SIEMENS

Data sheet 3RV2021-1JA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 7...10 A N release 130 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	9.25 W
at AC in hot operating state per pole	3.1 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	7 10 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	10 A
operational current	

at AC-3 at 400 V rated value	10 A
at AC-3e at 400 V rated value	10 A
operating power	
• at AC-3	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	7.5 kW
• at AC-3e	
— at 230 V rated value	2.2 kW
— at 400 V rated value	4 kW
— at 500 V rated value	5.5 kW
— at 690 V rated value	7.5 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 • ground fault detection	No
-	Yes
phase failure detection	CLASS 10
trip class	
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	100 kA
at AC at 400 V rated value	100 kA
at AC at 400 V rated value	100 kA
at AC at 500 V rated value	42 kA
at AC at 690 V rated value	6 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	42 kA
at 690 V rated value	4 kA
response value current of instantaneous short-circuit trip unit	130 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
 at 480 V rated value 	10 A
at 600 V rated value	10 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
 — at 110/120 V rated value 	
	0.5 hp
— at 230 V rated value	0.5 hp 1.5 hp
— at 230 V rated value	
— at 230 V rated valuefor 3-phase AC motor	1.5 hp
— at 230 V rated value• for 3-phase AC motor— at 200/208 V rated value	1.5 hp 2 hp
 at 230 V rated value for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value 	1.5 hp 2 hp 3 hp
 — at 230 V rated value ● for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value 	1.5 hp 2 hp 3 hp 5 hp
 — at 230 V rated value ● for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	1.5 hp 2 hp 3 hp 5 hp
 — at 230 V rated value ● for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection 	1.5 hp 2 hp 3 hp 5 hp 10 hp
— at 230 V rated value ● for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection	1.5 hp 2 hp 3 hp 5 hp 10 hp
— at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions	1.5 hp 2 hp 3 hp 5 hp 10 hp
— at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position	1.5 hp 2 hp 3 hp 5 hp 10 hp Yes magnetic
— at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method	1.5 hp 2 hp 3 hp 5 hp 10 hp Yes magnetic
- at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method height	1.5 hp 2 hp 3 hp 5 hp 10 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 97 mm
— at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value Short-circuit protection product function short circuit protection design of the short-circuit trip Installation/ mounting/ dimensions mounting position fastening method	1.5 hp 2 hp 3 hp 5 hp 10 hp Yes magnetic any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715

General Product Approval		ous locations
		For use in hazard-
Certificates/ approvals		
display version for switching status	Handle	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front	
protection class IP on the front according to IEC 60529	IP20	
61508		
T1 value for proof test interval or service life according to IEC	10 a	
with low demand rate according to SN 31920	50 FIT	
failure rate [FIT]		
with high demand rate according to SN 31920	50 %	
with low demand rate according to SN 31920	50 %	
proportion of dangerous failures		
with high demand rate according to SN 31920	5 000	
B10 value		
Safety related data		
• for main contacts	M4	
design of the thread of the connection screw		
size of the screwdriver tip	Pozidriv size 2	
design of screwdriver shaft	Diameter 5 to 6 mm	
for main contacts with screw-type terminals	2 2.5 N·m	
tightening torque		
for AWG cables for main contacts	2x (16 12), 2x (14 8)	
 finely stranded with core end processing 	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²	
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)	
• for main contacts		
type of connectable conductor cross-sections		
circuit	Top and bottom	
arrangement of electrical connectors for main current	Top and bottom	
for main current circuit	screw-type terminals	
type of electrical connection		
Connections/ Terminals		
— forwards	0 mm	
— at the side	30 mm	
— backwards	0 mm	
— upwards	50 mm	
— downwards	50 mm	
• for live parts at 690 V		
— forwards	0 mm	
— at the side	30 mm	
— backwards	0 mm	
— upwards	50 mm	
— downwards	50 mm	
 for grounded parts at 690 V 		
— at the side	9 mm	
— upwards	30 mm	
— downwards	30 mm	
• for live parts at 500 V		
— at the side	9 mm	
— upwards	30 mm	
— downwards	30 mm	
• for grounded parts at 500 V		
— at the side	9 mm	
— upwards	30 mm	
— downwards	30 mm	
• for live parts at 400 V		
— at the side	9 mm	
— upwards	30 mm	
— downwards	30 mm	
• for grounded parts at 400 V		
 with side-by-side mounting at the side 	0 mm	



Confirmation



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For use in hazardous locations

Declaration of Conformity

Test Certificates

<u>KC</u>

Marine / Shipping







Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping











Confirmation

other

other

Railway



Confirmation

Vibration and Shock

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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=3RV2021-1JA10

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV2021-1JA10}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1JA10

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

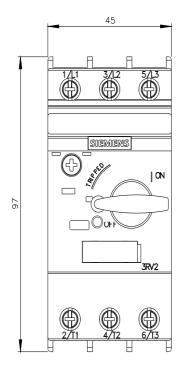
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1JA10&lang=en

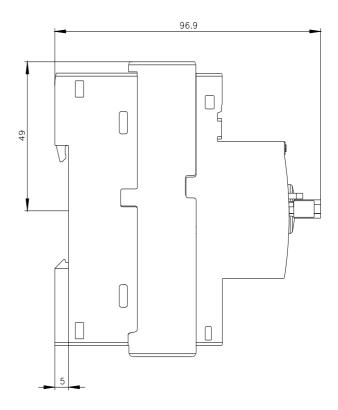
Characteristic: Tripping characteristics, I2t, Let-through current

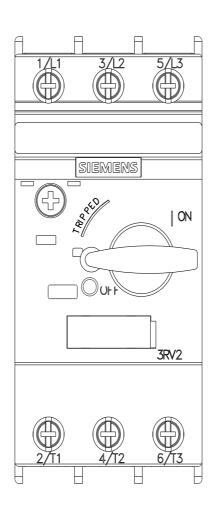
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1JA10/char

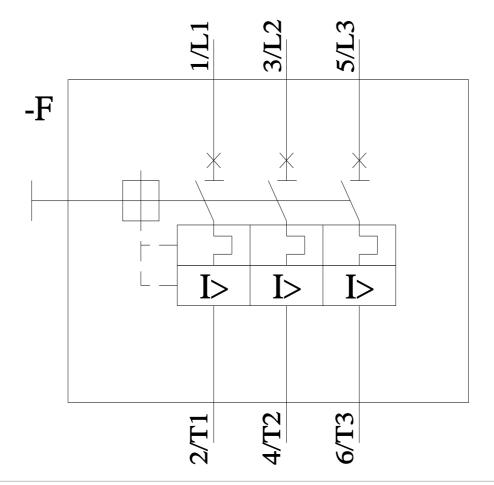
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1JA10&objecttype=14&gridview=view1









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