SIEMENS

Data sheet 3RV2021-1JA25



Circuit breaker size S0 for motor protection, CLASS 10 A-release 7...10 A N release 130 A Spring-type terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC $\,$

product brand name	SIRIUS		
product designation	Circuit breaker		
design of the product	For motor protection		
product type designation	3RV2		
General technical data	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] 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 (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 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	
design of the auxiliary switch	transverse
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
number of CO contacts for auxiliary contacts	0
operational current of auxiliary contacts at AC-15	
● at 24 V	2 A
● at 120 V	0.5 A
● at 125 V	0.5 A
● at 230 V	0.5 A
operational current of auxiliary contacts at DC-13	
● at 24 V	1 A
● at 60 V	0.15 A
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 maximum short-circuit current (Icu)	
 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 	42 kA
at AC at 690 V rated value	6 kA
breaking capacity operating short-circuit current (Ics)	
at AC • at 240 V rated value	100 kA
	100 kA 100 kA
at 400 V rated valueat 500 V rated value	100 KA 42 kA
at 500 V rated value at 690 V rated value	4 kA
♥ at U3U v tateu value	
response value current of instantaneous short circuit trip	
response value current of instantaneous short-circuit trip unit	130 A
unit	
unit UL/CSA ratings	
unit	
unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor	130 A 10 A
unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	130 A
unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp]	130 A 10 A
unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor	130 A 10 A 10 A
unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor — at 110/120 V rated value	130 A 10 A 10 A 0.5 hp
unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor	130 A 10 A 10 A

at 200/209 V rated value	2 hp
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value — at 575/600 V rated value	5 hp 10 hp
contact rating of auxiliary contacts according to UL	C300 / R300
Short-circuit protection	C300 / 1C300
	Yes
product function short circuit protection	
design of the short-circuit trip design of the fuse link	magnetic
-	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current
 for short-circuit protection of the auxiliary switch required 	lk < 400 A)
Installation/ mounting/ dimensions	,
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
	according to DIN EN 60715
height	119 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	5
— 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	O HIIII
for live parts at 690 v downwards	50 mm
	50 mm
— upwards	
— backwards	0 mm
— at the side	30 mm
— forwards	0 mm
Connections/ Terminals	
type of electrical connection	and a land of tames and
for main current circuit	spring-loaded terminals
for auxiliary and control circuit	spring-loaded 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 10 mm²)
 finely stranded with core end processing 	2x (1 6 mm²)
finely stranded without core end processing	2x (1 6 mm²)
at AWG cables for main contacts	2x (18 8)
type of connectable conductor cross-sections	
.yr	

 for auxiliary contacts 	
— solid or stranded	2x (0.5 2.5 mm²)
 finely stranded with core end processing 	2x (0.5 1.5 mm²)
 finely stranded without core end processing 	2x (0.5 1.5 mm²)
 at AWG cables for auxiliary contacts 	2x (20 14)
design of screwdriver shaft	Diameter 3 mm
size of the screwdriver tip	3,0 x 0,5 mm
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 y
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



Confirmation





<u>KC</u>



For use in hazardous locations

Declaration of Conformity

Test Certificates









Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping

othe

Railway



Confirmation



Vibration and Shock

Confirmation

Further informatio

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=3RV2021-1JA25

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1JA25

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1JA25

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1JA25&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1JA25/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1JA25&objecttype=14&gridview=view1

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