

Circuit breaker size S3 for motor protection, CLASS 20 A release 80...100 A N release 1300 A Screw-type connection Incr. switching capacity 100 kA



Figure similar

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	S3
Size of contactor can be combined company-specific	S3
Product extension	
• Auxiliary switch	Yes
Power loss [W] total typical	38 W
Insulation voltage with degree of pollution 3 rated value	1 000 V
Surge voltage resistance rated value	8 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

<b>Protection class IP</b>	
• on the front	IP20
• of the terminal	IP00
<b>Shock resistance</b>	
• acc. to IEC 60068-2-27	25g / 11 ms Sinus
<b>Mechanical service life (switching cycles)</b>	
• of the main contacts typical	25 000
• of auxiliary contacts typical	25 000
<b>Electrical endurance (switching cycles)</b>	
• typical	25 000
<b>Protection against electrical shock</b>	finger-safe when touched vertically from front acc. to IEC 60529
Equipment marking acc. to DIN EN 81346-2	Q

#### Ambient conditions

<b>Installation altitude at height above sea level</b>	
• maximum	2 000 m
<b>Ambient temperature</b>	
• during operation	-20 ... +60 °C
• during storage	-50 ... +80 °C
• during transport	-50 ... +80 °C
<b>Temperature compensation</b>	-20 ... +60 °C
Relative humidity during operation	10 ... 95 %

#### 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>	80 ... 100 A
<b>Operating voltage</b>	
• rated value	690 V
• at AC-3 rated value maximum	690 V
<b>Operating frequency rated value</b>	50 ... 60 Hz
<b>Operating current rated value</b>	100 A
<b>Operating current</b>	
• at AC-3	
— at 400 V rated value	100 A
<b>Operating power</b>	
• at AC-3	
— at 230 V rated value	30 000 W
— at 400 V rated value	45 000 W
— at 690 V rated value	90 000 W
<b>Operating frequency</b>	
• at AC-3 maximum	15 1/h

#### Protective and monitoring functions

<b>Product function</b>	
• Ground fault detection	No
• Phase failure detection	Yes
<b>Trip class</b>	Class 20
<b>Design of the overload release</b>	thermal
<b>Operational short-circuit current breaking capacity (Ics) at AC</b>	
• at 240 V rated value	100 000 A
• at 400 V rated value	50 000 A
• at 500 V rated value	5 000 A
• at 690 V rated value	3 000 A
<b>Maximum short-circuit current breaking capacity (Icu)</b>	
• at AC at 240 V rated value	100 kA
• at AC at 400 V rated value	100 kA
• at AC at 500 V rated value	10 kA
• at AC at 690 V rated value	6 kA
<b>Response value current</b>	
• of instantaneous short-circuit trip unit	1 300 A

#### UL/CSA ratings

<b>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V rated value	100 A
• at 600 V rated value	100 A
<b>Yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	7.5 hp
— at 230 V rated value	20 hp
• for three-phase AC motor	
— at 200/208 V rated value	30 hp
— at 220/230 V rated value	40 hp
— at 460/480 V rated value	75 hp
— at 575/600 V rated value	100 hp

#### Short-circuit protection

<b>Product function Short circuit protection</b>	Yes
<b>Design of the short-circuit trip</b>	magnetic

#### 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>	165 mm
<b>Width</b>	70 mm
<b>Depth</b>	176 mm

Required spacing	
<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>	<ul style="list-style-type: none"> <li>0 mm</li> <li>0 mm</li> <li>150 mm</li> <li>150 mm</li> <li>0 mm</li> <li>0 mm</li> <li>0 mm</li> <li>150 mm</li> <li>30 mm</li> <li>150 mm</li> <li>0 mm</li> <li>0 mm</li> <li>150 mm</li> <li>150 mm</li> <li>30 mm</li> </ul>

## 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>— solid</li> <li>— single or multi-stranded</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>2x (2.5 ... 16 mm<sup>2</sup>)</li> <li>2x (2,5 ... 50 mm<sup>2</sup>), 1x (10 ... 70 mm<sup>2</sup>)</li> </ul>
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>• for ring cable lug <ul style="list-style-type: none"> <li>— for main contacts</li> </ul> </li> </ul>	4.5 ... 6 N·m
<b>Outer diameter of the usable ring cable lug maximum</b>	19 mm
<b>Tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>	4.5 ... 6 N·m


## Safety related data

<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>	<ul style="list-style-type: none"> <li>50 %</li> <li>50 %</li> </ul>
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T1 value for proof test interval or service life acc. to IEC 61508	10 y
Display version	Handle
<ul style="list-style-type: none"> <li>for switching status</li> </ul>	

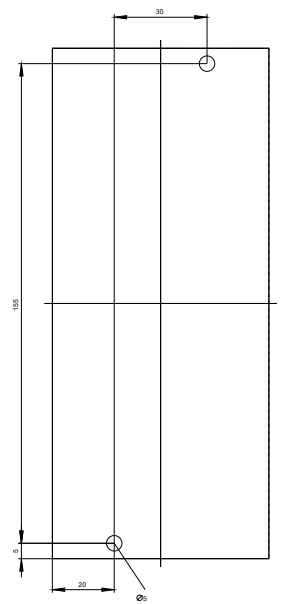
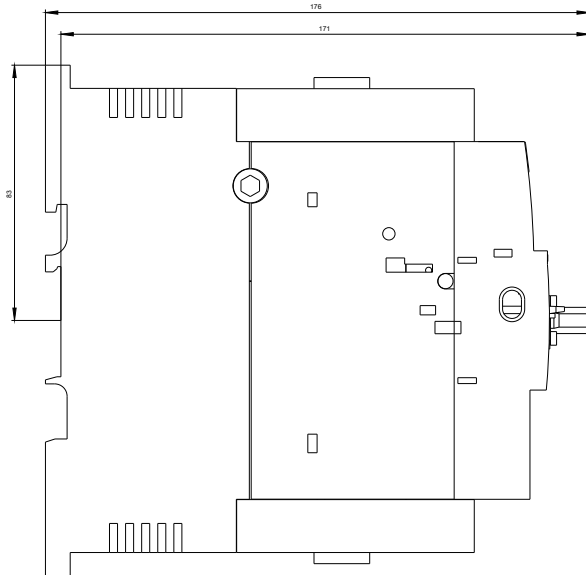
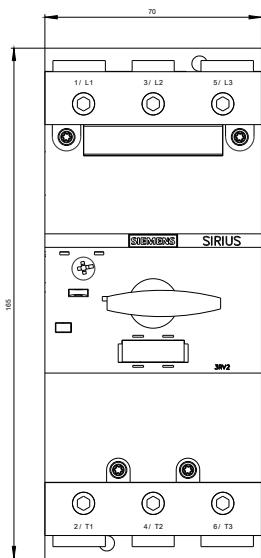
### Certificates/approvals

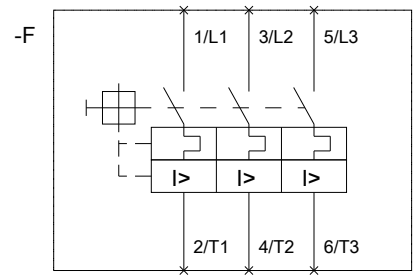
General Product Approval	Declaration of Conformity	Test Certificates
 CCC  CSA  UL	 EAC  CE EG-Konf.	<a href="#">Special Test Certificate</a>

Test Certificates	other	Railway
<a href="#">Declaration of the Compliance with the order</a>	<a href="#">Confirmation</a>  VDE	<a href="#">Miscellaneous</a> <a href="#">Vibration and Shock</a>

### 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=3RV2042-4MB10>
- Cax online generator**  
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2042-4MB10>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**  
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2042-4MB10>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**  
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2042-4MB10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2042-4MB10&lang=en)





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