



CIRCUIT-BREAKER SZ S0,  
FOR MOTOR PROTECTION, CLASS 10,  
A-RELEASE 23...28A, N-RELEASE 364A,  
SCREW CONNECTION,  
STANDARD SW. CAPACITY,  
W. TRANSVERSE AUX. SWITCH 1NO+1NC

### General technical data:

Product brand name		SIRIUS
product designation		3RV2 circuit breaker
Size of the circuit-breaker		S0
Trip class		CLASS 10
Protection class IP / on the front		IP20
Degree of pollution		3
Installation altitude / at a height over sea level / maximum	m	2,000
Ambient temperature		
• during storage	°C	-50 ... 80
• during operating	°C	-20 ... 60
• during transport	°C	-50 ... 80
Resistance against shock		25g / 11 ms
Impulse voltage resistance / rated value	kV	6
Insulation voltage / rated value	V	690
Active power loss / total / typical	W	10.8
Item designation		
• 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>		transverse
<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

<b>Main circuit:</b>		
<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	28
<b>Service power / at AC-3</b>		
• at 400 V / rated value	W	11,000
• at 500 V / rated value	W	18,500
• at 690 V / rated value	W	22,000
<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 current-dependent overload release	A	23 ... 28
<b>Service power / at AC-3 / at 230 V / rated value</b>	W	7,500
<b>Continuous current / rated value</b>	A	28

<b>Auxiliary circuit:</b>		
<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-12 / maximum	A	2.5
• at AC-15		

- at 24 V
- at 230 V
- at DC-13
  - maximum
  - at 24 V
  - at 60 V

A	2
A	0.5
A	1
A	1
A	0.15

#### Inputs/ Outputs:

Number of digital inputs

0

#### Short-circuit:

Breaking capacity limit short-circuit current (I<sub>cu</sub>)

- 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: 10 A, miniature circuit breaker C 6 A (short-circuit current I<sub>k</sub> < 400 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 45

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

mm	0
mm	0
mm	50

- downwards
- sideways

mm	50
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

For use in  
hazardous  
locations

Test Certificates



CQC

[ROSTEST](#)



UL

[DEKRA EXAM,](#)  
[DMT](#)

[Manufacturer](#)

[other](#)

### Shipping Approval



ABS



GL



LRS



PRS



RINA



RMRS

### other

[Manufacturer](#)

[other](#)



VDE

## UL/CSA ratings

### yielded mechanical performance (hp)

- for single-phase squirrel cage motors
  - at 110/120 V / rated value
  - at 230 V / rated value
- for three-phase squirrel cage motors
  - at 200/208 V / rated value
  - at 220/230 V / rated value
  - at 460/480 V / rated value

hp	2
hp	5
hp	7.5
hp	10
hp	20

### Operating current (FLA) / for three-phase squirrel cage motors

- at 480 V / rated value

A	27
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### Contact rating designation / for auxiliary contacts / according to UL

C300 / R300

## Safety:

### B10 value / with high demand rate

- according to SN 31920

50,000

### T1 value / for proof test interval or service life

- according to IEC 61508

a	10
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### Failure rate (FIT value) / with low demand rate

- according to SN 31920

FIT	50
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### Proportion of dangerous failures

- with low demand rate / according to SN 31920
- with high demand rate / according to SN 31920

%	40
%	40

### Protection against electrical shock

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

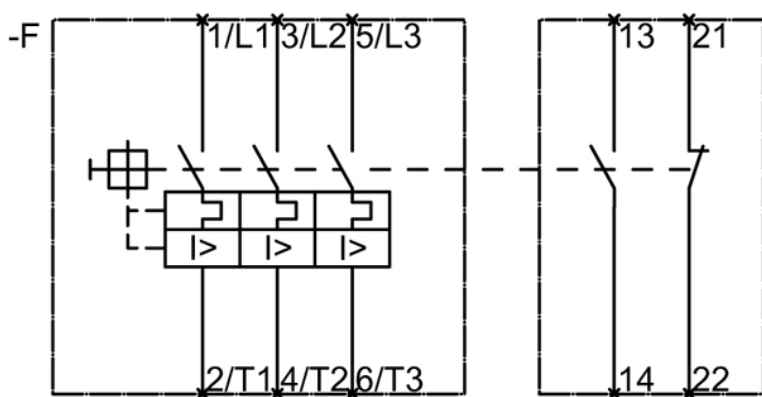
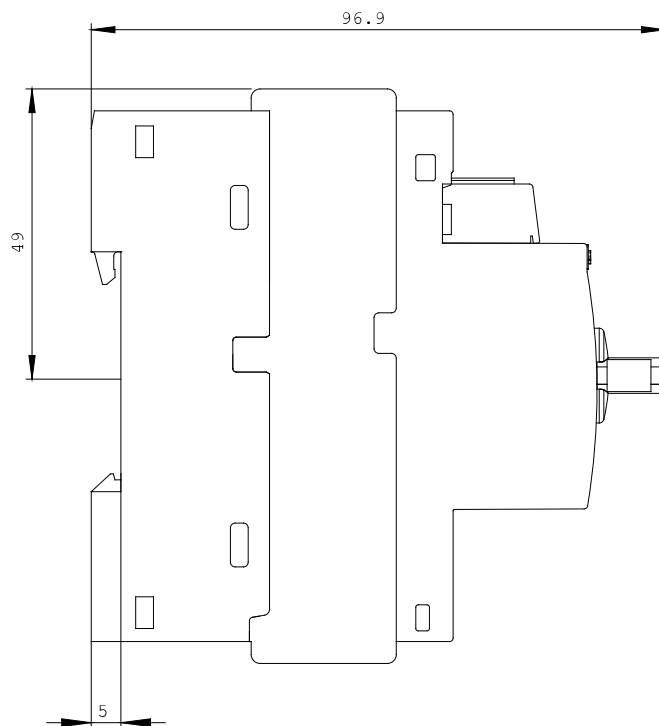
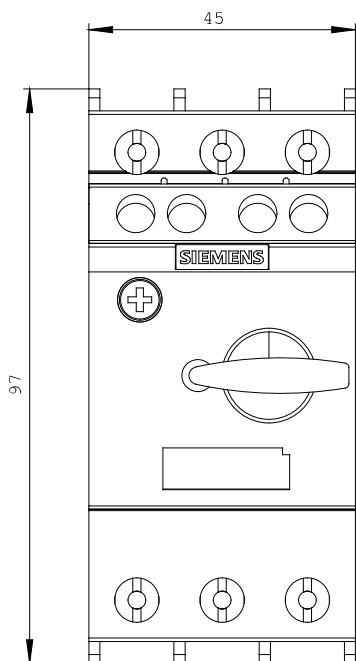
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RV2021-4NA15/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RV2021-4NA15](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RV2021-4NA15)



last change:

Oct 17, 2011