

Siemens  
EcoTech



circuit breaker 3VA2 IEC Frame 100 breaking capacity class M  $I_{cu}=55 \text{ kA @ } 415 \text{ V}$   
4-pole, line protection ETU330, LIG,  $I_n=100 \text{ A}$  overload protection  $I_r=40 \text{ A} \dots 100 \text{ A}$   
short-circuit protection  $I_i=1.5 \dots 12 \times I_n$  neutral conductor protection adjustable (OFF, 50%, 100%) ground-fault protection  $I_g=0.2 \dots 1 \times I_n$   $t_g=0.1/0.3 \text{ s}$  terminal connection

| Model                                                                                                 |                                             |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------|
| product brand name                                                                                    | SENTRON                                     |
| product designation                                                                                   | Molded case circuit breaker                 |
| design of the product                                                                                 | Line protection                             |
| design of the overcurrent release                                                                     | ETU330                                      |
| protection function of the overcurrent release                                                        | LIG                                         |
| number of poles                                                                                       | 4                                           |
| General technical data                                                                                |                                             |
| insulation voltage / rated value                                                                      | 800 V                                       |
| operating voltage / at AC / rated value                                                               | 690 V                                       |
| power loss [W] / maximum                                                                              | 13.5 W                                      |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 4.5 W                                       |
| mechanical service life (operating cycles) / typical                                                  | 25 000                                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                      | 15 000                                      |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                          | 10 500                                      |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | No                                          |
| ground-fault monitoring version                                                                       | Summation current formation L + N conductor |
| product function                                                                                      |                                             |
| • communication function                                                                              | No                                          |
| • other measurement function                                                                          | No                                          |
| Net Weight                                                                                            | 2.897 kg                                    |
| Current                                                                                               |                                             |
| operational current                                                                                   |                                             |
| • at 40 °C                                                                                            | 100 A                                       |
| • at 45 °C                                                                                            | 100 A                                       |
| • at 50 °C                                                                                            | 100 A                                       |
| • at 55 °C                                                                                            | 100 A                                       |
| • at 60 °C                                                                                            | 100 A                                       |
| • at 65 °C                                                                                            | 100 A                                       |
| • at 70 °C                                                                                            | 100 A                                       |
| Switching capacity according to IEC 60947                                                             |                                             |
| switching capacity class of the circuit breaker                                                       | M                                           |
| maximum short-circuit current breaking capacity ( $I_{cu}$ )                                          |                                             |
| • at 240 V                                                                                            | 85 kA                                       |

|                                                                                                                                                                                                      |                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                                                                             | 55 kA<br>55 kA<br>36 kA<br>2 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 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | 85 kA<br>55 kA<br>55 kA<br>36 kA<br>2 kA      |
| short-circuit current making capacity (Icm) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>             | 187 kA<br>121 kA<br>121 kA<br>75.5 kA<br>3 kA |
| <b>Adjustable parameters</b>                                                                                                                                                                         |                                               |
| product feature / for L-tripping / can be switched on/off                                                                                                                                            | No                                            |
| adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                              | 40 A<br>100 A                                 |
| adjustable response value delay time (tr) / for L-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                  | 0.5 s<br>17 s                                 |
| adjustable response value setting current (Ii) / for I-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                       | 150 A<br>1 200 A                              |
| adjustable current response value current / for G-tripping / with standard characteristic <ul style="list-style-type: none"> <li>• initial value</li> <li>• full-scale value</li> </ul>              | 20 A<br>100 A                                 |
| adjustable response value delay time (tg) / for G-tripping / with I0t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                  | 0.1 s<br>0.3 s                                |
| adjustable setting current (InN) / for N-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                                     | 20 A<br>100 A                                 |
| design of the N-conductor protection                                                                                                                                                                 | adjustable OFF; 50%; 100%                     |
| product function / grounding protection                                                                                                                                                              | Yes                                           |
| <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]                                                                                                                                                                                          | 7.13 in                                       |
| height                                                                                                                                                                                               | 181 mm                                        |
| width [in]                                                                                                                                                                                           | 5.51 in                                       |
| type of connectable conductor cross-sections / of the round conductor terminal / stranded                                                                                                            | 1 x (6 - 120 mm²)                             |
| width                                                                                                                                                                                                | 140 mm                                        |
| depth [in]                                                                                                                                                                                           | 3.39 in                                       |
| depth                                                                                                                                                                                                | 86 mm                                         |
| <b>Connections</b>                                                                                                                                                                                   |                                               |
| arrangement of electrical connectors / for main current circuit                                                                                                                                      | Front terminal                                |
| type of electrical connection / for main current circuit                                                                                                                                             | double-sided box terminal                     |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)                                                                                                                   | tin                                           |

|                                                                                       |                 |
|---------------------------------------------------------------------------------------|-----------------|
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) | tin             |
| <b>Auxiliary circuit</b>                                                              |                 |
| number of CO contacts / for auxiliary contacts                                        | 0               |
| <b>Accessories</b>                                                                    |                 |
| product extension / optional / motor drive                                            | Yes             |
| <b>Environmental conditions</b>                                                       |                 |
| 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           |
| <b>Environmental footprint</b>                                                        |                 |
| global warming potential [CO2 eq] / total                                             | 61.814 kg       |
| global warming potential [CO2 eq] / during manufacturing                              | 14.6 kg         |
| global warming potential [CO2 eq] / during operation                                  | 48.9 kg         |
| global warming potential [CO2 eq] / after end of life                                 | -2.2 kg         |
| Siemens Eco Profile (SEP)                                                             | Siemens EcoTech |
| reference code / according to IEC 81346-2                                             | Q               |
| <b>Approvals / Certificates</b>                                                       |                 |
| <b>General Product Approval</b>                                                       |                 |



[Miscellaneous](#)



[Confirmation](#)

| General Product Approval | EMV      | Test Certificates |                               |                                                    |
|--------------------------|----------|-------------------|-------------------------------|----------------------------------------------------|
|                          |          |                   | <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a>           |
|                          | EG-Konf. | RCM               |                               | <a href="#">Type Test Certificates/Test Report</a> |

| Maritime application | other |     |     |                                                    |                               |
|----------------------|-------|-----|-----|----------------------------------------------------|-------------------------------|
|                      |       |     |     | <a href="#">CCS (China Classification Society)</a> | <a href="#">Miscellaneous</a> |
|                      |       | DNV | LRS |                                                    |                               |

| other                         | Dangerous goods              | Environment |                                       |                                             |
|-------------------------------|------------------------------|-------------|---------------------------------------|---------------------------------------------|
| <a href="#">Miscellaneous</a> | <a href="#">Confirmation</a> |             | <a href="#">Transport Information</a> | <a href="#">Environmental Confirmations</a> |
|                               |                              |             |                                       |                                             |

| Environment                                 |
|---------------------------------------------|
| <a href="#">Environmental Confirmations</a> |
|                                             |

| Further information                                                                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Information on the packaging<br><a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a> |
| 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=3VA2010-5HM46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2010-5HM46-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2010-5HM46-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2010-5HM46-0AA0)

CAX-Online-Generator

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

Tender specifications

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP='HAUPT'></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)





