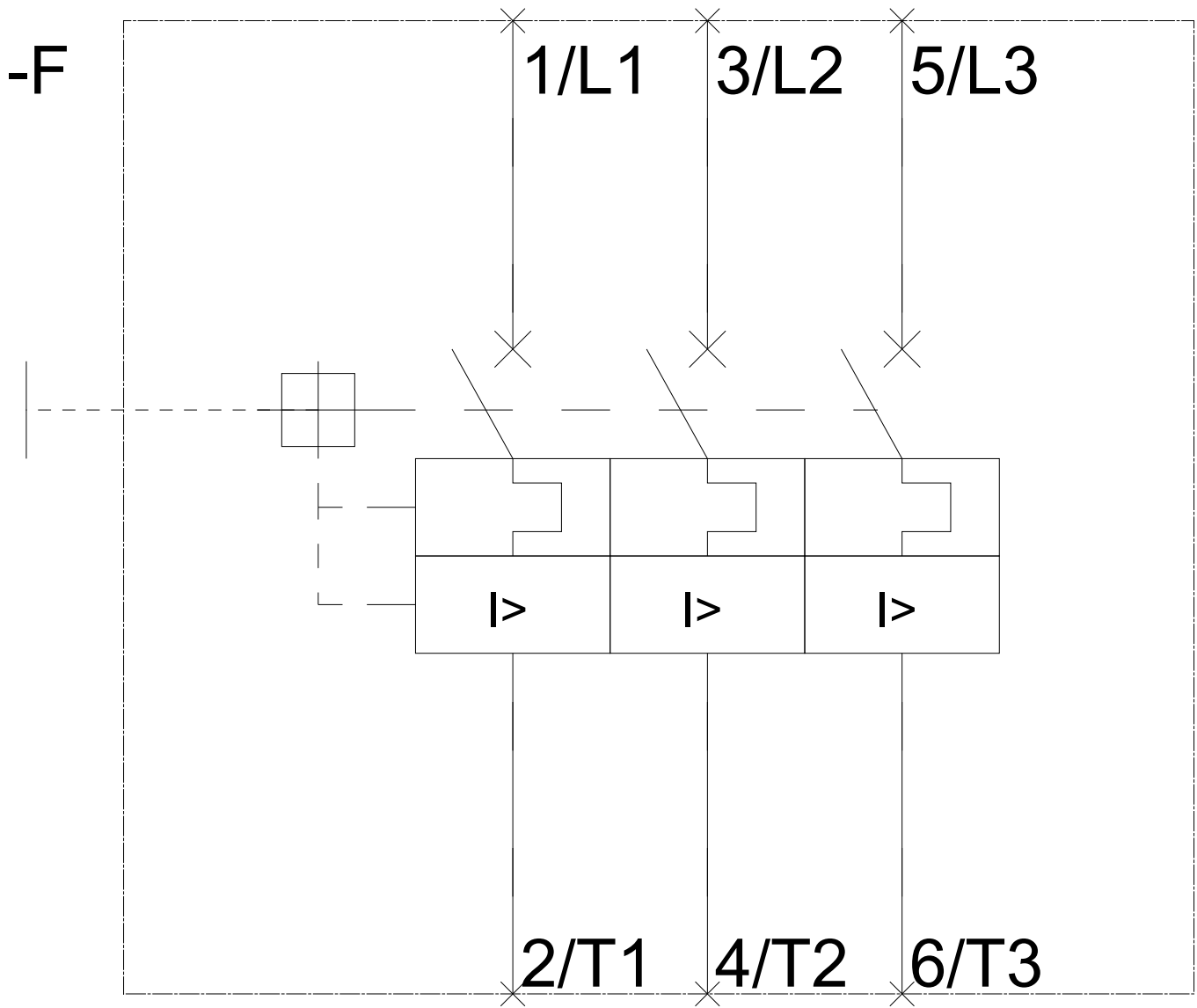
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4CA20>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4CA20&lang=en







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06/20/2017