



Withdrawable circuit breaker with guide frame, IEC 60947-2, frame size 1, 3-poles,  $I_n=1600\text{A}$  up to 690V AC 50/60Hz, breaking capacity S  $I_{cu}=66/50\text{kA}$  at 500/690V, Trip unit ETU600 LSIG upgrade ready , colordisplay, bluetooth and USB interface, Protection LT, ST, INST, GFx, N-protection required an external N-sensor, incl. trip alarm switch (1xCO), rear connection, horizontal top, flange bottom, guide frame with shutter and w/o position signalling switch, able to communication, Manual operating mechanism with mechanical closing, without Spring charging motor, Ready-to-close signal. switch, Auxiliary switches 2NO+2NC, without Closing coil (CC), manual operating mechanism with mechanical closing, without Remote trip alarm reset coil (RR), without 2nd shunt trip, without 1st Shunt trip Option F15 = COM150 COM module Modbus RTU breaker internal

| Model   |  |
|---|--|
| product brand name  | SENTRON  |
| product designation   | Air circuit breaker  |
| suitability for use   | circuit breaker  |
| size of the circuit-breaker   | 1  |
| number of poles   | 3  |
| position / of neutral conductor   | no internal N-conductor  |
| fastening method  | withdrawable circuit breaker                                     |
| design of the product   | AC application   |
| type of the driving mechanism   | manual operating mechanism with mechanical or electrical closing |
| design of the electronic trip unit  | ETU600 LSIG  |
| Weight  | 76.014 kg  |
| Net Weight  | 63.014 kg  |
| General technical data  |  |
| insulation voltage / rated value  | 1000 V   |
| operating voltage / at AC / at 50/60 Hz / rated value                         | 690 V  |
| power loss [W] / maximum  | 310 W  |
| Current   |  |
| continuous current / rated value / maximum                                    | 1600 A   |
| continuous current / rated value  | 1600 A   |
| operational current   |  |
| • at 40 °C / rated value  | 1600 A   |
| • at 45 °C / rated value  | 1600 A   |
| • at 50 °C / rated value  | 1600 A   |
| • at 55 °C / rated value  | 1600 A   |
| • at 60 °C / rated value  | 1600 A   |
| • at 70 °C / rated value  | 1490 A   |
| Switching capacity and short-time withstand current, according to IEC 60947-2 |  |
| switching capacity class of the circuit breaker                               | S  |
| maximum short-circuit current breaking capacity ( $I_{cu}$ )                  |  |
| • at 500 V / rated value  | 66 kA  |
| • at 690 V / rated value  | 50 kA  |
| operating short-circuit current breaking capacity ( $I_{cs}$ )                |  |
| • at 500 V / rated value  | 66 kA  |
| • at 690 V / rated value  | 50 kA  |
| short-circuit current making capacity ( $I_{cm}$ )                            |  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• at 500 V / rated value</li> </ul>  | 145 kA                                       |
| <ul style="list-style-type: none"> <li>• at 690 V / rated value</li> </ul>  | 105 kA                                       |
| short-time withstand current (I <sub>cw</sub> ) / at 500 V AC   |  |
| <ul style="list-style-type: none"> <li>• for 0.5 s / rated value</li> </ul>   | 66 kA  |
| <ul style="list-style-type: none"> <li>• for 1 s / rated value</li> </ul>   | 66 kA  |
| <ul style="list-style-type: none"> <li>• for 2 s / rated value</li> </ul>   | 45 kA  |
| <ul style="list-style-type: none"> <li>• for 3 s / rated value</li> </ul>   | 35 kA  |
| short-time withstand current (I <sub>cw</sub> ) / at 690 V AC   |  |
| <ul style="list-style-type: none"> <li>• for 0.5 s / rated value</li> </ul>   | 50 kA  |
| <ul style="list-style-type: none"> <li>• for 1 s / rated value</li> </ul>   | 50 kA  |
| <ul style="list-style-type: none"> <li>• for 2 s / rated value</li> </ul>   | 45 kA  |
| <ul style="list-style-type: none"> <li>• for 3 s / rated value</li> </ul>   | 35 kA  |
| <b>Electronic release unit</b>  |  |
| product feature   |  |
| <ul style="list-style-type: none"> <li>• upgradable</li> </ul>  | Yes  |
| <ul style="list-style-type: none"> <li>• Bluetooth and USB interface</li> </ul>   | Yes  |
| <ul style="list-style-type: none"> <li>• decoder for basic protection functions</li> </ul>                                    | Yes  |
| <ul style="list-style-type: none"> <li>• display and function keys</li> </ul>   | Yes  |
| <ul style="list-style-type: none"> <li>• SENTRON powerconfig configuration software</li> </ul>                                | Yes  |
| <b>Basic protection functions</b>   |  |
| product feature / for L-tripping  |  |
| <ul style="list-style-type: none"> <li>• can be switched on/off</li> </ul>  | Yes  |
| <ul style="list-style-type: none"> <li>• selectable characteristic function</li> </ul>  | Yes  |
| <ul style="list-style-type: none"> <li>• decoder and infinite adjustability are selectable with eSet</li> </ul>               | Yes  |
| set values setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic                           | 0.5; 0.6; 0.7; 0.75; 0.8; 0.85; 0.9; 0.95; 1 |
| reference value setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic                      | x I <sub>n</sub>                             |
| set values delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic                                | 1;2;5;8;10;14;17;21;25                       |
| reference value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic                           | s  |
| set values setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / for eSet                | 0.4-1;0.001                                  |
| adjustable absolute value setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / for eSet |  |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>   | 640 A  |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>   | 1600 A                                       |
| set values delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / for eSet                     | 0.5-30;0.001                                 |
| set values setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>4t</sub> characteristic / for eSet                | 0.4-1;0.001                                  |
| set values delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>4t</sub> characteristic / for eSet                     | 0.5-5;0.001                                  |
| adjustable absolute value setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>4t</sub> characteristic / for eSet |  |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>   | 640 A  |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>   | 1600 A                                       |
| <b>L: Overload protection N-conductor</b>   |  |
| product feature / with neutral conductor protection / can be switched on/off  | Yes  |
| setting values setting current (I <sub>nN</sub> ) / for N-tripping  | 0.2-2;0.001                                  |
| reference value setting current (I <sub>nN</sub> ) / for N-tripping   | x I <sub>n</sub>                             |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping  |  |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>   | 320 A  |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>   | 3200 A                                       |
| <b>S: delayed short-circuit protection ST</b>   |  |
| product feature / for S-tripping  |  |
| <ul style="list-style-type: none"> <li>• independent of direction / can be switched on/off</li> </ul>                         | Yes  |
| <ul style="list-style-type: none"> <li>• independent of direction / selectable characteristic function</li> </ul>             | Yes  |
| <ul style="list-style-type: none"> <li>• decoder and infinite adjustability are selectable with eSet</li> </ul>               | Yes  |
| <b>S: delayed short-circuit protection ST, settings values I<sub>0t</sub></b>   |  |

|  |                        |
|--|------------------------|
| set values setting current (I <sub>sd</sub> ) / for S-tripping / with I0t characteristic                                       | 1.5;2;2.5;3;4;5;6;8;10 |
| reference value setting current (I <sub>sd</sub> ) / for S-tripping / with I0t characteristic                                  | x I <sub>r</sub>       |
| set values delay time (t <sub>sd</sub> ) / for S-tripping / with I0t characteristic  | 0.08;0.15;0.22;0.3;0.4 |
| reference value delay time (t <sub>sd</sub> ) / for S-tripping / with I0t characteristic                                       | s                      |
| set values setting current (I <sub>sd</sub> ) / for S-tripping / with I0t characteristic / for eSet / independent of direction | 0.6-10;0.001           |
| adjustable absolute value setting current (I <sub>sd</sub> )   |                        |
| • for S-tripping / with I0t characteristic / for eSet / independent of direction / minimum                                     | 960 A                  |
| • at 500 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum                          | 52.8 kA                |
| • at 690 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum                          | 40 kA                  |
| set values delay time (t <sub>sd</sub> ) / for S-tripping / with I0t characteristic / for eSet / independent of direction      | 0.02-0.4;0.001         |
| <b>S: delayed short-circuit protection ST, settings values I2t</b>   |                        |
| set values setting current (I <sub>sd</sub> ) / for S-tripping / with I2t characteristic                                       | 1.5;2;2.5;3;4;5;6;8;10 |
| reference value setting current (I <sub>sd</sub> ) / for S-tripping / with I2t characteristic                                  | x I <sub>r</sub>       |
| set values delay time (t <sub>sd</sub> ) / for S-tripping / with I2t characteristic  | 0.1;0.2;0.3;0.4        |
| set values setting current (I <sub>sd</sub> ) / for S-tripping / with I2t characteristic / for eSet / independent of direction | 0.6-10;0.001           |
| adjustable absolute value setting current (I <sub>sd</sub> )   |                        |
| • for S-tripping / with I2t characteristic / for eSet / independent of direction / minimum                                     | 960 A                  |
| • at 500 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum                          | 52.8 kA                |
| • at 690 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum                          | 40 kA                  |
| set values delay time (t <sub>sd</sub> ) / for S-tripping / with I2t characteristic / for eSet / independent of direction      | 0.02-0.4; 0.001        |
| product feature / for I-tripping   |                        |
| • can be switched on/off   | Yes                    |
| • decoder and infinite adjustability are selectable (with eSet)  | Yes                    |
| set values setting current (I <sub>i</sub> ) / for I-tripping  | 1.5;2;3;4;6;8;10;12;15 |
| reference value setting current (I <sub>i</sub> ) / for I-tripping   | x I <sub>n</sub>       |
| tripping factor setting current (I <sub>imax</sub> ) / for I-tripping  | 0.8                    |
| reference value setting current (I <sub>imax</sub> ) / for I-tripping  | x I <sub>cs</sub>      |
| set values setting current (I <sub>i</sub> ) / for I-tripping / for eSet   | 1.5-15;0.001           |
| adjustable absolute value setting current (I <sub>i</sub> )  |                        |
| • for I-tripping / for eSet / minimum  | 2400 A                 |
| • at 500 V / for I-tripping / for eSet / maximum   | 52.8 kA                |
| • at 690 V / for I-tripping / for eSet / maximum   | 40 kA                  |
| <b>G: ground fault GF</b>  |                        |
| product feature / for G-tripping   |                        |
| • can be switched on/off   | Yes                    |
| • selectable characteristic function   | Yes                    |
| set values setting current (I <sub>g</sub> ) / for G-tripping / with I0t characteristic  | 0.0625-1.25;0.001      |
| reference value setting current (I <sub>g</sub> ) / for G-tripping / with I0t characteristic                                   | x I <sub>n</sub>       |
| set values delay time (t <sub>g</sub> ) / for G-tripping / with I0t characteristic   | 0.02-5;0.001           |
| reference value delay time (t <sub>g</sub> ) / for G-tripping / with I0t characteristic  | s                      |
| set values setting current (I <sub>g</sub> ) / for G-tripping / with I2t characteristic  | 0.0625-1.25;0.001      |
| reference value setting current (I <sub>g</sub> ) / for G-tripping / with I2t characteristic                                   | x I <sub>n</sub>       |
| set values delay time (t <sub>g</sub> ) / for G-tripping / with I2t characteristic   | 0.02-30; 0.001         |
| reference value delay time (t <sub>g</sub> ) / for G-tripping / with I2t   | s                      |

|   |  |
|---|--|
| characteristic  |  |
| <b>Further protective functions</b>                             |  |
| protection function   |  |
| • maintenance mode DAS+   | Yes  |
| <b>Measuring functions</b>                                      |  |
| measurement function  |  |
| • current measurement   | Yes  |
| <b>Communication</b>  |  |
| communication function / prepared for communication (Ready4COM) | Yes  |
| communication function  | Yes  |
| <b>Service Life</b>   |  |
| mechanical service life (operating cycles)                      |  |
| • without support / typical                                     | 15000  |
| • with support / typical  | 30000  |
| electrical endurance (operating cycles)                         |  |
| • at 690 V / without support / typical                          | 10000  |
| • at 690 V / with support / typical                             | 30000  |
| <b>Dimensions</b>   |  |
| height  | 468 mm   |
| width   | 320 mm   |
| depth   | 471 mm   |
| <b>Main connection</b>  |  |
| arrangement of electrical connectors / for main current circuit | main connection on the rear, horizontal on top / connecting flange at the bottom |
| <b>Auxiliary circuit</b>  |  |
| design of the auxiliary switch                                  | 2 NO + 2 NC  |
| number of NC contacts / for auxiliary contacts                  | 2  |
| number of NO contacts / for auxiliary contacts                  | 2  |
| number of CO contacts / for auxiliary contacts                  | 0  |
| <b>Internal accessories</b>                                     |  |
| product component   |  |
| • undervoltage release  | No   |
| • voltage trigger   | No   |
| • trip indicator  | Yes  |
| • motor drive   | No   |
| <b>Environmental conditions</b>                                 |  |
| protection class IP / on the front                              | IP20   |
| ambient temperature / during operation                          |  |
| • minimum   | -40 °C   |
| • maximum   | 70 °C  |
| ambient temperature / during storage                            |  |
| • minimum   | -40 °C   |
| • maximum   | 80 °C  |
| <b>Environmental footprint</b>                                  |  |
| Siemens Eco Profile (SEP)                                       | Siemens EcoTech  |
| <b>Certificates</b>   |  |
| reference code  |  |
| • according to IEC 81346-2                                      | Q  |
| <b>Approvals / Certificates</b>                                 |  |
| <b>General Product Approval</b>                                 |  |



[Confirmation](#)



EG-Konf.



EMV

Radio Equipment Type Approval Certificate

Test Certificates



[Miscellaneous](#)



[Miscellaneous](#)

[FCC](#)

[Miscellaneous](#)

Test Certificates

Maritime application

[Special Test Certificate](#)



other

Dangerous goods

Environment

[Manufacturer Declaration](#)



[Confirmation](#)

[Transport Information](#)



Environment



Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

Information- and Downloadcenter (catalogues, leaflets,...)

<https://www.siemens.com/energy-automation>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3WA1116-3CF38-0AA0-Z F15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3WA1116-3CF38-0AA0-Z F15>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3WA1116-3CF38-0AA0-Z F15](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1116-3CF38-0AA0-Z F15)

CAX-Online-Generator

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





