



Circuit breaker size S0 for motor protection, CLASS 10 A-release 17...22 A
N-release 286 A screw terminal Switching capacity 30 kA at 600 V
according to UL/CSA

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	S0
size of contactor can be combined company-specific	S00, S0
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	10.5 W
• at AC in hot operating state per pole	3.5 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
mechanical service life (switching cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (switching cycles) typical	100 000
reference code according to IEC 81346-2	Q
Substance Prohibitive (Date)	10/01/2009
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	16 ... 22 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	22 A
operational current	
• at AC-3 at 400 V rated value	22 A

<ul style="list-style-type: none"> • at AC-3e at 400 V rated value 	22 A
operating power	
<ul style="list-style-type: none"> • at AC-3 <ul style="list-style-type: none"> — at 690 V rated value 	18.5 kW
<ul style="list-style-type: none"> • at AC-3e <ul style="list-style-type: none"> — at 690 V rated value 	18.5 kW
operating frequency	
<ul style="list-style-type: none"> • at AC-3 maximum 	15 1/h
<ul style="list-style-type: none"> • at AC-3e maximum 	15 1/h
Auxiliary circuit	
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	
<ul style="list-style-type: none"> • ground fault detection 	No
<ul style="list-style-type: none"> • phase failure detection 	Yes
trip class	CLASS 10
design of the overload release	thermal
breaking capacity maximum short-circuit current (I_{cu})	
<ul style="list-style-type: none"> • at AC at 690 V rated value 	4 kA
breaking capacity operating short-circuit current (I_{cs}) at AC	
<ul style="list-style-type: none"> • at 690 V rated value 	2 kA
response value current of instantaneous short-circuit trip unit	286 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
<ul style="list-style-type: none"> • at 480 V rated value 	22 A
<ul style="list-style-type: none"> • at 600 V rated value 	22 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 	1.5 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 230 V rated value 	3 hp
<ul style="list-style-type: none"> • for 3-phase AC motor <ul style="list-style-type: none"> — at 200/208 V rated value 	7.5 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 220/230 V rated value 	7.5 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 460/480 V rated value 	15 hp
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at 575/600 V rated value 	20 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	
<ul style="list-style-type: none"> • at 400 V 	gG 63 A
<ul style="list-style-type: none"> • at 500 V 	gG 50 A
<ul style="list-style-type: none"> • at 690 V 	gG 50 A
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	97 mm
width	45 mm
depth	97 mm
required spacing	
<ul style="list-style-type: none"> • for grounded parts at 690 V <ul style="list-style-type: none"> — downwards 	50 mm
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — upwards 	50 mm
<ul style="list-style-type: none"> <ul style="list-style-type: none"> — at the side 	30 mm
<ul style="list-style-type: none"> • for live parts at 690 V 	

— downwards	50 mm
— upwards	50 mm
— at the side	30 mm

Connections/ Terminals

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 — finely stranded with core end processing • at AWG cables for main contacts	2x (1 ... 2.5 mm ²), 2x (2.5 ... 10 mm ²) 2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ² 2x (16 ... 12), 2x (14 ... 8)
tightening torque • for main contacts with screw-type terminals	2 ... 2.5 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	M4

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 y
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	Test Certificates
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[Confirmation](#)



[Type Test Certificates/Test Report](#)

Test Certificates	Marine / Shipping
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[Special Test Certificate](#)



Marine / Shipping	other	Railway
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[Confirmation](#)



[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=3RV2023-4CA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2023-4CA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2023-4CA10>

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

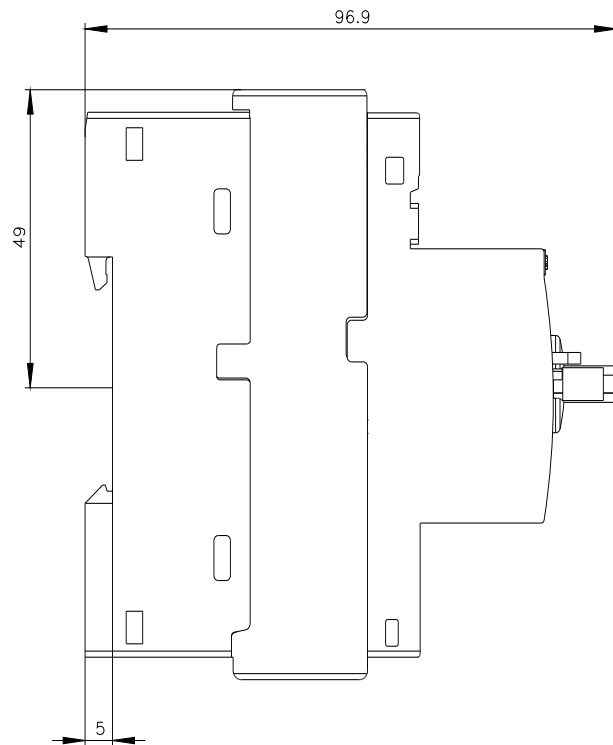
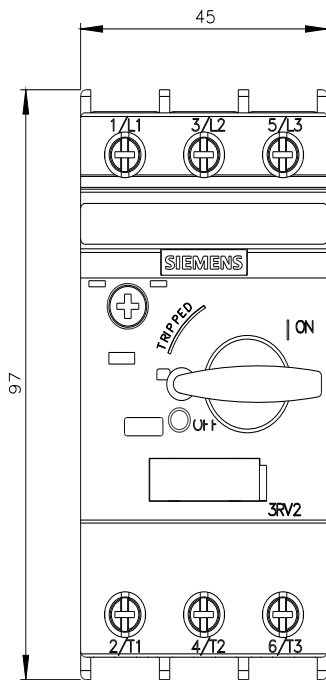
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2023-4CA10&lang=en

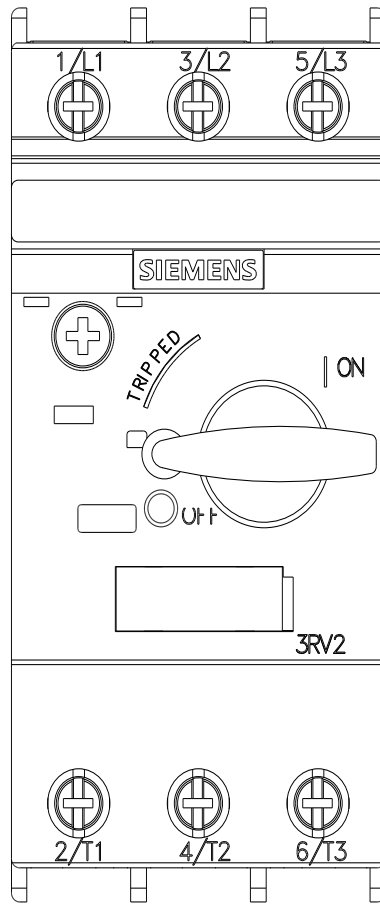
Characteristic: Tripping characteristics, I^t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2023-4CA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2023-4CA10&objecttype=14&gridview=view1>





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