## **SIEMENS**

Data sheet 3RV2031-4XA10



Circuit breaker size S2 for motor protection, CLASS 10 A-release 49...59 A N-release 845 A screw terminal Standard switching capacity



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	S2	
size of contactor can be combined company-specific	S2	
product extension auxiliary switch	Yes	
power loss [W] for rated value of the current		
<ul> <li>at AC in hot operating state</li> </ul>	26 W	
<ul> <li>at AC in hot operating state per pole</li> </ul>	8.7 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 Sinus	
mechanical service life (operating cycles)		
<ul> <li>of the main contacts typical</li> </ul>	20 000	
<ul> <li>of auxiliary contacts typical</li> </ul>	20 000	
electrical endurance (operating cycles) typical	20 000	
reference code according to IEC 81346-2	Q	
Substance Prohibitance (Date)	04/10/2015	
SVHC substance name	Lead - 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	
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	49 59 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	59 A
operational current	
<ul> <li>at AC-3 at 400 V rated value</li> </ul>	59 A
at AC-3e at 400 V rated value	59 A
operating power	
• at AC-3	
— at 230 V rated value	15 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
• at AC-3e	
— at 230 V rated value	15 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	55 kW
operating frequency	
• at AC-3 maximum	15 1/h
at AC-3e maximum	15 1/h
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	65 kA
at AC at 400 V rated value	65 kA
at AC at 500 V rated value	8 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	30 kA
at 500 V rated value	4 kA
at 690 V rated value     at 690 V rated value	2 kA
response value current of instantaneous short-circuit trip unit	845 A
JL/CSA ratings	040 N
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	59 A
at 600 V rated value     at 600 V rated value	59 A
yielded mechanical performance [hp]	38 A
• for single-phase AC motor	
— at 110/120 V rated value	5 hn
— at 110/120 v rated value  — at 230 V rated value	5 hp
	10 hp
• for 3-phase AC motor	20 hn
— at 220/230 V rated value	20 hp
— at 460/480 V rated value	40 hp
— at 575/600 V rated value	50 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 240 V	none required
• at 400 V	160
● at 500 V	125
• at 690 V	100
nstallation/ mounting/ dimensions	
nstallation/ mounting/ dimensions mounting position	any
	any screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715

depth	149 mm
required spacing	
with side-by-side mounting at the side	0 mm
• for grounded parts at 400 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for live parts at 400 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
<ul> <li>for grounded parts at 500 V</li> </ul>	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
<ul> <li>for live parts at 500 V</li> </ul>	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for grounded parts at 690 V	F0
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
for live parts at 690 V          — downwards	50 mm
— upwards	50 mm
— upwards — at the side	10 mm
Connections/ Terminals	10 Hilli
type of electrical connection	
• for main current circuit	screw-type 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 35 mm²), 1x (1 50 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 25 mm²), 1x (1 35 mm²)
• for AWG cables for main contacts	2x (18 2), 1x (18 1)
tightening torque	
<ul> <li>for main contacts with screw-type terminals</li> </ul>	3 4.5 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	
for main contacts	M6
Safety related data	
product function suitable for safety function	Yes
suitability for use	
<ul> <li>safety-related switching on</li> </ul>	No
safety-related switching OFF	Yes
service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	40.07
with low demand rate according to SN 31920      with high demand rate according to SN 31920	40 %
with high demand rate according to SN 31920  PAO value with high demand rate according to SN 21920	50%
B10 value with high demand rate according to SN 31920	5 000
failure rate [FIT] with low demand rate according to SN 31920	50 FIT
ISO 13849	2
device type according to ISO 13849-1	3 Voc
overdimensioning according to ISO 13849-2 necessary IEC 61508	Yes
safety device type according to IEC 61508-2	Type A
saisty device type according to IEO 01300-2	1,700,77

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**proval

For use in hazardous locations

**Test Certificates** 

Marine / Shipping







Type Test Certificates/Test Report

**Special Test Certific**ate



Marine / Shipping













**Miscellaneous** 

other

other

Railway

**Environment** 

Confirmation



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

Confirmation



Siemens **EcoTech** 



## **Environment**

**Environmental Confirmations** 

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=3RV2031-4XA10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4XA10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4XA10

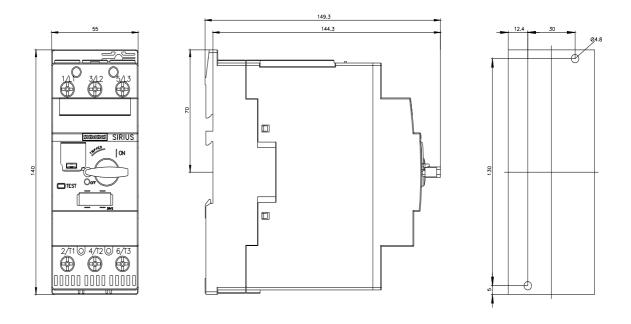
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

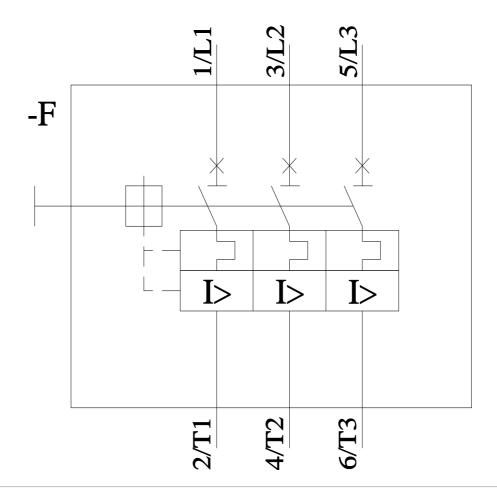
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2031-4XA10&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4XA10/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4XA10&objecttype=14&gridview=view1





last modified: 4/12/2024 🖸

