



circuit breaker 3VA5 UL Frame 250 breaking capacity class H 65 kA @ 480 V 3-pole, line protection TM210, FTFM,  $I_n=15$  A overload protection, 100%-rated  $I_r=15$  A permanently set short-circuit protection  $I_i=23.3 \times I_n$  without connection

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SENTRON                     |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | HFAS                        |
| design of the product                                                                                                      | System protection           |
| design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| design of the load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type)                      | Yes                         |
| design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)                                | Yes                         |
| design of the overcurrent release                                                                                          | TM210                       |
| protection function of the overcurrent release                                                                             | LI                          |
| 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                                                                                    | 690 V                       |
| power loss [W] / maximum                                                                                                   | 5.1 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 1.7 W                       |
| mechanical service life (operating cycles) / typical                                                                       | 20 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 8 000                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 4 000                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 8 000                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 4 000                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                          |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 2 100 g                     |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | Yes                         |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 15 A                        |
| • at 45 °C                                                                                                                 | 14.1 A                      |
| • at 50 °C                                                                                                                 | 13.1 A                      |
| • at 55 °C                                                                                                                 | 12.2 A                      |
| • at 60 °C                                                                                                                 | 11.2 A                      |

|                                                                                                                                                                                                  |                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 65 °C</li> <li>• at 70 °C</li> </ul>                                                                                                                 | 10.3 A<br>9.3 A                                                                                                                                                |
| <b>Switching capacity according to IEC 60947</b>                                                                                                                                                 |                                                                                                                                                                |
| switching capacity class of the circuit breaker                                                                                                                                                  | H                                                                                                                                                              |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> ) <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>70 kA<br>10 kA                                                                                                                                       |
| operating short-circuit current breaking capacity (I <sub>cs</sub> ) <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>70 kA<br>10 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>                                    | 220 kA<br>154 kA<br>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 |
| <b>Switching capacity according to UL 489</b>                                                                                                                                                    |                                                                                                                                                                |
| current breaking capacity <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 V</li> </ul>                                                                   | 100 kA<br>65 kA<br>25 kA                                                                                                                                       |
| <b>Adjustable parameters</b>                                                                                                                                                                     |                                                                                                                                                                |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul> | 15 A<br>15 A                                                                                                                                                   |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>     | 1 s<br>1 s                                                                                                                                                     |
| 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>                                      | 400 A<br>400 A                                                                                                                                                 |
| product function / grounding protection                                                                                                                                                          | No                                                                                                                                                             |
| <b>Mechanical Design</b>                                                                                                                                                                         |                                                                                                                                                                |
| product component <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul>                                                  | No<br>No<br>No                                                                                                                                                 |
| height [in]                                                                                                                                                                                      | 7.28 in                                                                                                                                                        |
| height                                                                                                                                                                                           | 185 mm                                                                                                                                                         |
| width [in]                                                                                                                                                                                       | 4.13 in                                                                                                                                                        |
| width                                                                                                                                                                                            | 105 mm                                                                                                                                                         |
| depth [in]                                                                                                                                                                                       | 3.27 in                                                                                                                                                        |
| depth                                                                                                                                                                                            | 83 mm                                                                                                                                                          |
| <b>Connections</b>                                                                                                                                                                               |                                                                                                                                                                |
| arrangement of electrical connectors / for main current circuit                                                                                                                                  | Without connection                                                                                                                                             |
| type of electrical connection / for main current circuit                                                                                                                                         | Without                                                                                                                                                        |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)                                                                                                            | silver                                                                                                                                                         |
| <b>Auxiliary circuit</b>                                                                                                                                                                         |                                                                                                                                                                |
| number of CO contacts / for auxiliary contacts                                                                                                                                                   | 0                                                                                                                                                              |
| <b>Accessories</b>                                                                                                                                                                               |                                                                                                                                                                |
| product extension / optional / motor drive                                                                                                                                                       | Yes                                                                                                                                                            |
| manufacturer's article number <ul style="list-style-type: none"> <li>• of the supplied basic switch</li> </ul>                                                                                   | <a href="#">3VA52956ED312AA0</a>                                                                                                                               |
| <b>Environmental conditions</b>                                                                                                                                                                  |                                                                                                                                                                |





