

circuit breaker 3VA6 UL frame 800 breaking capacity class H 65kA @ 480 V 4-pole, line protection ETU860, LSIG,  $I_n=800A$  overload protection  $I_r=320A \dots 800A$  short circuit protection  $I_{sd}=0,6..10 \times I_n$ ,  $I_i=1,5..10 \times I_n$



| Model                                                                                                                 |                             |
|-----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| Product brand name                                                                                                    | SENTRON                     |
| Product designation                                                                                                   | Molded-case circuit breaker |
| Product designation / according to UL file                                                                            | HMAE                        |
| Product version                                                                                                       | System protection           |
| Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release                                                                                     | ETU860                      |
| Protective function of the overcurrent release                                                                        | LSIG                        |
| Number of poles                                                                                                       | 4                           |
| General technical data                                                                                                |                             |
| Rated insulation voltage $U_i$                                                                                        | 600 V                       |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                                                                  | 600 V                       |
| Power loss [W] / maximum                                                                                              | 231 W                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole                        | 77 W                        |
| Mechanical service life (switching cycles) / typical                                                                  | 10 000                      |

|                                                                           |                                             |
|---------------------------------------------------------------------------|---------------------------------------------|
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 5 800                                       |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz     | 4 000                                       |
| Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz          | 5 800                                       |
| Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz          | 4 000                                       |
| Neutral conductors / upgradeable/retrofitable                             | No                                          |
| Ground fault monitoring version                                           | Summation current formation L + N-conductor |
| Product function                                                          |                                             |
| • communication function                                                  | Yes                                         |
| • other measurement function                                              | Yes                                         |

#### Current

|                                                  |       |
|--------------------------------------------------|-------|
| Marking / acc. to UL 489 / 100%-rated breaker    | No    |
| Max. rated operational current of the frame size | 800 A |
| Rated continuous current I <sub>u</sub>          | 800 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                                                             | 85 kA  |
| • at 690 V                                                             | 35 kA  |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |        |
| • at 240 V                                                             | 110 kA |
| • at 415 V                                                             | 85 kA  |
| • at 690 V                                                             | 19 kA  |
| Short-circuit current making capacity (I <sub>cm</sub> )               |        |
| • at 240 V                                                             | 242 kA |
| • at 415 V                                                             | 187 kA |
| • at 690 V                                                             | 74 kA  |

#### Switching capacity according to UL 489

|                           |        |
|---------------------------|--------|
| Breaking capacity current |        |
| • at 240 V                | 150 kA |
| • at 480 V                | 65 kA  |
| • at 600 V                | 35 kA  |

#### Adjustable parameters

|                                                         |       |
|---------------------------------------------------------|-------|
| Adjustable response value current / I <sub>r</sub> min. | 320 A |
| Adjustable response value current / I <sub>r</sub> max. | 800 A |
| Adjustable response value time / t <sub>r</sub> min.    | 0.5   |
| Adjustable response value time / t <sub>r</sub> max.    | 25    |

|                                                                         |         |
|-------------------------------------------------------------------------|---------|
| Adjustable response value current / I <sub>sd</sub> min.                | 480 A   |
| Adjustable response value current / I <sub>sd</sub> max.                | 8 000 A |
| Adjustable response value time / t <sub>sd</sub> min.                   | 0.05 s  |
| Adjustable response value time / t <sub>sd</sub> max.                   | 0.5 s   |
| Adjustable response value time / t <sub>sd</sub> min.                   | 0.05 s  |
| Adjustable response value time / t <sub>sd</sub> max.                   | 0.5 s   |
| Adjustable response value current / I <sub>i</sub> min.                 | 1 200 A |
| Adjustable response value current / I <sub>i</sub> max.                 | 8 000 A |
| Ground fault protection can be switched ON/OFF                          | Yes     |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | Yes     |
| Adjustable response value current / I <sub>g</sub> min.                 | 160 A   |
| Adjustable response value current / I <sub>g</sub> max.                 | 800 A   |
| Adjustable response value current / t <sub>g</sub> min.                 | 0.05 s  |
| Adjustable response value current / t <sub>g</sub> max.                 | 0.8 s   |

### Mechanical Design

|             |         |
|-------------|---------|
| Height [in] | 12.6 in |
| Height      | 328 mm  |
| Width [in]  | 11 in   |
| Width       | 280 mm  |
| Depth [in]  | 4.7 in  |
| Depth       | 120 mm  |

### Auxiliary circuit

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

### Environmental conditions

|                                    |        |
|------------------------------------|--------|
| 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  |

### Certificates

|                                                                                        |     |
|----------------------------------------------------------------------------------------|-----|
| Reference code / acc. to DIN EN 81346-2                                                | Q   |
| Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB | Yes |

### General Product Approval

[Miscellaneous](#)

## Further information

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

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

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6580-6KQ42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6580-6KQ42-0AA0>

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

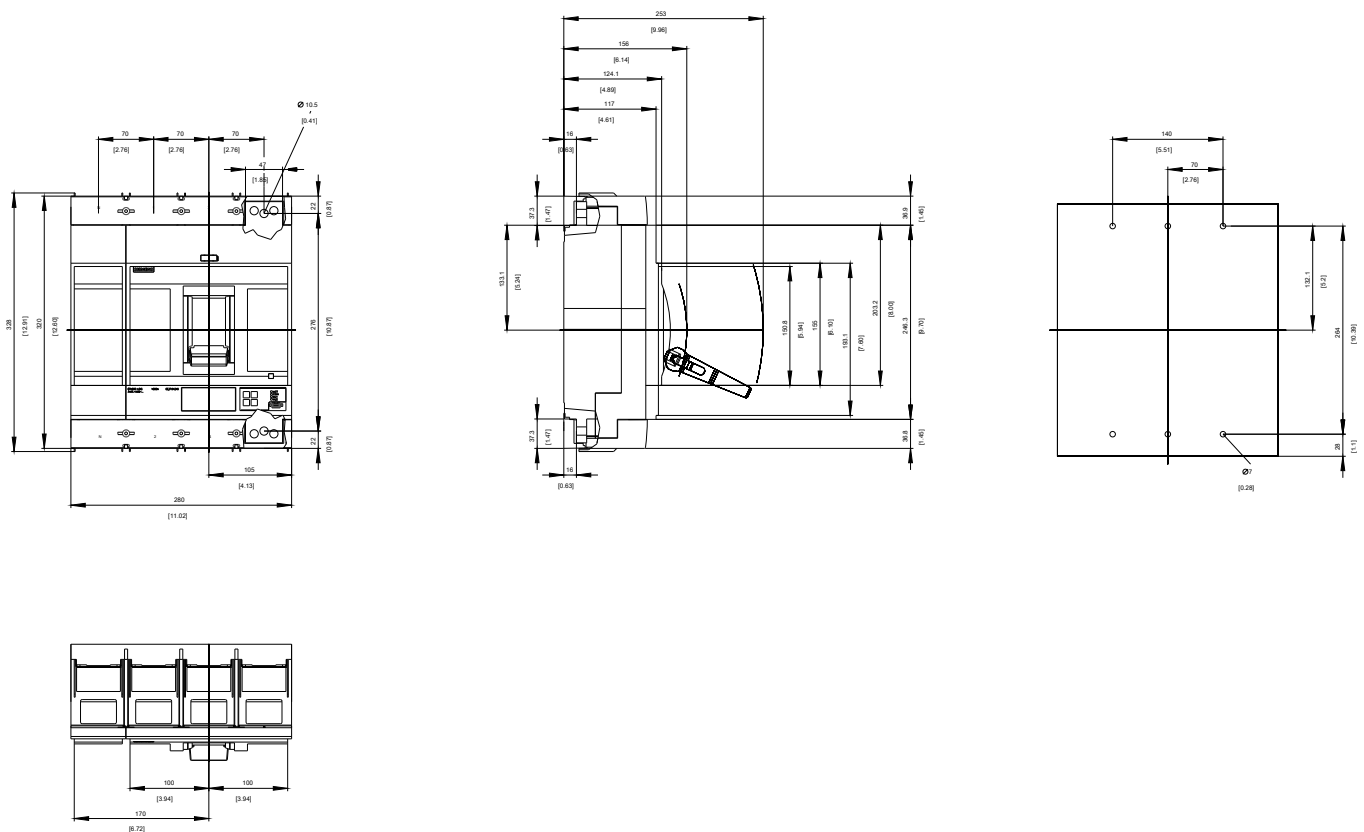
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6580-6KQ42-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6580-6KQ42-0AA0)

### CAX-Online-Generator

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

### Tender specifications

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



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