



molded case switch 3VA5 UL frame 1200 max short-circuit curr. rating 100kA @ 480 V 3-pole MCS110, FM, In=1200A without overload protection short circuit protection Ii=10 x In w/o connection self protection

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SENTRON                     |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | CNAS                        |
| design of the product                                                                                                      | Molded case switch          |
| design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| design of the overcurrent release                                                                                          | MCS110                      |
| protection function of the overcurrent release                                                                             | I                           |
| number of poles                                                                                                            | 3                           |
| General technical data                                                                                                     |                             |
| insulation voltage / rated value                                                                                           | 800 V                       |
| operating voltage / at DC / rated value                                                                                    | 750 V                       |
| operating voltage / at AC / rated value                                                                                    | 600 V                       |
| power loss [W] / maximum                                                                                                   | 249 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 249 W                       |
| mechanical service life (operating cycles) / typical                                                                       | 3 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 1 500                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 500                         |
| electrical endurance (operating cycles) / at 480 V                                                                         | 1 500                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 500                         |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                          |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • phase failure detection                                                                                                  | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 3.133 kg                    |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                          |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 1 200 A                     |
| Switching capacity according to IEC 60947                                                                                  |                             |
| switching capacity class of the circuit breaker                                                                            | C                           |
| maximum short-circuit current breaking capacity (Icu)                                                                      |                             |
| • at 240 V                                                                                                                 | 200 kA                      |
| • at 415 V                                                                                                                 | 110 kA                      |
| • at 690 V                                                                                                                 | 35 kA                       |
| operating short-circuit current breaking capacity (Ics)                                                                    |                             |

|                                                                                                                                                               |                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul>                                                          | 100 kA<br>55 kA<br>17 kA                                                                                                                                       |
| short-circuit current making capacity (I <sub>cm</sub> ) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 690 V</li> </ul> | 440 kA<br>242 kA<br>77 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 |

#### Switching capacity according to UL 489

|                                                                                                                                                          |                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| current breaking capacity <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 Y/347 V</li> <li>• at 600 V</li> </ul> | 200 kA<br>100 kA<br>65 kA<br>65 kA |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|

#### Adjustable parameters

|                                                                                                                                                             |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul> | 12 000 A<br>12 000 A |
| product function / grounding protection                                                                                                                     | No                   |

#### Mechanical Design

|                                                                                                                      |          |
|----------------------------------------------------------------------------------------------------------------------|----------|
| product component <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• trip indicator</li> </ul> | No<br>No |
| height [in]                                                                                                          | 8.14 in  |
| height                                                                                                               | 207 mm   |
| width [in]                                                                                                           | 8.99 in  |
| width                                                                                                                | 228.4 mm |
| depth [in]                                                                                                           | 16 in    |
| depth                                                                                                                | 406.4 mm |

#### Connections

|                                                                                       |                   |
|---------------------------------------------------------------------------------------|-------------------|
| type of electrical connection / for main current circuit                              | without terminals |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)    | silver            |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) | silver            |

#### Auxiliary circuit

|                                                |   |
|------------------------------------------------|---|
| number of CO contacts / for auxiliary contacts | 0 |
|------------------------------------------------|---|

#### Environmental conditions

|                                                                                                                                                                                                                  |                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| protection class IP / on the front                                                                                                                                                                               | IP40                               |
| ambient temperature <ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul> | -25 °C<br>70 °C<br>-40 °C<br>80 °C |
| reference code / according to IEC 81346-2                                                                                                                                                                        | F                                  |

#### Approvals / Certificates

##### General Product Approval



|                          |     |                   |                      |       |
|--------------------------|-----|-------------------|----------------------|-------|
| General Product Approval | EMV | Test Certificates | Maritime application | other |
|--------------------------|-----|-------------------|----------------------|-------|



other

Environment

Miscellaneous

Environmental Confirmations

## Further information

## Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

## Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

## Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/lowvoltage/catalogs>

## Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA5712-7BB31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5712-7BB31-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5712-7BB31-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5712-7BB31-0AA0)

## CAx-Online-Generator

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

## Tender specifications

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





