

Reference: 3RV2021-4CA10

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 16...22A, N-RELEASE 286A, SCREW CONNECTION, STANDARD SW. CAPACITY,

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product brand name	SIRIUS
Product designation	3RV2 circuit breaker
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] total typical	8 W
Insulation voltage with degree of pollution 3 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
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Protection class IP	
on the front	IP20
of the terminal	IP20
Shock resistance	
acc. 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
Type of protection	Increased safety
Certificate of suitability relating to ATEX	on request
Protection against electrical shock	finger-safe
Equipment marking acc. to DIN EN 81346-2	Q
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 pick-up value current of the current-dependent overload release	16 ... 22 A
Operating voltage	
rated value	690 V
at AC-3 rated value maximum	690 V
Operating frequency rated value	50 ... 60 Hz
Operating current rated value	22 A
Operating current	
at AC-3	
— at 400 V rated value	22 A
Operating power	
at AC-3	
— at 230 V rated value	5 500 W
— at 400 V rated value	11 000 W
— at 500 V rated value	11 000 W
— at 690 V rated value	18 500 W
Operating frequency	
at AC-3 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:	
Trip class	CLASS 10
Design of the overload release	thermal
Operational short-circuit current breaking capacity (Ics) at AC	
at 240 V rated value	100 kA
at 400 V rated value	25 kA
at 500 V rated value	5 kA
at 690 V rated value	2 kA
Maximum short-circuit current breaking capacity (Icu)	
at AC at 240 V rated value	100 kA
at AC at 400 V rated value	55 kA
at AC at 500 V rated value	10 kA
at AC at 690 V rated value	4 kA
Breaking capacity short-circuit current (Icn)	
at 1 current path at DC at 150 V rated value	10 kA
with 2 current paths in series at DC at 300 V rated value	10 kA
with 3 current paths in series at DC at 450 V rated value	10 kA
UL/CSA ratings:	
Full-load current (FLA) for three-phase AC motor	
at 480 V rated value	22 A
at 600 V rated value	22 A
Yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	1.5 hp
— at 230 V rated value	3 hp
for three-phase AC motor	
— at 200/208 V rated value	5 hp
— at 220/230 V rated value	7.5 hp
— at 460/480 V rated value	15 hp
Short-circuit protection	
Design of the short-circuit trip	magnetic
Design of the fuse link for IT network for short-circuit protection of the main circuit	

at 400 V	gL/gG 63 A
at 500 V	gL/gG 50 A
at 690 V	gL/gG 50 A
Installation/ mounting/ dimensions:	
Mounting position	any
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
Height	97 mm
Width	45 mm
Depth	96 mm
Required spacing	
with side-by-side mounting	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	0 mm
for grounded parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— at the side	30 mm
— downwards	50 mm
for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	30 mm
Connections/Terminals:	
Product function	
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	
— single or multi-stranded	2x (1 ... 2,5 mm ²), 2x (2,5 ... 10 mm ²)

— finely stranded with core end processing	2x (1 ... 2.5 mm ²), 2x (2.5 ... 6 mm ²), 1x 10 mm ²
at AWG conductors for main contacts	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
Design of the thread of the connection screw	
for main contacts	M4
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
Display version	
for switching status	Handle