

circuit breaker 3VA1 IEC frame 160 breaking capacity class S  
 $I_{cu}=36\text{kA}$  @ 415V 3-pole, line protection TM220, ATFM,  $I_n=100\text{A}$   
 overload protection  $I_r=70\text{A}\dots100\text{A}$  short-circuit protection  $I_i=10 \times I_n$   
 clamp connection



| Model  |                             |
|--|-----------------------------|
| Product brand name                             | SENTRON                     |
| Product designation                            | Molded case circuit breaker |
| Product version                                | Line protection             |
| Design of the overcurrent release              | TM220                       |
| Protective function of the overcurrent release | LI                          |
| Number of poles                                | 3                           |

| 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  |
| Power loss [W] / maximum   | 25 W   |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 8.33 W |
| Latching - endurance   | 20 000 |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz                      | 8 000  |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz                          | 8 000  |

|   |          |
|---|----------|
| Neutral conductors / upgradeable/retrofitable | No       |
| Ground fault monitoring version               | Without  |
| Product function                              |          |
| • communication function                      | No       |
| • other measurement function                  | No       |
| Net weight                                    | 1.028 kg |

| Current  |       |
|--|-------|
| Max. rated operational current of the frame size | 160 A |
| Rated continuous current I <sub>u</sub>          | 100 A |
| Operating current                                |       |
| • at 40 °C                                       | 100 A |
| • at 45 °C                                       | 100 A |
| • at 50 °C                                       | 100 A |
| • at 55 °C                                       | 98 A  |
| • at 60 °C                                       | 96 A  |
| • at 65 °C                                       | 94 A  |
| • at 70 °C                                       | 91 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 500 V   | 7 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 500 V   | 5 kA   |
| • at 690 V   | 5 kA   |
| Short-circuit current making capacity (I <sub>cm</sub> )               |  |
| • at 240 V   | 121 kA   |
| • at 415 V   | 76 kA  |
| • at 440 V   | 53 kA  |
| • at 500 V   | 11.9 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.                 | 70 A    |
| Adjustable response value current / I <sub>r</sub> max.                 | 100 A   |
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF      | No      |
| Adjustable response value current / I <sub>i</sub> min.                 | 1 000 A |
| Adjustable response value current / I <sub>i</sub> max.                 | 1 000 A |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | No      |

### Mechanical Design

|             |         |
|-------------|---------|
| Height [in] | 5.1 in  |
| Height      | 130 mm  |
| Width [in]  | 3 in    |
| Width       | 76.2 mm |
| Depth [in]  | 2.8 in  |
| 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

|  |   |
|--|---|
| 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  |

### Certificates

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

|                          |     |
|--------------------------|-----|
| General Product Approval | EMC |
|--------------------------|-----|



CCC



VDE

[Miscellaneous](#)

[KC](#)



RCM

|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Shipping Approval |
|---------------------------|-------------------|-------------------|



EG-Konf.

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS

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



GL



LRS



RMRS

[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=3VA1110-4EE36-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1110-4EE36-0AA0>

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

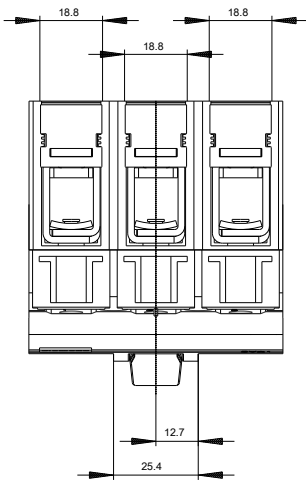
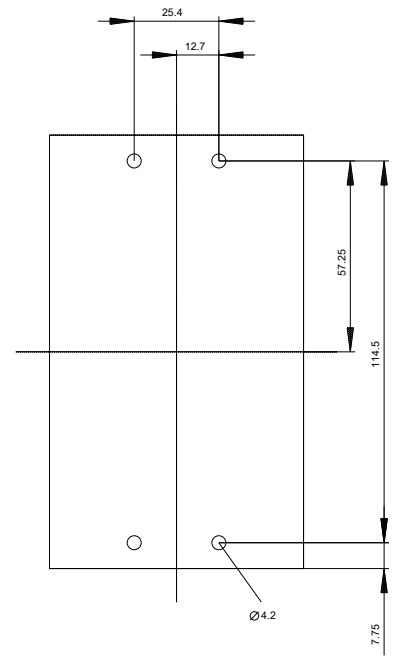
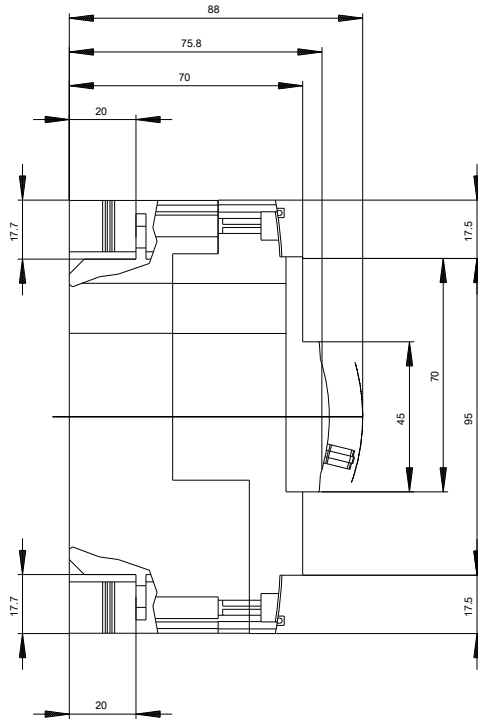
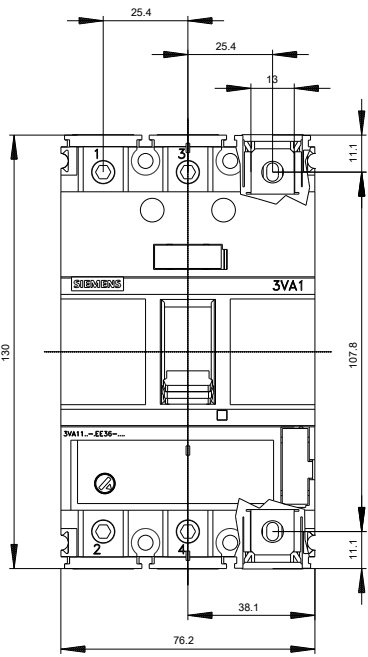
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1110-4EE36-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1110-4EE36-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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





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