

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, W. OVERLOAD RELAY FUNCTION A-RELEASE16...22A, N-RELEASE 286 A, SCREW CONNECTION, STANDARD SW. CAPACITY



product brandname	SIRIUS
Product designation	Circuit breaker
Design of the product	For motor protection with overload relay function
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 	IP20 IP20
Mechanical service life (switching cycles)	
<ul style="list-style-type: none"> • of the main contacts typical • of auxiliary contacts typical 	100 000 100 000
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 	-20 ... +60 °C -50 ... +80 °C -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	16 ... 22 A
Operating voltage	
<ul style="list-style-type: none"> • rated value • at AC-3 rated value maximum 	690 V 690 V
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 	5 500 W 11 000 W 11 000 W 18 500 W
Operating frequency	
<ul style="list-style-type: none"> • at AC-3 maximum 	15 1/h

Auxiliary circuit

Design of the auxiliary switch	laterally
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
Operating current of auxiliary contacts at AC-15	
<ul style="list-style-type: none"> • at 24 V 	1.5 A
<ul style="list-style-type: none"> • at 230 V 	1.5 A
Operating current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> • at 24 V 	1 A

Protective and monitoring functions

Product function	
<ul style="list-style-type: none"> • Ground fault detection 	No
<ul style="list-style-type: none"> • Phase failure detection 	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 	100 kA
<ul style="list-style-type: none"> • at 400 V rated value 	25 kA
<ul style="list-style-type: none"> • at 500 V rated value 	5 kA
<ul style="list-style-type: none"> • at 690 V rated value 	2 kA
Maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • at AC at 240 V rated value 	100 kA
<ul style="list-style-type: none"> • at AC at 400 V rated value 	55 kA
<ul style="list-style-type: none"> • at AC at 500 V rated value 	10 kA
<ul style="list-style-type: none"> • at AC at 690 V rated value 	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 	10 kA
<ul style="list-style-type: none"> • with 2 current paths in series at DC at 300 V rated value 	10 kA
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • at 480 V rated value 	22 A
<ul style="list-style-type: none"> • at 600 V rated value 	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 	1.5 hp
<ul style="list-style-type: none"> — at 230 V rated value 	3 hp
<ul style="list-style-type: none"> • for three-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value 	5 hp

— at 220/230 V rated value	7.5 hp
— at 460/480 V rated value	15 hp
Contact rating of auxiliary contacts according to UL	C600 / R300

Short-circuit protection

Product function Short circuit protection	Yes
Design of the short-circuit trip	magnetic
Design of the fuse link <ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required 	fuse gL/gG: 6 A, quick: 10 A
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	97 mm
Width	65 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 for auxiliary and control current circuit 	screw-type terminals screw-type 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 finely stranded with core end processing at AWG conductors for main contacts 	2x (1 ... 2,5 mm ²), 2x (2,5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (16 ... 12), 2x (14 ... 8)
Type of connectable conductor cross-sections	
<ul style="list-style-type: none"> for auxiliary contacts <ul style="list-style-type: none"> single or multi-stranded finely stranded with core end processing at AWG conductors for auxiliary contacts 	2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)
Tightening torque	
<ul style="list-style-type: none"> for main contacts with screw-type terminals for auxiliary contacts with screw-type terminals 	2 ... 2.5 N·m 0.8 ... 1.2 N·m
Design of screwdriver shaft	Diameter 5 to 6 mm

Safety related data	
B10 value	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	5 000
Proportion of dangerous failures	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 	50 % 50 %
Failure rate [FIT]	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> for switching status 	Handle

Certificates/approvals

General Product Approval	Declaration of Conformity
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[KC](#)



Test Certificates	Shipping Approval
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Shipping Approval	other
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[Confirmation](#)

[Environmental Confirmations](#)



[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=3RV2121-4CA10>

Cax online generator

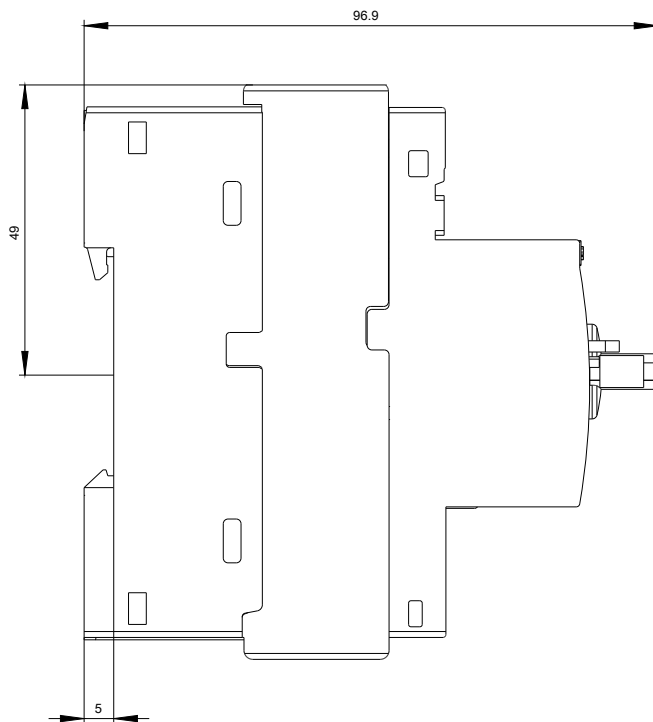
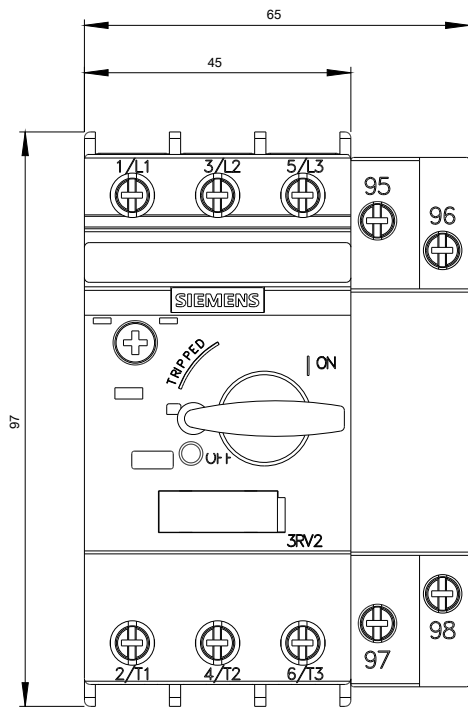
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2121-4CA10>

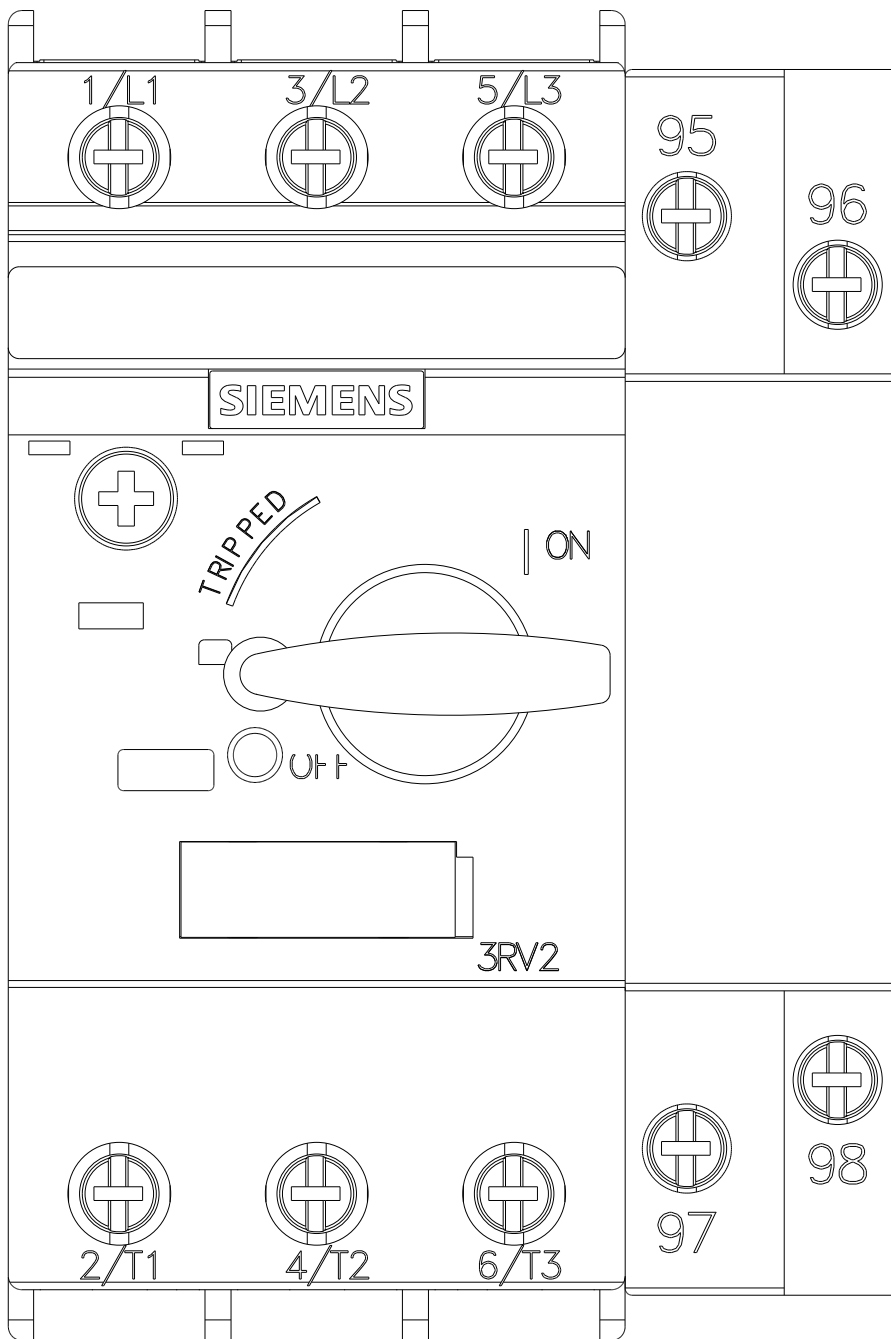
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

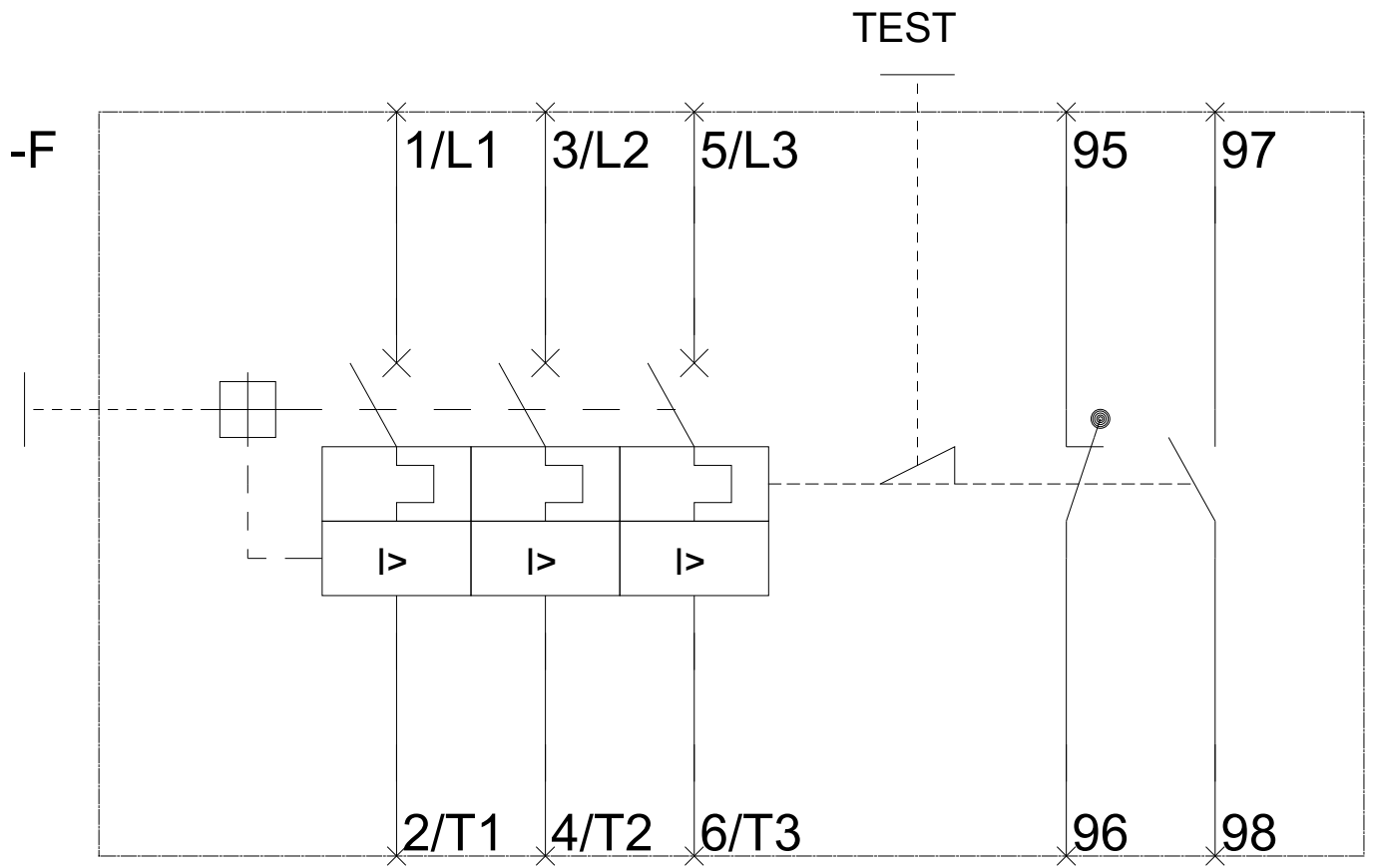
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2121-4CA10>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2121-4CA10&lang=en







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