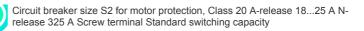
SIEMENS

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	
 at AC in hot operating state 	14.5 W
 at AC in hot operating state per pole 	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)	
 of the main contacts typical 	50 000
 of auxiliary contacts typical 	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	
 during operation 	-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

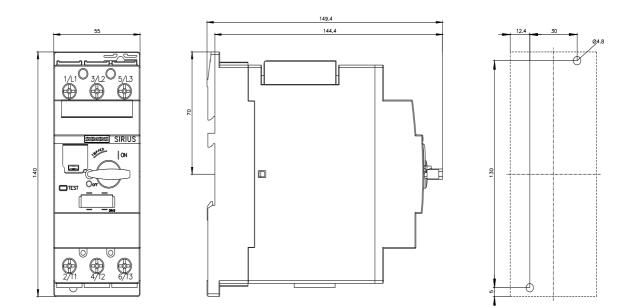
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	18 25 A
type of voltage for main current circuit	AC
operating voltage	
rated value	20 690 V
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 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	
 at 400 V rated value at 500 V rated value 	6 kA
at 500 V rated valueat 690 V rated value	6 kA
 at 500 V rated value at 690 V rated value response value current of instantaneous short-circuit trip unit 	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
 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 	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
 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] for single-phase AC motor 	6 kA 3 kA 325 A 25 A 25 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] for single-phase AC motor at 110/120 V rated value 	6 kA 3 kA 325 A 25 A 25 A 25 A 2 hp
 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] for single-phase AC motor at 110/120 V rated value at 230 V rated value 	6 kA 3 kA 325 A 25 A 25 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] for single-phase AC motor at 110/120 V rated value at 230 V rated value for 3-phase AC motor 	6 kA 3 kA 325 A 25 A 25 A 25 A 2 hp 5 hp
 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] for single-phase AC motor at 110/120 V rated value at 230 V rated value 	6 kA 3 kA 325 A 25 A 25 A 25 A 2 hp

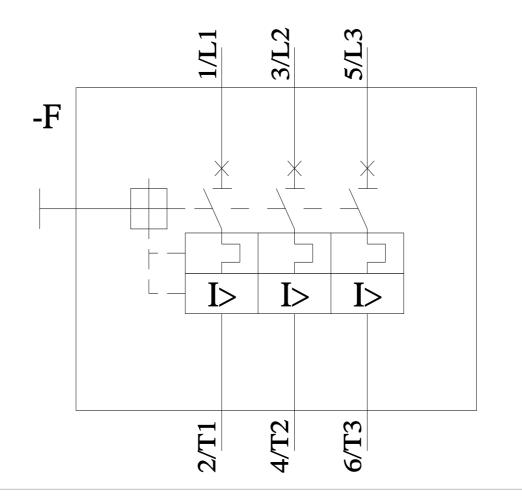
— at 460/480 V rated value	20 hp
— at 575/600 V rated value	25 hp
Short-circuit protection	25 mp
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the fuse link for IT network for short-circuit protection of the main circuit	
• at 240 V	none required
• 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
 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 — at the side	50 mm 10 mm
 for grounded parts at 500 V 	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
 for grounded parts at 690 V 	
— downwards	50 mm
— upwards	50 mm
— at the side	10 mm
 for live parts at 690 V 	
— 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	
 for main contacts 	
— solid or stranded	2x (1 25 mm ²), 1x (1 35 mm ²)
 finely stranded with core end processing 	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						
 safety-related switching on 		N	0			
 safety-related switching OFF 		Y	Yes			
service life maximum		10	10 a			
test wear-related service life necessary		Y	es			
proportion of danger	ous failures					
 with low demand rate according to SN 31920 		920 40	40 %			
 with high demand rate according to SN 31920 		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						
 for proof test interval or service life according to IEC 61508 		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		
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		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, I²t, 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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