



circuit breaker 3VA5 UL frame 1200 breaking capacity class H 65kA @ 480 V 2-pole, line protection TM230, FTAM, In=900A overload protection Ir=900A fixed short circuit protection Ii=5 - 10 x In w/o connection

| Model                                                                                                                      |                             |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                                         | SENTRON                     |
| product designation                                                                                                        | Molded-case circuit breaker |
| product designation / according to UL file                                                                                 | HNAS                        |
| 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 overcurrent release                                                                                          | TM230                       |
| protection function of the overcurrent release                                                                             | LI                          |
| number of poles                                                                                                            | 2                           |
| General technical data                                                                                                     |                             |
| insulation voltage / rated value                                                                                           | 800 V                       |
| operating voltage / at DC / rated value                                                                                    | 500 V                       |
| operating voltage / at AC / rated value                                                                                    | 600 V                       |
| power loss [W] / maximum                                                                                                   | 167 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 167 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                                                                                                                 | 900 A                       |
| • at 45 °C                                                                                                                 | 868 A                       |
| • at 50 °C                                                                                                                 | 837 A                       |
| • at 55 °C                                                                                                                 | 805 A                       |
| • at 60 °C                                                                                                                 | 774 A                       |
| • at 65 °C                                                                                                                 | 742 A                       |
| • at 70 °C                                                                                                                 | 710 A                       |
| Switching capacity according to IEC 60947                                                                                  |                             |

|                                                                                                                   |                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| switching capacity class of the circuit breaker                                                                   | H                                                                                                                                                              |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                                                |                                                                                                                                                                |
| • at 240 V                                                                                                        | 110 kA                                                                                                                                                         |
| • at 415 V                                                                                                        | 70 kA                                                                                                                                                          |
| • at 690 V                                                                                                        | 30 kA                                                                                                                                                          |
| operating short-circuit current breaking capacity (I <sub>cs</sub> )                                              |                                                                                                                                                                |
| • at 240 V                                                                                                        | 55 kA                                                                                                                                                          |
| • at 415 V                                                                                                        | 35 kA                                                                                                                                                          |
| • at 690 V                                                                                                        | 15 kA                                                                                                                                                          |
| short-circuit current making capacity (I <sub>cm</sub> )                                                          |                                                                                                                                                                |
| • at 240 V                                                                                                        | 242 kA                                                                                                                                                         |
| • at 415 V                                                                                                        | 154 kA                                                                                                                                                         |
| • at 690 V                                                                                                        | 63 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                                                                                         |                                                                                                                                                                |
| • at 240 V                                                                                                        | 100 kA                                                                                                                                                         |
| • at 480 V                                                                                                        | 65 kA                                                                                                                                                          |
| • at 600 Y/347 V                                                                                                  | 35 kA                                                                                                                                                          |
| • at 600 V                                                                                                        | 35 kA                                                                                                                                                          |
| <b>Adjustable parameters</b>                                                                                      |                                                                                                                                                                |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic |                                                                                                                                                                |
| • minimum                                                                                                         | 900 A                                                                                                                                                          |
| • maximum                                                                                                         | 900 A                                                                                                                                                          |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic     |                                                                                                                                                                |
| • minimum                                                                                                         | 1 s                                                                                                                                                            |
| • maximum                                                                                                         | 1 s                                                                                                                                                            |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                      |                                                                                                                                                                |
| • minimum                                                                                                         | 4 500 A                                                                                                                                                        |
| • maximum                                                                                                         | 9 000 A                                                                                                                                                        |
| product function / grounding protection                                                                           | No                                                                                                                                                             |
| <b>Mechanical Design</b>                                                                                          |                                                                                                                                                                |
| product component                                                                                                 |                                                                                                                                                                |
| • undervoltage release                                                                                            | No                                                                                                                                                             |
| • trip indicator                                                                                                  | 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                                                                                                                                                       |
| <b>Connections</b>                                                                                                |                                                                                                                                                                |
| 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                                                                                                                                                         |
| <b>Auxiliary circuit</b>                                                                                          |                                                                                                                                                                |
| number of CO contacts / for auxiliary contacts                                                                    | 0                                                                                                                                                              |
| <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                                                                                                                                                          |

|                                           |   |
|-------------------------------------------|---|
| reference code / according to IEC 81346-2 | F |
|-------------------------------------------|---|

## Approvals / Certificates

### General Product Approval



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

[Miscellaneous](#)



[Type Test Certificates/Test Report](#)



[Confirmation](#)

|       |             |
|-------|-------------|
| 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=3VA5790-6EC61-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5790-6EC61-0AA0>

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

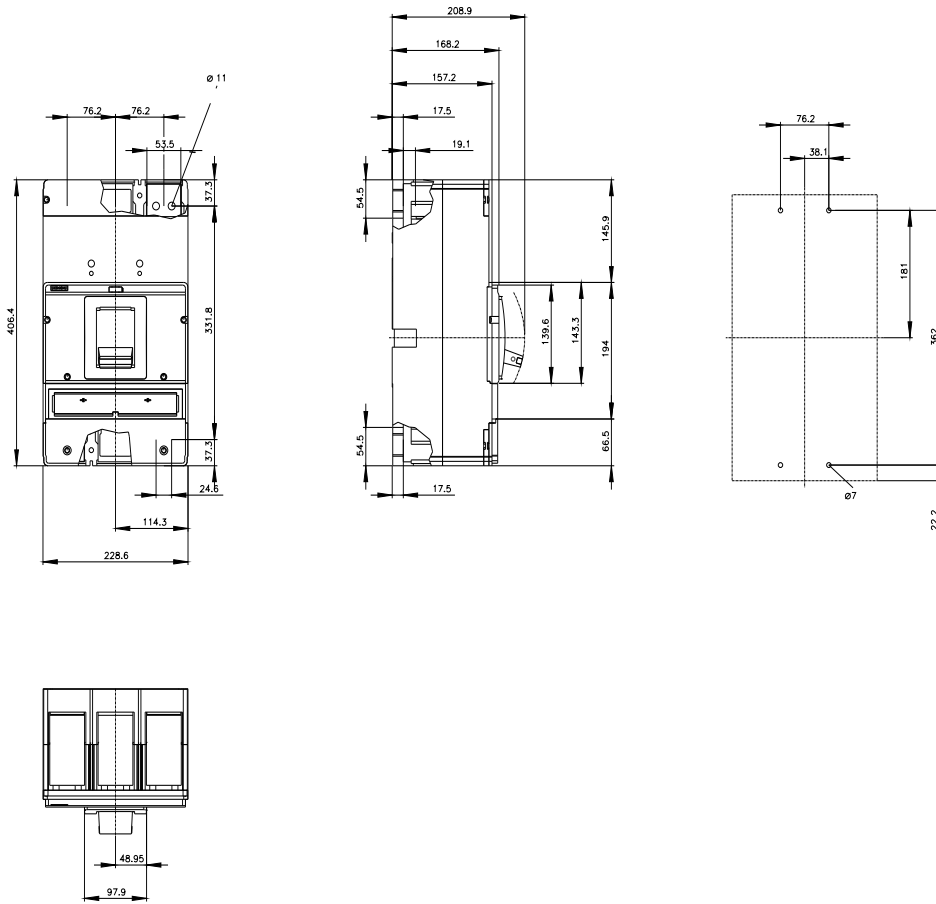
[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5790-6EC61-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5790-6EC61-0AA0)

CAX-Online-Generator

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

Tender specifications

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



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