



Circuit breaker size S00 for motor protection, CLASS 10 A-release 3.5...5 A N release 65 A Screw terminal Standard switching capacity

product brand name	SIRIUS
product designation	Circuit breaker
design of the product	For motor protection
product type designation	3RV1
General technical data	
Product equipment of circuit breaker for motor protection complete unit with protection device	Yes
size of the circuit-breaker	S00
size of contactor can be combined company-specific	S00
product function disconnecter functionality	Yes
product extension auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	7.25 W
• at AC in hot operating state per pole	2.4 W
type of calculation of power loss current-dependent	quadratic
insulation voltage with degree of pollution 3 at AC rated value	690 V
surge voltage resistance rated value	6 kV
maximum permissible voltage for protective separation	
• in networks with ungrounded star point between main and auxiliary circuit	400 V
• in networks with grounded star point between main and auxiliary circuit	400 V
protection class IP	
• on the front according to IEC 60529	IP20
• on the front	IP20
• of the terminal	IP00
mechanical service life (operating cycles)	
• of the main contacts typical	100 000
• of auxiliary contacts typical	100 000
electrical endurance (operating cycles) typical	100 000
reference code according to IEC 81346-2	Q
continuous current rated value	5 A
Substance Prohibitance (day/month/year)	01/01/2013
Net Weight	0.276 g
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	3.5 ... 5 A
type of voltage for main current circuit	AC
operating voltage • rated value • rated value • at AC-3 rated value maximum • at AC-3e rated value maximum	690 V 20 ... 690 V 690 V 690 V
operating frequency rated value	50 ... 60 Hz
operational current rated value	5 A
operational current • at AC-3 at 400 V rated value • at AC-3e at 400 V rated value	5 A 5 A
operating power • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value • at AC-3e — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value	1.1 kW 1.5 kW 2.2 kW 4 kW 1.1 kW 1.5 kW 2.2 kW 4 kW
operating frequency • at AC-3 maximum • at AC-3e maximum	15 1/h 15 1/h
Auxiliary circuit	
type of voltage for auxiliary and control circuit	AC/DC
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 • ground fault detection • phase failure detection	No Yes
trip class	CLASS 10
design of the overload release	thermal
protection function thermal overload protection (ANSI 49)	Yes
maximum short-circuit current breaking capacity (Icu) • 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 100 kA 3 kA 2 kA
operating short-circuit current breaking capacity (Ics) at AC • at 240 V rated value • at 400 V rated value • at 500 V rated value • at 690 V rated value	100 kA 100 kA 3 kA 2 kA
response value current of instantaneous short-circuit trip unit	65 A
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value	5 A 5 A
yielded mechanical performance [hp]	

• for single-phase AC motor — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value	0.17 hp 0.5 hp 1 hp 1 hp 3 hp 3 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 • at 400 V • at 500 V • at 690 V	none required gG 50 A gG 35 A gG 35 A
certificate of suitability according to ATEX directive 2014/34/EU	DMT 02 ATEX F 001
type of protection according to ATEX directive 2014/34/EU	Ex II (2) GD
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
Mounting method of circuit breaker for Transformer protection, Generator protection and system protection optional standard bar mounting	Yes
height	90 mm
width	45 mm
depth	75 mm
required spacing • for grounded parts at 400 V — downwards — upwards — at the side • for live parts at 400 V — downwards — upwards — at the side • for grounded parts at 500 V — downwards — upwards — at the side • for live parts at 500 V — downwards — upwards — at the side • for grounded parts at 690 V — downwards — upwards — backwards — at the side — forwards • for live parts at 690 V — downwards — upwards — backwards — at the side — forwards	20 mm 20 mm 9 mm 20 mm 20 mm 9 mm 20 mm 20 mm 9 mm 20 mm 20 mm 0 mm 9 mm 0 mm 20 mm 20 mm 0 mm 9 mm 0 mm
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 — finely stranded with core end processing		2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x (1 ... 4 mm²) 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)	
connectable conductor cross-section for main contacts • solid or stranded • finely stranded with core end processing		0.5 ... 4 mm² 0.5 ... 2.5 mm²	
type of connectable conductor cross-sections • for auxiliary contacts — solid or stranded		2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)	
AWG number as coded connectable conductor cross section for main contacts		18 ... 14	
tightening torque • for main contacts with screw-type terminals • for auxiliary contacts with screw-type terminals		0.8 ... 1.2 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 • for main contacts		M3	
Safety related data			
product function suitable for safety function		Yes	
suitability for use • safety-related switching on • safety-related switching OFF		No Yes	
service life maximum		10 a	
test wear-related service life necessary		Yes	
proportion of dangerous failures • with low demand rate according to SN 31920 • with high demand rate according to SN 31920		40 % 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	
overdimensioning according to ISO 13849-2 necessary		Yes	
IEC 61508			
safety device type according to IEC 61508-2		Type 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		Rocker switch	
Approvals Certificates			
Environment	General Product Approval		
Environmental Conformations     			
General Product Approval	For use in hazardous locations	Test Certificates	Maritime application



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Maritime application

other



[Miscellaneous](#)

other

Railway

[Confirmation](#)

[Miscellaneous](#)



[Special Test Certificate](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RV1011-1FA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1FA10>

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

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1FA10&lang=en

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1FA10>

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>



