

CIRCUIT BREAKER 3VA5 UL FRAME 125 BREAKING CAPACITY CLASS S 25KA @ 480V 3-POLE, LINE PROTECTION TM230, FTAM, IN=80A OVERLOAD PROTECTION IR=80A FIXED SHORT CIRCUIT PROTECTION II=5...10 X IN W/O CONNECTION



| Model   |                             |
|---|-----------------------------|
| Product brand name  | SENTRON                     |
| Product designation   | Molded-case circuit breaker |
| Design of the product   | System protection           |
| Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release   | TM230                       |
| Protective function of the overcurrent release  | LI                          |
| Number of poles   | 3                           |

| General technical data   |        |
|--|--------|
| Tension assignée d'isolement Ui  | 800 V  |
| Max. rated operational voltage Ue with AC 50/60Hz  | 690 V  |
| Max. rated operational voltage Ue with DC  | 500 V  |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 19.2 W |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 6.4 W  |
| Mechanical service life (switching cycles) / typical   | 15 000 |

|   |         |
|---|---------|
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 8 000   |
| Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz          | 8 000   |
| Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz          | 4 000   |
| Neutral conductors / upgradeable/retrofitable                             | No      |
| Ground fault monitoring version   | Without |
| Product function  |         |
| • communication function  | No      |
| • other measurement function  | No      |

### Electricity

|   |          |
|---|----------|
| Marking / acc. to UL 489 / 100%-rated breaker                     | No       |
| Max. rated operational voltage of the size of the circuit-breaker | 125 A    |
| Courant permanent assigné Iu                                      | 80 A     |
| Operating current   |          |
| • at 40 °C  | 80 A     |
| • at 45 °C  | 78.47 A  |
| • at 50 °C  | 77 A     |
| • at 55 °C  | 75.579 A |
| • at 60 °C  | 74.21 A  |
| • at 65 °C  | 72.893 A |
| • at 70 °C  | 71.62 A  |

### Switching capacity according to IEC 60947

|   |        |
|---|--------|
| Switching capacity class of the circuit breaker           | S      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V  | 55 kA  |
| • at 415 V  | 36 kA  |
| • at 690 V  | 5 kA   |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V  | 85 kA  |
| • at 415 V  | 36 kA  |
| • at 690 V  | 5 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V  | 121 kA |
| • at 415 V  | 76 kA  |
| • at 690 V  | 7.5 kA |

### Switching capacity according to UL 489

|                           |       |
|---------------------------|-------|
| Breaking capacity current |       |
| • at 240 V                | 65 kA |

- at 480 V 25 kA
- at 600 Y/347 V 14 kA

#### Adjustable parameters

|   |       |
|---|-------|
| Adjustable response value current / I <sub>g</sub> min.                 | 80 A  |
| Adjustable response value current / I <sub>g</sub> min.                 | 80 A  |
| Adjustable response value current / I <sub>i</sub> min.                 | 400 A |
| Adjustable response value current / I <sub>i</sub> max.                 | 800 A |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | No    |

#### Mechanical Design

|             |         |
|-------------|---------|
| Height [in] | 5.5 in  |
| Height      | 140 mm  |
| Width [in]  | 3 in    |
| Width       | 76.2 mm |
| Depth [in]  | 3 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 |
|--|-----|

#### Environmental conditions

|  |        |
|--|--------|
| Protection class IP / on the front   | IP40   |
| Ambient temperature  |        |
| <ul style="list-style-type: none"> <li>• during operation / minimum</li> </ul> | -25 °C |
| <ul style="list-style-type: none"> <li>• during operation / maximum</li> </ul> | 70 °C  |
| <ul style="list-style-type: none"> <li>• during storage / minimum</li> </ul>   | -40 °C |
| <ul style="list-style-type: none"> <li>• during storage / maximum</li> </ul>   | 80 °C  |

#### Certificates

|  |    |
|--|----|
| Equipment marking / acc. to DIN EN 81346-2   | Q  |
| Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB | No |

|                          |     |                           |
|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|



|                   |       |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



[Miscellaneous](#)

### Further information

**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=3VA5180-4EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5180-4EC31-0AA0>

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

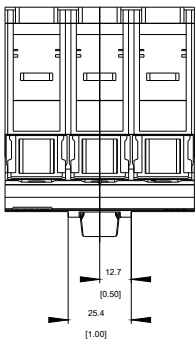
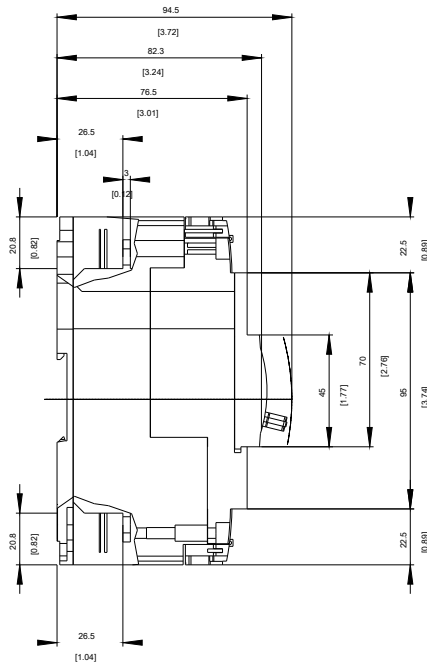
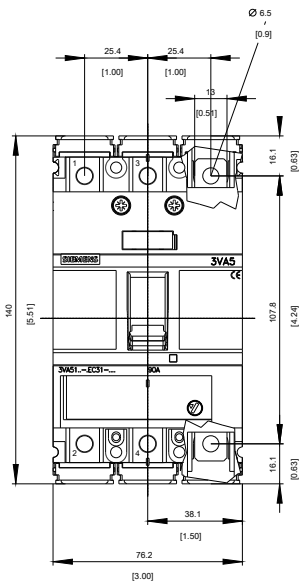
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5180-4EC31-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5180-4EC31-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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



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