



CIRCUIT BREAKER 3VA1 IEC FRAME 250 BREAKING CAPACITY CLASS H ICU=70KA @ 415 V 4-POLE, LINE PROTECTION TM240, ATAM, IN=160A OVERLOAD PROTECTION IR=112A ...160A SHORT CIRCUIT PROTECTION II=5...10 X IN NEUTRAL UNPROTECTED 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                                                                                    | TM240                       |
| 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 | 33 W   |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 11 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                                                                | 2.3 kg  |

#### Electricity

|                                                                   |         |
|-------------------------------------------------------------------|---------|
| Marking / according to UL 489 / 100%-rated breaker                | No      |
| Max. rated operational voltage of the size of the circuit-breaker | 250 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                                                        | 155.6 A |
| • at 60 °C                                                        | 151.2 A |
| • at 65 °C                                                        | 146.8 A |
| • at 70 °C                                                        | 142.4 A |

#### Switching capacity according to IEC 60947

|                                                           |        |
|-----------------------------------------------------------|--------|
| Switching capacity class of the circuit breaker           | H      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 100 kA |
| • at 415 V                                                | 70 kA  |
| • at 440 V                                                | 36 kA  |
| • at 690 V                                                | 10 kA  |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 100 kA |
| • at 415 V                                                | 70 kA  |
| • at 440 V                                                | 36 kA  |
| • at 690 V                                                | 5 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 220 kA |
| • at 415 V                                                | 154 kA |
| • at 440 V                                                | 76 kA  |
| • at 690 V                                                | 17 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.                 | 800 A   |
| Adjustable response value current / I <sub>i</sub> max.                 | 1 600 A |
| Design of the N-conductor protection                                    | Without |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | No      |

#### Mechanical Design

|             |        |
|-------------|--------|
| Height [in] | 6.2 in |
| Height      | 158 mm |
| Width [in]  | 5.5 in |
| Width       | 140 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 |  | <br>RCM | <br>EG-Konf. | <a href="#">Typprüfbescheinigung/Werkszeugnis</a> |

| 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/3VA1216-6EF42-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1216-6EF42-0AA0/all>

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

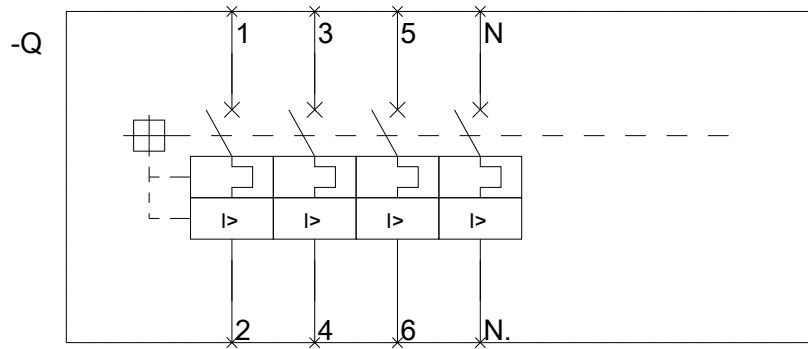
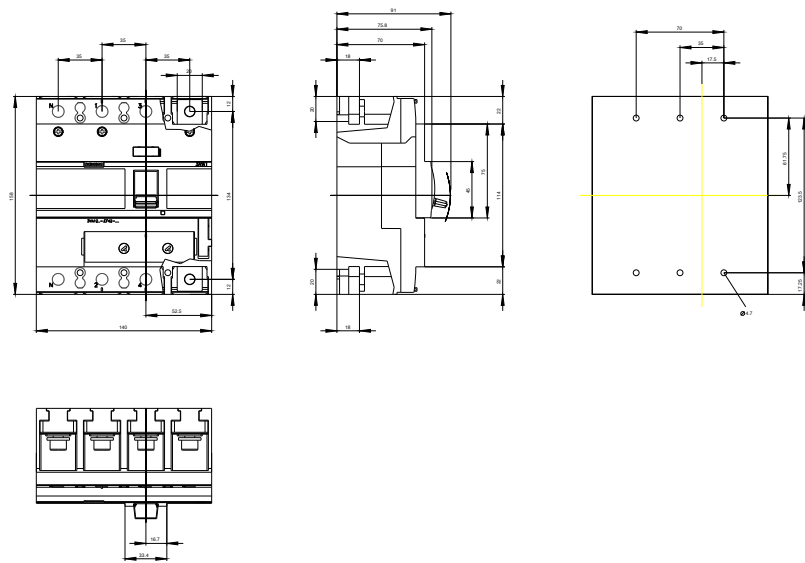
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1216-6EF42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1216-6EF42-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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



**last modified:**

10/24/2016