



Figure similar

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING  
CAPACITY CLASS H ICU=70KA @ 415 V 4-POLE,  
LINE PROTECTION TM210, FTFM, IN=160A  
OVERLOAD PROTECTION IR=160A FIXED SHORT  
CIRCUIT PROTECTION II=10 X IN NEUTRAL  
UNPROTECTED CABLE CONNECTION

| Model                                                                                |   |                             |
|--------------------------------------------------------------------------------------|---|-----------------------------|
| product brand name                                                                   |   | SENTRON                     |
| Product designation                                                                  |   | Molded case circuit breaker |
| Design of the product                                                                |   | Line protection             |
| Product variations                                                                   |   | General Applications        |
| Ground fault monitoring version                                                      |   | Without                     |
| Design of the auxiliary release                                                      |   | Without auxiliary release   |
| Design of the auxiliary switch                                                       |   | Without                     |
| Design of the operating mechanism                                                    |   | toggle handle               |
| Type of the driving mechanism / motor drive                                          |   | No                          |
| Design of the overcurrent release                                                    |   | TM210                       |
| General technical data                                                               |   |                             |
| Number of poles                                                                      |   | 4                           |
| Trip class / of the L-trip / with I <sup>2</sup> t characteristic / initial value    |   | 1                           |
| Trip class / of the L-trip / with I <sup>2</sup> t characteristic / Full-scale value |   | 1                           |
| Electrical endurance (switching cycles)                                              |   |                             |
| • at AC-1 / at 380/415 V / at 50/60 Hz                                               |   | 8 000                       |
| circuit-breaker / Design                                                             |   | 3VA                         |
| Mechanical service life (switching cycles) / typical                                 |   | 15 000                      |
| Voltage                                                                              |   |                             |
| Insulation voltage                                                                   |   |                             |
| • Rated value                                                                        | V | 800                         |

|                                                                |   |                   |
|----------------------------------------------------------------|---|-------------------|
| Protection class                                               |   |                   |
| Protective function of the overcurrent release                 |   | LI                |
| Switching capacity                                             |   |                   |
| Switching capacity class of the circuit breaker                |   | H                 |
| Dissipation                                                    |   |                   |
| Active power loss                                              |   |                   |
| • maximum                                                      | W | 38                |
| Electricity                                                    |   |                   |
| Operating current / at 45 °C / Rated value                     | A | 160               |
| Continuous current / Rated value / maximum                     | A | 160               |
| Continuous current                                             |   |                   |
| • Rated value                                                  | A | 160               |
| Adjustable response value current                              |   |                   |
| • of the current-dependent overload release / Full-scale value | A | 1                 |
| • of the instantaneous short-circuit release / initial value   | A | 10                |
| Net weight                                                     | g | 1 200             |
| Main circuit                                                   |   |                   |
| Operating voltage                                              |   |                   |
| • with AC / at 50/60 Hz / Rated value                          | V | 690               |
| • for DC / Rated value                                         | V | 600               |
| Operating current                                              |   |                   |
| • at 40 °C / Rated value                                       | A | 160               |
| • at 50 °C / Rated value                                       | A | 160               |
| • at 55 °C / Rated value                                       | A | 158               |
| • at 60 °C / Rated value                                       | A | 155               |
| • at 65 °C / Rated value                                       | A | 153               |
| • at 70 °C / Rated value                                       | A | 150               |
| Auxiliary circuit                                              |   |                   |
| Number of CO contacts                                          |   |                   |
| • for auxiliary contacts                                       |   | 0                 |
| Suitability                                                    |   |                   |
| • Suitability for use                                          |   | system protection |
| Adjustable parameters                                          |   |                   |
| Adjustable response value current                              |   |                   |
| • of I-trip / Full-scale value                                 | A | 10                |
| • for N-conductor protection / initial value                   | A | 0                 |
| • for N-conductor protection / Full-scale value                | A | 0                 |

|                                                                                                                                                                                                                                                                                     |                            |                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-----------------------------|
| Adjustable response value current / of the current-dependent overload release / initial value                                                                                                                                                                                       | A                          | 1                           |
| Appearance                                                                                                                                                                                                                                                                          |                            |                             |
| Product details                                                                                                                                                                                                                                                                     |                            |                             |
| <b>Product component</b> <ul style="list-style-type: none"> <li>• Trip indicator</li> <li>• display</li> <li>• Voltage trigger</li> <li>• undervoltage release</li> <li>• undervoltage release with leading contact</li> </ul>                                                      |                            | No<br>No<br>No<br>No<br>No  |
| <b>Product property</b> <ul style="list-style-type: none"> <li>• for neutral conductors / upgradeable/retrofitable / Short-circuit and overload proof</li> </ul>                                                                                                                    |                            | No                          |
| <b>Product expansion</b> <ul style="list-style-type: none"> <li>• optional<br/>— motor drive</li> </ul>                                                                                                                                                                             |                            | Yes                         |
| Product function                                                                                                                                                                                                                                                                    |                            |                             |
| <b>Product function</b> <ul style="list-style-type: none"> <li>• Intrinsic device protection</li> <li>• communication function</li> <li>• Phase failure detection</li> <li>• other measurement function</li> </ul>                                                                  |                            | Yes<br>No<br>No<br>No       |
| Accessories                                                                                                                                                                                                                                                                         |                            |                             |
| Manufacturer article number / of the supplied basic switch                                                                                                                                                                                                                          |                            | 3VA1116-6ED46-0AA0          |
| Short circuit                                                                                                                                                                                                                                                                       |                            |                             |
| <b>Operational short-circuit current breaking capacity (Ics)</b> <ul style="list-style-type: none"> <li>• at 240 V / Rated value</li> <li>• at 415 V / Rated value</li> <li>• at 440 V / Rated value</li> <li>• at 500 V / Rated value</li> <li>• at 690 V / Rated value</li> </ul> | kA<br>kA<br>kA<br>kA<br>kA | 100<br>70<br>36<br>15<br>5  |
| <b>Maximum short-circuit current breaking capacity (Icu)</b> <ul style="list-style-type: none"> <li>• at 240 V / Rated value</li> <li>• at 415 V / Rated value</li> <li>• at 440 V / Rated value</li> <li>• at 500 V / Rated value</li> <li>• at 690 V / Rated value</li> </ul>     | kA<br>kA<br>kA<br>kA<br>kA | 100<br>70<br>36<br>20<br>10 |
| Short-circuit current making capacity (Icm)                                                                                                                                                                                                                                         |                            |                             |

- at 240 V / Rated value
- at 415 V / Rated value
- at 690 V / Rated value

|    |     |
|----|-----|
| kA | 220 |
| kA | 154 |
| kA | 17  |

## Connections

|                                              |  |                    |
|----------------------------------------------|--|--------------------|
| <b>Arrangement of electrical connectors</b>  |  |                    |
| • for main current circuit                   |  | Front terminal     |
| Type of connectable conductor cross-section  |  |                    |
| • of the round conductor terminal / stranded |  | 1 x (1.5 - 70 mm²) |
| <b>Design of the electrical connection</b>   |  |                    |
| • for main current circuit                   |  | Box terminal       |

## Mechanical Design

|                      |    |                |
|----------------------|----|----------------|
| <b>Height</b>        | mm | 130            |
| <b>Width</b>         | mm | 101.6          |
| <b>Depth</b>         | mm | 70             |
| <b>Mounting type</b> |    | fixed mounting |

## Environmental conditions

|                              |    |     |
|------------------------------|----|-----|
| <b>Ambient temperature</b>   |    |     |
| • during operation / minimum | °C | -25 |
| • during operation / maximum | °C | 70  |
| • during storage / minimum   | °C | -40 |
| • during storage / maximum   | °C | 80  |

## Certificates

|                                 |            |                                  |                          |              |
|---------------------------------|------------|----------------------------------|--------------------------|--------------|
| <b>Reference code</b>           |            |                                  |                          |              |
| • acc. to DIN EN 61346-2        |            |                                  | Q                        |              |
| • acc. to DIN EN 81346-2        |            |                                  | Q                        |              |
| <b>General Product Approval</b> | <b>EMC</b> | <b>Declaration of Conformity</b> | <b>Shipping Approval</b> | <b>other</b> |



[other](#)



EG-Konf.



GL

[other](#)

## 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/3VA11166ED460AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA11166ED460AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA11166ED460AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11166ED460AA0)

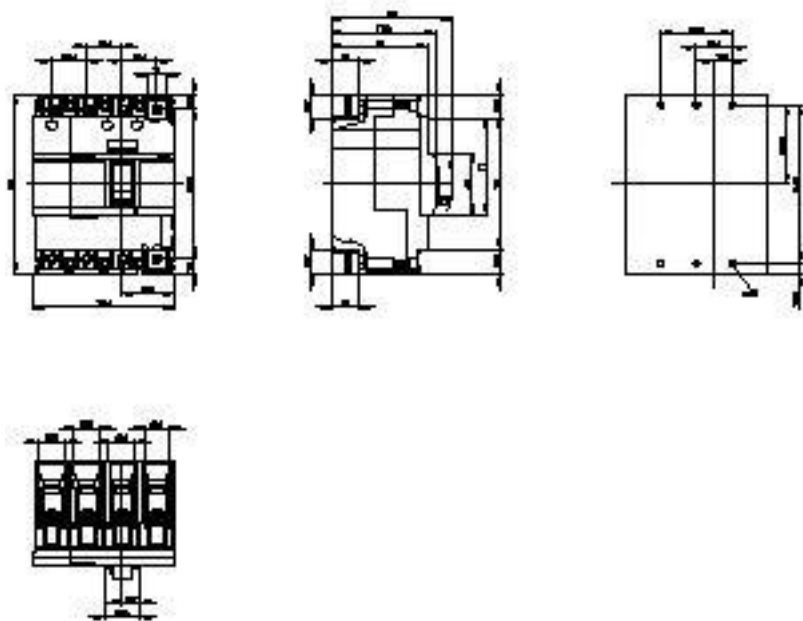


Figure similar

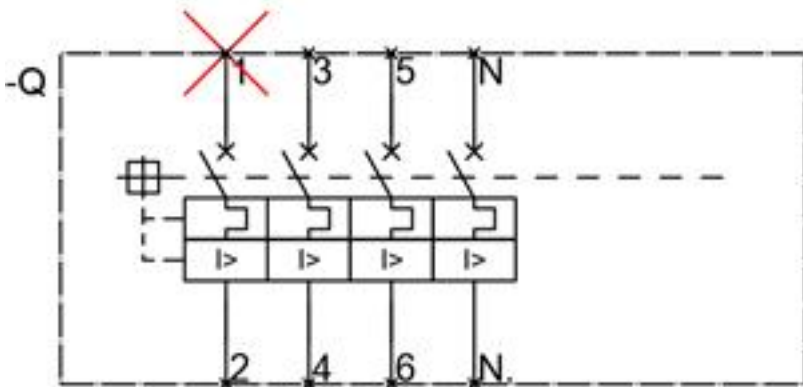


Figure similar

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