



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=100A OVERLOAD PROTECTION IR=100A 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             |
| Design of the overcurrent release              | TM210                       |
| 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 | 25 W   |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 8.33 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

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné lu                                      | 100 A |
| Operating current                                                 |       |
| • at 40 °C                                                        | 100 A |
| • at 45 °C                                                        | 100 A |
| • at 50 °C                                                        | 100 A |
| • at 55 °C                                                        | 98 A  |
| • at 60 °C                                                        | 96 A  |
| • at 65 °C                                                        | 94 A  |
| • at 70 °C                                                        | 91 A  |

#### Switching capacity according to IEC 60947

|                                                           |        |
|-----------------------------------------------------------|--------|
| Switching capacity class of the circuit breaker           | M      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 36 kA  |
| • at 500 V                                                | 10 kA  |
| • at 690 V                                                | 10 kA  |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 36 kA  |
| • at 500 V                                                | 5 kA   |
| • at 690 V                                                | 5 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 187 kA |
| • at 415 V                                                | 121 kA |
| • at 440 V                                                | 76 kA  |
| • at 500 V                                                | 17 kA  |
| • at 690 V                                                | 17 kA  |

#### Adjustable parameters

|                                                         |       |
|---------------------------------------------------------|-------|
| Adjustable response value current / I <sub>g</sub> min. | 100 A |
| Adjustable response value current / I <sub>g</sub> min. | 100 A |

|                                                            |         |
|------------------------------------------------------------|---------|
| Short-term delayed / tripping switchable / I2t=ON/OFF      | No      |
| Adjustable response value current / li min.                | 1 000 A |
| Adjustable response value current / li max.                | 1 000 A |
| Ground fault protection / tripping switchable / I2t=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   |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 12 x 0         |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5       |

#### 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 |
|--------------------------------------------|---|

| General Product Approval                                                                 |                                                                                          |                               |                    |                                                                                            | EMC                                                                                        |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------|--------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <a href="#">Miscellaneous</a> | <a href="#">KC</a> | <br>EAC | <br>RCM |

| Declaration of Conformity                                                                     | Test Certificates                                  |                               |                                          | Shipping Approval                                                                          |                                                                                                       |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>EG-Konf. | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a> | <br>ABS | <br>BUREAU VERITAS |

| Shipping Approval                                                                       | other                                                                                    |                                                                                           |                               |  |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------|--|
| <br>GL | <br>LRS | <br>RMRS | <a href="#">Miscellaneous</a> |  |

#### 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=3VA1110-5GD42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1110-5GD42-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1110-5GD42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1110-5GD42-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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





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