

**Siemens**  
**EcoTech**



circuit breaker 3VA6 UL Frame 150 breaking capacity class H 65 kA @ 480 V 4-pole, line protection ETU330, LIG,  $I_n=40$  A overload protection  $I_r=16$  A...40 A short-circuit protection  $I_i=1.5...12 \times I_n$  neutral conductor protection adjustable (OFF, 100%) ground-fault protection  $I_g=0.375...1 \times I_n$   $t_g=0.1/0.3$ s without connection



| Model                                                                                                                      |                                             |
|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| product brand name                                                                                                         | SENTRON                                     |
| product designation                                                                                                        | Molded-case circuit breaker                 |
| product designation / according to UL file                                                                                 | HDAE                                        |
| 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                                                                                          | 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                                                                                                   | 2.4 W                                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 0.8 W                                       |
| mechanical service life (operating cycles) / typical                                                                       | 25 000                                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 14 000                                      |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 9 800                                       |
| electrical endurance (operating cycles) / at 480 V                                                                         | 14 000                                      |
| electrical endurance (operating cycles) / at 600 V                                                                         | 9 800                                       |
| 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                                                                                                                 | 3.2 kg                                      |
| Current                                                                                                                    |                                             |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                                          |
| operational current                                                                                                        |                                             |
| • at 40 °C                                                                                                                 | 40 A                                        |
| • at 45 °C                                                                                                                 | 40 A                                        |
| • at 50 °C                                                                                                                 | 40 A                                        |
| • at 55 °C                                                                                                                 | 40 A                                        |
| • at 60 °C                                                                                                                 | 40 A                                        |
| • at 65 °C                                                                                                                 | 40 A                                        |

|                                                                                                                   |                      |
|-------------------------------------------------------------------------------------------------------------------|----------------------|
| • at 70 °C                                                                                                        | 40 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> )                                                |                      |
| • at 240 V                                                                                                        | 110 kA               |
| • at 415 V                                                                                                        | 85 kA                |
| • at 690 V                                                                                                        | 2.5 kA               |
| operating short-circuit current breaking capacity (I <sub>cs</sub> )                                              |                      |
| • at 240 V                                                                                                        | 110 kA               |
| • at 415 V                                                                                                        | 85 kA                |
| • at 690 V                                                                                                        | 2.5 kA               |
| short-circuit current making capacity (I <sub>cm</sub> )                                                          |                      |
| • at 240 V                                                                                                        | 242 kA               |
| • at 415 V                                                                                                        | 187 kA               |
| • at 690 V                                                                                                        | 3.8 kA               |
| <b>Switching capacity according to UL 489</b>                                                                     |                      |
| current breaking capacity                                                                                         |                      |
| • at 240 V                                                                                                        | 100 kA               |
| • at 480 V                                                                                                        | 65 kA                |
| • at 600 V                                                                                                        | 22 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                                                                                                         | 15 A                 |
| • maximum                                                                                                         | 40 A                 |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic     |                      |
| • minimum                                                                                                         | 0.5 s                |
| • maximum                                                                                                         | 17 s                 |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                      |                      |
| • minimum                                                                                                         | 60 A                 |
| • maximum                                                                                                         | 480 A                |
| adjustable current response value current / for G-tripping / with standard characteristic                         |                      |
| • initial value                                                                                                   | 15 A                 |
| • full-scale value                                                                                                | 40 A                 |
| adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>0t</sub> characteristic     |                      |
| • minimum                                                                                                         | 0.1 s                |
| • maximum                                                                                                         | 0.3 s                |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping                                                    |                      |
| • minimum                                                                                                         | 40 A                 |
| • maximum                                                                                                         | 40 A                 |
| design of the N-conductor protection                                                                              | adjustable OFF; 100% |
| product function / grounding protection                                                                           | Yes                  |
| <b>Mechanical Design</b>                                                                                          |                      |
| product component                                                                                                 |                      |
| • undervoltage release                                                                                            | No                   |
| • voltage trigger                                                                                                 | No                   |
| • trip indicator                                                                                                  | No                   |
| height [in]                                                                                                       | 7.8 in               |
| height                                                                                                            | 198 mm               |
| width [in]                                                                                                        | 5.51 in              |
| width                                                                                                             | 140 mm               |
| depth [in]                                                                                                        | 3.39 in              |
| depth                                                                                                             | 86 mm                |
| <b>Connections</b>                                                                                                |                      |
| arrangement of electrical connectors / for main current circuit                                                   | Without connection   |
| type of electrical connection / for main current circuit                                                          | Without              |
| <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>                           |                 |
| Environmental Product Declaration(EPD)                   | Yes             |
| 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>                          |                 |



[Confirmation](#)



EG-Konf.



UL



UL

#### General Product Approval

#### EMV

#### Test Certificates



[Miscellaneous](#)



RCM

[Type Test Certificates/Test Report](#)

#### Maritime application

#### other



ABS



BUREAU  
VERITAS



DNV



LRS



RMRS

[Confirmation](#)

#### other

#### Dangerous goods

#### Environment

[Miscellaneous](#)

[Transport Information](#)



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[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=3VA6140-6HM41-0AA0>

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

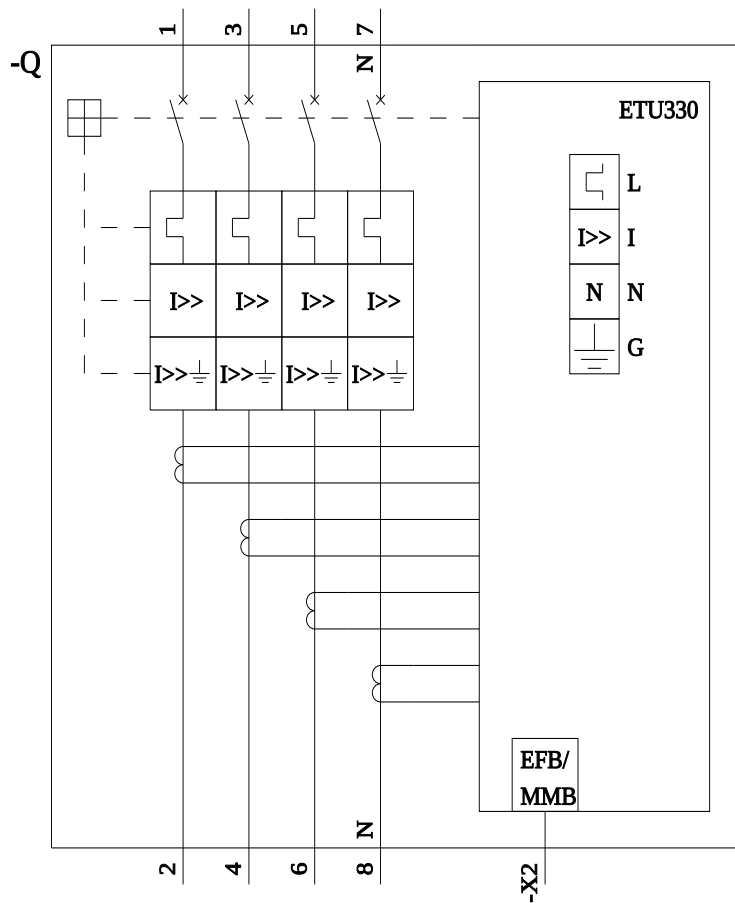
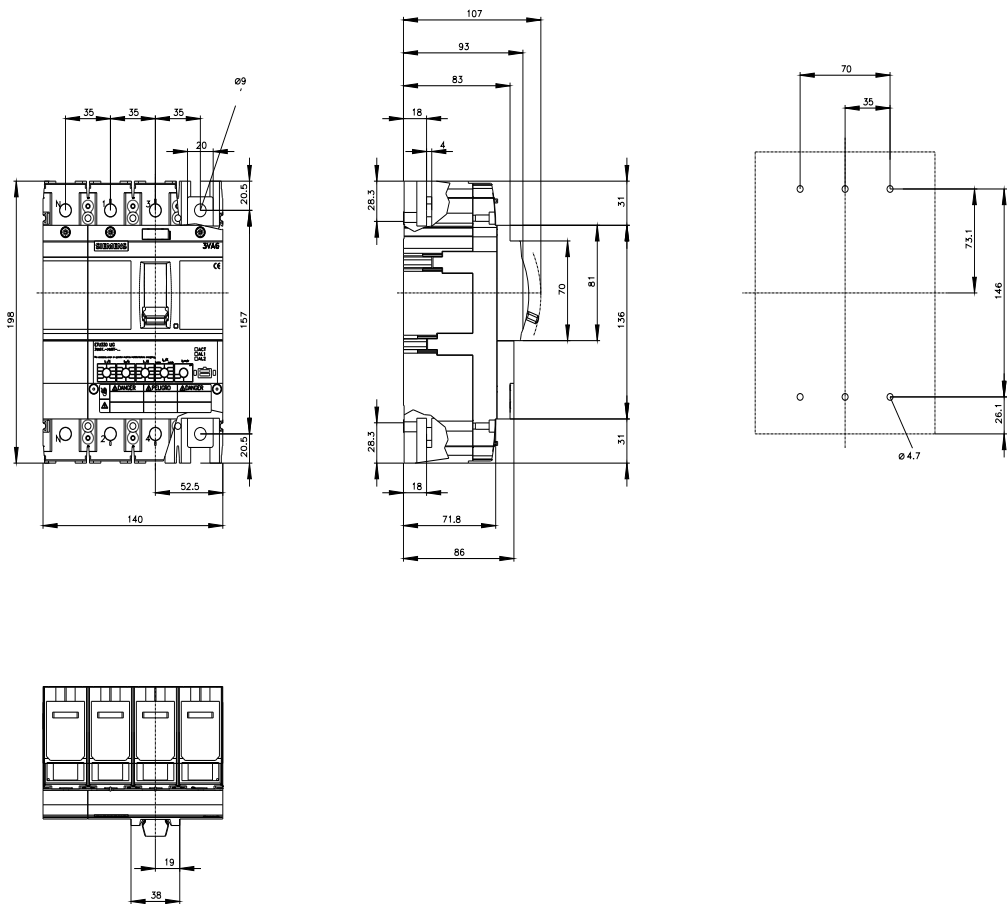
<https://support.industry.siemens.com/cs/ww/en/ps/3VA6140-6HM41-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6140-6HM41-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6140-6HM41-0AA0)

##### CAX-Online-Generator

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





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