



circuit breaker 3VA6 UL frame 1600 breaking capacity class C 100kA @ 480 V 3-pole, line protection ETU360, LSIG,  $I_n=1600A$  100%-rated, overload protection  $I_r=600A - 1600A$  short circuit protection  $I_{sd}=1,5-10 \times I_n$ ,  $I_i=1,5-7,5 \times I_n$  w/o connection

| Model                                                                                                                      |                                             |
|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| product brand name                                                                                                         | SENTRON                                     |
| product designation                                                                                                        | Molded-case circuit breaker                 |
| product designation / according to UL file                                                                                 | CPAE                                        |
| 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                                                                                          | ETU360                                      |
| protection function of the overcurrent release                                                                             | LSIG                                        |
| number of poles                                                                                                            | 3                                           |
| General technical data                                                                                                     |                                             |
| insulation voltage / rated value                                                                                           | 800 V                                       |
| operating voltage / at AC / rated value                                                                                    | 600 V                                       |
| power loss [W] / maximum                                                                                                   | 433 W                                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 433 W                                       |
| mechanical service life (operating cycles) / typical                                                                       | 3 000                                       |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 1 500                                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 500                                         |
| electrical endurance (operating cycles) / at 480 V                                                                         | 1 500                                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 500                                         |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                                          |
| ground-fault monitoring version                                                                                            | Summation current formation L + N-conductor |
| product function                                                                                                           |                                             |
| • communication function                                                                                                   | No                                          |
| • other measurement function                                                                                               | No                                          |
| Net Weight                                                                                                                 | 3.133 kg                                    |
| Current                                                                                                                    |                                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | Yes                                         |
| operational current                                                                                                        |                                             |
| • at 40 °C                                                                                                                 | 1 600 A                                     |
| • at 45 °C                                                                                                                 | 1 600 A                                     |
| • at 50 °C                                                                                                                 | 1 600 A                                     |
| • at 55 °C                                                                                                                 | 1 568 A                                     |
| • at 60 °C                                                                                                                 | 1 536 A                                     |
| • at 65 °C                                                                                                                 | 1 504 A                                     |
| • at 70 °C                                                                                                                 | 1 472 A                                     |
| Switching capacity according to IEC 60947                                                                                  |                                             |
| switching capacity class of the circuit breaker                                                                            | C                                           |

|                                                                                                                   |                                            |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                                                |                                            |
| • at 240 V                                                                                                        | 200 kA                                     |
| • at 415 V                                                                                                        | 110 kA                                     |
| • at 690 V                                                                                                        | 35 kA                                      |
| operating short-circuit current breaking capacity (I <sub>cs</sub> )                                              |                                            |
| • at 240 V                                                                                                        | 100 kA                                     |
| • at 415 V                                                                                                        | 55 kA                                      |
| • at 690 V                                                                                                        | 17 kA                                      |
| short-circuit current making capacity (I <sub>cm</sub> )                                                          |                                            |
| • at 240 V                                                                                                        | 440 kA                                     |
| • at 415 V                                                                                                        | 242 kA                                     |
| • at 690 V                                                                                                        | 77 kA                                      |
| <b>Switching capacity according to UL 489</b>                                                                     |                                            |
| current breaking capacity                                                                                         |                                            |
| • at 240 V                                                                                                        | 200 kA                                     |
| • at 480 V                                                                                                        | 100 kA                                     |
| • at 600 V                                                                                                        | 65 kA                                      |
| <b>Adjustable parameters</b>                                                                                      |                                            |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic |                                            |
| • minimum                                                                                                         | 600 A                                      |
| • maximum                                                                                                         | 1 600 A                                    |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic     |                                            |
| • minimum                                                                                                         | 10 s                                       |
| • maximum                                                                                                         | 20 s                                       |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>2t</sub> characteristic    |                                            |
| • minimum                                                                                                         | 2 400 A                                    |
| • maximum                                                                                                         | 16 000 A                                   |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>2t</sub> characteristic    |                                            |
| • minimum                                                                                                         | 0.0001 s                                   |
| • maximum                                                                                                         | 0.4 s                                      |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                      |                                            |
| • minimum                                                                                                         | 12 000 A                                   |
| • maximum                                                                                                         | 12 000 A                                   |
| adjustable current response value current / for G-tripping / with standard characteristic                         |                                            |
| • initial value                                                                                                   | 320 A                                      |
| • full-scale value                                                                                                | 1 200 A                                    |
| adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>0t</sub> characteristic     |                                            |
| • minimum                                                                                                         | 0.1 s                                      |
| • maximum                                                                                                         | 0.3 s                                      |
| design of the N-conductor protection                                                                              | adjustable OFF; 50%; 75%; 100%; 125%; 150% |
| product function / grounding protection                                                                           | Yes                                        |
| <b>Mechanical Design</b>                                                                                          |                                            |
| product component                                                                                                 |                                            |
| • undervoltage release                                                                                            | No                                         |
| • trip indicator                                                                                                  | 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      |
| <b>Approvals / Certificates</b>                                                       |        |
| <b>General Product Approval</b>                                                       |        |



[Confirmation](#)

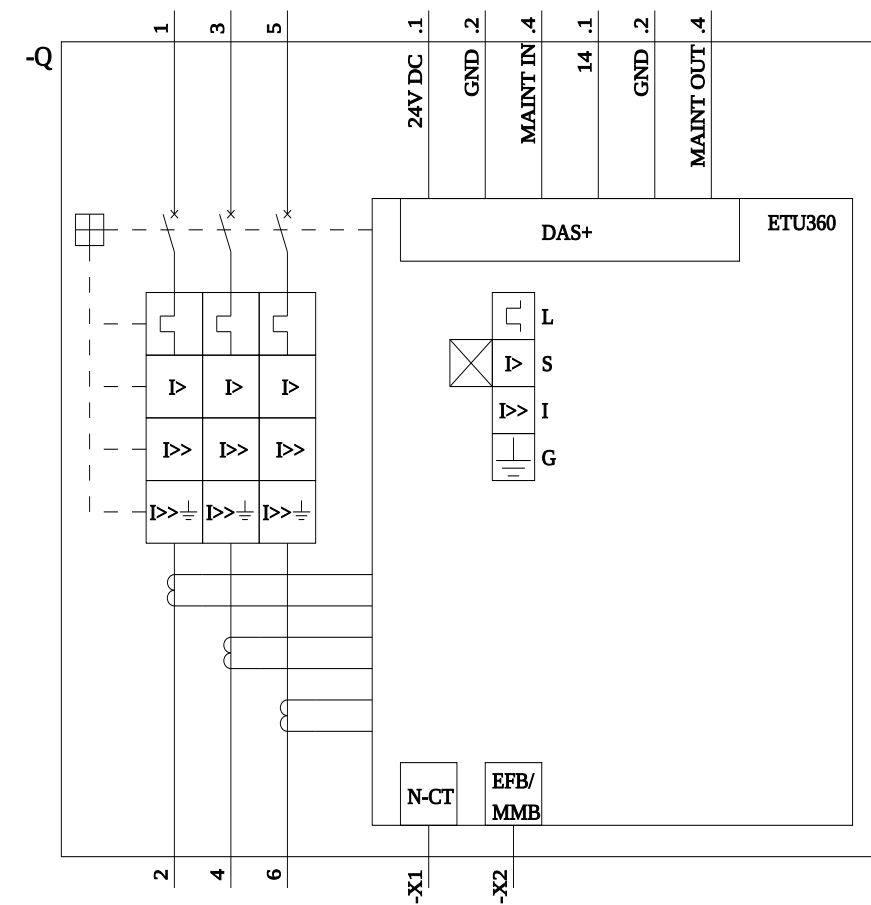


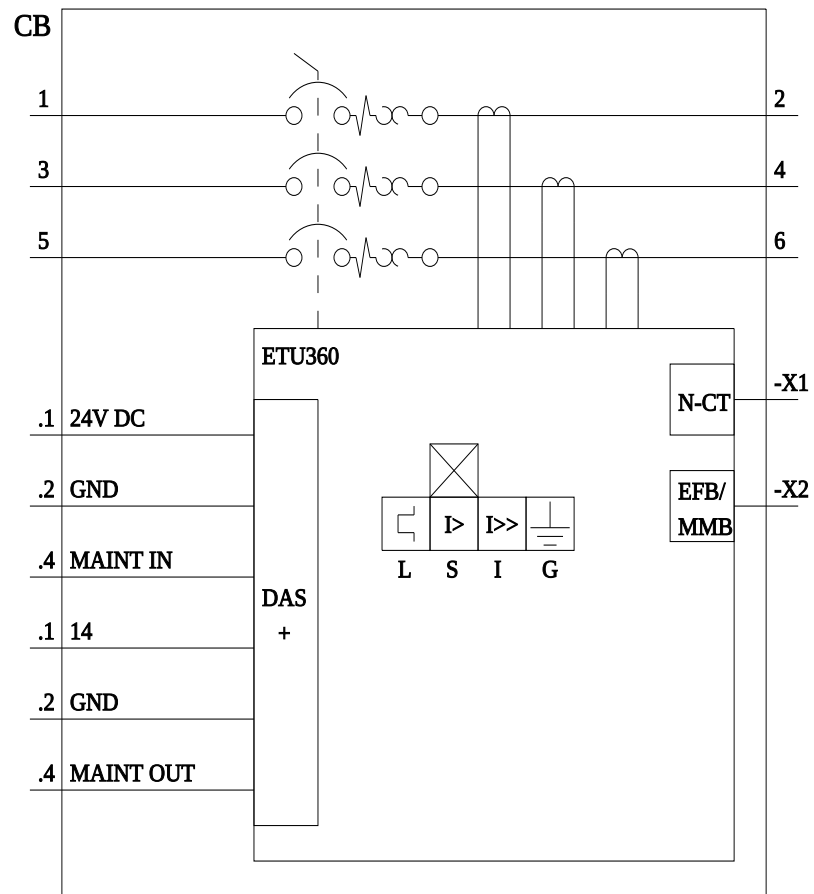
[Miscellaneous](#)

| General Product Approval | EMV | Test Certificates                                  | Maritime application | other                                                      |
|--------------------------|-----|----------------------------------------------------|----------------------|------------------------------------------------------------|
|                          |     | <a href="#">Type Test Certificates/Test Report</a> |                      | <a href="#">Confirmation</a> <a href="#">Miscellaneous</a> |

| Dangerous goods                       | Environment                                 |
|---------------------------------------|---------------------------------------------|
| <a href="#">Transport Information</a> | <a href="#">Environmental Confirmations</a> |

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| <b>Further information</b><br><a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a><br>Information on the packaging<br><a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">https://support.industry.siemens.com/cs/ww/en/view/109995012</a><br>Information for data generation and storage<br>Information- and Downloadcenter (Catalogs, Brochures,...)<br><a href="https://www.siemens.com/lowvoltage/catalogs">https://www.siemens.com/lowvoltage/catalogs</a><br>Industry Mall (Online ordering system)<br><a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6816-7HQ31-2AA0">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6816-7HQ31-2AA0</a><br>Service&Support (Manuals, Certificates, Characteristics, FAQs,...)<br><a href="https://support.industry.siemens.com/cs/ww/en/ps/3VA6816-7HQ31-2AA0">https://support.industry.siemens.com/cs/ww/en/ps/3VA6816-7HQ31-2AA0</a><br>Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)<br><a href="https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6816-7HQ31-2AA0">https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6816-7HQ31-2AA0</a><br>CAx-Online-Generator<br><a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a><br>Tender specifications<br><a href="https://www.siemens.com/specifications">https://www.siemens.com/specifications</a> |
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