

Circuit breaker size S3 for motor protection, CLASS 10 A release 28...40 A N release 520 A Screw terminals Standard breaking capacity with transv. auxiliary switch 1NO+1NC



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	Yes
• Auxiliary switch	Yes
Power loss [W] total typical	19 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>	28 ... 40 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>	40 A
<b>Operating current</b>	
• at AC-3	
— at 400 V rated value	40 A
<b>Operating power</b>	
• at AC-3	
— at 230 V rated value	11 000 W
— at 400 V rated value	18 500 W
— at 500 V rated value	22 000 W
— at 690 V rated value	37 000 W
<b>Operating frequency</b>	
• at AC-3 maximum	15 1/h

## Auxiliary circuit

<b>Design of the auxiliary switch</b>	transverse
<b>Number of NC contacts</b>	
• for auxiliary contacts	1
— Note	1
<b>Number of NO contacts</b>	
• for auxiliary contacts	1
— Note	1
<b>Operating current of auxiliary contacts at AC-15</b>	
• at 24 V	2 A
• at 230 V	0.5 A
<b>Operating current of auxiliary contacts at DC-13</b>	
• at 24 V	1 A
• at 60 V	0.15 A

## Protective and monitoring functions

<b>Product function</b>	
• Ground fault detection	No
• Phase failure detection	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>	
• at 240 V rated value	100 000 A
• at 400 V rated value	30 000 A
• at 500 V rated value	6 000 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	65 kA
• at AC at 500 V rated value	12 kA
• at AC at 690 V rated value	5 kA
<b>Response value current</b>	
• of instantaneous short-circuit trip unit	520 A

## UL/CSA ratings

<b>Full-load current (FLA) for three-phase AC motor</b>	
• at 480 V rated value	40 A
• at 600 V rated value	40 A
<b>Yielded mechanical performance [hp]</b>	
• for single-phase AC motor	
— at 110/120 V rated value	3 hp
— at 230 V rated value	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> <li>— at 575/600 V rated value</li> </ul> </li> </ul>	15 hp 15 hp 30 hp 40 hp
<b>Contact rating of auxiliary contacts according to UL</b>	C300 / R300

### 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
<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 150 mm 150 mm 0 mm  0 mm 0 mm 150 mm 30 mm 150 mm  0 mm 0 mm 150 mm 150 mm 30 mm

### Connections/Terminals

<b>Product function</b>	No
<ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>	
<b>Type of electrical connection</b>	
<ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>	screw-type terminals


<ul style="list-style-type: none"> <li>• for auxiliary and control 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> </ul> </li> <li>— single or multi-stranded</li> </ul>	2x (2.5 ... 16 mm <sup>2</sup> ) 2x (2,5 ... 50 mm <sup>2</sup> ), 1x (10 ... 70 mm <sup>2</sup> )
<b>Type of connectable conductor cross-sections</b>	
<ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG conductors for auxiliary contacts</li> </ul>	2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) 2x (20 ... 16), 2x (18 ... 14)
<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> <li>• for auxiliary contacts with screw-type terminals</li> </ul>	4.5 ... 6 N·m 0.8 ... 1.2 N·m
<b>Design of the thread of the connection screw</b>	
<ul style="list-style-type: none"> <li>• of the auxiliary and control contacts</li> </ul>	M3

#### 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>	50 % 50 %
<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				Declaration of Conformity	Test Certificates
 CCC	 CSA	 UL		 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>	<a href="#">Environmental Confirmations</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=3RV2041-4FA15>

**Cax online generator**

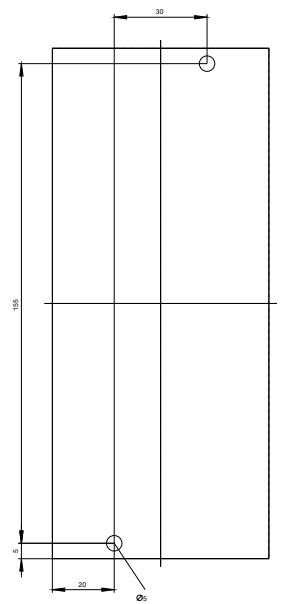
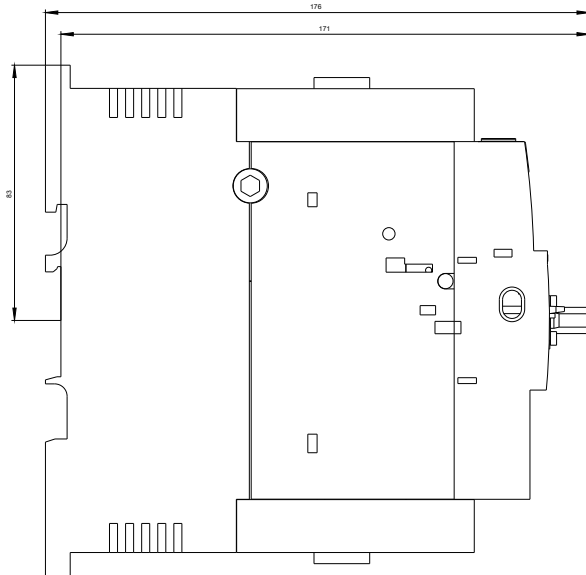
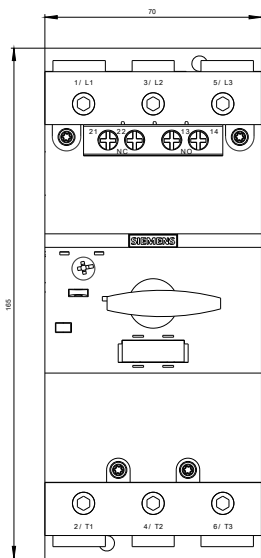
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4FA15>

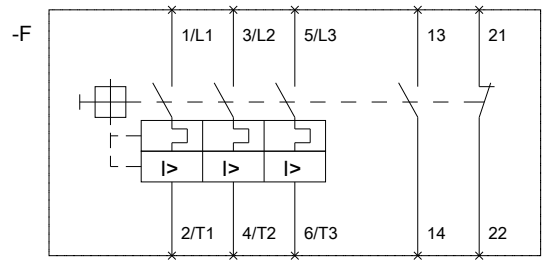
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4FA15>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2041-4FA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4FA15&lang=en)





last modified:

10/13/2017