## **SIEMENS**

Data sheet 3RV2021-4NA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 23...28 A N-release 364 A screw terminal Standard switching capacity



product designation  design of the product  product type designation  General technical data  size of the circuit-breaker  size of contactor can be combined company-specific  Circuit breaker  For motor protect  3RV2  Solution  Solution	ion
design of the product product type designation General technical data size of the circuit-breaker  For motor protect 3RV2  SO	ion
General technical data size of the circuit-breaker S0	
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 13.25 W	
• at AC in hot operating state per pole 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)	
• of the main contacts typical 100 000	
• of auxiliary contacts typical 100 000	
electrical endurance (operating cycles) typical 100 000	
reference code according to IEC 81346-2 Q	
Substance Prohibitance (Date) 10/01/2009	
SVHC substance name Lead - 7439-92-7	
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	
operating voltage	
• rated value 20 690 V	
• at AC-3 rated value maximum 690 V	
<ul> <li>at AC-3 rated value maximum</li> <li>at AC-3e rated value maximum</li> <li>690 V</li> <li>690 V</li> </ul>	

operational current rated value	28 A
operational current	
<ul> <li>at AC-3 at 400 V rated value</li> </ul>	28 A
at AC-3e at 400 V rated value	28 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	22 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	22 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
phase failure detection	Yes
trip class	CLASS 10
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	World.
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      at AC at 690 V rated value	4 kA
operating short-circuit current breaking capacity (Ics) at AC	4 M
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 690 V rated value     at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	364 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	00.4
at 480 V rated value	28 A
at 600 V rated value	28 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	2 hp
— at 230 V rated value	5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	7.5 hp
— at 220/230 V rated value	10 hp
— at 460/480 V rated value	20 hp
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
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
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	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	
— 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	Top and bottom
circuit	Top and bottom
type of connectable conductor cross-sections	
• for main contacts	
<ul> <li>solid or stranded</li> </ul>	2x (1 2.5 mm²), 2x (2.5 10 mm²)
<ul><li>— solid or stranded</li><li>— finely stranded with core end processing</li></ul>	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
— finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
<ul><li>— finely stranded with core end processing</li><li>• for AWG cables for main contacts</li></ul>	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
— finely stranded with core end processing  • for AWG cables for main contacts  tightening torque	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)
— finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) 2 2.5 N·m
— finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm
— finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2
— finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  safety related data	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2  M4
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  safety related data  product function suitable for safety function	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  safety related data  product function suitable for safety function  suitability for use  • safety-related switching on	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m Diameter 5 to 6 mm Pozidriv size 2  M4
— finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  safety related data  product function suitable for safety function  suitability for use	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2  M4  Yes
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  Safety related data  product function suitable for safety function  suitability for use  • safety-related switching on  • safety-related switching OFF  service life maximum	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2  M4  Yes  No Yes 10 a
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  safety related data  product function suitable for safety function  suitability for use  • safety-related switching on  • safety-related switching OFF  service life maximum  test wear-related service life necessary	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2  M4  Yes  No  Yes
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  safety related data  product function suitable for safety function  suitability for use  • safety-related switching on  • safety-related switching OFF  service life maximum  test wear-related service life necessary  proportion of dangerous failures	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m Diameter 5 to 6 mm Pozidriv size 2  M4  Yes  No Yes 10 a Yes
- finely stranded with core end processing  • for AWG cables for main contacts  tightening torque  • for main contacts with screw-type terminals  design of screwdriver shaft  size of the screwdriver tip  design of the thread of the connection screw  • for main contacts  safety related data  product function suitable for safety function  suitability for use  • safety-related switching on  • safety-related switching OFF  service life maximum  test wear-related service life necessary	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8)  2 2.5 N·m  Diameter 5 to 6 mm  Pozidriv size 2  M4  Yes  No Yes 10 a

failure rate [FIT] with low demand rate according to SN 31920	50 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
T1 value	
<ul> <li>for proof test interval or service life according to IEC 61508</li> </ul>	10 a
Electrical Safety	
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	
display version for switching status	Handle
Approvals Certificates	
General Product Approval	







Confirmation



<u>KC</u>

**General Product Ap-**

For use in hazardous locations

**Test Certificates** 

Marine / Shipping







Type Test Certificates/Test Report

**Special Test Certific-**



Marine / Shipping













**Miscellaneous** 

other

other Railway

Confirmation



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

Confirmation



**Environment** 





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=3RV2021-4NA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4NA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4NA10

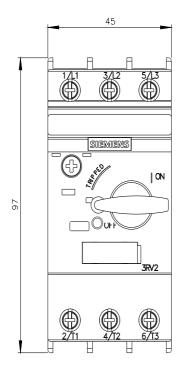
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

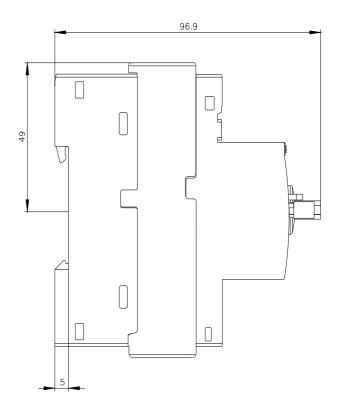
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2021-4NA10&lang=en

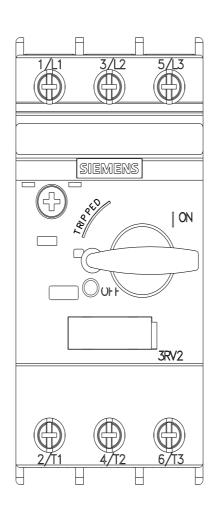
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4NA10/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4NA10&objecttype=14&gridview=view1









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