

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=160A OVERLOAD PROTECTION IR=112A ...160A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION 100% BUSBAR 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                                                                                    | TM220                       |
| Protective function of the overcurrent release                                                                       | LI                          |
| Number of poles                                                                                                      | 4                           |
| 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                                                                            | 600 V                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device                     | 38 W                        |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                       | 12.67 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                                                                | 1.2 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                                      | 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           | N       |
| Maximum short-circuit current breaking capacity (Icu)     |         |
| • at 240 V                                                | 36 kA   |
| • at 415 V                                                | 25 kA   |
| • at 440 V                                                | 16 kA   |
| • at 500 V                                                | 8 kA    |
| • at 690 V                                                | 7 kA    |
| Operational short-circuit current breaking capacity (Ics) |         |
| • at 240 V                                                | 36 kA   |
| • at 415 V                                                | 25 kA   |
| • at 440 V                                                | 16 kA   |
| • at 500 V                                                | 8 kA    |
| • at 690 V                                                | 5 kA    |
| Short-circuit current making capacity (Icm)               |         |
| • at 240 V                                                | 76 kA   |
| • at 415 V                                                | 53 kA   |
| • at 440 V                                                | 32 kA   |
| • at 500 V                                                | 13.6 kA |
| • at 690 V                                                | 11.9 kA |

| Adjustable parameters                                                                  |                |
|----------------------------------------------------------------------------------------|----------------|
| Adjustable response value current / I <sub>g</sub> min.                                | 112 A          |
| Adjustable response value current / I <sub>g</sub> min.                                | 160 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.                                | 1 600 A        |
| Adjustable response value current / I <sub>i</sub> max.                                | 1 600 A        |
| Design of the N-conductor protection                                                   | 100%           |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF                | No             |
| Mechanical Design                                                                      |                |
| Height [in]                                                                            | 5.1 in         |
| Height                                                                                 | 130 mm         |
| Width [in]                                                                             | 4 in           |
| Width                                                                                  | 101.6 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   |
| 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                                                                           |                |
| 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>CCC | <br>VDE | <a href="#">sonstig</a>                                                                  | <br>EG-Konf. | <a href="#">Typprüfbescheinigung/Werkszeugnis</a> |
|                                                                                          |                                                                                          | <br>RCM |                                                                                                 |                                                   |

|                         |                                                                                          |                                                                                                     |                                                                                         |                                                                                            |                                                                                             |
|-------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Test Certificates       | Shipping Approval                                                                        |                                                                                                     |                                                                                         |                                                                                            |                                                                                             |
| <a href="#">sonstig</a> | <br>ABS | <br>BUREAU VERITAS | <br>GL | <br>LRS | <br>RMRS |

|                         |
|-------------------------|
| other                   |
| <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/3VA1116-3GE42-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1116-3GE42-0AA0/all>

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

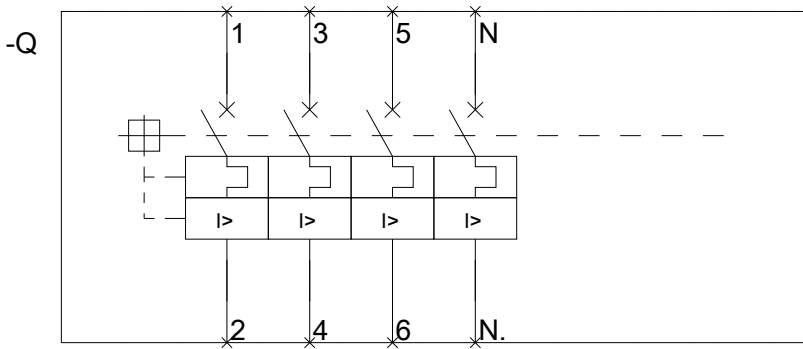
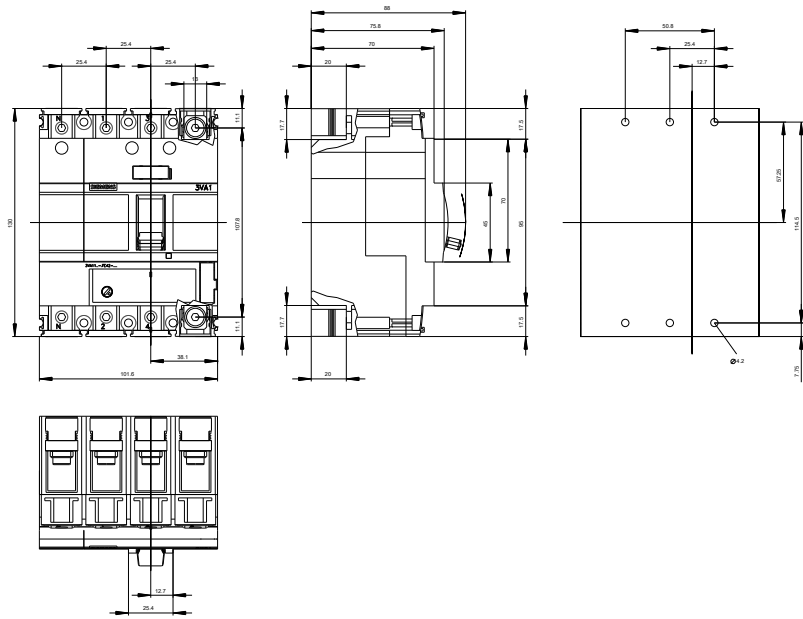
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA1116-3GE42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA1116-3GE42-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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



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