



Circuit breaker size S2 for motor protection class 20 A-release 14...20 A N-release 260 A screw terminal Standard switching capacity with transverse auxiliary switch 1 NO+1 NC

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 Prohibition (Date)	10/15/2014

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	14 ... 20 A
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	20 A
operational current	
• at AC-3 at 400 V rated value	20 A
• at AC-3e at 400 V rated value	20 A
operating power	

<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value • at AC-3e <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value 	5.5 kW 7.5 kW 11 kW 15 kW
operating frequency <ul style="list-style-type: none"> • at AC-3 maximum • at AC-3e maximum 	15 1/h 15 1/h
Auxiliary circuit	
design of the auxiliary switch	transverse
number of NC contacts for auxiliary contacts	1
number of NO contacts for auxiliary contacts	1
operational current of auxiliary contacts at AC-15	
<ul style="list-style-type: none"> • at 24 V • at 230 V 	2 A 0.5 A
operational current of auxiliary contacts at DC-13	
<ul style="list-style-type: none"> • at 24 V • at 60 V • at 110 V • at 125 V • at 220 V 	1 A 0.15 A 0 A 0 A 0 A
Protective and monitoring functions	
product function	
<ul style="list-style-type: none"> • ground fault detection • phase failure detection 	No Yes
trip class	CLASS 20
design of the overload release	thermal
maximum short-circuit current breaking capacity (Icu)	
<ul style="list-style-type: none"> • at AC at 240 V rated value • at AC at 400 V rated value • at AC at 500 V rated value • at AC at 690 V rated value 	100 kA 65 kA 12 kA 5 kA
operating short-circuit current breaking capacity (Ics) at AC	
<ul style="list-style-type: none"> • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value 	100 kA 30 kA 6 kA 3 kA
response value current of instantaneous short-circuit trip unit	260 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value • at 600 V rated value 	20 A 20 A
yielded mechanical performance [hp]	
<ul style="list-style-type: none"> • for single-phase AC motor <ul style="list-style-type: none"> — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 	1.5 hp 3 hp 7.5 hp 7.5 hp 15 hp 20 hp
contact rating of auxiliary contacts according to UL	C300 / R300
Short-circuit protection	
product function short circuit protection	Yes
design of the short-circuit trip	magnetic
design of the fuse link	

<ul style="list-style-type: none"> • for short-circuit protection of the auxiliary switch required 	fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A)
design of the fuse link for IT network for short-circuit protection of the main circuit	
<ul style="list-style-type: none"> • at 240 V • at 400 V • at 500 V • at 690 V 	none required 100 80 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	
<ul style="list-style-type: none"> • with side-by-side mounting at the side 	0 mm
<ul style="list-style-type: none"> • for grounded parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — at the side 	50 mm 50 mm 10 mm
<ul style="list-style-type: none"> • for live parts at 400 V <ul style="list-style-type: none"> — downwards — upwards — at the side 	50 mm 50 mm 10 mm
<ul style="list-style-type: none"> • for grounded parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — at the side 	50 mm 50 mm 10 mm
<ul style="list-style-type: none"> • for live parts at 500 V <ul style="list-style-type: none"> — downwards — upwards — at the side 	50 mm 50 mm 10 mm
<ul style="list-style-type: none"> • for grounded parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — at the side 	50 mm 50 mm 10 mm
<ul style="list-style-type: none"> • for live parts at 690 V <ul style="list-style-type: none"> — downwards — upwards — at the side 	50 mm 50 mm 10 mm
Connections/ Terminals	
type of electrical connection	
<ul style="list-style-type: none"> • for main current circuit • for auxiliary and control circuit 	screw-type terminals screw-type terminals
arrangement of electrical connectors for main current circuit	Top and bottom
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts 	2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) 2x (1 ... 16 mm ²), 1x (1 ... 25 mm ²) 2x (18 ... 3), 1x (18 ... 2)
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — solid or stranded — finely stranded with core end processing • at AWG cables for auxiliary contacts 	2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14)
tightening torque	
<ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals 	3 ... 4.5 N·m 0.8 ... 1.2 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	
<ul style="list-style-type: none"> • for main contacts 	M6

- of the auxiliary and control contacts

M3

Safety related data

B10 value

- with high demand rate according to SN 31920

5 000

proportion of dangerous failures

- with low demand rate according to SN 31920
- with high demand rate according to SN 31920

50 %

50 %

failure rate [FIT]

- with low demand rate according to SN 31920

50 FIT

T1 value for proof test interval or service life according to IEC 61508

10 a

protection class IP on the front according to IEC 60529

IP20

touch protection on the front according to IEC 60529
display version for switching status

finger-safe, for vertical contact from the front
Handle

Certificates/ approvals

General Product Approval



[Confirmation](#)



[KC](#)



Declaration of Conformity

Test Certificates

Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Confirmation](#)

other

Railway



[Confirmation](#)

[Vibration and Shock](#)

Further information

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=3RV2031-4BB15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4BB15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4BB15>

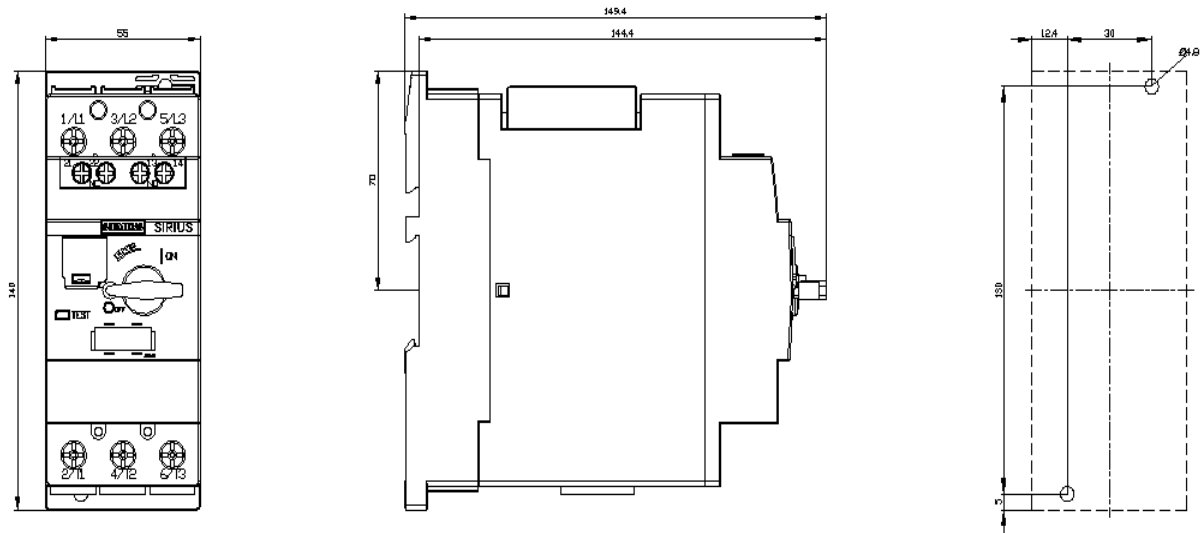
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

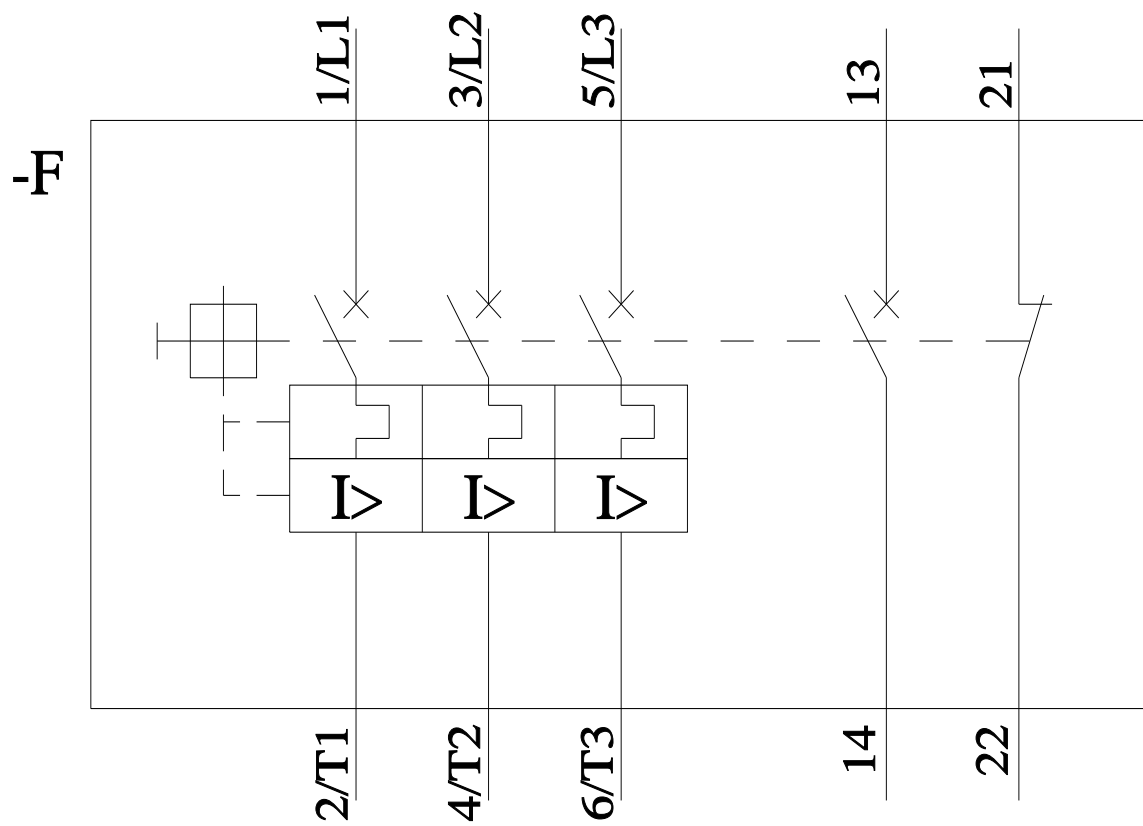
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4BB15&lang=en

Characteristic: Tripping characteristics, I_t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4BB15/char>

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





last modified:

11/21/2022 [↗](#)