

**Siemens**  
**EcoTech**



circuit breaker 3VA6 UL Frame 600 breaking capacity class M 35 kA @ 480 V 4-pole, line protection ETU350, LSI, In=600 A overload protection Ir=240 A...600 A short-circuit protection I<sub>sd</sub>=1.5...9 x I<sub>r</sub>, I<sub>i</sub>=9x I<sub>n</sub> neutral conductor protection adjustable (OFF, 50%, 100%) without connection



| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SETRON                      |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | MLAE                        |
| 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                                                                                          | ETU350                      |
| protection function of the overcurrent release                                                                             | LSI                         |
| number of poles                                                                                                            | 4                           |
| General technical data                                                                                                     |                             |
| insulation voltage / rated value                                                                                           | 800 V                       |
| operating voltage / at AC / rated value                                                                                    | 690 V                       |
| power loss [W] / maximum                                                                                                   | 151 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 50.33 W                     |
| mechanical service life (operating cycles) / typical                                                                       | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 4 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 3 500                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 4 000                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 3 500                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                          |
| ground-fault monitoring version                                                                                            | without                     |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 6.9 kg                      |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                          |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 600 A                       |
| • at 45 °C                                                                                                                 | 600 A                       |
| • at 50 °C                                                                                                                 | 593 A                       |
| • at 55 °C                                                                                                                 | 575 A                       |
| • at 60 °C                                                                                                                 | 557 A                       |
| • at 65 °C                                                                                                                 | 538 A                       |

|                                                                                                                   |                           |
|-------------------------------------------------------------------------------------------------------------------|---------------------------|
| • at 70 °C                                                                                                        | 520 A                     |
| <b>Switching capacity according to IEC 60947</b>                                                                  |                           |
| switching capacity class of the circuit breaker                                                                   | M                         |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                                                |                           |
| • at 240 V                                                                                                        | 85 kA                     |
| • at 415 V                                                                                                        | 55 kA                     |
| • at 690 V                                                                                                        | 6 kA                      |
| operating short-circuit current breaking capacity (I <sub>cs</sub> )                                              |                           |
| • at 240 V                                                                                                        | 85 kA                     |
| • at 415 V                                                                                                        | 55 kA                     |
| • at 690 V                                                                                                        | 6 kA                      |
| short-circuit current making capacity (I <sub>cm</sub> )                                                          |                           |
| • at 240 V                                                                                                        | 187 kA                    |
| • at 415 V                                                                                                        | 121 kA                    |
| • at 690 V                                                                                                        | 9 kA                      |
| <b>Switching capacity according to UL 489</b>                                                                     |                           |
| current breaking capacity                                                                                         |                           |
| • at 240 V                                                                                                        | 100 kA                    |
| • at 480 V                                                                                                        | 35 kA                     |
| • at 600 V                                                                                                        | 18 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                                                                                                         | 250 A                     |
| • maximum                                                                                                         | 600 A                     |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic     |                           |
| • minimum                                                                                                         | 0.5 s                     |
| • maximum                                                                                                         | 15 s                      |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>0t</sub> characteristic    |                           |
| • minimum                                                                                                         | 900 A                     |
| • maximum                                                                                                         | 5 400 A                   |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>2t</sub> characteristic    |                           |
| • minimum                                                                                                         | 900 A                     |
| • maximum                                                                                                         | 5 400 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                                                                                                         | 5 400 A                   |
| • maximum                                                                                                         | 5 400 A                   |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping                                                    |                           |
| • minimum                                                                                                         | 300 A                     |
| • maximum                                                                                                         | 600 A                     |
| design of the N-conductor protection                                                                              | adjustable OFF; 50%; 100% |
| product function / grounding protection                                                                           | No                        |
| <b>Mechanical Design</b>                                                                                          |                           |
| product component                                                                                                 |                           |
| • undervoltage release                                                                                            | No                        |
| • voltage trigger                                                                                                 | No                        |
| • trip indicator                                                                                                  | No                        |
| height [in]                                                                                                       | 9.76 in                   |
| height                                                                                                            | 248 mm                    |
| width [in]                                                                                                        | 7.24 in                   |
| width                                                                                                             | 184 mm                    |
| depth [in]                                                                                                        | 4.33 in                   |
| depth                                                                                                             | 110 mm                    |

| Connections                                                     |                    |
|-----------------------------------------------------------------|--------------------|
| arrangement of electrical connectors / for main current circuit | Without connection |
| type of electrical connection / for main current circuit        | Without            |
| Auxiliary circuit                                               |                    |
| number of CO contacts / for auxiliary contacts                  | 0                  |
| Accessories                                                     |                    |
| product extension / optional / motor drive                      | Yes                |
| Environmental conditions                                        |                    |
| 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              |
| Environmental footprint                                         |                    |
| Environmental Product Declaration (EPD)                         | Yes                |
| global warming potential [CO2 eq] / total                       | 495 kg             |
| global warming potential [CO2 eq] / during manufacturing        | 28.7 kg            |
| global warming potential [CO2 eq] / during operation            | 470 kg             |
| global warming potential [CO2 eq] / after end of life           | -4.07 kg           |
| Siemens Eco Profile (SEP)                                       | Siemens EcoTech    |
| reference code / according to IEC 81346-2                       | Q                  |

#### Approvals / Certificates

##### General Product Approval



[Confirmation](#)



##### General Product Approval

##### EMV

##### Test Certificates



[Miscellaneous](#)



[Type Test Certificates/Test Report](#)

##### Maritime application

##### other



[Confirmation](#)

##### other

##### Dangerous goods

##### Environment

[Miscellaneous](#)

[Transport Information](#)



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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,...)

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

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

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6460-5HN41-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6460-5HN41-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6460-5HN41-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6460-5HN41-0AA0)

CAX-Online-Generator

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

Tender specifications

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





