## **SIEMENS**

Data sheet 3RV2021-4EA10



Circuit breaker size S0 for motor protection, CLASS 10 A-release 27...32 A N-release 400 A screw terminal Standard switching capacity

1. 41. 1	OIDHIO
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	\$0
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
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
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	
<ul> <li>during operation</li> </ul>	-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	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	

<ul> <li>at AC-3 at 400 V rated value</li> </ul>	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	
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
	ulcimai
maximum short-circuit current breaking capacity (Icu)	400 kA
at AC at 400 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
<ul> <li>at 400 V rated value</li> </ul>	25 kA
<ul> <li>at 500 V rated value</li> </ul>	5 kA
• at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	400 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	32 A
at 600 V rated value	
- at 000 + 1atoa +alao	3/ A
violded mechanical performance [hn]	32 A
yielded mechanical performance [hp]	32 A
• for single-phase AC motor	
• for single-phase AC motor — at 110/120 V rated value	2 hp
<ul> <li>for single-phase AC motor</li> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul>	
<ul> <li>for single-phase AC motor</li> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> <li>for 3-phase AC motor</li> </ul>	2 hp 5 hp
<ul> <li>for single-phase AC motor</li> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> <li>for 3-phase AC motor</li> <li>— at 200/208 V rated value</li> </ul>	2 hp 5 hp 7.5 hp
<ul> <li>for single-phase AC motor</li> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> <li>for 3-phase AC motor</li> </ul>	2 hp 5 hp
<ul> <li>for single-phase AC motor</li> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> <li>for 3-phase AC motor</li> <li>— at 200/208 V rated value</li> </ul>	2 hp 5 hp 7.5 hp
<ul> <li>for single-phase AC motor</li> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> <li>for 3-phase AC motor</li> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> </ul>	2 hp 5 hp 7.5 hp 10 hp
<ul> <li>for single-phase AC motor</li> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> <li>• for 3-phase AC motor</li> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul>	2 hp 5 hp 7.5 hp 10 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  Short-circuit protection	2 hp 5 hp 7.5 hp 10 hp 20 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  Short-circuit protection  product function short circuit protection	2 hp 5 hp 7.5 hp 10 hp 20 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  Short-circuit protection  product function short circuit protection design of the short-circuit trip design of the fuse link for IT network for short-circuit	2 hp 5 hp 7.5 hp 10 hp 20 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  Short-circuit protection  product function short circuit protection  design of the short-circuit trip  design of the fuse link for IT network for short-circuit protection of the main circuit	2 hp 5 hp 7.5 hp 10 hp 20 hp  Yes magnetic
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  Short-circuit protection  product function short circuit protection  design of the short-circuit trip  design of the fuse link for IT network for short-circuit protection of the main circuit         • at 400 V	2 hp 5 hp 7.5 hp 10 hp 20 hp  Yes magnetic  gL/gG 63 A gL/gG 63 A
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  Short-circuit protection  product function short circuit protection  design of the short-circuit trip  design of the fuse link for IT network for short-circuit protection of the main circuit         • at 400 V         • at 500 V         • at 690 V	2 hp 5 hp 7.5 hp 10 hp 20 hp  Yes magnetic  gL/gG 63 A
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  Short-circuit protection  product function short circuit protection  design of the short-circuit trip  design of the fuse link for IT network for short-circuit protection of the main circuit         • at 400 V         • at 500 V         • at 690 V  Installation/ mounting/ dimensions	2 hp 5 hp 7.5 hp 10 hp 20 hp  Yes magnetic  gL/gG 63 A gL/gG 63 A gL/gG 63 A
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  Short-circuit protection  product function short circuit protection  design of the short-circuit trip  design of the fuse link for IT network for short-circuit protection of the main circuit         • at 400 V         • at 500 V         • at 690 V  Installation/ mounting/ dimensions  mounting position	2 hp 5 hp 7.5 hp 10 hp 20 hp  Yes magnetic  gL/gG 63 A gL/gG 63 A gL/gG 63 A gL/gG 63 A
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  Short-circuit protection  product function short circuit protection  design of the short-circuit trip  design of the fuse link for IT network for short-circuit protection of the main circuit         • at 400 V         • at 500 V         • at 690 V  Installation/ mounting/ dimensions	2 hp 5 hp 7.5 hp 10 hp 20 hp  Yes magnetic  gL/gG 63 A gL/gG 63 A gL/gG 63 A

width	45 mm
depth	97 mm
required spacing	
with side-by-side mounting at the side	0 mm
• for grounded parts at 400 V	S IIIII
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 400 V	311111
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for grounded parts at 500 V	3 11111
— downwards	30 mm
— upwards	30 mm
— at the side	9 mm
• for live parts at 500 V	3 11111
— downwards	30 mm
— downwards — upwards	30 mm
— upwards — at the side	9 mm
<ul><li>at the side</li><li>for grounded parts at 690 V</li></ul>	3 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  arrangement of electrical connectors for main current electrical	screw-type terminals  Top and bottom
type of connectable conductor cross sections	
type of connectable conductor cross-sections  • for main contacts	
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
for AWG cables for main contacts	2x (16 12), 2x (14 8)
tightening torque	۵۸ (۱۵ ۱۵), ۵۸ (۱۹ ۵)
for main contacts with screw-type terminals	2 2.5 N·m
design of screwdriver shaft	Diameter 5 to 6 mm
size of the screwdriver tip	Pozidriv size 2
design of the thread of the connection screw	1 OZIGITY SIZO Z
for main contacts	M4
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
<del>-</del>	
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





**KC** 





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=3RV2021-4EA10

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RV2021-4EA10}$ 

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA10

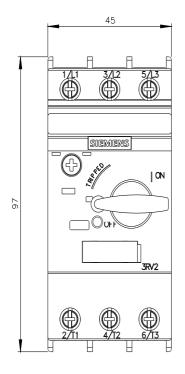
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

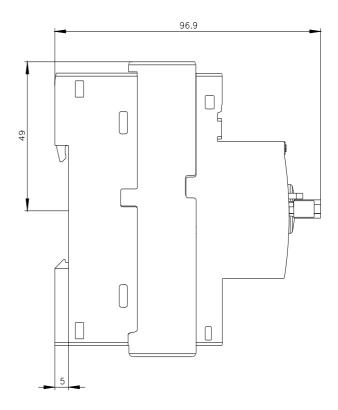
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2021-4EA10&lang=en

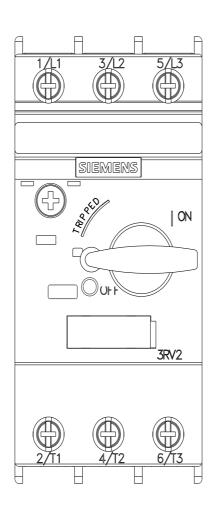
Characteristic: Tripping characteristics, I2t, Let-through current

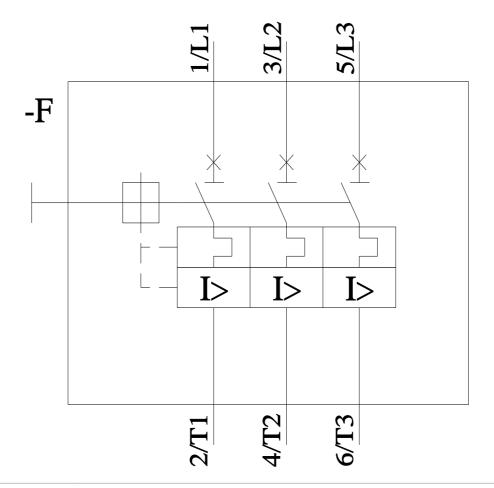
https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4EA10/char

Further characteristics (e.g. electrical endurance, switching frequency)
<a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4EA10&objecttype=14&gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4EA10&objecttype=14&gridview=view1</a>









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