SIEMENS

Data sheet 3RV2031-4XB10



Circuit breaker size S2 for motor protection, Class 20 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	
 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
maximum permissible voltage for safe isolation in networks with grounded star point	
 between main and auxiliary circuit 	400 V
between main and auxiliary circuit	400 V
shock resistance acc. to IEC 60068-2-27	25g / 11 ms Sinus
mechanical service life (switching cycles)	
 of the main contacts typical 	20 000
of auxiliary contacts typical	20 000
electrical endurance (switching cycles) typical	20 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	10.04.2015
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
temperature compensation	-20 +60 °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	690 V
rated value	20 690 V

• at AC-3 rated value maximum	690 V
operating frequency rated value	50 60 Hz
operating frequency rated value	59 A
operational current at AC-3 at 400 V rated value	59 A
operating power at AC-3	30 A
• 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 at 690 V rated value	55 kW
operating frequency at AC-3 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
breaking capacity operating short-circuit current (Ics)	ticina
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	2 kA
breaking capacity maximum short-circuit current (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
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]	
 for single-phase AC motor 	
 at 110/120 V rated value 	5 hp
— at 230 V rated value	10 hp
 for 3-phase AC motor 	
— 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	100
-	100
mounting position	any
-	any screw and snap-on mounting onto 35 mm standard mounting rail
mounting position fastening method	any screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
mounting position fastening method height	any screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 140 mm
mounting position fastening method height width	any screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 140 mm 55 mm
mounting position fastening method height width depth	any screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 140 mm
mounting position fastening method height width depth required spacing	any screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 140 mm 55 mm
mounting position fastening method height width depth	any screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 140 mm 55 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	50 mm
— at the side	10 mm
onnections/ Terminals	

— at the side	10 111111
Connections/ Terminals	
product component removable terminal for auxiliary and control circuit	No
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 mm²), 1x (1 35 mm²)
at AWG cables for main contacts	2x (18 2), 1x (18 1)
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	
 for main contacts 	M6
Safety related data	
B10 value	
with high demand rate acc. to SN 31920	5 000
proportion of dangerous failures	
 with low demand rate acc. to SN 31920 	50 %
 with high demand rate acc. to SN 31920 	50 %
failure rate [FIT]	
with low demand rate acc. to SN 31920	50 FIT
T1 value for proof test interval or service life acc. to IEC 61508	10 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
display version for switching status	Handle
Certificates/ approvals	

General Product Approval



Confirmation





<u>KC</u>



Declaration of Conformity

Test Certificates

Marine / Shipping



UK Declaration of Conformity Special Test Certificate

Type Test Certificates/Test Report





Marine / Shipping

other











Confirmation

other

Railway



Confirmation

Vibration and Shock

Further information

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, ...)

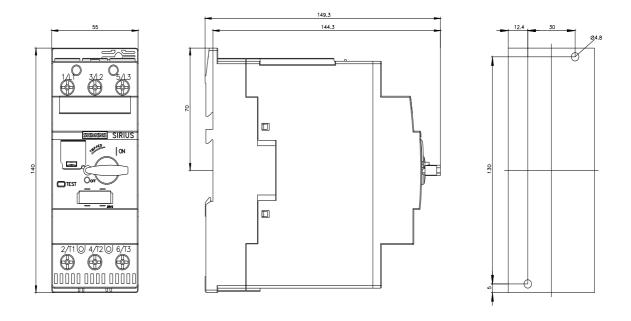
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4XB10&lang=en

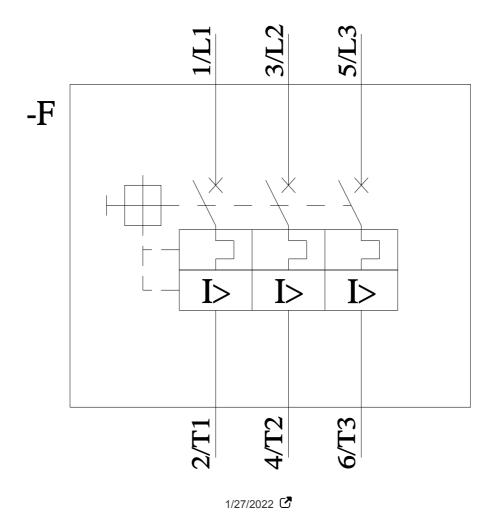
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4XB10/char

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





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