

circuit breaker 3VA1 IEC frame 160 breaking capacity class S  
 $I_{cu}=36kA$  @ 415V 3-pole, line protection TM240, ATAM,  $I_n=80A$   
 overload protection  $I_r=56A...80A$  short-circuit protection  $I_i=5...10 \times I_n$   
 clamp connection undervoltage release (UVR) 120-127V AC  
 50/60Hz 2 auxiliary switches HQ



| Model   |                             |
|---|-----------------------------|
| Product brand name  | SENTRON                     |
| Product designation   | Molded case circuit breaker |
| Product version   | Line protection             |
| Design of the overcurrent release   | TM240                       |
| Protective function of the overcurrent release                            | LI                          |
| Number of poles   | 3                           |
| Design of the auxiliary release   | Undervoltage release (UVR)  |
| Auxiliary contact version   | 2 auxiliary switches HQ     |
| General technical data  |                             |
| Rated insulation voltage $U_i$  | 800 V                       |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                      | 690 V                       |
| Max. rated operational voltage $U_e$ with DC                              | 500 V                       |
| Latching - endurance  | 15 000                      |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 8 000                       |
| Neutral conductors / upgradeable/retrofitable                             | No                          |
| Ground fault monitoring version   | Without                     |
| Product function  |                             |

|                              |         |
|------------------------------|---------|
| • communication function     | No      |
| • Phase failure detection    | No      |
| • other measurement function | No      |
| Net weight                   | 1.05 kg |

### Current

|  |        |
|--|--------|
| Max. rated operational current of the frame size | 160 A  |
| Rated continuous current I <sub>u</sub>          | 80 A   |
| Operating current                                |        |
| • at 40 °C                                       | 80 A   |
| • at 45 °C                                       | 80 A   |
| • at 50 °C                                       | 80 A   |
| • at 55 °C                                       | 76.8 A |
| • at 60 °C                                       | 75.2 A |
| • at 65 °C                                       | 73.6 A |
| • at 70 °C                                       | 72 A   |

### Switching capacity according to IEC 60947

|  |  |
|--|--|
| Switching capacity class of the circuit breaker                        | S  |
| Maximum short-circuit current breaking capacity (I <sub>cu</sub> )     |  |
| • at 240 V   | 55 kA  |
| • at 415 V   | 36 kA  |
| • at 440 V   | 25 kA  |
| • at 690 V   | 7 kA   |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |  |
| • at 240 V   | 55 kA  |
| • at 415 V   | 36 kA  |
| • at 440 V   | 25 kA  |
| • at 690 V   | 5 kA   |
| Short-circuit current making capacity (I <sub>cm</sub> )               |  |
| • at 240 V   | 121 kA   |
| • at 415 V   | 75.6 kA  |
| • at 440 V   | 52.5 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 |

### Adjustable parameters

|   |      |
|---|------|
| Adjustable response value current / I <sub>r</sub> min. | 56 A |
| Adjustable response value current / I <sub>r</sub> max. | 80 A |
| Adjustable response value time / t <sub>r</sub> min.    | 1    |
| Adjustable response value time / t <sub>r</sub> max.    | 1    |

|  |       |
|--|-------|
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF | No    |
| Adjustable response value current / I <sub>i</sub> min.            | 400 A |
| Adjustable response value current / I <sub>i</sub> max.            | 800 A |

### Mechanical Design

|        |         |
|--------|---------|
| Height | 130 mm  |
| Width  | 76.2 mm |
| Depth  | 70 mm   |

### Connections

|   |                                 |
|---|---------------------------------|
| Arrangement of electrical connectors / for main current circuit                 | Front terminal                  |
| Type of electrical connection / for main current circuit                        | box terminal                    |
| Type of connectable conductor cross-section, round conductor terminal, stranded | 1 x (1.5 - 70 mm <sup>2</sup> ) |

### Auxiliary circuit

|  |   |
|--|---|
| Product component  |   |
| <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• Voltage trigger</li> <li>• undervoltage release with leading contact</li> <li>• Trip indicator</li> </ul> | <ul style="list-style-type: none"> <li>Yes</li> <li>No</li> <li>No</li> <li>No</li> </ul> |
| Number of CO contacts / for auxiliary contacts   | 2   |

### Accessories

|   |  |
|---|--|
| Product extension / optional / motor drive  | Yes  |
| Manufacturer's article number   |  |
| <ul style="list-style-type: none"> <li>• of the integrated auxiliary switch/alarm switch</li> <li>• of the integrated auxiliary trip</li> </ul> | <ul style="list-style-type: none"> <li><a href="#">3VA9988-0AA12</a></li> <li>3VA9608-0BB24</li> </ul> |

### Environmental conditions

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

### Certificates

|   |   |
|---|---|
| Reference code / acc. to DIN EN 81346-2 | Q |
|---|---|

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



CCC



VDE

[Miscellaneous](#)



RCM



EG-Konf.

|                   |                   |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS



LRS

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



RMRS

[CCS / China Classification Society](#)

[Manufacturer Declaration](#)

[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=3VA1180-4EF36-0CC0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1180-4EF36-0CC0>

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

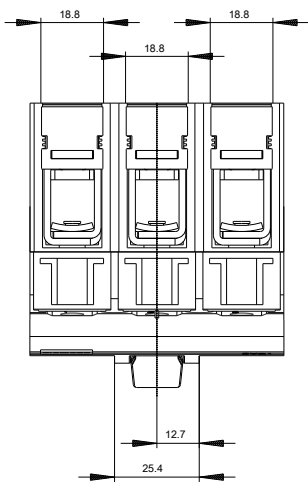
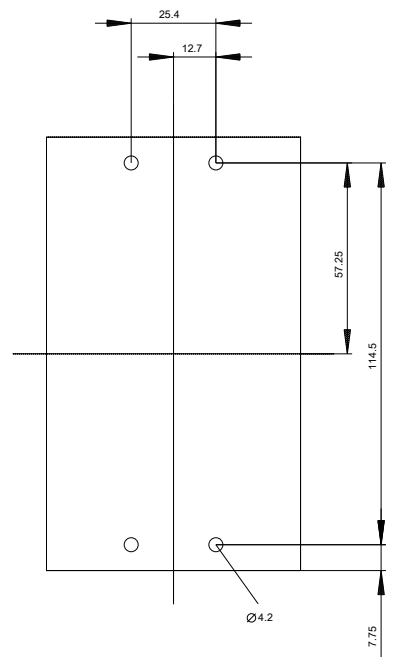
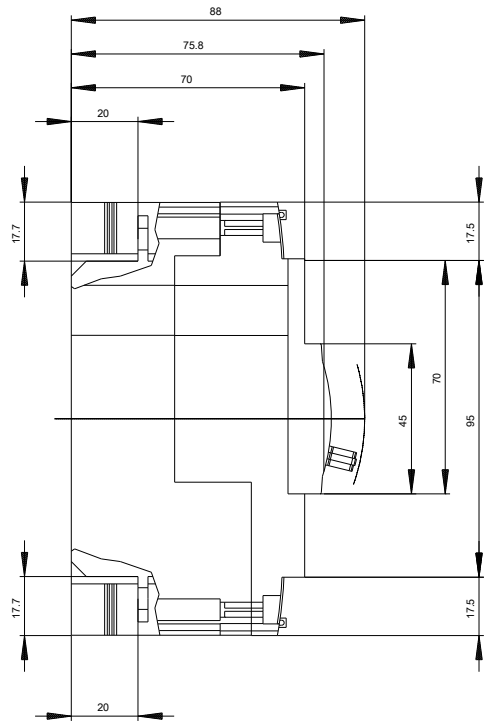
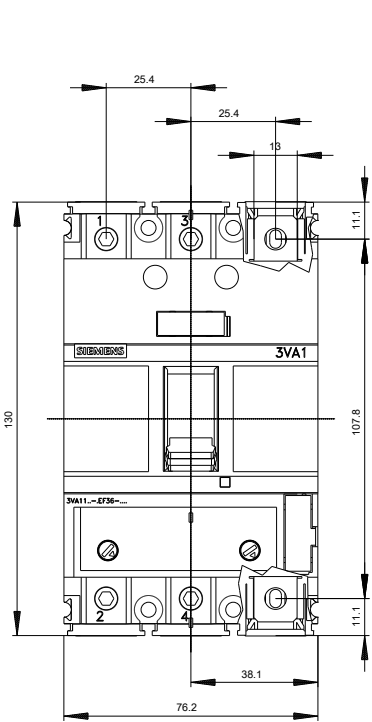
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1180-4EF36-0CC0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1180-4EF36-0CC0)

**CAX-Online-Generator**

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

**Tender specifications**

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





last modified:

08/10/2019