



CIRCUIT-BREAKER SZ S0,  
FOR MOTOR PROTECTION, CLASS 10,  
W. OVERLOAD RELAY FUNCTION A-RELEASE 27...32A,  
N-RELEASE 400A, SCREW CONNECTION,  
STANDARD SW. CAPACITY

**General technical data:**

<b>Product brand name</b>		SIRIUS
<b>product designation</b>		3RV2 circuit breaker
<b>Size of the circuit-breaker</b>		S0
<b>Trip class</b>		CLASS 10
<b>Protection class IP / on the front</b>		IP20
<b>Degree of pollution</b>		3
<b>Installation altitude / at a height over sea level / maximum</b>	m	2,000
<b>Ambient temperature</b>		
• during storage	°C	-50 ... 80
• during operating	°C	-20 ... 60
• during transport	°C	-50 ... 80
<b>Resistance against shock</b>		25g / 11 ms
<b>Impulse voltage resistance / rated value</b>	kV	6
<b>Insulation voltage / rated value</b>	V	690
<b>Active power loss / total / typical</b>	W	12.2
<b>Item designation</b>		
• according to DIN 40719 extendable after IEC 204-2 / according to IEC 750		F
• according to DIN EN 61346-2		F

<b>Mechanical operating cycles as operating time</b>		
• of the main contacts / typical		100,000
• of the auxiliary contacts / typical		100,000
<b>Design of the auxiliary switch</b>		laterally
<b>Type of the driving mechanism / motor drive</b>		No
<b>Design of the operating mechanism</b>		selector switch
<b>Product function</b>		
• overload protection		Yes
• phase disturbance recognition		Yes
<b>Product component</b>		
• auxiliary switch		Yes
• undervoltage release mechanism		No
• trip indicator		No
<b>Product extension / optional / motor drive</b>		No

#### Main circuit:

<b>Number of poles / for main current circuit</b>		3
<b>Operating voltage / at AC-3 / rated value / maximum</b>	V	690
<b>Operating current / at AC-3 / at 400 V / rated value</b>	A	29
<b>Service power / at AC-3</b>		
• at 400 V / rated value	W	15,000
• at 500 V / rated value	W	18,500
• at 690 V / rated value	W	30,000
<b>Frequency of operation / at AC-3 / according to IEC 60947-6-2 / maximum</b>	1/h	15
<b>Arrangement of electrical connectors / for main current circuit</b>		Top and bottom
<b>Adjustable response current</b>		
• of the non-delayed short-circuit release	A	400 ... 400
• of the current-dependent overload release	A	27 ... 32
<b>Service power / at AC-3 / at 230 V / rated value</b>	W	7,500
<b>Continuous current / rated value</b>	A	32

#### Auxiliary circuit:

<b>Product extension / auxiliary switch</b>		Yes
<b>Number of NC contacts / for auxiliary contacts / instantaneous switching</b>		1
<b>Number of NO contacts / for auxiliary contacts / instantaneous switching</b>		1
<b>Number of change-over switches / for auxiliary contacts</b>		0
<b>Operating current / of the auxiliary contacts</b>		
• at AC-15		

- at 24 V
- at 230 V
- at DC-13
  - maximum
  - at 24 V

A	1.5
A	1.5
A	1.5
A	1

#### Inputs/ Outputs:

**Number of digital inputs**

0

#### Short-circuit:

**Breaking capacity limit short-circuit current (Icu)**

- at 400 V / rated value
- at 500 V / rated value
- at 690 V / rated value

A	55,000
A	10,000
A	4,000

**Design of the fuse link / for short-circuit protection of the auxiliary switch / required**

fuse gL/gG: 6 A, quick: 10 A

**Design of the overcurrent release and short-circuit release**

thermomagnetic

#### Installation/mounting/dimensions:

**Built in orientation**

any

**Type of mounting**

screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715

**Width**

mm 65

**Height**

mm 97

**Depth**

mm 91

**Distance, to be maintained, to the ranks assembly**

- forwards
- backwards
- upwards
- downwards
- sideways

mm	0
mm	0
mm	50
mm	50
mm	0

**Distance, to be maintained, to earthed part**

- forwards
- backwards
- upwards
- sideways
- downwards

mm	0
mm	0
mm	50
mm	30
mm	50

**Distance, to be maintained, conductive elements**

- forwards
- backwards
- upwards
- downwards

mm	0
mm	0
mm	50
mm	50

• sideways

mm

30

**Connections:**

**Product function**

- removable terminal for main circuit
- removable terminal for auxiliary and control circuit

No

No

**Design of the electrical connection**

- for main current circuit
- for auxiliary and control current circuit

screw-type terminals

screw-type terminals

**Type of the connectable conductor cross-section**

- for main contacts
  - solid
  - stranded
  - finely stranded
    - with conductor end processing
- for AWG conductors / for main contacts
- for auxiliary contacts
  - solid
  - finely stranded
    - with conductor end processing
- for AWG conductors / for auxiliary contacts

2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 10 mm<sup>2</sup>)

2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 10 mm<sup>2</sup>)

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)

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)

2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)

2x (20 ... 16), 2x (18 ... 14)

**Certificates/approvals:**

**Verification of suitability**

- für Staubexplosionsschutz für Zone 21/22
- for gas explosion protection for zone 1/2

CE / UL / CSA

no

no

**General Product Approval**

**Test Certificates**



CQC



CSA

[ROSTEST](#)



UL

[Manufacturer](#)

**Shipping Approval**



ABS



GL



LRS



PRS



RINA



RMRS

**other**

[Manufacturer](#)

[other](#)



VDE

**UL/CSA ratings**

yielded mechanical performance (hp)

<ul style="list-style-type: none"> <li>• for single-phase squirrel cage motors <ul style="list-style-type: none"> <li>• at 110/120 V / rated value</li> <li>• at 230 V / rated value</li> </ul> </li> <li>• for three-phase squirrel cage motors <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>	hp	2
	hp	5
	hp	7.5
	hp	10
	hp	20
<b>Operating current (FLA) / for three-phase squirrel cage motors</b>		
<ul style="list-style-type: none"> <li>• at 480 V / rated value</li> </ul>	A	27
<b>Contact rating designation / for auxiliary contacts / according to UL</b>		C600 / R300

#### Safety:

<b>B10 value / with high demand rate</b>		
<ul style="list-style-type: none"> <li>• according to SN 31920</li> </ul>		50,000
<b>T1 value / for proof test interval or service life</b>		
<ul style="list-style-type: none"> <li>• according to IEC 61508</li> </ul>	a	10
<b>Failure rate (FIT value) / with low demand rate</b>		
<ul style="list-style-type: none"> <li>• according to SN 31920</li> </ul>	FIT	50
<b>Proportion of dangerous failures</b>		
<ul style="list-style-type: none"> <li>• with low demand rate / according to SN 31920</li> <li>• with high demand rate / according to SN 31920</li> </ul>	%	40
	%	40
<b>Protection against electrical shock</b>		finger-safe

#### Further information:

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/industrial-controls/catalogs>

##### Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

##### CAX-Online-Generator

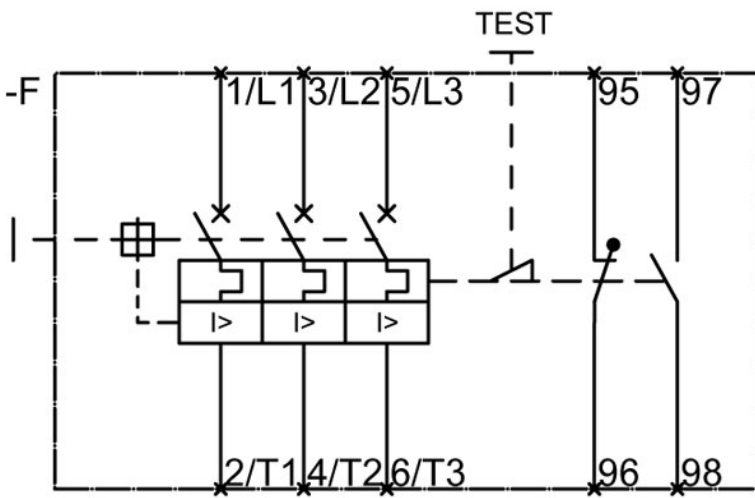
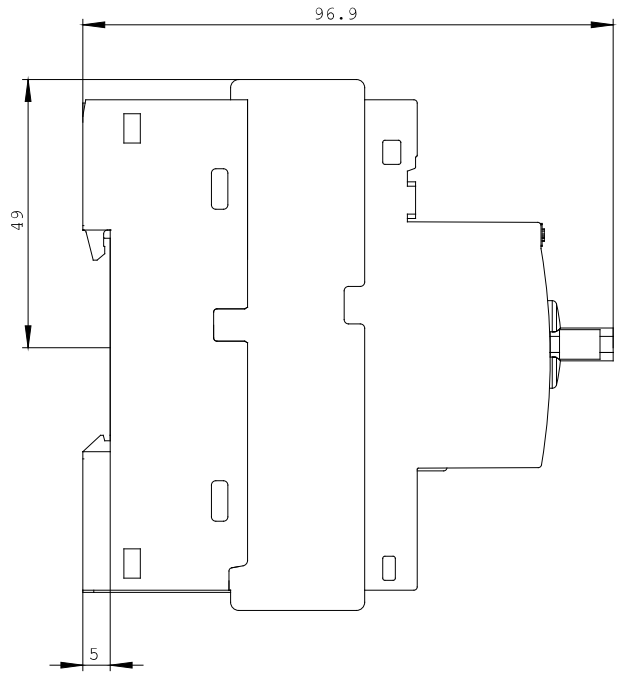
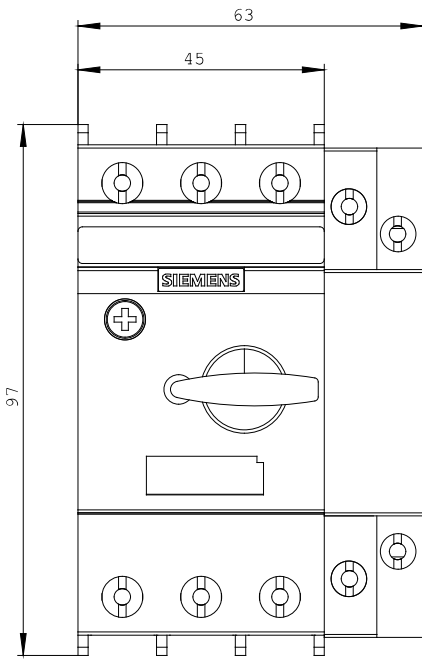
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RV2121-4EA10/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RV2121-4EA10](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RV2121-4EA10)



last change:

Oct 17, 2011