



CIRCUIT-BREAKER SZ S0,  
FOR MOTOR PROTECTION, CLASS 10,  
A-REL. 2.8...4A,  
N-REL. 52A SPRING-L. CONNECTION,  
STANDARD SW. CAPACITY

### General technical data:

|                                                        |    |                      |
|--------------------------------------------------------|----|----------------------|
| product brand name                                     |    | SIRIUS               |
| product designation                                    |    | 3RV2 circuit breaker |
| Size of the circuit-breaker                            |    | S0                   |
| Number of poles / for main current circuit             |    | 3                    |
| Product function                                       |    |                      |
| • removable terminal for auxiliary and control circuit |    | No                   |
| • overload protection                                  |    | Yes                  |
| • phase disturbance recognition                        |    | Yes                  |
| • short-circuit to earth recognition                   |    | No                   |
| Product component                                      |    |                      |
| • auxiliary switch                                     |    | No                   |
| • undervoltage release mechanism                       |    | No                   |
| • trip indicator                                       |    | No                   |
| Product extension                                      |    |                      |
| • auxiliary switch                                     |    | Yes                  |
| • optional / motor drive                               |    | No                   |
| Impulse voltage resistance / rated value               | kV | 6                    |
| Protection class IP / on the front                     |    | IP20                 |
| Protection against electrical shock                    |    | finger-safe          |

|                                                                     |    |             |
|---------------------------------------------------------------------|----|-------------|
| <b>Installation altitude / at a height over sea level / maximum</b> | m  | 2,000       |
| <b>Resistance against shock</b>                                     |    | 25g / 11 ms |
| <b>Ambient temperature</b>                                          |    |             |
| • during transport                                                  | °C | -50 ... +80 |
| • during storage                                                    | °C | -50 ... +80 |
| • during operating                                                  | °C | -20 ... +60 |
| <b>Active power loss / total / typical</b>                          | W  | 6.3         |

|                                                                                       |     |         |
|---------------------------------------------------------------------------------------|-----|---------|
| <b>Main circuit:</b>                                                                  |     |         |
| <b>Operating voltage / rated value</b>                                                | V   | 690     |
| <b>Service power / at AC-3</b>                                                        |     |         |
| • at 400 V / rated value                                                              | W   | 1,500   |
| • at 500 V / rated value                                                              | W   | 2,200   |
| • at 690 V / rated value                                                              | W   | 3,000   |
| <b>Operational current / at AC-3 / at 400 V / rated value</b>                         | A   | 4       |
| <b>Mechanical operating cycles as operating time / of the main contacts / typical</b> |     | 100,000 |
| <b>Frequency of operation / at AC-3 / according to IEC 60947-6-2</b>                  | 1/h | 15      |

|                                                                                            |  |         |
|--------------------------------------------------------------------------------------------|--|---------|
| <b>Auxiliary circuit:</b>                                                                  |  |         |
| <b>Number of change-over switches / for auxiliary contacts</b>                             |  | 0       |
| <b>Mechanical operating cycles as operating time / of the auxiliary contacts / typical</b> |  | 100,000 |

|                                                                                |   |           |
|--------------------------------------------------------------------------------|---|-----------|
| <b>Protection function:</b>                                                    |   |           |
| <b>Trip class</b>                                                              |   | CLASS 10  |
| <b>Adjustable response current / of the current-dependent overload release</b> | A | 2.8 ... 4 |
| <b>Breaking capacity limit short-circuit current (I<sub>cu</sub>)</b>          |   |           |
| • at 400 V / rated value                                                       | A | 100,000   |
| • at 500 V / rated value                                                       | A | 100,000   |
| • at 690 V / rated value                                                       | A | 6,000     |

|                                                                                    |     |        |
|------------------------------------------------------------------------------------|-----|--------|
| <b>Safety:</b>                                                                     |     |        |
| <b>Proportion of dangerous failures</b>                                            |     |        |
| • with high demand rate / according to SN 31920                                    | %   | 40     |
| • with low demand rate / according to SN 31920                                     | %   | 40     |
| <b>Failure rate (FIT value) / with low demand rate / according to SN 31920</b>     | FIT | 50     |
| <b>B10 value / with high demand rate / according to SN 31920</b>                   |     | 50,000 |
| <b>T1 value / for proof test interval or service life / according to IEC 61508</b> | a   | 10     |

**Installation/mounting/dimensions:**

|                          |    |                                                                                        |
|--------------------------|----|----------------------------------------------------------------------------------------|
| <b>Type of mounting</b>  |    | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| <b>mounting position</b> |    | any                                                                                    |
| <b>Depth</b>             | mm | 96                                                                                     |
| <b>Height</b>            | mm | 109                                                                                    |
| <b>Width</b>             | mm | 45                                                                                     |

**Connections:**

|                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------|
| <b>Arrangement of electrical connectors / for main current circuit</b>                                                                                                                                                                                                                                                                                                                |  | Top and bottom                                                                                                        |
| <b>Design of the electrical connection</b> <ul style="list-style-type: none"><li>• for main current circuit</li></ul>                                                                                                                                                                                                                                                                 |  | spring-loaded terminals                                                                                               |
| <b>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"><li>• for main contacts<ul style="list-style-type: none"><li>• solid</li><li>• finely stranded<ul style="list-style-type: none"><li>• without conductor final cutting</li><li>• with conductor end processing</li></ul></li></ul></li><li>• for AWG conductors / for main contacts</li></ul> |  | 2x (1 ... 10 mm <sup>2</sup> )<br><br>2x (1 ... 6 mm <sup>2</sup> )<br>2x (1 ... 6 mm <sup>2</sup> )<br>2x (18 ... 8) |

**UL/CSA ratings:**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                      |                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------|
| <b>yielded mechanical performance (hp)</b> <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><li>• at 575/600 V / rated value</li></ul></li></ul> | hp<br>hp<br><br>hp<br>hp<br>hp<br>hp | 0.125<br>0.333<br><br>0.75<br>0.75<br>2<br>3 |
| <b>Operating current (FLA) / for three-phase squirrel cage motors</b> <ul style="list-style-type: none"><li>• at 480 V / rated value</li><li>• at 600 V / rated value</li></ul>                                                                                                                                                                                                                                                                                                           | A<br>A                               | 3.4<br>3.9                                   |

**Certificates/approvals:**

| General Product Approval | For use in hazardous locations | Declaration of Conformity | Test Certificates |
|--------------------------|--------------------------------|---------------------------|-------------------|
|--------------------------|--------------------------------|---------------------------|-------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Shipping Approval other



[other](#)

#### 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:

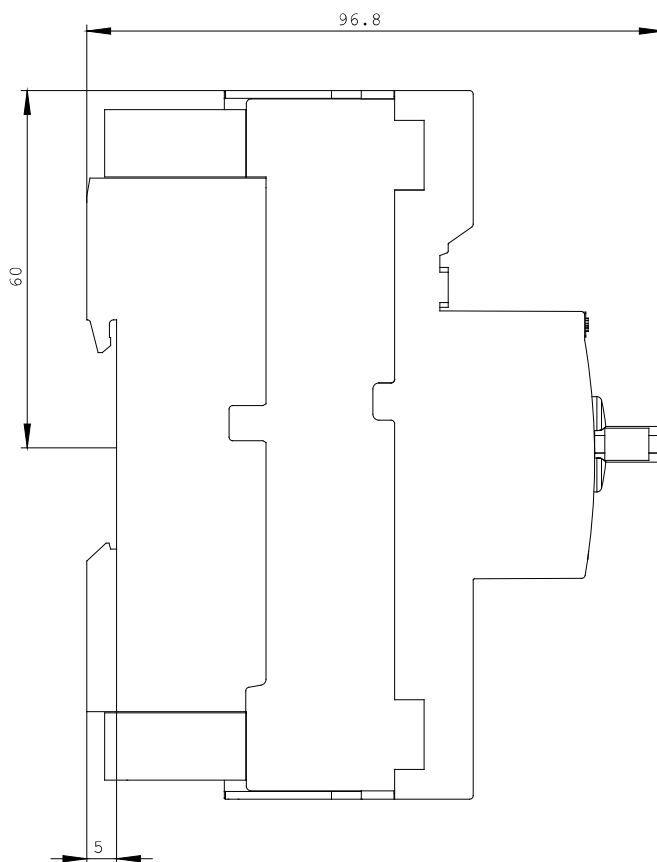
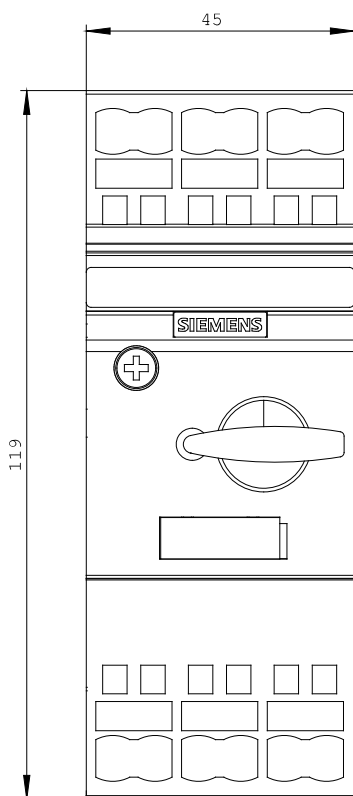
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RV2021-1EA20/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RV2021-1EA20](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RV2021-1EA20)



last change:

Feb 14, 2013