



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  
PROTECTION 100% BUSBAR 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 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 I2t characteristic / initial value    |   | 1                           |
| Trip class / of the L-trip / with I2t characteristic / Full-scale value |   | 1                           |
| Mechanical service life (switching cycles) / typical                    |   | 15 000                      |
| Voltage                                                                 |   |                             |
| Insulation voltage / Rated value                                        | V | 800                         |
| Protection class                                                        |   |                             |
| Protection class IP                                                     |   | IP40                        |
| Protection class IP / on the front                                      |   | IP40                        |
| Protective function of the overcurrent release                          |   | LI                          |
| Switching capacity                                                      |   |                             |
| Switching capacity class of the circuit breaker                         |   | H                           |

|                                                                                                      |   |                   |
|------------------------------------------------------------------------------------------------------|---|-------------------|
| Dissipation                                                                                          |   |                   |
| <b>Active power loss</b>                                                                             |   |                   |
| • maximum                                                                                            | W | 38                |
| Electricity                                                                                          |   |                   |
| <b>Continuous current / Rated value / maximum</b>                                                    | A | 160               |
| Continuous current / Rated value                                                                     | A | 160               |
| Main circuit                                                                                         |   |                   |
| <b>Operating voltage</b>                                                                             |   |                   |
| • with AC / at 50/60 Hz / Rated value                                                                | V | 690               |
| • for DC / Rated value                                                                               | V | 600               |
| <b>Operating current</b>                                                                             |   |                   |
| • 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                                                                                          |   |                   |
| <b>Suitability for use</b>                                                                           |   | system protection |
| Adjustable parameters                                                                                |   |                   |
| <b>Adjustable response value current / of the current-dependent overload release / initial value</b> | A | 160               |
| Product details                                                                                      |   |                   |
| <b>Product component</b>                                                                             |   |                   |
| • Trip indicator                                                                                     |   | No                |
| • display                                                                                            |   | No                |
| • undervoltage release                                                                               |   | No                |
| <b>Product property</b>                                                                              |   |                   |
| • for neutral conductors / upgradeable/retrofitable / Short-circuit and overload proof               |   | No                |
| Product expansion / optional / motor drive                                                           |   | Yes               |
| Product function                                                                                     |   |                   |
| <b>Product function</b>                                                                              |   |                   |
| • Intrinsic device protection                                                                        |   | Yes               |
| • communication function                                                                             |   | No                |
| • other measurement function                                                                         |   | No                |

## Short circuit

|                                                                  |    |      |
|------------------------------------------------------------------|----|------|
| <b>Operational short-circuit current breaking capacity (Ics)</b> |    |      |
| • at 240 V / Rated value                                         | kA | 100  |
| • at 415 V / Rated value                                         | kA | 70   |
| • at 440 V / Rated value                                         | kA | 36   |
| • at 500 V / Rated value                                         | kA | 15   |
| • at 690 V / Rated value                                         | kA | 5    |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>     |    |      |
| • at 240 V / Rated value                                         | kA | 100  |
| • at 415 V / Rated value                                         | kA | 70   |
| • at 440 V / Rated value                                         | kA | 36   |
| • at 500 V / Rated value                                         | kA | 20   |
| • at 690 V / Rated value                                         | kA | 10   |
| <b>Short-circuit current making capacity (Icm)</b>               |    |      |
| • at 240 V / Rated value                                         | kA | 220  |
| • at 415 V / Rated value                                         | kA | 154  |
| • at 440 V / Rated value                                         | kA | 75.6 |
| • at 500 V / Rated value                                         | kA | 40   |
| • at 690 V / Rated value                                         | kA | 17   |

## Connections

|                                                                 |  |                |
|-----------------------------------------------------------------|--|----------------|
| Arrangement of electrical connectors / for main current circuit |  | Front terminal |
| Type of connectable conductor cross-section                     |  |                |
| • for flat-bar terminal connection / minimum                    |  | 12 x 0         |
| • for flat-bar terminal connection / maximum                    |  | 17 x 6.5       |
| Type of electrical connection / for main current circuit        |  | Lug terminal   |

## Mechanical Design

|               |    |                |
|---------------|----|----------------|
| Height        | mm | 130            |
| Width         | mm | 101.6          |
| Depth         | mm | 70             |
| Mounting type |    | fixed mounting |
| Net weight    | g  | 1 200          |

## 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

|                   |  |  |
|-------------------|--|--|
| Equipment marking |  |  |
|-------------------|--|--|

- acc. to DIN EN 61346-2
- acc. to DIN EN 81346-2

Q  
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| General Product Approval | EMC | Declaration of Conformity | Test Certificates | Shipping Approval |
|--------------------------|-----|---------------------------|-------------------|-------------------|
|--------------------------|-----|---------------------------|-------------------|-------------------|



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



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#### 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/3VA11166GD420AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA11166GD420AA0/all>

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

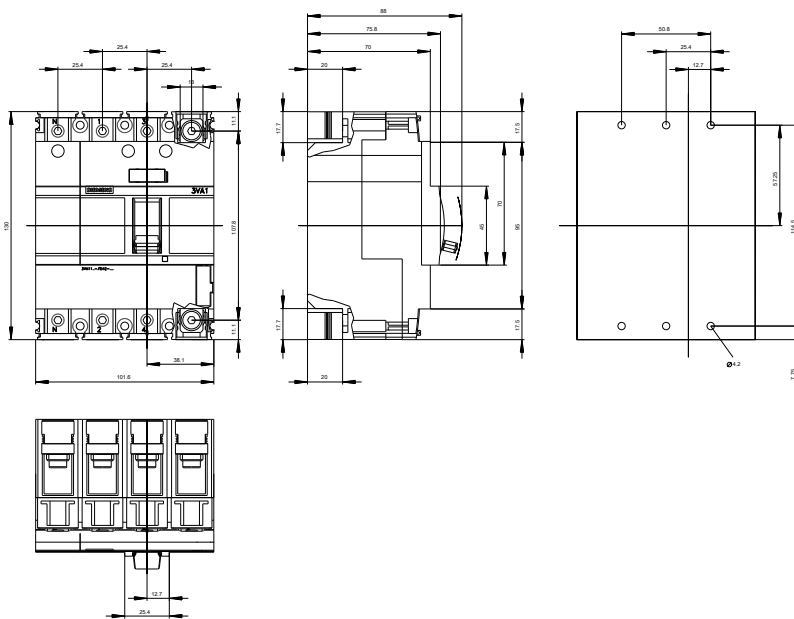
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA11166GD420AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11166GD420AA0)

##### CAX-Online-Generator

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

##### Tender specifications

<http://ausschreibungstexte.siemens.com/tiplv>



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