SIEMENS

Data sheet

3RV2021-1GA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 4.5...6.3 A N-release 82 A screw terminal Standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV2
General technical data	
size of the circuit-breaker	SO
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
 at AC in hot operating state 	7.25 W
 at AC in hot operating state per pole 	2.4 W
insulation voltage with degree of pollution 3 at AC 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
 between main and auxiliary circuit 	400 V
shock resistance acc. to IEC 60068-2-27	25g / 11 ms
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 according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-20 +60 °C
 during storage 	-50 +80 °C
during transport	-50 +80 °C
temperature compensation	-20 +60 °C
relative humidity during operation	10 95 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the	4.5 6.3 A

ourrent dependent overland release	
current-dependent overload release	
operating voltage	200.1/
rated value	690 V
• rated value	20 690 V
at AC-3 rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	6.3 A
operational current at AC-3 at 400 V rated value	6.3 A
operating power at AC-3	
at 230 V rated value	1.5 kW
 at 400 V rated value 	2.2 kW
• at 500 V rated value	3 kW
at 690 V rated value	4 kW
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
breaking capacity operating short-circuit current (Ics) at AC	
 at 240 V rated value 	100 kA
• at 400 V rated value	100 kA
• at 500 V rated value	100 kA
 at 690 V rated value 	4 kA
breaking capacity maximum short-circuit current (lcu)	
at AC at 240 V rated value	100 kA
 at AC at 400 V rated value 	100 kA
 at AC at 500 V rated value 	100 kA
 at AC at 690 V rated value 	6 kA
response value current of instantaneous short-circuit trip unit	82 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	6.3 A
at 600 V rated value	6.3 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	0.25 hp
— at 230 V rated value	0.5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	1 hp
— at 220/230 V rated value	1.5 hp
— at 460/480 V rated value	3 hp
— at 575/600 V rated value	5 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	
	201/
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
height	97 mm
width	45 mm
depth	97 mm
•	

required spacing	
 for grounded parts at 400 V 	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for live parts at 400 V 	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for grounded parts at 500 V 	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 500 V	
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
 for grounded parts at 690 V 	•
- downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— at the side — forwards	0 mm
 for live parts at 690 V 	
- downwards	50 mm
— upwards	50 mm
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
Connections/ Terminals	0 11111
Connections/ Terminals	
	No
product component removable terminal for auxiliary and control circuit	No
product component removable terminal for auxiliary	No
product component removable terminal for auxiliary and control circuit	No screw-type terminals
product component removable terminal for auxiliary and control circuit type of electrical connection	
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit	screw-type terminals
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections	screw-type terminals
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit	screw-type terminals Top and bottom
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts	screw-type terminals Top and bottom 2x (1 2.5 mm²), 2x (2.5 10 mm²)
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing 	screw-type terminals Top and bottom 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts 	screw-type terminals Top and bottom 2x (1 2.5 mm²), 2x (2.5 10 mm²)
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts tightening torque	screw-type terminals Top and bottom 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts tightening torque for main contacts with screw-type terminals	screw-type terminals Top and bottom 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) 2 2.5 N·m
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts tightening torque for main contacts with screw-type terminals design of screwdriver shaft	screw-type terminals Top and bottom 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts tightening torque • for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip	screw-type terminals Top and bottom 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) 2 2.5 N·m
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts tightening torque • for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts tightening torque for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw for main contacts 	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts tightening torque • for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts tightening torque for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw for main contacts Safety related data B10 value	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2 M4
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts tightening torque • for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw • for main contacts Safety related data B10 value • with high demand rate acc. to SN 31920	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2
product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts — solid or stranded — finely stranded with core end processing at AWG cables for main contacts tightening torque for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw for main contacts Safety related data B10 value with high demand rate acc. to SN 31920 proportion of dangerous failures	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2 M4
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts tightening torque • for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw • for main contacts Safety related data B10 value • with high demand rate acc. to SN 31920	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2 M4
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product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts tightening torque for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw for main contacts Safety related data B10 value with high demand rate acc. to SN 31920 proportion of dangerous failures with low demand rate acc. to SN 31920 	screw-type terminals Top and bottom 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2 M4 5 000 50 %
product component removable terminal for auxiliary and control circuit type of electrical connection • for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections • for main contacts — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts tightening torque • for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw • for main contacts Safety related data B10 value • with high demand rate acc. to SN 31920 proportion of dangerous failures • with low demand rate acc. to SN 31920	screw-type terminals Top and bottom 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2 M4 5 000 50 %
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product component removable terminal for auxiliary and control circuit type of electrical connection for main current circuit arrangement of electrical connectors for main current circuit type of connectable conductor cross-sections for main contacts solid or stranded finely stranded with core end processing at AWG cables for main contacts tightening torque for main contacts with screw-type terminals design of screwdriver shaft size of the screwdriver tip design of the thread of the connection screw for main contacts Safety related data B10 value with high demand rate acc. to SN 31920 proportion of dangerous failures with low demand rate acc. to SN 31920 failure rate [FIT] with low demand rate acc. to SN 31920 T1 value for proof test interval or service life acc. to IEC 61508	screw-type terminals Top and bottom 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) 2 2.5 N·m Diameter 5 to 6 mm Pozidriv 2 M4 5 000 50 % 50 % 50 % 50 FIT 10 y IP20

Certificates/ approva	ls				
General Product A	pproval				
	<u>Confirmation</u>			<u>KC</u>	EHC
For use in hazardous locations Declaration		Declaration of Con	formity	Test Certificates	
KEX ATEX	IECE×	CE EG-Konf.	<u>UK Declaration of</u> <u>Conformity</u>	Special Test Certific- ate	Type Test Certific- ates/Test Report
Marine / Shipping					
ABS	BUREAU VERITAS		Lloyd's Register uis	PRS	RINA
Marine / Shipping	other		Railway		
RMRS RMRS	<u>Confirmation</u>		Vibration and Shock	<u>Confirmation</u>	
Further information					
https://www.siemens Industry Mall (Onlin https://mall.industry.s Cax online generate	ne ordering system) siemens.com/mall/en/er or	n/Catalog/product?mlfb=	<u>=3RV2021-1GA10</u> 2lang=en&mlfb=3RV20		

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1GA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1GA10

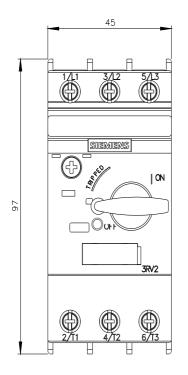
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

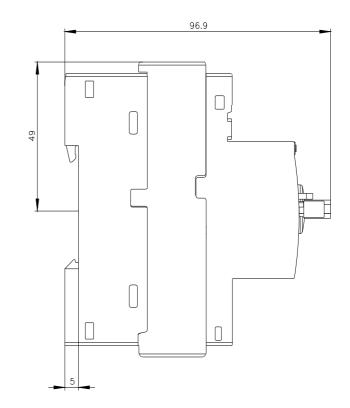
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1GA10&lang=en

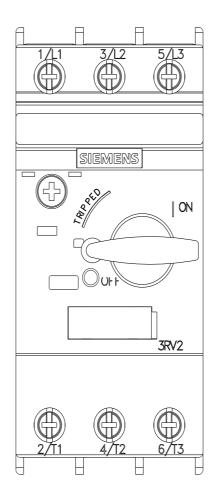
Characteristic: Tripping characteristics, I²t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1GA10/char

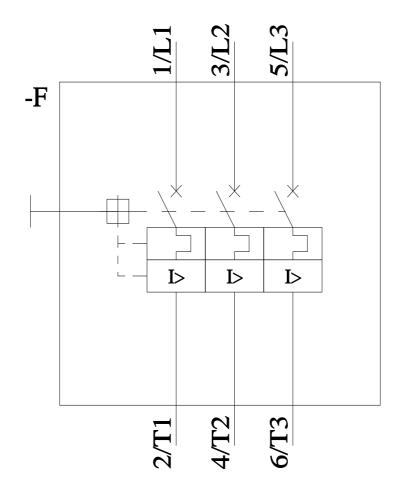
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1GA10&objecttype=14&gridview=view1







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