## **SIEMENS**

Data sheet 3RV2021-4EA25



Circuit breaker size S0 for motor protection, CLASS 10 A-release 27...32 A N-release 400 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	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		
<ul> <li>at AC in hot operating state</li> </ul>	13.25 W	
<ul> <li>at AC in hot operating state per pole</li> </ul>	4.4 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)		
<ul> <li>of the main contacts typical</li> </ul>	100 000	
<ul> <li>of auxiliary contacts typical</li> </ul>	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	
SVHC substance name	Blei - 7439-92-1	
Ambient conditions		
installation altitude at height above sea level maximum	2 000 m	
ambient temperature		
<ul> <li>during operation</li> </ul>	-20 +60 °C	
<ul> <li>during storage</li> </ul>	-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	27 32 A	
operating voltage		
• rated value	20 690 V	
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V	
at AC-3e rated value maximum	690 V	
operating frequency rated value	50 60 Hz	
operational current rated value	32 A	

operational current	22.4
• at AC-3 at 400 V rated value	32 A
at AC-3e at 400 V rated value	32 A
operating power	
• at AC-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	30 kW
• at AC-3e	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	30 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
Due to a time and manife view for a time.	
Protective and monitoring functions	
Protective and monitoring functions product function	
product function	No
	No Yes
product function	
product function	Yes CLASS 10
product function	Yes
product function	Yes CLASS 10 thermal
product function  ■ ground fault detection  ■ phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)  ■ at AC at 240 V rated value	Yes CLASS 10 thermal
product function	Yes CLASS 10 thermal  100 kA 55 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA 2 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA 2 kA
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA 5 kA 2 kA 400 A
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product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA 5 kA 2 kA 400 A  2 hp 5 hp
product function  • ground fault detection  • phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)  • at AC at 240 V rated value  • at AC at 500 V rated value  • at AC at 500 V rated value  • at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC  • at 240 V rated value  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  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  vielded 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	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA 5 kA 2 kA 400 A  2 hp 5 hp 7.5 hp
product function	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA 2 kA 400 A  2 hp 5 hp 7.5 hp 10 hp
product function  • ground fault detection  • phase failure detection  trip class  design of the overload release  maximum short-circuit current breaking capacity (Icu)  • at AC at 240 V rated value  • at AC at 500 V rated value  • at AC at 500 V rated value  • at AC at 690 V rated value  operating short-circuit current breaking capacity (Ics) at AC  • at 240 V rated value  • at 400 V rated value  • at 500 V rated value  • at 690 V rated value  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  vielded 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	Yes CLASS 10 thermal  100 kA 55 kA 10 kA 4 kA  100 kA 25 kA 5 kA 2 kA 400 A  2 hp 5 hp 7.5 hp

Short-circuit protection		
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	·	
• at 400 V	gL/gG 63 A	
● at 500 V	gL/gG 63 A	
● at 690 V	gL/gG 63 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	97 mm	
required spacing		
<ul> <li>with side-by-side mounting at the side</li> </ul>	0 mm	
<ul> <li>for grounded parts at 400 V</li> </ul>		
— 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	
<ul> <li>for grounded parts at 500 V</li> </ul>		
— downwards	30 mm	
— upwards	30 mm	
— at the side	9 mm	
<ul> <li>for live parts at 500 V</li> </ul>		
— downwards	30 mm	
— upwards	30 mm	
— at the side	9 mm	
<ul> <li>for grounded parts at 690 V</li> </ul>		
— 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 circuit	Top and bottom	
type of connectable conductor cross-sections		
• for main contacts		
— solid or stranded	2x (1 10 mm²)	
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 6 mm²)	
<ul> <li>finely stranded without core end processing</li> </ul>	2x (1 6 mm²)	
for AWG cables for main contacts	2x (18 8)	
type of connectable conductor cross-sections		
<ul> <li>for auxiliary contacts</li> </ul>		

<ul> <li>— solid or stranded</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 1.5 mm²)
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	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	
<ul> <li>with high demand rate according to SN 31920</li> </ul>	5 000
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	50 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	50 %
failure rate [FIT]	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	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
Approvals Certificates	

## **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







LRS





Household and similar appliances

other

other

Railway

Environment

Confirmation



Vibration and Shock

Confirmation

Environmental Confirmations

## 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=3RV2021-4EA25

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4EA25

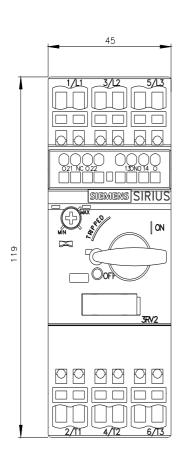
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

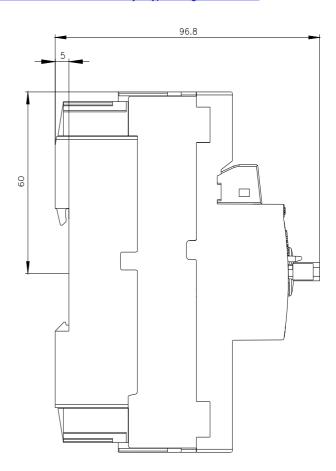
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA2

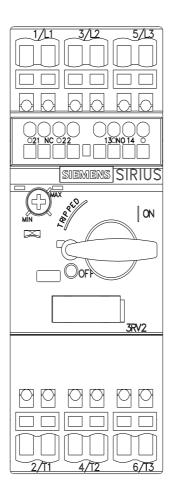
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2021-4EA25&lang=en

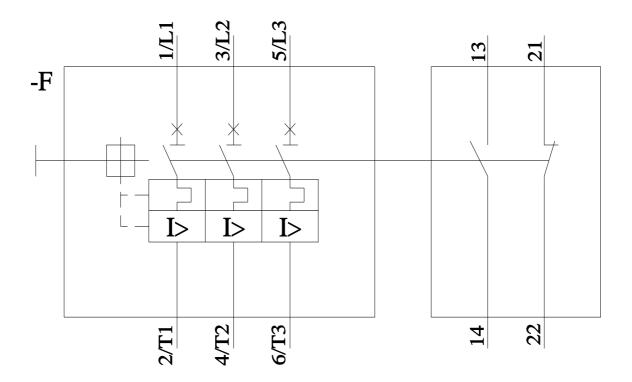
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA25/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4EA25&objecttype=14&gridview=view1









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