

Siemens  
EcoTech



circuit breaker 3VA6 UL Frame 250 breaking capacity class L 150 kA @ 480 V 3-pole, line protection ETU850, LSI,  $I_n=100$  A overload protection  $I_r=40$  A...100 A short-circuit protection  $I_{sd}=0.6..10 \times I_n$ ,  $I_i=1.5..12 \times I_n$  neutral conductor protection optionally with external current transformer, up to 160% without connection



| Model  |                             |
|--|-----------------------------|
| product brand name   | SENTRON                     |
| product designation  | Molded-case circuit breaker |
| product designation / according to UL file   | LFAE                        |
| design of the product  | System protection           |
| design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| design of the overcurrent release  | ETU850                      |
| protection function of the overcurrent release   | LSI                         |
| number of poles  | 3                           |
| General technical data   |                             |
| insulation voltage / rated value   | 800 V                       |
| operating voltage / at AC / rated value  | 690 V                       |
| power loss [W] / maximum   | 6.7 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 2.23 W                      |
| mechanical service life (operating cycles) / typical   | 25 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V   | 12 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 690 V   | 8 400                       |
| electrical endurance (operating cycles) / at 480 V   | 12 000                      |
| electrical endurance (operating cycles) / at 600 V   | 8 400                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | Yes                         |
| ground-fault monitoring version  | without                     |
| product function   |                             |
| • communication function   | Yes                         |
| • other measurement function   | Yes                         |
| Net Weight   | 2.5 kg                      |
| Current  |                             |
| marking / according to UL 489 / 100%-rated breaker   | No                          |
| operational current  |                             |
| • at 40 °C   | 100 A                       |
| • at 45 °C   | 100 A                       |
| • at 50 °C   | 100 A                       |
| • at 55 °C   | 100 A                       |
| • at 60 °C   | 100 A                       |
| • at 65 °C   | 100 A                       |
| • at 70 °C   | 100 A                       |

**Switching capacity according to IEC 60947**

|  |        |
|--|--------|
| switching capacity class of the circuit breaker                      | L      |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )   |        |
| • at 240 V   | 200 kA |
| • at 415 V   | 150 kA |
| • at 690 V   | 3 kA   |
| operating short-circuit current breaking capacity (I <sub>cs</sub> ) |        |
| • at 240 V   | 200 kA |
| • at 415 V   | 150 kA |
| • at 690 V   | 3 kA   |
| short-circuit current making capacity (I <sub>cm</sub> )             |        |
| • at 240 V   | 440 kA |
| • at 415 V   | 330 kA |
| • at 690 V   | 4.5 kA |

**Switching capacity according to UL 489**

|                           |        |
|---------------------------|--------|
| current breaking capacity |        |
| • at 240 V                | 200 kA |
| • at 480 V                | 150 kA |
| • at 600 V                | 50 kA  |

**Adjustable parameters**

|   |                             |
|---|-----------------------------|
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic |                             |
| • minimum   | 40 A                        |
| • maximum   | 100 A                       |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic     |                             |
| • minimum   | 0.5 s                       |
| • maximum   | 25 s                        |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>0t</sub> characteristic    |                             |
| • minimum   | 60 A                        |
| • maximum   | 1 000 A                     |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>2t</sub> characteristic    |                             |
| • minimum   | 60 A                        |
| • maximum   | 1 000 A                     |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>0t</sub> characteristic    |                             |
| • minimum   | 0.05 s                      |
| • maximum   | 0.5 s                       |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>2t</sub> characteristic    |                             |
| • minimum   | 0.05 s                      |
| • maximum   | 0.5 s                       |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                      |                             |
| • minimum   | 150 A                       |
| • maximum   | 1 200 A                     |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping  |                             |
| • minimum   | 0 A                         |
| • maximum   | 0 A                         |
| design of the N-conductor protection  | adjustable OFF; 20% to 160% |
| product function / grounding protection   | No                          |

**Mechanical Design**

|                        |         |
|------------------------|---------|
| product component      |         |
| • undervoltage release | No      |
| • voltage trigger      | No      |
| • trip indicator       | No      |
| height [in]            | 7.8 in  |
| height                 | 198 mm  |
| width [in]             | 4.13 in |
| width                  | 105 mm  |
| depth [in]             | 3.39 in |

|   |                    |
|---|--------------------|
| depth   | 86 mm              |
| <b>Connections</b>  |                    |
| arrangement of electrical connectors / for main current circuit | Without connection |
| type of electrical connection / for main current circuit        | Without            |
| <b>Auxiliary circuit</b>  |                    |
| number of CO contacts / for auxiliary contacts                  | 0                  |
| <b>Accessories</b>  |                    |
| product extension / optional / motor drive                      | Yes                |
| <b>Environmental conditions</b>                                 |                    |
| protection class IP / on the front                              | IP40               |
| ambient temperature   |                    |
| • during operation / minimum                                    | -25 °C             |
| • during operation / maximum                                    | 70 °C              |
| • during storage / minimum                                      | -40 °C             |
| • during storage / maximum                                      | 80 °C              |
| <b>Environmental footprint</b>                                  |                    |
| Environmental Product Declaration (EPD)                         | Yes                |
| global warming potential [CO2 eq] / total                       | 61.814 kg          |
| global warming potential [CO2 eq] / during manufacturing        | 14.6 kg            |
| global warming potential [CO2 eq] / during operation            | 48.9 kg            |
| global warming potential [CO2 eq] / after end of life           | -2.2 kg            |
| Siemens Eco Profile (SEP)                                       | Siemens EcoTech    |
| reference code / according to IEC 81346-2                       | Q                  |

#### Approvals / Certificates

##### General Product Approval



##### General Product Approval

##### EMV

##### Test Certificates

##### Maritime application

##### Miscellaneous



##### [Type Test Certificates/Test Report](#)



##### Maritime application

##### other

##### Dangerous goods

##### Environment



##### [Confirmation](#)

##### [Miscellaneous](#)

##### [Transport Information](#)



##### Environment

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##### [Environmental Confirmations](#)

#### 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 (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

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

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6210-8KP31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6210-8KP31-0AA0>

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

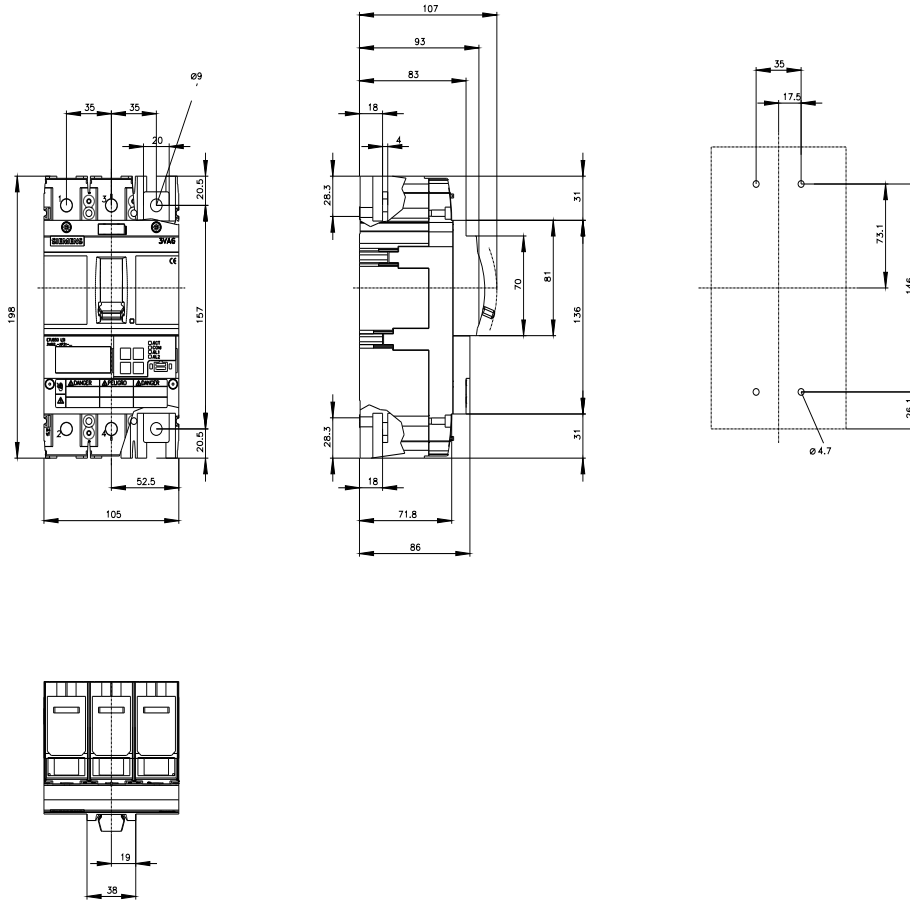
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6210-8KP31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6210-8KP31-0AA0)

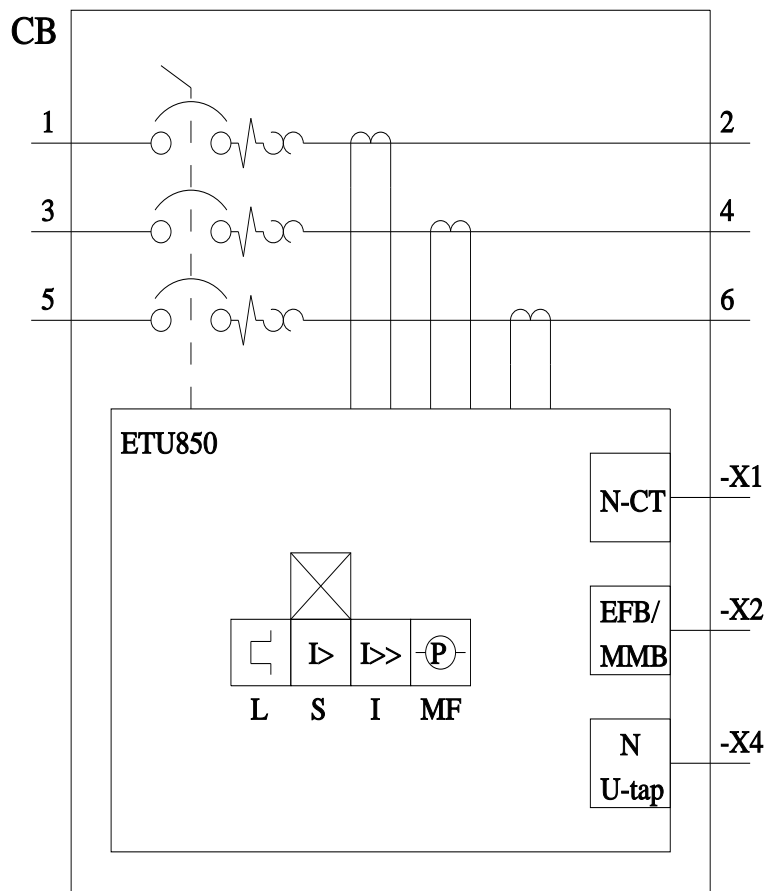
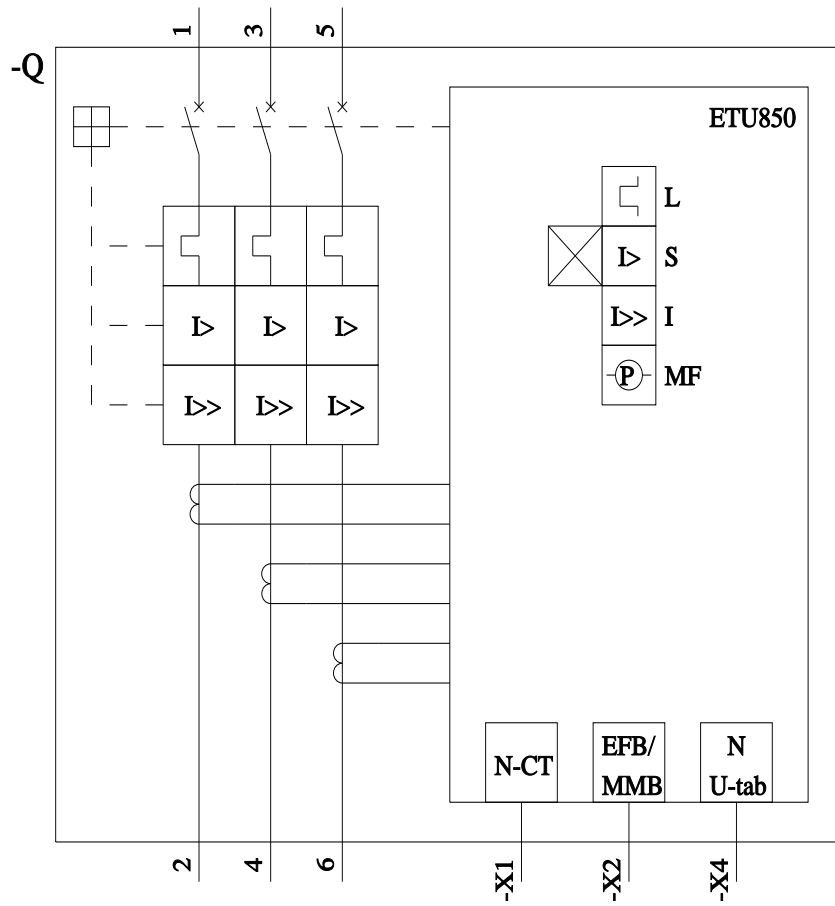
CAX-Online-Generator

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

Tender specifications

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





last modified:

5/2/2025

