

CIRCUIT-BREAKER SZ S0, FOR MOTOR PROTECTION, CLASS 10, A-RELEASE 34...40A, N-RELEASE 480A, SCREW TERMINAL, STANDARD SWITCHING CAPACITY,



product brandname	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] total typical	14 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
• in networks with grounded star point between main and auxiliary circuit	400 V
Protection class IP	

<ul style="list-style-type: none"> <li>• on the front</li> <li>• of the terminal</li> </ul>	IP20 IP20
<b>Mechanical service life (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• of the main contacts typical</li> <li>• of auxiliary contacts typical</li> </ul>	100 000 100 000
<b>Electrical endurance (switching cycles)</b>	
<ul style="list-style-type: none"> <li>• typical</li> </ul>	100 000
<b>Type of protection</b>	Increased safety
<b>Protection against electrical shock</b>	finger-safe
Equipment marking acc. to DIN EN 81346-2	Q

### Ambient conditions

<b>Ambient temperature</b>	
<ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>	-20 ... +40 °C -50 ... +80 °C -50 ... +80 °C
<b>Temperature compensation</b>	-20 ... +60 °C

### Main circuit

<b>Number of poles for main current circuit</b>	3
<b>Adjustable pick-up value current of the current-dependent overload release</b>	34 ... 40 A
<b>Operating voltage</b>	
<ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> </ul>	690 V 690 V
<b>Operating frequency rated value</b>	50 ... 60 Hz
<b>Operating current rated value</b>	40 A
<b>Operating current</b>	
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>	40 A
<b>Operating power</b>	
<ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>	11 000 W 18 500 W 22 000 W 39 000 W
<b>Operating frequency</b>	
<ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>	15 1/h

### Auxiliary circuit

<b>Number of NC contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	0
<b>Number of NO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	0

<b>Number of CO contacts</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>	0
<b>Protective and monitoring functions</b>	
<b>Product function</b>	
<ul style="list-style-type: none"> <li>• Ground fault detection</li> </ul>	No
<ul style="list-style-type: none"> <li>• Phase failure detection</li> </ul>	Yes
<b>Trip class</b>	CLASS 10
<b>Design of the overload release</b>	thermal
<b>Operational short-circuit current breaking capacity (Ics) at AC</b>	
<ul style="list-style-type: none"> <li>• at 240 V rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>	10 kA
<ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>	3 kA
<ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>	2 kA
<b>Maximum short-circuit current breaking capacity (Icu)</b>	
<ul style="list-style-type: none"> <li>• at AC at 240 V rated value</li> </ul>	100 kA
<ul style="list-style-type: none"> <li>• at AC at 400 V rated value</li> </ul>	20 kA
<ul style="list-style-type: none"> <li>• at AC at 500 V rated value</li> </ul>	6 kA
<ul style="list-style-type: none"> <li>• at AC at 690 V rated value</li> </ul>	3 kA
<b>Breaking capacity short-circuit current (Icn)</b>	
<ul style="list-style-type: none"> <li>• at 1 current path at DC at 150 V rated value</li> </ul>	10 kA
<ul style="list-style-type: none"> <li>• with 2 current paths in series at DC at 300 V rated value</li> </ul>	10 kA
<ul style="list-style-type: none"> <li>• with 3 current paths in series at DC at 450 V rated value</li> </ul>	10 kA
<b>UL/CSA ratings</b>	
<b>Full-load current (FLA) for three-phase AC motor</b>	
<ul style="list-style-type: none"> <li>• at 480 V rated value</li> </ul>	40 A
<ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>	40 A
<b>Yielded mechanical performance [hp]</b>	
<ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> </ul>	3 hp 7.5 hp
<ul style="list-style-type: none"> <li>• for three-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul> </li> </ul>	10 hp 10 hp 30 hp
<b>Short-circuit protection</b>	
<b>Product function Short circuit protection</b>	Yes
<b>Design of the short-circuit trip</b>	magnetic

<b>Design of the fuse link for IT network for short-circuit protection of the main circuit</b>	
<ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	gG 63 A gG 63 A gG 63 A

### Installation/ mounting/ dimensions

<b>Mounting position</b>	any
<b>Mounting type</b>	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
<b>Height</b>	97 mm
<b>Width</b>	45 mm
<b>Depth</b>	96 mm
<b>Required spacing</b>	
<ul style="list-style-type: none"> <li>• with side-by-side mounting               <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts               <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts               <ul style="list-style-type: none"> <li>— forwards</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul>	0 mm 0 mm 70 mm 70 mm 9 mm  0 mm 0 mm 70 mm 30 mm 70 mm  0 mm 0 mm 70 mm 70 mm 30 mm

### Connections/Terminals

<b>Product function</b>	
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	No
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>	screw-type terminals
<b>Arrangement of electrical connectors for main current circuit</b>	Top and bottom
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• for main contacts               <ul style="list-style-type: none"> <li>— single or multi-stranded</li> </ul> </li> </ul>	2x (1 ... 2,5 mm <sup>2</sup> ), 2x (2,5 ... 10 mm <sup>2</sup> )

<ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> <li>• at AWG conductors for main contacts</li> </ul>	2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> 2x (16 ... 12), 2x (14 ... 8)
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>	2 ... 2.5 N·m
<b>Design of screwdriver shaft</b>	Diameter 5 to 6 mm

### Safety related data

<b>B10 value</b> <ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>	5 000
<b>Proportion of dangerous failures</b> <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul>	50 % 50 %
<b>Failure rate [FIT]</b> <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> </ul>	50 FIT
<b>T1 value for proof test interval or service life acc. to IEC 61508</b>	10 y
<b>Display version</b> <ul style="list-style-type: none"> <li>• for switching status</li> </ul>	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	Shipping Approval
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[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



Shipping Approval	other
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[Environmental Confirmations](#)

[Confirmation](#)

other	Railway
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[Miscellaneous](#)

[Vibration and Shock](#)

**Further information**

**Information- and Downloadcenter (Catalogs, Brochures,...)**  
<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**  
<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-4FA10>

**Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4FA10>

**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4FA10>

**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4FA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4FA10&lang=en)









last modified:

06/20/2017