SIEMENS

3RV2021-1AA10 **Data sheet**



Circuit breaker size S0 for motor protection, CLASS 10 A-release 1.1...1.6 A N-release 21 A screw terminal Standard switching capacity

1.41	OID!! IO
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
shock resistance according to IEC 60068-2-27	25g / 11 ms
mechanical service life (operating cycles)	
 of the main contacts typical 	100 000
 of auxiliary contacts typical 	100 000
electrical endurance (operating 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 according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
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
relative humidity during operation	10 95 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current-dependent overload release	1.1 1.6 A
operating voltage	
• rated value	20 690 V
 at AC-3 rated value maximum 	690 V
 at AC-3e rated value maximum 	690 V
operating frequency rated value	50 60 Hz
operational current rated value	1.6 A
•	

operational current	
• at AC-3 at 400 V rated value	1.6 A
• at AC-3e at 400 V rated value	1.6 A
operating power	
at AC-3— at 230 V rated value	0.3 PM
— at 400 V rated value	0.3 kW 0.6 kW
— at 500 V rated value	0.8 kW
— at 690 V rated value	1.1 kW
• at AC-3e	I.I KVV
— at 230 V rated value	0.3 kW
— at 400 V rated value	0.6 kW
— at 500 V rated value	0.8 kW
— at 690 V rated value	1.1 kW
operating frequency	
• at AC-3 maximum	15 1/h
at AC-3e 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	No
 ground fault detection phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	tionnal
• 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	100 kA
operating short-circuit current breaking capacity (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 	100 kA
response value current of instantaneous short-circuit trip unit	21 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
 at 480 V rated value 	1.6 A
• at 600 V rated value	1.6 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 230 V rated value	0.1 hp
• for 3-phase AC motor	41
— at 460/480 V rated value	1 hp
— at 575/600 V rated value	0.8 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	97 mm
width	45 mm
depth	97 mm
required spacing	
with side-by-side mounting at the side	0 mm
 for grounded parts at 400 V 	

— downwards— upwards	30 mm 30 mm	
— upwards — at the side	9 mm	
for grounded parts at 500 V	9 111111	
— downwards	30 mm	
— upwards	30 mm	
— at the side	9 mm	
• for live parts at 500 V	5 mm	
— 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	
— 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		
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 		
— solid or 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 cables 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	
size of the screwdriver tip	Pozidriv size 2	
design of the thread of the connection screw		
for main contacts	M4	
Safety related data		
B10 value		
 with high demand rate according to SN 31920 	5 000	
proportion of dangerous failures		
 with low demand rate according to SN 31920 	50 %	
 with high demand rate according to SN 31920 	50 %	
failure rate [FIT]		
 with low demand rate according to SN 31920 	50 FIT	
T1 value for proof test interval or service life according to IEC 61508	10 a	
protection class IP on the front according to IEC 60529	IP20	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front	
display version for switching status	Handle	
Certificates/ approvals		
General Product Approval		For use in hazard- ous locations











For use in hazardous locations

Declaration of Conformity

Test Certificates

<u>KC</u>

Marine / Shipping







Special Test Certific-<u>ate</u>

Type Test Certificates/Test Report



Marine / Shipping













other

Railway

Confirmation



Vibration and Shock

Confirmation

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-1AA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1AA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1AA10

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

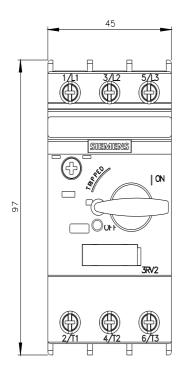
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1AA10&lang=en

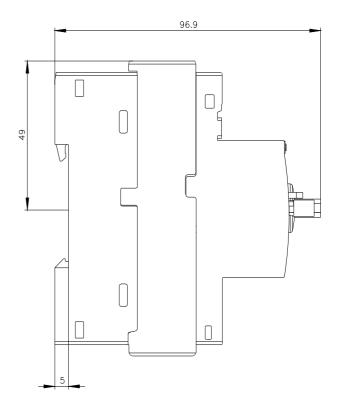
Characteristic: Tripping characteristics, I2t, Let-through current

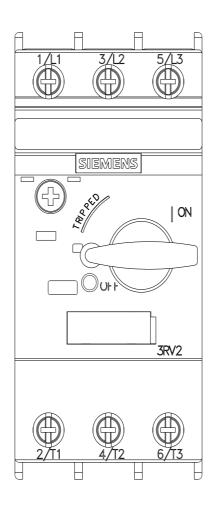
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1AA10/char

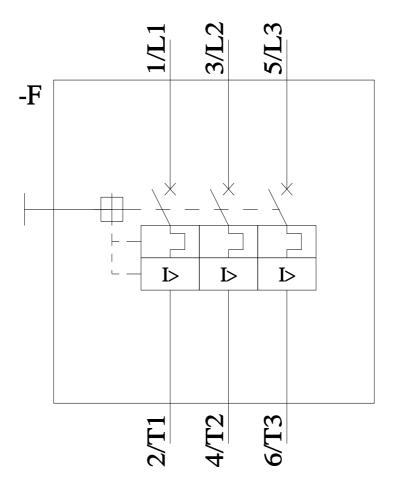
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1AA10&objecttype=14&gridview=view1









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