



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY  
CLASS S ICU=36KA @ 240 V 1-POLE, LINE PROTECTION  
TM210, FTFM, IN=160A OVERLOAD PROTECTION IR=160A  
FIXED SHORT CIRCUIT PROTECTION II=10 X IN BUSBAR  
CONNECTION

| Model                                          |                             |
|------------------------------------------------|-----------------------------|
| Product brand name                             | SENTRON                     |
| Product designation                            | Molded case circuit breaker |
| Design of the product                          | Line protection             |
| Design of the overcurrent release              | TM210                       |
| Protective function of the overcurrent release | LI                          |
| Number of poles                                | 1                           |

| General technical data                                                                           |        |
|--------------------------------------------------------------------------------------------------|--------|
| Tension assignée d'isolement $U_i$                                                               | 500 V  |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                                             | 415 V  |
| Max. rated operational voltage $U_e$ with DC                                                     | 125 V  |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 12.7 W |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 12.7 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  |
| Neutral conductors / upgradeable/retrofitable                                                    | No     |

|                                 |         |
|---------------------------------|---------|
| Ground fault monitoring version | Without |
| Product function                |         |
| • communication function        | No      |
| • other measurement function    | No      |
| Net weight                      | 0.36 kg |

#### Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné lu                                      | 160 A |
| Operating current                                                 |       |
| • at 40 °C                                                        | 160 A |
| • at 45 °C                                                        | 160 A |
| • at 50 °C                                                        | 160 A |
| • at 55 °C                                                        | 158 A |
| • at 60 °C                                                        | 155 A |
| • at 65 °C                                                        | 153 A |
| • at 70 °C                                                        | 150 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                                                | 36 kA |
| • at 415 V                                                | 6 kA  |
| Operational short-circuit current breaking capacity (Ics) |       |
| • at 240 V                                                | 36 kA |
| • at 415 V                                                | 6 kA  |
| Short-circuit current making capacity (Icm)               |       |
| • at 240 V                                                | 76 kA |
| • at 415 V                                                | 9 kA  |

#### Adjustable parameters

|                                                            |         |
|------------------------------------------------------------|---------|
| Adjustable response value current / Ig min.                | 160 A   |
| Adjustable response value current / Ig min.                | 160 A   |
| Short-term delayed / tripping switchable / I2t=ON/OFF      | No      |
| Adjustable response value current / li min.                | 1 600 A |
| Adjustable response value current / li max.                | 1 600 A |
| Ground fault protection / tripping switchable / I2t=ON/OFF | No      |

#### Mechanical Design

|             |        |
|-------------|--------|
| Height [in] | 5.1 in |
| Height      | 130 mm |

|            |         |
|------------|---------|
| Width [in] | 1 in    |
| Width      | 25.4 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                                | lug terminal   |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 12 x 0         |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5       |

#### Auxiliary circuit

|                                                |   |
|------------------------------------------------|---|
| Number of CO contacts / for auxiliary contacts | 0 |
|------------------------------------------------|---|

#### Accessories

|                                            |    |
|--------------------------------------------|----|
| Product extension / optional / motor drive | No |
|--------------------------------------------|----|

#### 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

|                                            |   |
|--------------------------------------------|---|
| Equipment marking / acc. to DIN EN 81346-2 | Q |
|--------------------------------------------|---|

| General Product Approval                                                                   |                                                                                            | EMC                                                                                        | Declaration of Conformity                                                                  | Test Certificates                                                                                 |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <br>EAC | <br>RCM | <br>EG-Konf. |
| <a href="#">Type Test Certificates/Test Report</a>                                         |                                                                                            |                                                                                            |                                                                                            |                                                                                                   |

| Test Certificates             |                                          | other                         |
|-------------------------------|------------------------------------------|-------------------------------|
| <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a> | <a href="#">Miscellaneous</a> |

#### 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=3VA1116-4ED12-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1116-4ED12-0AA0>

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

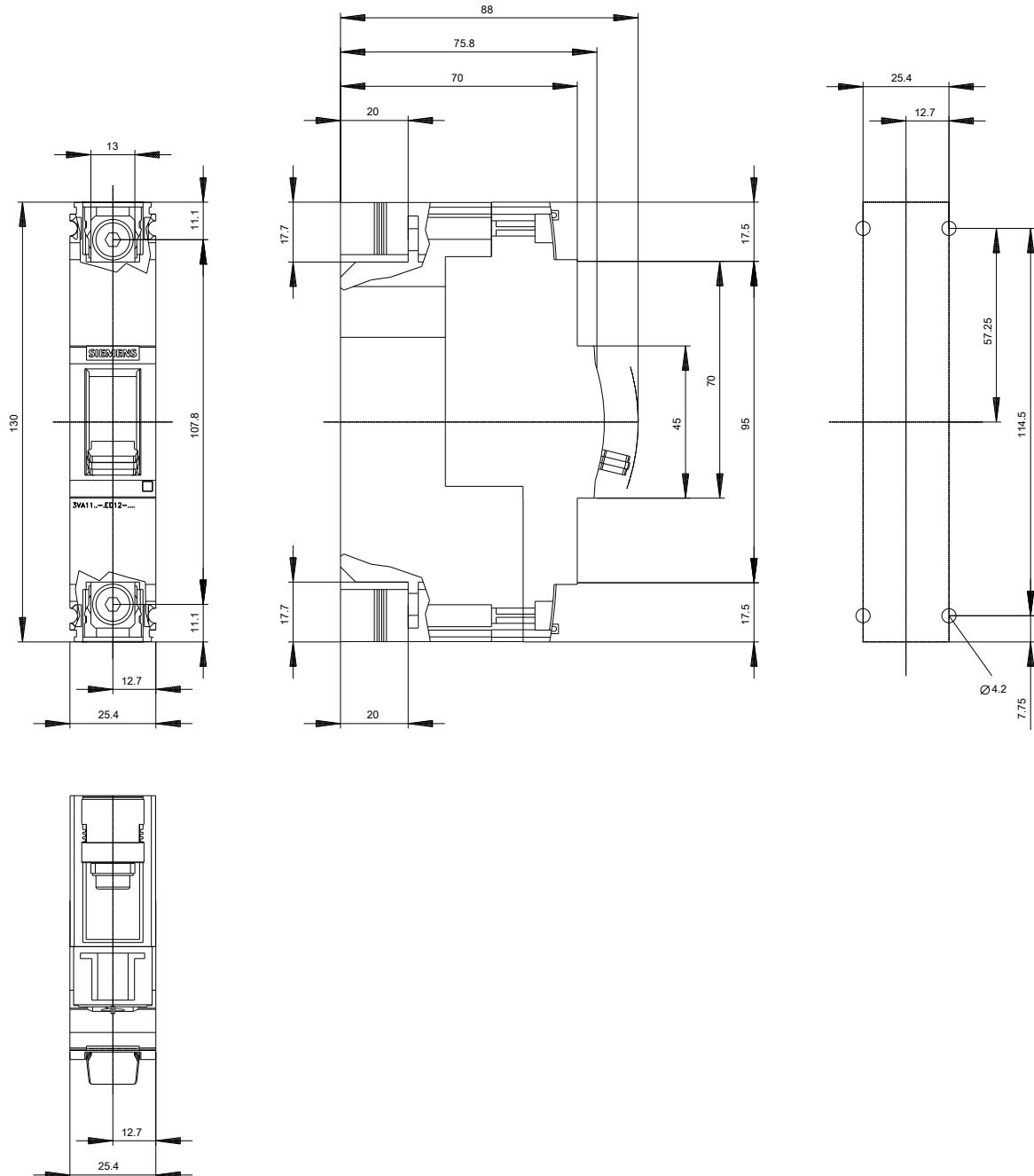
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1116-4ED12-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1116-4ED12-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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



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last modified:

07/27/2017