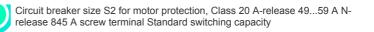
## SIEMENS

## Data sheet

## 3RV2031-4XB10







product brand name         SIRUS           product designation         Circuit breaker           design of the product         For motior protection           product type designation         3RV2           General technical dats		
Instruction         For motor protection           product type designation         3RV2           General technical data         S2           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         ************************************	product brand name	SIRIUS
product type designation         3RV2           General technical data	product designation	Circuit breaker
General technical data     S2       size of the circuit-breaker     S2       size of the circuit-breaker     S2       product extension auxiliary switch     Yes       power loss [W] for rated value of the current     41 AC in hot operating state       • at AC in hot operating state     26 W       • at AC in hot operating state per pole     8.7 W       Insulation voltage with degree of pollution 3 at AC rated value     690 V       surge voltage resistance rated value     64 V       shock resistance according to IEC 6008-2-27     25g / 11 ms Sinus       mechanical service life (operating cycles)     0000       • of the main contacts typical     20 000       • of auxiliary contacts typical     20 000       electrical endurance (operating cycles) typical     20 000       • of auxiliary contacts typical     20 000       reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     04/10/2015       SVH substance name     Lead - 7439-92-1       Ambient conditions     -20 +60 °C       • during operation     -20 +60 °C       • during transport     -50 +80	design of the product	For motor protection
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     ************************************	product type designation	3RV2
size of contactor can be combined company-specific         S2           product extension auxiliary switch         Yes           power loss [W] for rated value of the current         4 AC in hot operating state           e at AC in hot operating state         8.7 W           insulation voltage with degree of pollution 3 at AC rated value         680 V           surge voltage resistance rated value         64 V           shock resistance according to IEC 60068-2-27         25g / 11 ms Sinus           mechanical service life (operating cycles)         000           of the main contacts typical         20 000           electrical endurance (operating cycles) typical         20 000           electrical endurance (operating cycles) typical         20 000           substance Prohibitance (Date)         04/10/2015           SVHC substance name         Lead - 7439-92-1           Ambient conditions         -20 +60 °C           i during storage         -50 +60 °C           i during transport         -50 +60 °C	General technical data	
product extension auxiliary switch         Yes           power loss [W] for rated value of the current         26 W           • at AC in hot operating state         26 W           • at AC in hot operating state per pole         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)         -           • of the main contacts typical         20 000           electrical endurance (operating cycles) typical         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         -           • during storage         -50 +60 °C           • during transport         10 95 %           Main circuit         3           muber of poles for main current circuit         3           adjustable current respo	size of the circuit-breaker	S2
power loss [W] for rated value of the current     26 W       • at AC in hot operating state     26 W       • at AC in hot operating state per pole     8.7 W       Insulation voltage with degree of pollution 3 at AC rated value     690 V       surge voltage resistance rated value     64 V       shock resistance according to IEC 60068-2-27     25 g/ 11 ms Sinus       mechanical service life (operating cycles)     600 V       • of the main contacts typical     20 000       • of auxiliary contacts typical     20 000       • electrical endurance (operating cycles) typical     20 000       • of auxiliary contacts typical     20 000       • of usiliary contacts typical     20 000       • of auxiliary contacts typical     20 000       • of usiliary contacts typical     20 000       • of usiliary contacts typical     20 000       • of usiliary contacts typical     20 000       Substance name     Lead - 7439-92-1       Ambient conditions     2 000 m       installation altitude at height above sea level maximum     2 000 m       ambient temperature     -20 +60 °C       • during storage     -50 +80 °C       • during torage     -50 +80 °C       • during torage     -50 +80 °C       • during torage value current of the current-dicout     3       adjustable current	size of contactor can be combined company-specific	S2
• at AC in hot operating state26 W• at AC in hot operating state per pole8.7 Winsulation voltage with degree of pollution 3 at AC rated value690 Vsurge voltage resistance rated value6 kVshock resistance according to IEC 60068-2-2725g / 11 ms Sinusmechanical service life (operating cycles)000• of the main contacts typical20 000• of auxiliary contacts typical20 000electrical endurance (operating cycles) typical20 000electrical endurance (operating cycles) typical20 000Substance Prohibitance (Date)04/10/2015SVHC substance nameLead - 7439-92-1Ambient conditions2000 minstallation altitude at height above sea level maximum2 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• relative humidity during operation10 95 %Main circuit3number of poles for main current circuit3adjustable current response value current of the current- dependent overload release9 59 A	product extension auxiliary switch	Yes
• at AC in hot operating state per pole8.7 Winsulation voltage with degree of pollution 3 at AC rated value690 Vsurge voltage resistance rated value6 kVshock resistance according to IEC 60068-2-2725g / 11 ms Sinusmechanical service life (operating cycles)0000• of the main contacts typical20 000• of auxiliary contacts typical20 000electrical endurance (operating cycles) typical20 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)04/10/2015SVHC substance nameLead - 7439-92-1Ambient conditions2 000 mambient temperature- 60 °C• during operation-20 +60 °C• during strage-50 +80 °C• during operation-50 +80 °C• relative humidity during operation10 95 %Main circuit3adjustable current response value current of the current- dependent overload release9 59 A	power loss [W] for rated value of the current	
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)     20 000       • of the main contacts typical     20 000       • of auxiliary contacts typical     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     2 000 m       installation altitude at height above sea level maximum     2 000 m       ambient temperature     -20 +60 °C       • during operation     -20 +60 °C       • during torage     -50 +80 °C       • during torage     <	<ul> <li>at AC in hot operating state</li> </ul>	26 W
surge voltage resistance rated value6 kVshock resistance according to IEC 60068-2-2725g / 11 ms Sinusmechanical service life (operating cycles)20 000• of the main contacts typical20 000• of auxiliary contacts typical20 000electrical endurance (operating cycles) typical20 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)04/10/2015SVHC substance nameLead - 7439-92-1Ambient conditions20 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during operation-50 +80 °C• during operation-50 +80 °C• during transport-50 +80 °C• during operation10 95 %Main circuit3number of poles for main current circuit3adjustarde urrent response value current of the current- dependent overload release49 59 A	<ul> <li>at AC in hot operating state per pole</li> </ul>	8.7 W
shock resistance according to IEC 60068-2-2725g / 11 ms Sinusmechanical service life (operating cycles)20 000• of the main contacts typical20 000e of auxiliary contacts typical20 000electrical endurance (operating cycles) typical20 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)04/10/2015SVHC substance nameLead - 7439-92-1Ambient conditions2 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation3adjustable current response value current of the current- dependent overload release3operating voltage59 A	insulation voltage with degree of pollution 3 at AC rated value	690 V
mechanical service life (operating cycles)• of the main contacts typical20 000• of auxiliary contacts typical20 000electrical endurance (operating cycles) typical20 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)04/10/2015SVHC substance nameLead - 7439-92-1Ambient conditions20 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Main circuit3number of poles for main current circuit3adjustable current response value current of the current- dependent overload release49 59 A	surge voltage resistance rated value	6 kV
• of the main contacts typical20 000• of auxiliary contacts typical20 000electrical endurance (operating cycles) typical20 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)04/10/2015SVHC substance nameLead - 7439-92-1Ambient conditions2 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Main circuit3adjustable current response value current of the current- dependent overload release3operating voltage-59 A	shock resistance according to IEC 60068-2-27	25g / 11 ms Sinus
• of auxiliary contacts typical20 000electrical endurance (operating cycles) typical20 000reference code according to IEC 81346-2QSubstance Prohibitance (Date)04/10/2015SVHC substance nameLead - 7439-92-1Ambient conditions2 000 minstallation altitude at height above sea level maximum2 000 mambient temperature-20 +60 °C• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Main circuit3adjustable current response value current of the current- dependent overload release49 59 A	mechanical service life (operating cycles)	
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reference code according to IEC 81346-2     Q       Substance Prohibitance (Date)     04/10/2015       SVHC substance name     Lead - 7439-92-1       Ambient conditions     2 000 m       installation altitude at height above sea level maximum     2 000 m       ambient temperature     -20 +60 °C       • during operation     -20 +60 °C       • during storage     -50 +80 °C       • during transport     -50 +80 °C       relative humidity during operation     10 95 %       Main circuit     3       number of poles for main current circuit     3       adjustable current response value current of the current-dependent overload release     49 59 A	<ul> <li>of auxiliary contacts typical</li> </ul>	20 000
Substance Prohibitance (Date)       04/10/2015         SVHC substance name       Lead - 7439-92-1         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -20 +60 °C         • during storage       -50 +80 °C         • during transport       -50 +80 °C         relative humidity during operation       10 95 %         Main circuit       3         number of poles for main current circuit       3         adjustable current response value current of the current- dependent overload release       49 59 A	electrical endurance (operating cycles) typical	20 000
SVHC substance name       Lead - 7439-92-1         Ambient conditions       2 000 m         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -20 +60 °C         • during operation       -20 +60 °C         • during storage       -50 +80 °C         • during transport       -50 +80 °C         relative humidity during operation       10 95 %         Main circuit       3         number of poles for main current circuit       3         adjustable current response value current of the current- dependent overload release       49 59 A	reference code according to IEC 81346-2	Q
Ambient conditions         installation altitude at height above sea level maximum       2 000 m         ambient temperature       -20 +60 °C         • during operation       -20 +60 °C         • during storage       -50 +80 °C         • during transport       -50 +80 °C         relative humidity during operation       10 95 %         Main circuit       3         number of poles for main current circuit       3         adjustable current response value current of the current-dependent overload release       49 59 A	Substance Prohibitance (Date)	04/10/2015
installation altitude at height above sea level maximum       2 000 m         ambient temperature       -20 +60 °C         • during operation       -20 +60 °C         • during storage       -50 +80 °C         • during transport       -50 +80 °C         relative humidity during operation       10 95 %         Main circuit       3         number of poles for main current circuit       3         adjustable current response value current of the current- dependent overload release       49 59 A	SVHC substance name	Lead - 7439-92-1
ambient temperature       -20 +60 °C         • during operation       -20 +60 °C         • during storage       -50 +80 °C         • during transport       -50 +80 °C         relative humidity during operation       10 95 %         Main circuit       3         number of poles for main current circuit       3         adjustable current response value current of the current- dependent overload release       49 59 A         operating voltage       -59 A	Ambient conditions	
• during operation-20 +60 °C• during storage-50 +80 °C• during transport-50 +80 °Crelative humidity during operation10 95 %Main circuit3number of poles for main current circuit3adjustable current response value current of the current- dependent overload release9 59 Aoperating voltage-50 +80 °C	installation altitude at height above sea level maximum	2 000 m
	ambient temperature	
	during operation	-20 +60 °C
relative humidity during operation     10 95 %       Main circuit     3       number of poles for main current circuit     3       adjustable current response value current of the current- dependent overload release     49 59 A       operating voltage     49 59 A	during storage	-50 +80 °C
Main circuit     3       number of poles for main current circuit     3       adjustable current response value current of the current- dependent overload release     49 59 A       operating voltage     49 59 A	during transport	-50 +80 °C
number of poles for main current circuit     3       adjustable current response value current of the current- dependent overload release     49 59 A       operating voltage     49 59 A	relative humidity during operation	10 95 %
adjustable current response value current of the current- dependent overload release     49 59 A       operating voltage     49 59 A	Main circuit	
dependent overload release operating voltage	number of poles for main current circuit	3
		49 59 A
	operating voltage	
• rated value 20 690 V	rated value	20 690 V
• at AC-3 rated value maximum 690 V	• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum 690 V	• at AC-3e rated value maximum	690 V
operating frequency rated value 50 60 Hz	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
<ul> <li>at AC-3e at 400 V rated value</li> </ul>	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 20
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 240 V rated value     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	400.14
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	2 kA
response value current of instantaneous short-circuit trip unit	845 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	59 A
at 600 V rated value	59 A
yielded mechanical performance [hp]	
<ul> <li>for single-phase AC motor</li> </ul>	
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
— 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
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	140 mm
width	55 mm

depth	149 mm		
required spacing			
with side-by-side mounting at the side	0 mm		
<ul> <li>for grounded parts at 400 V</li> </ul>			
— downwards	50 mm		
— upwards	50 mm		
— at the side	10 mm		
• for live parts at 400 V			
— downwards	50 mm		
— upwards			
— at the side	50 mm 10 mm		
<ul> <li>for grounded parts at 500 V</li> </ul>	10 mm		
- downwards	50 mm		
— upwards	50 mm 50 mm		
	10 mm		
— at the side	10 mm		
• for live parts at 500 V	50 mm		
— downwards	50 mm		
— upwards	50 mm		
— at the side	10 mm		
for grounded parts at 690 V	50		
— downwards	50 mm		
— upwards	50 mm		
— at the side	10 mm		
<ul> <li>for live parts at 690 V</li> </ul>			
— downwards	50 mm		
— upwards	50 mm		
— at the side	10 mm		
Connections/ Terminals			
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)		
- finely stranded with core end processing	2x (1 25 mm <sup>2</sup> ), 1x (1 35 mm <sup>2</sup> )		
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			
safety-related switching on	No		
safety-related switching OFF	Yes		
• salety-related switching OFF	10 a		
test wear-related service life necessary	Yes		
· · · · · · · · · · · · · · · · · · ·	100		
proportion of dangerous failures	40 %		
with low demand rate according to SN 31920     with high demand rate according to SN 31920	40 % 50 %		
with high demand rate according to SN 31920  R10 value with high demand rate according to SN 31920			
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			
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	Туре А		

T1 value						
<ul> <li>for proof test inter 61508</li> </ul>	rval or service life accordi	ng to IEC	10 a			
Electrical Safety						
protection class IP on	protection class IP on the front according to IEC 60529 IP20		IP20	20		
touch protection on the front according to IEC 60529 finge		finger-safe, for vertical contac	nger-safe, for vertical contact from the front			
Display						
display version for switc	hing status		Handle			
Approvals Certificates						
General Product Appr	oval					
CE EG-Konf.	UK CA	<u>Confirmatio</u>			KC	
General Product Ap- proval	Test Certificates		Marine / Shipping			
EHC	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Cer</u> ates/Test Rep	tific- port Abs	BUREAU VERITAS		
Marine / Shipping			other			
Lloyd's Register urs	PRS	RINA	<u>Miscellaneous</u>	Confirmation	UDE VDE	
Railway		Environment				
<u>Special Test Certific-</u> <u>ate</u>	<u>Confirmation</u>	EPD	Siemens EcoTech	Environmental Con- firmations		
Further information	kaging					

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=3RV2031-4XB10

Cax online generator

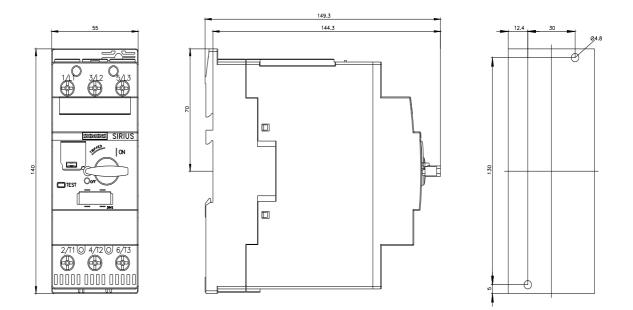
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4XB10

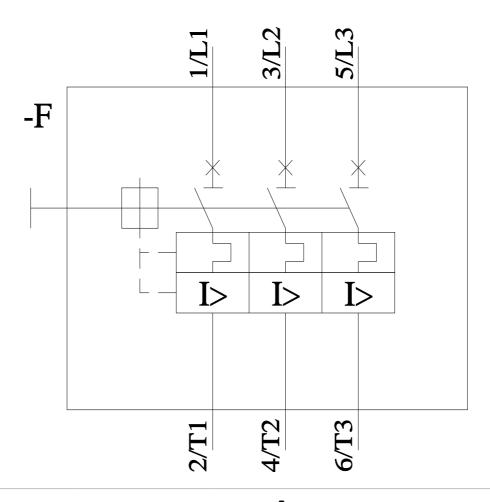
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4XB10

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2031-4XB10&lang=en

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RV2031 -4XB10/c

Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4XB10&objecttype=14&gridview=view1





4/12/2024 🖸