SIEMENS

Data sheet 3RV2021-4AA25



Circuit breaker size S0 for motor protection, CLASS 10 A-release 10...16 A N-release 208 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		
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	
reference code according to IEC 81346-2 Substance Prohibitance (Date)	Q 10/01/2009	
Substance Prohibitance (Date)		
Substance Prohibitance (Date) Ambient conditions	10/01/2009	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum	10/01/2009	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature	10/01/2009 2 000 m	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation	10/01/2009 2 000 m -20 +60 °C	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage	10/01/2009 2 000 m -20 +60 °C -50 +80 °C	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 %	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 %	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 %	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 %	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 % 3 10 16 A	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 % 3 10 16 A	
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during transport relative humidity during operation Main circuit number of poles for main current circuit adjustable current response value current of the current-dependent overload release operating voltage • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum	10/01/2009 2 000 m -20 +60 °C -50 +80 °C -50 +80 °C 10 95 % 3 10 16 A 20 690 V 690 V	

 at AC-3 at 400 V rated value 	16 A
at AC-3e at 400 V rated value	16 A
operating power	
• at AC-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
• at AC-3e	11 KVV
— at 230 V rated value	A LAM
	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 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
maximum short-circuit current breaking capacity (Icu)	
• at AC at 240 V rated value	100 kA
at AC at 400 V rated value	55 kA
at AC at 500 V rated value	10 kA
at AC at 690 V rated value	4 kA
operating short-circuit current breaking capacity (Ics) at AC	
at 240 V rated value	100 kA
at 400 V rated value	25 kA
at 500 V rated value at 500 V rated value	5 kA
at 500 v rated value	
■ at 690 V rated value	2 kΔ
at 690 V rated value response value current of instantaneous short-circuit trip unit	2 kA
response value current of instantaneous short-circuit trip unit	2 kA 208 A
response value current of instantaneous short-circuit trip unit UL/CSA ratings	
response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor	208 A
response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value	208 A 16 A
response value current of instantaneous short-circuit trip unit UL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	208 A
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response value current of instantaneous short-circuit trip 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	208 A 16 A 16 A 1 hp
response value current of instantaneous short-circuit trip 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 — at 230 V rated value	208 A 16 A 16 A
response value current of instantaneous short-circuit trip 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 — at 230 V rated value • for 3-phase AC motor	208 A 16 A 16 A 1 hp 2 hp
response value current of instantaneous short-circuit trip 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 — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value	208 A 16 A 16 A 1 hp 2 hp 3 hp
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response value current of instantaneous short-circuit trip 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 — 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 460/480 V rated value	208 A 16 A 16 A 1 hp 2 hp 3 hp 5 hp 10 hp

product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the fuse link	
for short-circuit protection of the auxiliary switch required	Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current lk < 400 A)
design of the fuse link for IT network for short-circuit	
protection of the main circuit	1.4.0.00 A
• at 400 V	gL/gG 63 A
• at 500 V	gL/gG 50 A
• at 690 V	gL/gG 40 A
nstallation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	119 mm
width	45 mm
depth required energies	97 mm
required spacingwith side-by-side mounting at the side	0 mm
-	O IIIIII
 for grounded parts at 400 V — downwards 	30 mm
	30 mm
— upwards — at the side	9 mm
at the side for live parts at 400 V	V IIIII
for live parts at 400 v — downwards	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	9 111111
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
for grounded parts at 690 V	3 11111
— 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	spring-loaded terminals
for auxiliary and control circuit	spring-loaded terminals
arrangement of electrical connectors for main current	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 with core end processing — finely stranded without core end processing	2x (1 6 mm²)
for AWG cables for main contacts	2x (1 8)
type of connectable conductor cross-sections	Z. ((V V)
for auxiliary contacts	

 finely stranded with core end processing 	2x (0.5 1.5 mm²)	
 finely stranded without core end processing 	2x (0.5 1.5 mm²)	
 for 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 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 hazardous locations

Confirmation





<u>KC</u>





For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping







Special Test Certificate Type Test Certificates/Test Report



Marine / Shipping











Confirmation

other

other

Railway



Vibration and Shock

Confirmation

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=3RV2021-4AA25

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4AA25

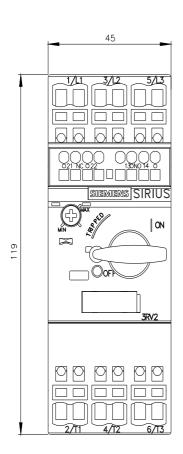
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

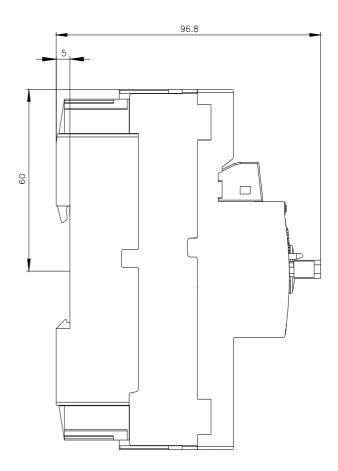
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4AA25

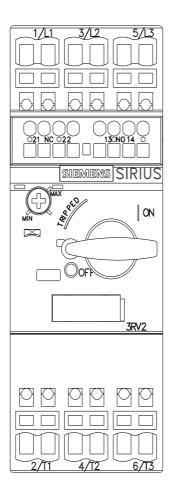
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax de.aspx?mlfb=3RV2021-4AA25&lang=en

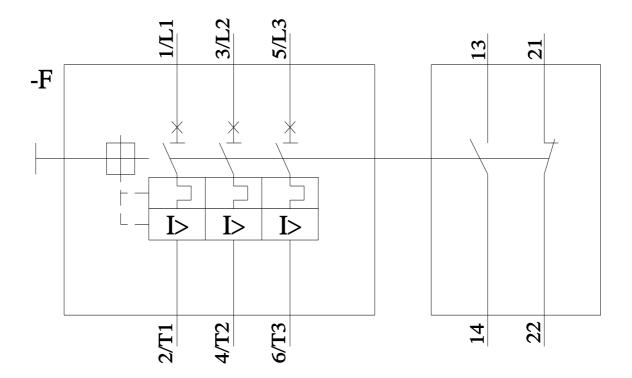
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4AA25/c

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4AA25&objecttype=14&gridview=view1









last modified: 11/21/2022 🖸