



circuit breaker 3VA1 IEC frame 160 breaking capacity class M  
Icu=55kA @ 415V 3-pole, line protection TM240, ATAM, In=16A  
overload protection Ir=11A...16A short-circuit protection li=10...20 x  
In clamp connection 1 auxiliary switch HQ 1 trip alarm switch HQ

| Model                                                                     |                                             |
|---------------------------------------------------------------------------|---------------------------------------------|
| Product brand name                                                        | SENTRON                                     |
| Product designation                                                       | Molded case circuit breaker                 |
| Product version                                                           | Line protection                             |
| Design of the overcurrent release                                         | TM240                                       |
| Protective function of the overcurrent release                            | LI                                          |
| Number of poles                                                           | 3                                           |
| Design of the auxiliary release                                           | without auxiliary release                   |
| Auxiliary contact version                                                 | 1 auxiliary switch + 1 trip alarm switch HQ |
| General technical data                                                    |                                             |
| Rated insulation voltage Ui                                               | 800 V                                       |
| Max. rated operational voltage Ue with AC 50/60Hz                         | 690 V                                       |
| Max. rated operational voltage Ue with DC                                 | 500 V                                       |
| Latching - endurance                                                      | 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      |
| • Phase failure detection    | No      |
| • other measurement function | No      |
| Net weight                   | 0.96 kg |

#### Current

|                                                  |         |
|--------------------------------------------------|---------|
| Max. rated operational current of the frame size | 160 A   |
| Rated continuous current I <sub>u</sub>          | 16 A    |
| Operating current                                |         |
| • at 40 °C                                       | 16 A    |
| • at 45 °C                                       | 16 A    |
| • at 50 °C                                       | 16 A    |
| • at 55 °C                                       | 15.36 A |
| • at 60 °C                                       | 15.04 A |
| • at 65 °C                                       | 14.72 A |
| • at 70 °C                                       | 14.4 A  |

#### Switching capacity according to IEC 60947

|                                                                        |                                                                                                                                                                |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switching capacity class of the circuit breaker                        | M                                                                                                                                                              |
| Maximum short-circuit current breaking capacity (I <sub>cu</sub> )     |                                                                                                                                                                |
| • at 240 V                                                             | 85 kA                                                                                                                                                          |
| • at 415 V                                                             | 55 kA                                                                                                                                                          |
| • at 440 V                                                             | 36 kA                                                                                                                                                          |
| • at 690 V                                                             | 10 kA                                                                                                                                                          |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |                                                                                                                                                                |
| • at 240 V                                                             | 85 kA                                                                                                                                                          |
| • at 415 V                                                             | 55 kA                                                                                                                                                          |
| • at 440 V                                                             | 36 kA                                                                                                                                                          |
| • at 690 V                                                             | 5 kA                                                                                                                                                           |
| Short-circuit current making capacity (I <sub>cm</sub> )               |                                                                                                                                                                |
| • at 240 V                                                             | 187 kA                                                                                                                                                         |
| • at 415 V                                                             | 121 kA                                                                                                                                                         |
| • at 440 V                                                             | 75.6 kA                                                                                                                                                        |
| • at 690 V                                                             | 17 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. | 11 A |
| Adjustable response value current / I <sub>r</sub> max. | 16 A |
| Adjustable response value time / t <sub>r</sub> min.    | 1    |
| Adjustable response value time / t <sub>r</sub> max.    | 1    |

|                                                                    |       |
|--------------------------------------------------------------------|-------|
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF | No    |
| Adjustable response value current / I <sub>i</sub> min.            | 160 A |
| Adjustable response value current / I <sub>i</sub> max.            | 320 A |

### Mechanical Design

|        |         |
|--------|---------|
| Height | 130 mm  |
| Width  | 76.2 mm |
| 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

|                                                |     |
|------------------------------------------------|-----|
| Product component                              |     |
| • undervoltage release                         | No  |
| • Voltage trigger                              | No  |
| • undervoltage release with leading contact    | No  |
| • Trip indicator                               | Yes |
| Number of CO contacts / for auxiliary contacts | 2   |

### Accessories

|                                                   |                               |
|---------------------------------------------------|-------------------------------|
| Product extension / optional / motor drive        | Yes                           |
| Manufacturer's article number                     |                               |
| • of the integrated auxiliary switch/alarm switch | <a href="#">3VA9988-0AA12</a> |
| • of the integrated auxiliary switch/alarm switch | <a href="#">3VA9988-0AB12</a> |

### 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 | Declaration of Conformity |
|--------------------------|-----|---------------------------|
|--------------------------|-----|---------------------------|



CCC



VDE

[Miscellaneous](#)



RCM



EG-Konf.

| Test Certificates | Shipping Approval |
|-------------------|-------------------|
|-------------------|-------------------|

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



ABS



BUREAU  
VERITAS



LRS

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



RMRS

[CCS / China Classification Society](#)

[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=3VA1196-5EF36-0AF0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1196-5EF36-0AF0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1196-5EF36-0AF0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1196-5EF36-0AF0)

**CAX-Online-Generator**

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

**Tender specifications**

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





last modified:

08/10/2019