

**Siemens**  
**EcoTech**



circuit breaker 3VA6 UL Frame 600 breaking capacity class L 150 kA @ 480 V 3-pole, line protection ETU330, LIG,  $I_n=400$  A overload protection  $I_r=160$  A...400 A short-circuit protection  $I_i=1.5...12 \times I_n$  ground-fault protection  $I_g=0.2...1 \times I_n$ ,  $t_g=0.1/0.3$ s without connection



| Model                                                                                                                      |                                         |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| product brand name                                                                                                         | SENTRON                                 |
| product designation                                                                                                        | Molded-case circuit breaker             |
| product designation / according to UL file                                                                                 | LLAE                                    |
| 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                                                                                                            | 3                                       |
| General technical data                                                                                                     |                                         |
| insulation voltage / rated value                                                                                           | 800 V                                   |
| operating voltage / at AC / rated value                                                                                    | 690 V                                   |
| power loss [W] / maximum                                                                                                   | 70 W                                    |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole                                | 23.33 W                                 |
| mechanical service life (operating cycles) / typical                                                                       | 20 000                                  |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                                           | 4 000                                   |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                                               | 3 500                                   |
| electrical endurance (operating cycles) / at 480 V                                                                         | 4 000                                   |
| electrical endurance (operating cycles) / at 600 V                                                                         | 3 500                                   |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof                      | No                                      |
| ground-fault monitoring version                                                                                            | Summation current formation L-conductor |
| product function                                                                                                           |                                         |
| • communication function                                                                                                   | No                                      |
| • other measurement function                                                                                               | No                                      |
| Net Weight                                                                                                                 | 5.3 kg                                  |
| Current                                                                                                                    |                                         |
| marking / according to UL 489 / 100%-rated breaker                                                                         | No                                      |
| operational current                                                                                                        |                                         |
| • at 40 °C                                                                                                                 | 400 A                                   |
| • at 45 °C                                                                                                                 | 400 A                                   |
| • at 50 °C                                                                                                                 | 400 A                                   |
| • at 55 °C                                                                                                                 | 400 A                                   |
| • at 60 °C                                                                                                                 | 400 A                                   |
| • at 65 °C                                                                                                                 | 400 A                                   |

|                                                                                                                   |                    |
|-------------------------------------------------------------------------------------------------------------------|--------------------|
| • at 70 °C                                                                                                        | 400 A              |
| <b>Switching capacity according to IEC 60947</b>                                                                  |                    |
| switching capacity class of the circuit breaker                                                                   | L                  |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                                                |                    |
| • at 240 V                                                                                                        | 200 kA             |
| • at 415 V                                                                                                        | 150 kA             |
| • at 690 V                                                                                                        | 6 kA               |
| operating short-circuit current breaking capacity (I <sub>cs</sub> )                                              |                    |
| • at 240 V                                                                                                        | 200 kA             |
| • at 415 V                                                                                                        | 150 kA             |
| • at 690 V                                                                                                        | 6 kA               |
| short-circuit current making capacity (I <sub>cm</sub> )                                                          |                    |
| • at 240 V                                                                                                        | 440 kA             |
| • at 415 V                                                                                                        | 330 kA             |
| • at 690 V                                                                                                        | 9 kA               |
| <b>Switching capacity according to UL 489</b>                                                                     |                    |
| current breaking capacity                                                                                         |                    |
| • at 240 V                                                                                                        | 200 kA             |
| • at 480 V                                                                                                        | 150 kA             |
| • at 600 V                                                                                                        | 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 |                    |
| • minimum                                                                                                         | 150 A              |
| • maximum                                                                                                         | 400 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                                                                                                         | 600 A              |
| • maximum                                                                                                         | 4 800 A            |
| adjustable current response value current / for G-tripping / with standard characteristic                         |                    |
| • initial value                                                                                                   | 80 A               |
| • full-scale value                                                                                                | 400 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                                                                                                         | 0 A                |
| • maximum                                                                                                         | 0 A                |
| product function / grounding protection                                                                           | Yes                |
| <b>Mechanical Design</b>                                                                                          |                    |
| product component                                                                                                 |                    |
| • undervoltage release                                                                                            | No                 |
| • voltage trigger                                                                                                 | No                 |
| • trip indicator                                                                                                  | No                 |
| height [in]                                                                                                       | 9.76 in            |
| height                                                                                                            | 248 mm             |
| width [in]                                                                                                        | 5.43 in            |
| width                                                                                                             | 138 mm             |
| depth [in]                                                                                                        | 4.33 in            |
| depth                                                                                                             | 110 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                  |

| Accessories                                              |                 |
|----------------------------------------------------------|-----------------|
| product extension / optional / motor drive               | Yes             |
| 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           |
| Environmental footprint                                  |                 |
| Environmental Product Declaration (EPD)                  | Yes             |
| global warming potential [CO2 eq] / total                | 495 kg          |
| global warming potential [CO2 eq] / during manufacturing | 28.7 kg         |
| global warming potential [CO2 eq] / during operation     | 470 kg          |
| global warming potential [CO2 eq] / after end of life    | -4.07 kg        |
| Siemens Eco Profile (SEP)                                | Siemens EcoTech |
| reference code / according to IEC 81346-2                | Q               |
| Approvals / Certificates                                 |                 |
| General Product Approval                                 |                 |



[Confirmation](#)



| General Product Approval | EMV | Test Certificates |
|--------------------------|-----|-------------------|
|                          |     |                   |

[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

| Maritime application | other |
|----------------------|-------|
|                      |       |

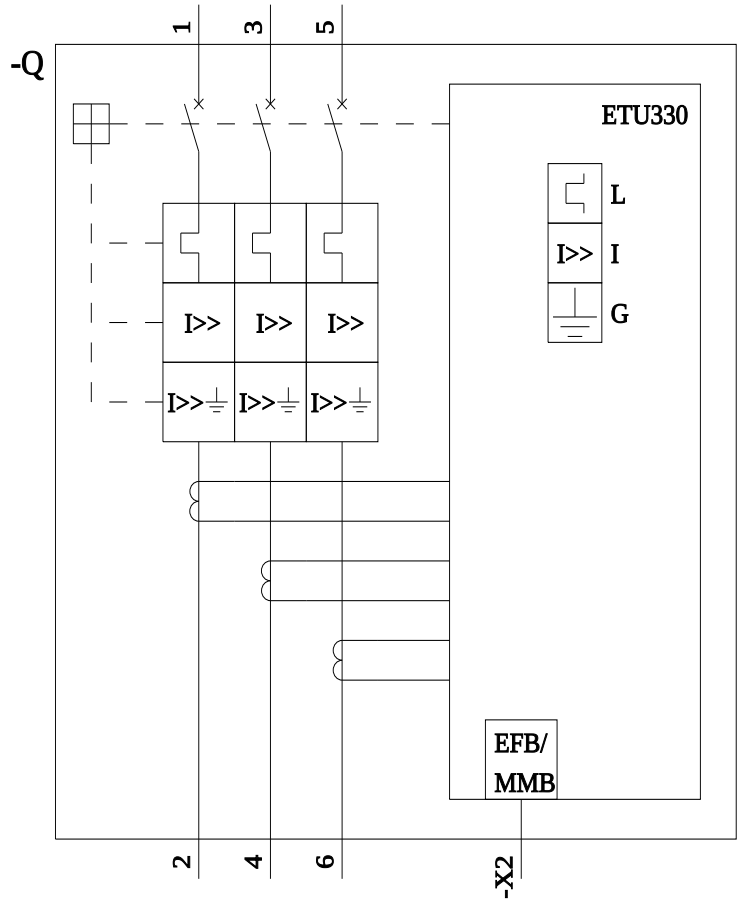
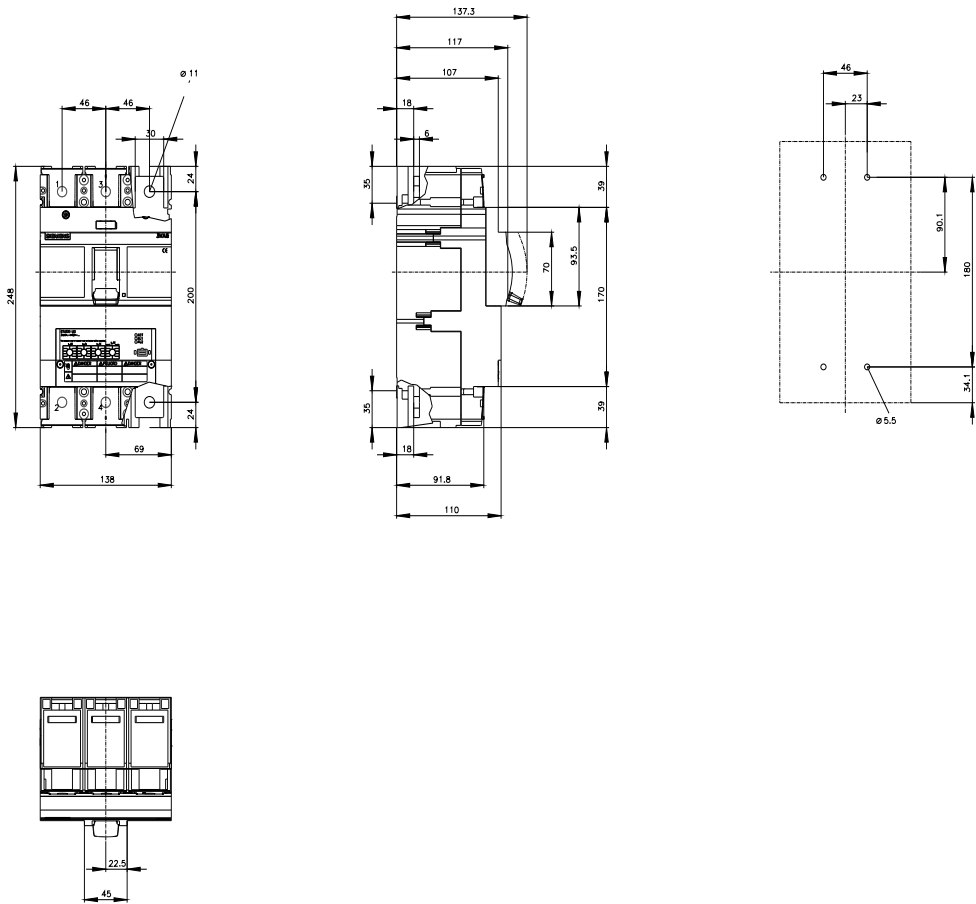
[Confirmation](#)

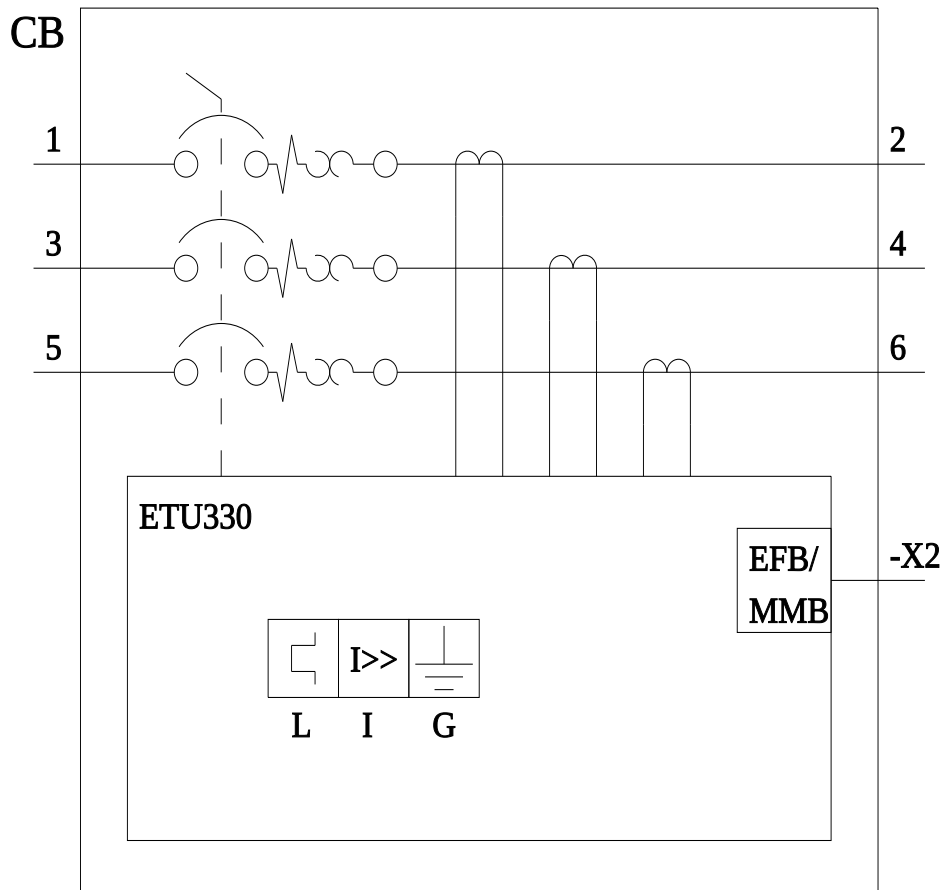
| other                         | Dangerous goods                       | Environment |
|-------------------------------|---------------------------------------|-------------|
| <a href="#">Miscellaneous</a> | <a href="#">Transport Information</a> |             |

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[Environmental Confirmations](#)

| Further information                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Information on the packaging</b><br><a href="https://support.industry.siemens.com/cs/ww/en/view/109813875">https://support.industry.siemens.com/cs/ww/en/view/109813875</a>                                                                                                      |
| <b>Information for data generation and storage</b><br><a href="https://support.industry.siemens.com/cs/ww/en/view/109995012">https://support.industry.siemens.com/cs/ww/en/view/109995012</a>                                                                                       |
| <b>Information- and Downloadcenter (Catalogs, Brochures,...)</b><br><a href="https://www.siemens.com/lowvoltage/catalogs">https://www.siemens.com/lowvoltage/catalogs</a>                                                                                                           |
| <b>Industry Mall (Online ordering system)</b><br><a href="https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6440-8HM31-0AA0">https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6440-8HM31-0AA0</a>                                            |
| <b>Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)</b><br><a href="https://support.industry.siemens.com/cs/ww/en/ps/3VA6440-8HM31-0AA0">https://support.industry.siemens.com/cs/ww/en/ps/3VA6440-8HM31-0AA0</a>                                              |
| <b>Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)</b><br><a href="https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6440-8HM31-0AA0">https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6440-8HM31-0AA0</a> |
| <b>CAX-Online-Generator</b><br><a href="https://www.siemens.com/cax">https://www.siemens.com/cax</a>                                                                                                                                                                                |
| <b>Tender specifications</b>                                                                                                                                                                                                                                                        |





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