



circuit breaker 3VA5 UL Frame 800 breaking capacity class C 100 kA @ 480 V 3-pole, line protection TM230, FTAM, In=700 A overload protection, 100%-rated Ir=700 A permanently set short-circuit protection Ii=5...10 x In cable connection on two sides

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SENTRON                     |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | CMAS                        |
| 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)                      | No                          |
| design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)                                | No                          |
| design of the overcurrent release                                                                                          | TM230                       |
| 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                                                                                                   | 183 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 61 W                        |
| mechanical service life (operating cycles) / typical                                                                       | 10 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 4 800                       |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 3 300                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 4 800                       |
| electrical endurance (operating cycles) / at 600 V                                                                         | 3 300                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                          |
| product function                                                                                                           |                             |
| • communication function                                                                                                   | No                          |
| • other measurement function                                                                                               | No                          |
| Net Weight                                                                                                                 | 14.586 kg                   |
| Current                                                                                                                    |                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | Yes                         |
| operational current                                                                                                        |                             |
| • at 40 °C                                                                                                                 | 700 A                       |
| • at 45 °C                                                                                                                 | 680 A                       |
| • at 50 °C                                                                                                                 | 659 A                       |
| • at 55 °C                                                                                                                 | 639 A                       |
| • at 60 °C                                                                                                                 | 619 A                       |

|                                                                                                                               |                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 65 °C</li> <li>• at 70 °C</li> </ul>                                              | 599 A<br>578 A                                                                                                                                                 |
| <b>Switching capacity according to IEC 60947</b>                                                                              |                                                                                                                                                                |
| switching capacity class of the circuit breaker                                                                               | C                                                                                                                                                              |
| 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>                          | 200 kA<br>110 kA<br>35 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>                          | 150 kA<br>85 kA<br>19 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>73.5 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>                          | 200 kA<br>100 kA<br>50 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>                                                | 700 A<br>700 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>                                                | 3 500 A<br>7 000 A                                                                                                                                             |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping                                                                |                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                | 0 A<br>0 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]                                                                                                                   | 12.91 in                                                                                                                                                       |
| height                                                                                                                        | 328 mm                                                                                                                                                         |
| width [in]                                                                                                                    | 8.27 in                                                                                                                                                        |
| width                                                                                                                         | 210 mm                                                                                                                                                         |
| depth [in]                                                                                                                    | 4.72 in                                                                                                                                                        |
| depth                                                                                                                         | 120 mm                                                                                                                                                         |
| <b>Connections</b>                                                                                                            |                                                                                                                                                                |
| arrangement of electrical connectors / for main current circuit                                                               | Front connection                                                                                                                                               |
| type of electrical connection / for main current circuit                                                                      | circular conductor terminal on both sides                                                                                                                      |
| 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                                                                                    | No                                                                                                                                                             |





