



circuit breaker 3VA6 UL frame 2000 breaking capacity class M 35kA @ 480 V 3-pole, line protection ETU860, LSIG, In=2000A overload protection Ir=800A - 2000A short circuit protection Isd=0,6-10x In, li=1,5-6x In w/o connection Product is not marked with CE, not for use in Europe (EU) and in IEC applications

| Model                                                                                                                      |                                             |
|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| product brand name                                                                                                         | SENTRON                                     |
| product designation                                                                                                        | Molded-case circuit breaker                 |
| product designation / according to UL file                                                                                 | MRAE                                        |
| 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                                                                                          | ETU860                                      |
| protection function of the overcurrent release                                                                             | LSIG                                        |
| number of poles                                                                                                            | 3                                           |
| General technical data                                                                                                     |                                             |
| operating voltage / at AC / rated value                                                                                    | 600 V                                       |
| power loss [W] / maximum                                                                                                   | 676 W                                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 676 W                                       |
| mechanical service life (operating cycles) / typical                                                                       | 3 000                                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 500                                         |
| electrical endurance (operating cycles) / at 600 V                                                                         | 500                                         |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | Yes                                         |
| ground-fault monitoring version                                                                                            | Summation current formation L + N-conductor |
| product function                                                                                                           |                                             |
| • communication function                                                                                                   | Yes                                         |
| • other measurement function                                                                                               | Yes                                         |
| Net Weight                                                                                                                 | 26.025 kg                                   |
| Current                                                                                                                    |                                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                                          |
| operational current                                                                                                        |                                             |
| • at 40 °C                                                                                                                 | 2 000 A                                     |
| Switching capacity according to IEC 60947                                                                                  |                                             |
| switching capacity class of the circuit breaker                                                                            | M                                           |
| Switching capacity according to UL 489                                                                                     |                                             |
| current breaking capacity                                                                                                  |                                             |
| • at 240 V                                                                                                                 | 85 kA                                       |
| • at 480 V                                                                                                                 | 35 kA                                       |
| • at 600 V                                                                                                                 | 25 kA                                       |
| Adjustable parameters                                                                                                      |                                             |
| adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic                                   |                                             |
| • minimum                                                                                                                  | 800 A                                       |

|                                                                                           |                             |
|-------------------------------------------------------------------------------------------|-----------------------------|
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 2 000 A                     |
| adjustable response value delay time (tr) / for L-tripping / with I2t characteristic      |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 2.5 s                       |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 30 s                        |
| adjustable response value setting current (Isd) / of S-trip / with I0t characteristic     |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 1 200 A                     |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 12 000 A                    |
| adjustable response value setting current (Isd) / of S-trip / with I2t characteristic     |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 1 200 A                     |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 12 000 A                    |
| adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic     |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 0.05 s                      |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 0.5 s                       |
| adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic     |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 0.05 s                      |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 0.5 s                       |
| adjustable response value setting current (Ii) / for I-tripping                           |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 3 000 A                     |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 12 000 A                    |
| adjustable current response value current / for G-tripping / with standard characteristic |                             |
| <ul style="list-style-type: none"> <li>• initial value</li> </ul>                         | 400 A                       |
| <ul style="list-style-type: none"> <li>• full-scale value</li> </ul>                      | 1 200 A                     |
| adjustable response value delay time (tg) / for G-tripping / with I0t characteristic      |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 0.05 s                      |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 0.8 s                       |
| adjustable response value setting current (Ig) / for G-tripping / with I2t characteristic |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 400 A                       |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 1 200 A                     |
| adjustable response value delay time (tg) / for G-tripping / with I2t characteristic      |                             |
| <ul style="list-style-type: none"> <li>• minimum</li> </ul>                               | 0.05 s                      |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>                               | 0.8 s                       |
| design of the N-conductor protection                                                      | adjustable OFF; 20% to 160% |
| product function / grounding protection                                                   | Yes                         |
| <b>Mechanical Design</b>                                                                  |                             |
| product component                                                                         |                             |
| <ul style="list-style-type: none"> <li>• undervoltage release</li> </ul>                  | No                          |
| <ul style="list-style-type: none"> <li>• trip indicator</li> </ul>                        | No                          |
| height [in]                                                                               | 8.14 in                     |
| height                                                                                    | 206.9 mm                    |
| width [in]                                                                                | 8.99 in                     |
| width                                                                                     | 228.4 mm                    |
| depth [in]                                                                                | 16 in                       |
| depth                                                                                     | 406.4 mm                    |
| <b>Connections</b>                                                                        |                             |
| type of electrical connection / for main current circuit                                  | without terminals           |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)        | silver                      |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)     | silver                      |
| <b>Auxiliary circuit</b>                                                                  |                             |
| number of CO contacts / for auxiliary contacts                                            | 0                           |
| <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  |
| reference code / according to IEC 81346-2 | F      |

#### Approvals / Certificates

|                          |     |
|--------------------------|-----|
| General Product Approval | EMV |
|--------------------------|-----|

[Confirmation](#)



[Miscellaneous](#)



|       |                 |             |
|-------|-----------------|-------------|
| other | Dangerous goods | Environment |
|-------|-----------------|-------------|

[Confirmation](#)

[Miscellaneous](#)

[Transport Information](#)

[Environmental Con-  
firmations](#)

#### 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,...)

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

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

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6920-5KQ31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6920-5KQ31-0AA0>

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

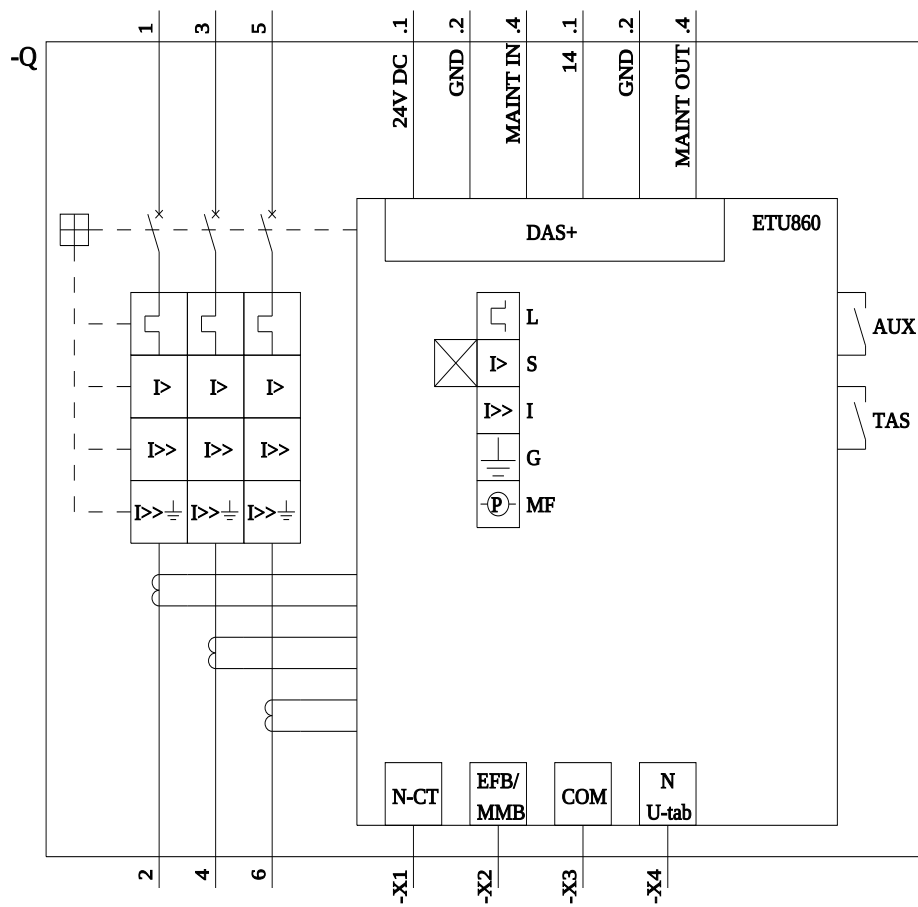
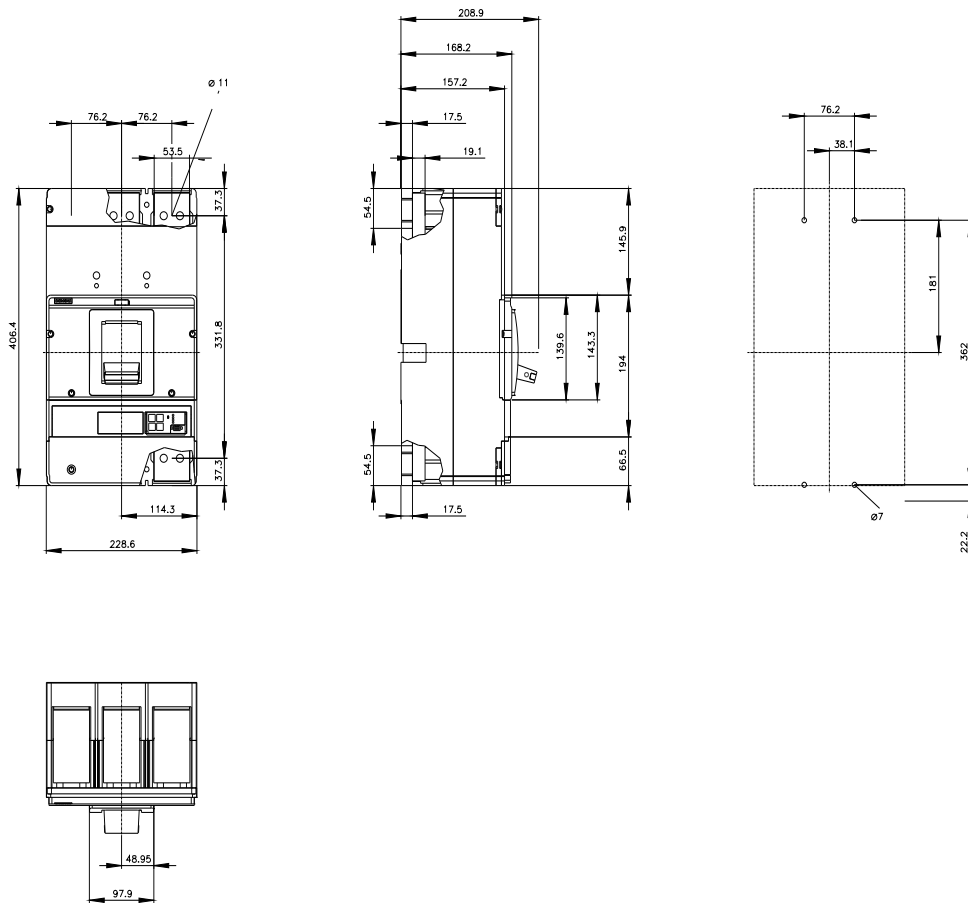
[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6920-5KQ31-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6920-5KQ31-0AA0)

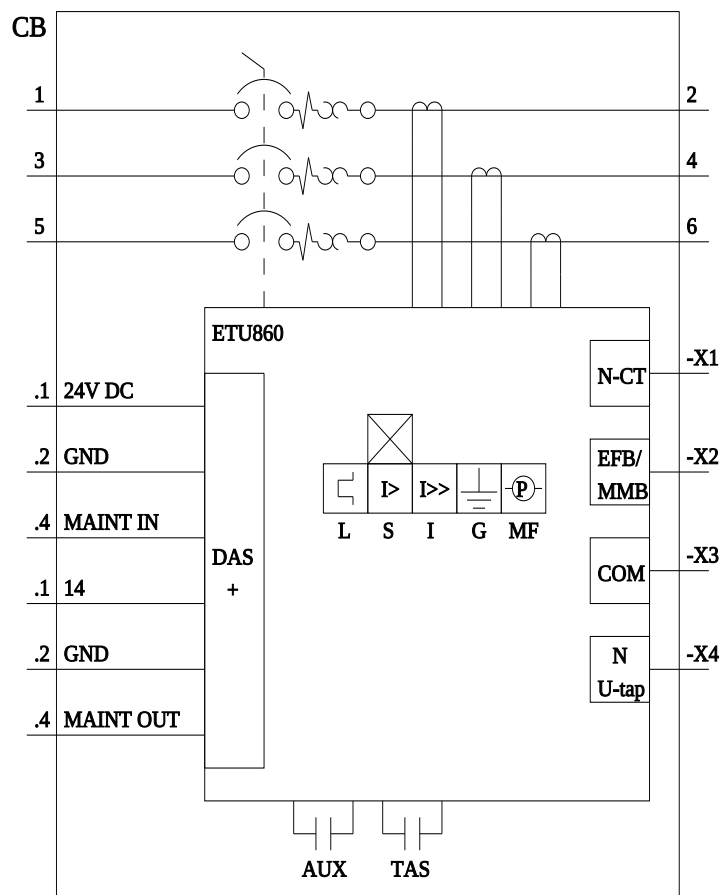
##### CAX-Online-Generator

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

##### Tender specifications

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





last modified:

3/31/2025

