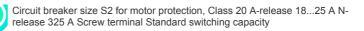
## SIEMENS

## Data sheet

## 3RV2031-4DB10







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>	14.5 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	4.8 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>	50 000
<ul> <li>of auxiliary contacts typical</li> </ul>	50 000
electrical endurance (operating cycles) typical	50 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/15/2014
SVHC substance name	Lead - 7439-92-1
Weight	1.08 kg
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 %
Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	239.877 kg
global warming potential [CO2 eq] during manufacturing	12.8 kg
global warming potential [CO2 eq] during sales	0.477 kg
global warming potential [CO2 eq] during operation	230 kg
global warming potential [CO2 eq] after end of life	-3.4 kg
Siemens Eco Profile (SEP)	Siemens EcoTech

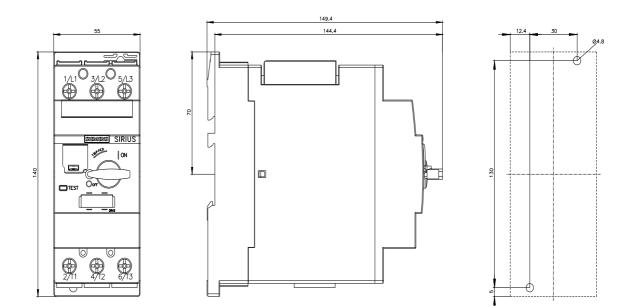
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	18 25 A
type of voltage for main current circuit	AC
operating voltage	
rated value	20 690 V
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operating frequency rated value	50 60 Hz
operational current rated value	25 A
operational current	
at AC-3 at 400 V rated value	25 A
• at AC-3e at 400 V rated value	25 A
operating power	
• at AC-3	
— at 230 V rated value	5.5 kW
— at 400 V rated value	11 kW
— at 500 V rated value	15 kW
— at 690 V rated value	22 kW
• at AC-3e	
- at 230 V rated value	5.5 kW
— at 200 V rated value	11 kW
— at 500 V rated value	15 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	
type of voltage for auxiliary and control circuit	AC/DC
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 20
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	
at AC at 240 V rated value	100 kA
at AC at 400 V rated value	65 kA
at AC at 500 V rated value	12 kA
at AC at 690 V rated value	5 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 400 v rateu value	
<ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> </ul>	6 kA
<ul><li>at 500 V rated value</li><li>at 690 V rated value</li></ul>	6 kA
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>response value current of instantaneous short-circuit trip unit</li> </ul>	6 kA 3 kA
at 500 V rated value     at 690 V rated value response value current of instantaneous short-circuit trip unit UL/CSA ratings	6 kA 3 kA
at 500 V rated value     at 690 V rated value response value current of instantaneous short-circuit trip unit	6 kA 3 kA 325 A
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	6 kA 3 kA 325 A 25 A
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>response value current of instantaneous short-circuit trip unit</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor</li> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul>	6 kA 3 kA 325 A
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     yielded mechanical performance [hp]	6 kA 3 kA 325 A 25 A
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>response value current of instantaneous short-circuit trip unit</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> </li> <li>yielded mechanical performance [hp] <ul> <li>for single-phase AC motor</li> </ul> </li> </ul>	6 kA 3 kA 325 A 25 A 25 A
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>response value current of instantaneous short-circuit trip unit</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> </li> <li>yielded mechanical performance [hp] <ul> <li>for single-phase AC motor</li> <li>at 110/120 V rated value</li> </ul> </li> </ul>	6 kA 3 kA 325 A 25 A 25 A 25 A 2 hp
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>response value current of instantaneous short-circuit trip unit</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> </li> <li>yielded mechanical performance [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> </li> </ul>	6 kA 3 kA 325 A 25 A 25 A
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>response value current of instantaneous short-circuit trip unit</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> </li> <li>yielded mechanical performance [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> </li> </ul>	6 kA 3 kA 325 A 25 A 25 A 25 A 2 hp 5 hp
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>response value current of instantaneous short-circuit trip unit</li> <li>UL/CSA ratings</li> <li>full-load current (FLA) for 3-phase AC motor <ul> <li>at 480 V rated value</li> <li>at 600 V rated value</li> </ul> </li> <li>yielded mechanical performance [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> </li> </ul>	6 kA 3 kA 325 A 25 A 25 A 25 A 2 hp

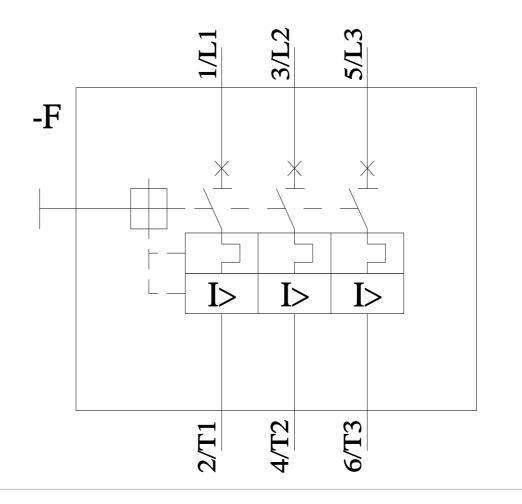
— at 460/480 V rated value	20 hp
— at 575/600 V rated value	25 hp
Short-circuit protection	25 mp
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the fuse link for IT network for short-circuit protection of the main circuit	
• at 240 V	none required
• at 400 V	100
• at 500 V	80
• at 690 V	63
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
<ul> <li>for live parts at 400 V</li> <li>— downwards</li> </ul>	50 mm
— upwards — at the side	50 mm 10 mm
<ul> <li>for grounded parts at 500 V</li> </ul>	10 1111
- downwards	50 mm
— upwards	50 mm
— at the side	10 mm
• for live parts at 500 V	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
<ul> <li>for grounded parts at 690 V</li> </ul>	
— 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	Top and bottom
circuit type of connectable conductor cross-sections	
<ul> <li>for main contacts</li> </ul>	
— solid or stranded	2x (1 25 mm <sup>2</sup> ), 1x (1 35 mm <sup>2</sup> )
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 16 mm²), 1x (1 25 mm²)
for AWG cables for main contacts	2x (18 3), 1x (18 2)
tightening torque	0.451.0
for main contacts with screw-type terminals	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
for main contacts Safety related data	M6
	Vas
product function suitable for safety function	Yes

suitability for use						
<ul> <li>safety-related switching on</li> </ul>		N	0			
<ul> <li>safety-related switching OFF</li> </ul>		Y	Yes			
service life maximum		10	10 a			
test wear-related service life necessary		Y	es			
proportion of danger	ous failures					
<ul> <li>with low demand rate according to SN 31920</li> </ul>		920 40	40 %			
<ul> <li>with high demand rate according to SN 31920</li> </ul>		920 50	50 %			
B10 value with high demand rate according to SN 31920		5 SN 31920	5 000			
failure rate [FIT] with low demand rate according to SN 31920		ing to SN 50	0 FIT			
ISO 13849						
device type according to ISO 13849-1		3				
overdimensioning according to ISO 13849-2 necessary		necessary Y	Yes			
IEC 61508						
safety device type ac	cording to IEC 61508-2	T	уре А			
T1 value						
<ul> <li>for proof test interval or service life according to IEC 61508</li> </ul>		ing to IEC 10	0 a			
Electrical Safety						
protection class IP or	the front according to I	EC 60529 IF	20			
touch protection on t	he front according to IE	C 60529 fir	nger-safe, for vertical contact	from the front		
Display						
display version for swite	ching status	н	andle			
Approvals Certificates	-					
General Product App	roval					
General Product Ap-	EG-Konf.	UK CA	ų,		LHL	
proval	Test Certificates		Marine / Shipping			
<u>BIS CRS</u>	<u>Special Test Certific-</u> <u>ate</u>	<u>Type Test Certificates ates/Test Report</u>	ABS	BUREAU VERITAS		
Marine / Shipping			other			
Lloyd's Register uis	PRS	RINA	<u>Miscellaneous</u>	<u>Confirmation</u>	DE	
Railway		Environment				
<u>Special Test Certific-</u> <u>ate</u>	Confirmation		Siemens	Environmental Con- firmations		
		EPD	EcoTech			
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Further information		EPD				
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## Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4DB10 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RV2031-4DB10&lang=en Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4DB10/char Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4DB10&objecttype=14&gridview=view1





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