SIEMENS

Data sheet 3RV2031-4TB10



Circuit breaker size S2 for motor protection, Class 20 A-release 12...17 A N-release 260 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	
 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
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 %
Main circuit	
number of poles for main current circuit	3
adjustable current response value current of the current- dependent overload release	12 17 A
operating voltage	
	20 690 V
rated value	20 090 V
rated valueat AC-3 rated value maximum	690 V

operational current rated value	17 A
operational current rated value operational current	17 A
at AC-3 at 400 V rated value	17 A
	17 A
at AC-3e at 400 V rated value	17 A
operating power • at AC-3	
■ at AC-3 — at 230 V rated value	4 kW
	7.5 kW
— at 400 V rated value — at 500 V rated value	
— at 690 V rated value — at 690 V rated value	7.5 kW 15 kW
at AC-3e	15 KVV
— at 230 V rated value — at 230 V rated value	4 kW
	7.5 kW
— at 400 V rated value	
— at 500 V rated value	7.5 kW 15 kW
— at 690 V rated value	15 KVV
operating frequency	15 1/h
at AC-3 maximum at AC-3e maximum	
	15 1/h
Protective and monitoring functions	
product function	No
ground fault detection phase failure detection	No Voc
phase failure detection trin class	Yes CLASS 20
trip class	
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu) • at AC at 240 V rated value	100 kA
	65 kA
 at AC at 400 V rated value at AC at 500 V rated value 	12 kA
	5 kA
at AC at 690 V rated value	5 KA
operating short-circuit current breaking capacity (Ics) at AC	100 kA
 at 240 V rated value at 400 V rated value 	30 kA
at 400 V rated value at 500 V rated value	6 kA
	3 kA
at 690 V rated value response value current of instantaneous short circuit trip unit	260 A
response value current of instantaneous short-circuit trip unit UL/CSA ratings	200 A
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	17 A
at 600 V rated value at 600 V rated value	17 A
yielded mechanical performance [hp]	17.4
• for single-phase AC motor	
— at 110/120 V rated value	1.5 hp
— at 230 V rated value	3 hp
for 3-phase AC motor	о пр
— at 200/208 V rated value	5 hp
— at 220/230 V rated value	7.5 hp
— at 460/480 V rated value	15 hp
— at 575/600 V rated value	15 hp
Short-circuit protection	1. C. T. P. C. T.
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the short-circuit trip design of the fuse link for IT network for short-circuit protection of the main circuit	
•	none required
● at 240 V	
• at 240 V • at 400 V	100
• at 400 V	
	100 80 63
at 400 Vat 500 Vat 690 V	80
at 400 V at 500 V at 690 V Installation/ mounting/ dimensions	80 63
at 400 V at 500 V at 690 V Installation/ mounting/ dimensions mounting position	80 63 any
at 400 V at 500 V at 690 V Installation/ mounting/ dimensions	80 63

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	50 mm
— at the side	10 mm
 for grounded parts at 500 V 	
— 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— at the side	50 mm 10 mm
— at the side Connections/ Terminals	10 111111
type of electrical connection	
for main current circuit	screw-type terminals
arrangement of electrical connectors for main current	Top and bottom
circuit	14
type of connectable conductor cross-sections	
 for main contacts 	
— solid or stranded	2x (1 25 mm²), 1x (1 35 mm²)
 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	
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	MC
• for main contacts	M6
Safety related data	Von
product function suitable for safety function	Yes
suitability for use	No
safety-related switching onsafety-related switching OFF	Yes
sarety-related switching OFF service life maximum	10 a
test wear-related service life necessary	Yes
proportion of dangerous failures	1.00
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920 with high demand rate according to SN 31920	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	
device type according to ISO 13849-1	3
	Yes
overdimensioning according to ISO 13849-2 necessary	res

safety device type according to IEC 61508-2	Type A
T1 value	
 for proof test interval or service life according to IEC 61508 	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	
Conoral Broduct Approval	

General Product Approval







Confirmation



<u>KC</u>

General Product Ap-

Test Certificates

Marine / Shipping



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

Type Test Certificates/Test Report







Marine / Shipping

other







Miscellaneous

Confirmation



Railway

Environment

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

Confirmation



Siemens **EcoTech**



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=3RV2031-4TB10

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4TB10

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

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4TB10

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

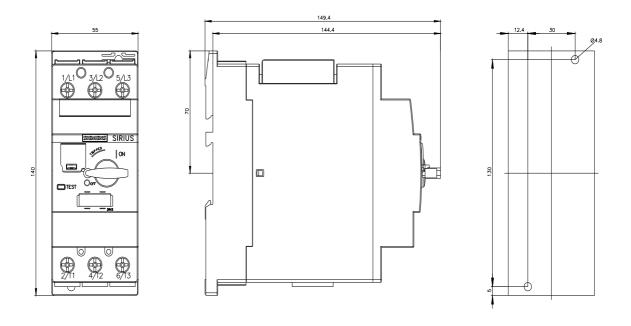
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4TB10&lang=en

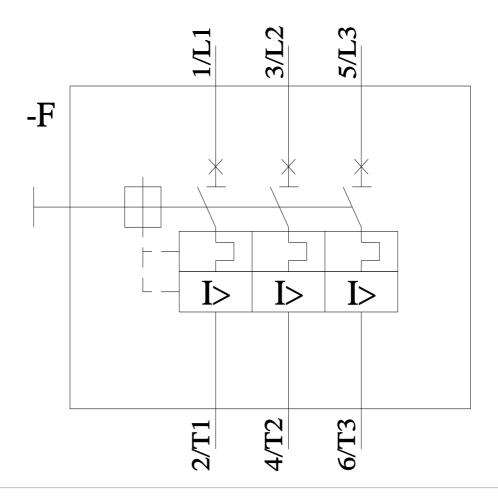
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4TB10/char

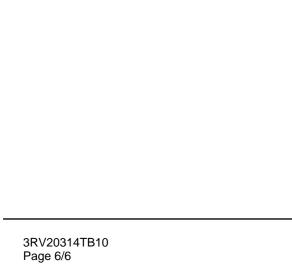
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4TB10&objecttype=14&gridview=view1





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