



CIRCUIT-BREAKER, SIZE S2,  
A-RELEASE 40...50 A, N-RELEASE 650 A,  
MOTOR PROTECTION, CLASS 20,  
SCREW CONNECTION,  
STANDARD BREAKING CAPACITY

### General technical data:

|                                                        |   |                 |
|--------------------------------------------------------|---|-----------------|
| product brand name                                     |   | SIRIUS          |
| product designation                                    |   | circuit breaker |
| Size of the circuit-breaker                            |   | S2              |
| 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                               |   | Yes             |
| Impulse voltage resistance / rated value               | V | 6,000           |
| Protection class IP / on the front                     |   | IP20            |
| Protection against electrical shock                    |   | finger-safe     |

|                                                                                                                                          |                |                                           |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------------------------|
| Installation altitude / at a height over sea level / maximum                                                                             | m              | 2,000                                     |
| Resistance against shock                                                                                                                 |                | 25g / 11 ms                               |
| Ambient temperature <ul style="list-style-type: none"> <li>during transport</li> <li>during storage</li> <li>during operating</li> </ul> | °C<br>°C<br>°C | -50 ... +80<br>-50 ... +80<br>-20 ... +70 |
| Active power loss / total / typical                                                                                                      | W              | 20                                        |

| Main circuit:                                                                  |     |        |
|--------------------------------------------------------------------------------|-----|--------|
| Operating voltage / rated value                                                | V   | 690    |
| type of voltage                                                                |     | AC/DC  |
| Service power / at AC-3 / at 400 V / rated value                               | kW  | 22     |
| Operational current / at AC-3 / at 400 V / rated value                         | A   | 50     |
| Mechanical operating cycles as operating time / of the main contacts / typical |     | 50,000 |
| Frequency of operation / at AC-3 / according to IEC 60947-6-2                  | 1/h | 15     |

| Auxiliary circuit:                                      |  |   |
|---------------------------------------------------------|--|---|
| Number of change-over switches / for auxiliary contacts |  | 0 |

| Protection function:                                                                                                                                                                                      |                |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|
| Trip class                                                                                                                                                                                                |                | CLASS 20      |
| Adjustable response current / of the current-dependent overload release                                                                                                                                   | A              | 40 ... 50     |
| Breaking capacity limit short-circuit current (I <sub>cu</sub> ) <ul style="list-style-type: none"> <li>at 400 V / rated value</li> <li>at 500 V / rated value</li> <li>at 690 V / rated value</li> </ul> | kA<br>kA<br>kA | 50<br>10<br>4 |

| Installation/mounting/dimensions: |    |                                                                                        |
|-----------------------------------|----|----------------------------------------------------------------------------------------|
| Type of mounting                  |    | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 |
| mounting position                 |    | any                                                                                    |
| Depth                             | mm | 149                                                                                    |
| Height                            | mm | 140                                                                                    |
| Width                             | mm | 55                                                                                     |

| Connections:                                                                                                                                                      |  |                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------|
| Arrangement of electrical connectors / for main current circuit                                                                                                   |  | front side                                                      |
| Design of the electrical connection <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control current circuit</li> </ul> |  | screw-type terminals with box terminals<br>screw-type terminals |
| Type of the connectable conductor cross-section                                                                                                                   |  |                                                                 |

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

2x (0.75 ... 16 mm<sup>2</sup>)

2x (0.75 ... 16 mm<sup>2</sup>), 0.75 ... 25 mm<sup>2</sup>

2x (0.75 ... 25 mm<sup>2</sup>), 0.75 ... 35 mm<sup>2</sup>

2x (18 ... 2), 1x (18 ... 2)

#### Certificates/approvals:

##### General Product Approval



GOST



UL



EG-Konf.

##### Test Certificates

[Special Test Certificate](#)

#### Shipping Approval



ABS



BUREAU  
VERITAS



DNV



GL



RMRS

#### other

[Confirmation](#)

[Declaration of  
Conformity](#)

[other](#)

[Environmental  
Confirmations](#)

#### 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:

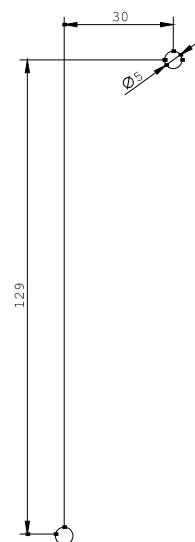
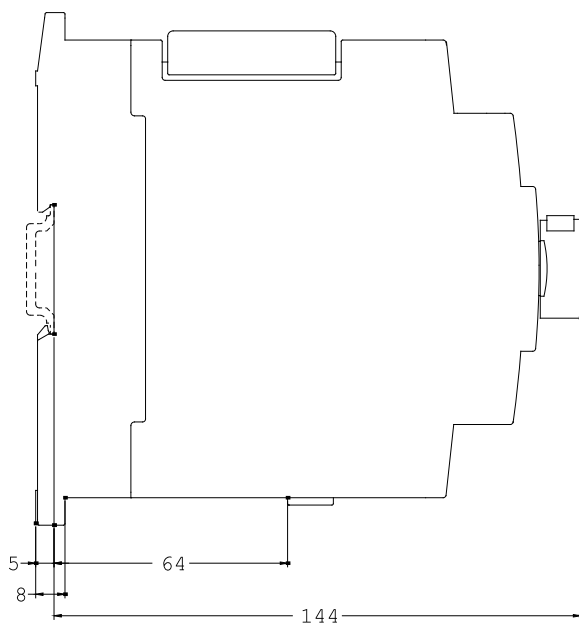
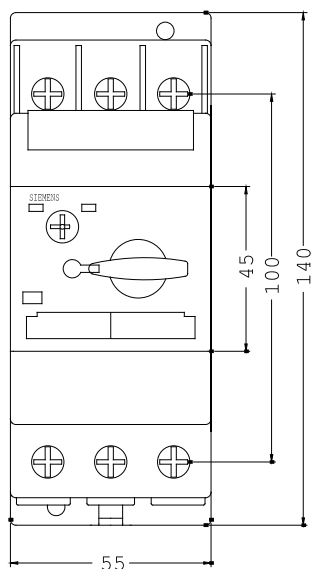
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RV1031-4HB10/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RV1031-4HB10](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RV1031-4HB10)



last change:

Feb 11, 2013