

Circuit breaker size S2 for motor protection CLASS 10 A-release
22...32 A N-release 416 A screw terminal Standard switching
capacity Multi-unit packaging = 12 units



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	Yes
<ul style="list-style-type: none"> • auxiliary switch 	Yes
power loss [W] for rated value of the current	
<ul style="list-style-type: none"> • at AC in hot operating state 	18 W
<ul style="list-style-type: none"> • at AC in hot operating state per pole 	6 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	
<ul style="list-style-type: none"> • in networks with grounded star point between main and auxiliary circuit 	400 V

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protection class IP	
<ul style="list-style-type: none"> on the front 	IP20
<ul style="list-style-type: none"> of the terminal 	IP00
shock resistance	
<ul style="list-style-type: none"> acc. to IEC 60068-2-27 	25g / 11 ms Sinus
mechanical service life (switching cycles)	
<ul style="list-style-type: none"> of the main contacts typical 	50 000
<ul style="list-style-type: none"> of auxiliary contacts typical 	50 000
electrical endurance (switching cycles)	
<ul style="list-style-type: none"> typical 	50 000
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
reference code acc. to IEC 81346-2	Q

Ambient conditions

<ul style="list-style-type: none"> installation altitude at height above sea level maximum 	2 000 m
ambient temperature	
<ul style="list-style-type: none"> during operation 	-20 ... +60 °C
<ul style="list-style-type: none"> during storage 	-50 ... +80 °C
<ul style="list-style-type: none"> 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	22 ... 32 A
operating voltage	
<ul style="list-style-type: none"> rated value 	690 V
<ul style="list-style-type: none"> at AC-3 rated value maximum 	690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	32 A
operational current	
<ul style="list-style-type: none"> at AC-3 <ul style="list-style-type: none"> — at 400 V rated value 	32 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 	7 500 W 15 000 W

— at 500 V rated value	18 500 W
— at 690 V rated value	30 000 W
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 10
design of the overload release	thermal
breaking capacity operating short-circuit current (Ics) at AC	
• at 240 V rated value	100 kA
• at 400 V rated value	30 kA
• at 500 V rated value	5 kA
• at 690 V rated value	2 kA
breaking capacity maximum short-circuit current (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	10 kA
• at AC at 690 V rated value	4 kA
response value current	
• of instantaneous short-circuit trip unit	416 A

UL/CSA ratings

full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	32 A
• at 600 V rated value	32 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	5 hp
• for 3-phase AC motor	
— at 200/208 V rated value	10 hp
— at 220/230 V rated value	10 hp
— at 460/480 V rated value	25 hp
— at 575/600 V rated value	30 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	125
• at 500 V	100
• at 690 V	80

Installation/ mounting/ dimensions

mounting position	any
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
height	140 mm
width	55 mm
depth	149 mm
required spacing	
<ul style="list-style-type: none"> • for grounded parts at 400 V <ul style="list-style-type: none"> — downwards 50 mm — upwards 50 mm — at the side 10 mm • for live parts at 400 V <ul style="list-style-type: none"> — downwards 50 mm — upwards 50 mm — at the side 10 mm • for grounded parts at 500 V <ul style="list-style-type: none"> — downwards 50 mm — upwards 50 mm — at the side 10 mm • for live parts at 500 V <ul style="list-style-type: none"> — downwards 50 mm — upwards 50 mm — at the side 10 mm • for grounded parts at 690 V <ul style="list-style-type: none"> — downwards 50 mm — upwards 50 mm — backwards 0 mm — at the side 10 mm — forwards 0 mm • for live parts at 690 V <ul style="list-style-type: none"> — downwards 50 mm — upwards 50 mm — backwards 0 mm — at the side 10 mm — forwards 0 mm 	

Connections/ Terminals

product function	
<ul style="list-style-type: none"> removable terminal for auxiliary and control circuit 	No
type of electrical connection	
<ul style="list-style-type: none"> for main current circuit 	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)
tightening torque	
<ul style="list-style-type: none"> 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 2
design of the thread of the connection screw	
<ul style="list-style-type: none"> for main contacts 	M6

Safety related data

B10 value	
<ul style="list-style-type: none"> with high demand rate acc. to SN 31920 	5 000
proportion of dangerous failures	
<ul style="list-style-type: none"> with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 	50 % 50 %
failure rate [FIT]	
<ul style="list-style-type: none"> 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
display version	
<ul style="list-style-type: none"> for switching status 	Handle

Certificates/ approvals

General Product Approval	For use in hazardous locations
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[KC](#)



For use in hazardous locations	Declaration of Conformity	Test Certificates	Marine / Shipping
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping



other	Railway
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[Confirmation](#)



[Vibration and Shock](#)

[Confirmation](#)

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=3RV2031-4EA10-Z W96>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4EA10-Z W96>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4EA10-Z W96>

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

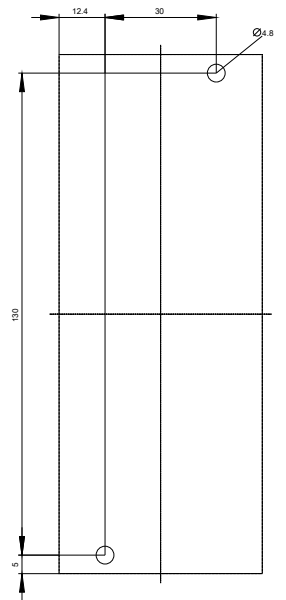
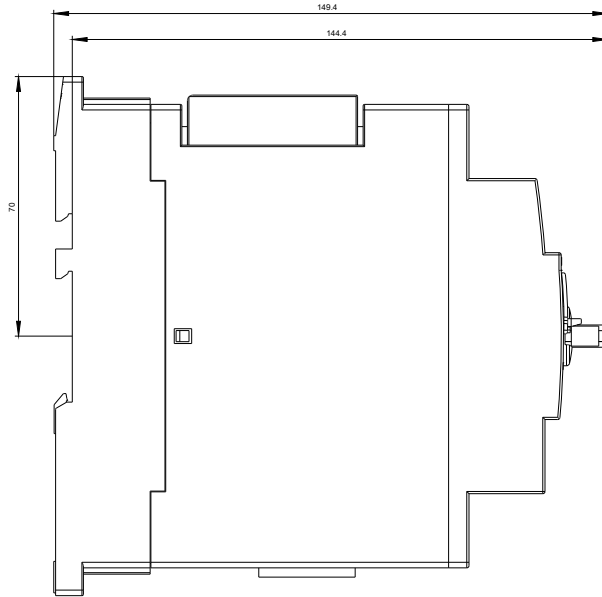
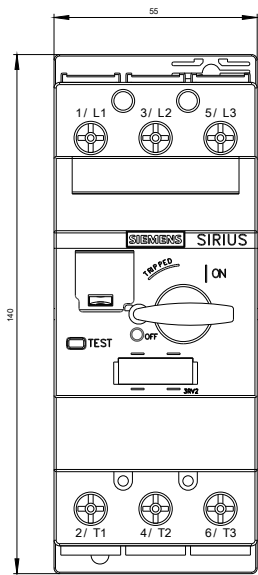
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4EA10-Z W96&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4EA10-Z W96/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4EA10-Z W96&objecttype=14&gridview=view1>





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