



circuit breaker 3VA5 UL Frame 125 breaking capacity class M 35 kA @ 480 V 3-pole, line protection TM230, FTAM, In=60 A overload protection Ir=60 A permanently set short-circuit protection Ii=5...10 x In without connection

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SETRON                      |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | MEAS                        |
| 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 load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type)                      | No                          |
| design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)                                | No                          |
| design of the overcurrent release                                                                                          | TM230                       |
| protection function of the overcurrent release                                                                             | LI                          |
| number of poles                                                                                                            | 3                           |
| General technical data                                                                                                     |                             |
| insulation voltage / rated value                                                                                           | 800 V                       |
| operating voltage / at DC / rated value                                                                                    | 500 V                       |
| operating voltage / at AC / rated value                                                                                    | 690 V                       |
| power loss [W] / maximum                                                                                                   | 15.4 W                      |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 5.13 W                      |
| mechanical service life (operating cycles) / typical                                                                       | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 8 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 4 000                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 8 000                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 4 000                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                          |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 930 g                       |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                          |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 60 A                        |
| • at 45 °C                                                                                                                 | 59 A                        |

|            |      |
|------------|------|
| • at 50 °C | 58 A |
| • at 55 °C | 57 A |
| • at 60 °C | 56 A |
| • at 65 °C | 55 A |
| • at 70 °C | 54 A |

#### Switching capacity according to IEC 60947

|                                                         |                                                                                                                                                                |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switching capacity class of the circuit breaker         | M                                                                                                                                                              |
| maximum short-circuit current breaking capacity (Icu)   |                                                                                                                                                                |
| • at 240 V                                              | 85 kA                                                                                                                                                          |
| • at 415 V                                              | 55 kA                                                                                                                                                          |
| • at 690 V                                              | 7 kA                                                                                                                                                           |
| operating short-circuit current breaking capacity (Ics) |                                                                                                                                                                |
| • at 240 V                                              | 85 kA                                                                                                                                                          |
| • at 415 V                                              | 55 kA                                                                                                                                                          |
| • at 690 V                                              | 5 kA                                                                                                                                                           |
| short-circuit current making capacity (Icm)             |                                                                                                                                                                |
| • at 240 V                                              | 187 kA                                                                                                                                                         |
| • at 415 V                                              | 121 kA                                                                                                                                                         |
| • at 690 V                                              | 11.9 kA                                                                                                                                                        |
| design of short-circuit protection                      | For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter |

#### Switching capacity according to UL 489

|                           |       |
|---------------------------|-------|
| current breaking capacity |       |
| • at 240 V                | 85 kA |
| • at 480 V                | 35 kA |
| • at 600 Y/347 V          | 18 kA |

#### Adjustable parameters

|                                                                                                                   |       |
|-------------------------------------------------------------------------------------------------------------------|-------|
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic |       |
| • minimum                                                                                                         | 60 A  |
| • maximum                                                                                                         | 60 A  |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic     |       |
| • minimum                                                                                                         | 1 s   |
| • maximum                                                                                                         | 1 s   |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                      |       |
| • minimum                                                                                                         | 300 A |
| • maximum                                                                                                         | 600 A |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping                                                    |       |
| • minimum                                                                                                         | 0 A   |
| • maximum                                                                                                         | 0 A   |
| product function / grounding protection                                                                           | No    |

#### Mechanical Design

|                        |         |
|------------------------|---------|
| product component      |         |
| • undervoltage release | No      |
| • voltage trigger      | No      |
| • trip indicator       | No      |
| height [in]            | 5.51 in |
| height                 | 140 mm  |
| width [in]             | 3 in    |
| width                  | 76.2 mm |
| depth [in]             | 3.01 in |
| depth                  | 76.5 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    |
| <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  | Q      |

#### Approvals / Certificates

##### General Product Approval



[Miscellaneous](#)



[Miscellaneous](#)



##### General Product Approval

EMV



[Confirmation](#)



##### Test Certificates

##### Maritime application

##### other

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Miscellaneous](#)

[Confirmation](#)

#### Environment

[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=3VA5160-5EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5160-5EC31-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5160-5EC31-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5160-5EC31-0AA0)

##### CAX-Online-Generator

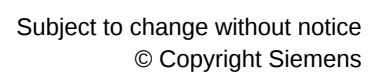
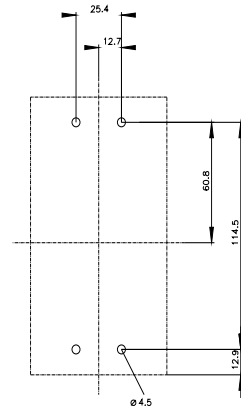
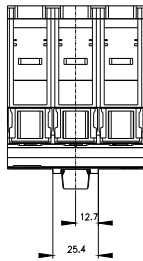
<https://www.siemens.com/cax>

##### Tender specifications

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

##### Characteristic curves

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



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