

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY  
CLASS S ICU=36KA @ 240 V 1-POLE, LINE PROTECTION  
TM210, FTFM, IN=40A OVERLOAD PROTECTION IR=40A FIXED  
SHORT CIRCUIT PROTECTION II=10 X IN CABLE CONNECTION



| Model                                                                                                                |                             |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brandname                                                                                                    | SENTRON                     |
| Product designation                                                                                                  | Molded case circuit breaker |
| Design of the product                                                                                                | Line protection             |
| Type of load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release                                                                                    | TM210                       |
| Protective function of the overcurrent release                                                                       | LI                          |
| Number of poles                                                                                                      | 1                           |
| General technical data                                                                                               |                             |
| Tension assignée d'isolement Ui                                                                                      | 500 V                       |
| Max. rated operational voltage Ue with AC 50/60Hz                                                                    | 415 V                       |
| Max. rated operational voltage Ue with DC                                                                            | 125 V                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device                     | 3.6 W                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                       | 3.6 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                                                                | 0.399 kg |

## Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Marking / according to UL 489 / 100%-rated breaker                | No    |
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné Iu                                      | 40 A  |
| Operating current                                                 |       |
| • at 40 °C                                                        | 40 A  |
| • at 45 °C                                                        | 40 A  |
| • at 50 °C                                                        | 40 A  |
| • at 55 °C                                                        | 39 A  |
| • at 60 °C                                                        | 39 A  |
| • at 65 °C                                                        | 38 A  |
| • at 70 °C                                                        | 37 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 / I <sub>g</sub> min.            | 40 A  |
| Adjustable response value current / I <sub>g</sub> min.            | 40 A  |
| Adjustable response value current / I <sub>g</sub> min.            | 1     |
| Adjustable response value current / I <sub>g</sub> min.            | 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.            | 400 A |

|                                                                                        |                    |
|----------------------------------------------------------------------------------------|--------------------|
| Ground fault protection / tripping switchable / I2t=ON/OFF                             | No                 |
| <b>Mechanical Design</b>                                                               |                    |
| Height [in]                                                                            | 5.1 in             |
| Height                                                                                 | 130 mm             |
| Width [in]                                                                             | 1 in               |
| Width                                                                                  | 25.4 mm            |
| Depth [in]                                                                             | 2.8 in             |
| Depth                                                                                  | 70 mm              |
| <b>Connections</b>                                                                     |                    |
| 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 mm²) |
| <b>Auxiliary circuit</b>                                                               |                    |
| Number of CO contacts / for auxiliary contacts                                         | 0                  |
| <b>Accessories</b>                                                                     |                    |
| Product extension / optional / motor drive                                             | No                 |
| <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              |
| <b>Certificates</b>                                                                    |                    |
| 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                                                                | Test Certificates                                                                             |                                                                              |
|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <br>VDE |  | <br>RCM | <br>EG-Konf. | <a href="#">Typprüfbescheinigung/Werkszeugnis</a><br><a href="#">sonstig</a> |

|                                  |
|----------------------------------|
| other<br><a href="#">sonstig</a> |
|----------------------------------|

#### Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**

<http://www.siemens.com/lowvoltage/catalogs>

**Industry Mall (Online ordering system)**

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA1140-4ED16-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1140-4ED16-0AA0/all>

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

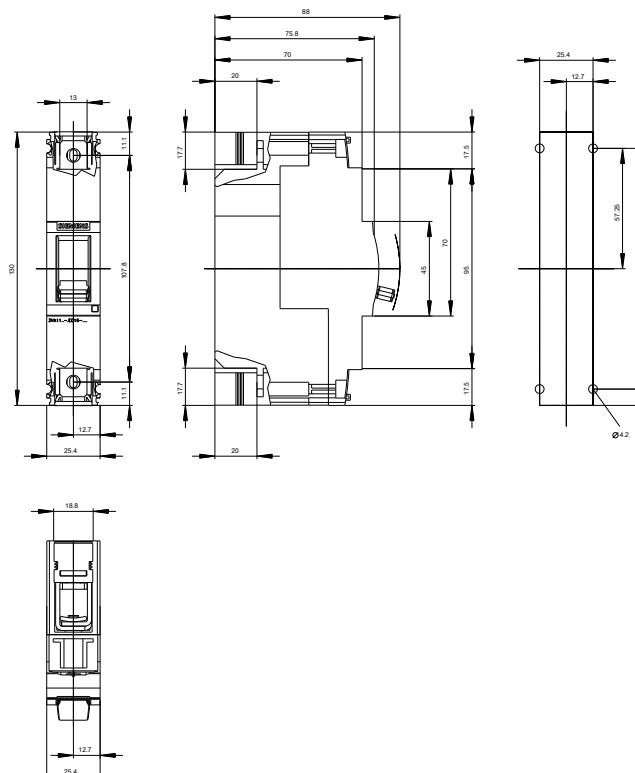
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1140-4ED16-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1140-4ED16-0AA0)

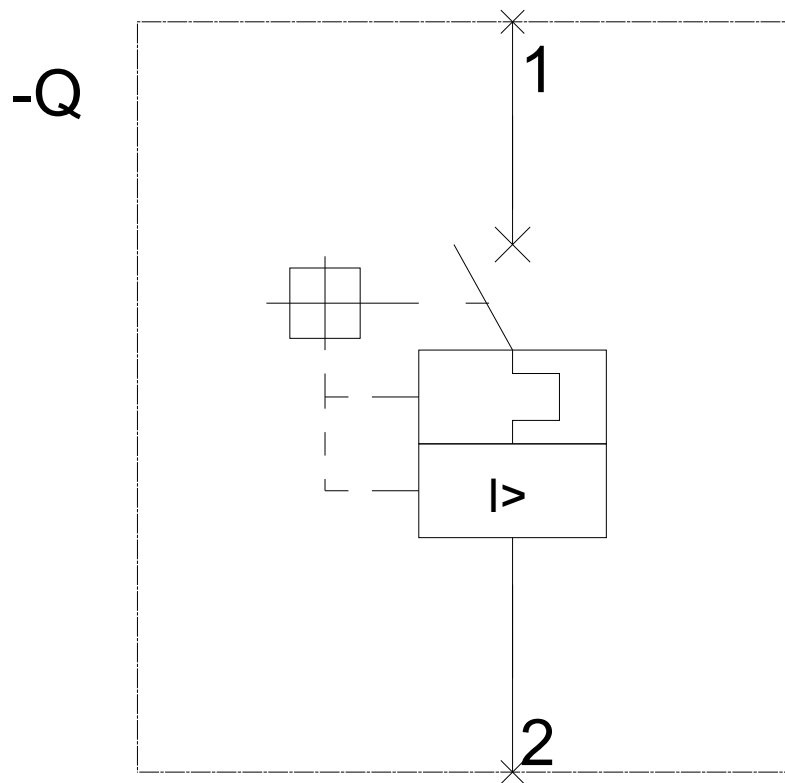
**CAX-Online-Generator**

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

**Tender specifications**

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





last modified:

10/24/2016