

Reference: 3RV2031-4WA10

CIRCUIT BREAKER, SIZE S2, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 42...52A, N-RELEASE 741A, SCREW TERMINAL, STANDARD BREAKING CAPACITY

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product brand name	SIRIUS
Product designation	3RV2 circuit breaker
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] total typical	17 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	IP00
Shock resistance	
acc. to IEC 60068-2-27	25g / 11 ms Sinus
Mechanical service life (switching cycles)	

of the main contacts typical	50 000
of auxiliary contacts typical	50 000
Electrical endurance (switching cycles)	
typical	50 000
Protection against electrical shock	finger-safe when touched vertically from front acc. to IEC 60529
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	42 ... 52 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	52 A
Operating current	
at AC-3	
— at 400 V rated value	52 A
Operating power	
at AC-3	
— at 230 V rated value	15 000 W
— at 500 V rated value	30 000 W
— at 690 V rated value	45 000 W
Operating frequency	
at AC-3 maximum	15 1/h
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 A
at 400 V rated value	30 kA
at 500 V rated value	4 kA
at 690 V rated value	2 kA
Maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
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	8 kA
at AC at 690 V rated value	4 kA
UL/CSA ratings:	
Full-load current (FLA) for three-phase AC motor	
at 480 V rated value	52 A
at 600 V rated value	52 A
Yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
for three-phase AC motor	
— at 200/208 V rated value	15 hp
— at 220/230 V rated value	20 hp
— at 460/480 V rated value	40 hp
— at 575/600 V rated value	50 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 240 V	none required
at 400 V	160
at 500 V	125
at 690 V	100
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	140 mm
Width	55 mm
Depth	149 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	10 mm
— downwards	50 mm
for live parts	
— forwards	0 mm
— Backwards	0 mm
— upwards	50 mm
— downwards	50 mm
— at the side	10 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 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )
— finely stranded with core end processing	2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )
at AWG conductors for main contacts	2x (18 ... 2), 1x (18 ... 1)
Tightening torque	
for main contacts with screw-type terminals	3 ... 4.5 N·m
Design of screwdriver shaft	Diameter 5 to 6 mm
Design of the thread of the connection screw	
for main contacts	M6
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