

Siemens  
EcoTech



circuit breaker 3VA2 IEC Frame 160 breaking capacity class C  $I_{cu}=110 \text{ kA} @ 415 \text{ V}$  3-pole, motor protection ETU860M, LSIG,  $I_n=100 \text{ A}$  overload protection  $I_r=40 \text{ A} \dots 100 \text{ A}$  short-circuit protection  $I_{sd}=1.2 \dots 15 \times I_n$ ,  $I_i=3 \dots 15 \times I_n$  ground-fault protection, can be switched off  $I_g=0.2 \dots 1 \times I_n$ ,  $t_g=0.05-0.8 \text{ s}$  terminal connection

| Model                                                                                                  |                                         |
|--------------------------------------------------------------------------------------------------------|-----------------------------------------|
| product brand name                                                                                     | SENTRON                                 |
| product designation                                                                                    | Molded case circuit breaker             |
| design of the product                                                                                  | Motor protection                        |
| design of the overcurrent release                                                                      | ETU860M                                 |
| protection function of the overcurrent release                                                         | LSIG                                    |
| number of poles                                                                                        | 3                                       |
| General technical data                                                                                 |                                         |
| insulation voltage / rated value                                                                       | 800 V                                   |
| operating voltage / at AC / rated value                                                                | 690 V                                   |
| operating power / at AC-3 / at 400 V                                                                   | 55 000 W                                |
| operating power / at AC-3 / at 230 V                                                                   | 30 000 W                                |
| power loss [W] / maximum                                                                               | 10 W                                    |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole            | 3.33 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 AC-3 / at 380/415 V                                       | 5 000                                   |
| product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof | No                                      |
| ground-fault monitoring version                                                                        | Summation current formation L-conductor |
| product function                                                                                       |                                         |
| • communication function                                                                               | Yes                                     |
| • phase failure detection                                                                              | Yes                                     |
| • other measurement function                                                                           | Yes                                     |
| Net Weight                                                                                             | 2.321 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                                                                    | C       |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> )                                                 |         |
| • at 240 V                                                                                                         | 150 kA  |
| • at 415 V                                                                                                         | 110 kA  |
| • at 440 V                                                                                                         | 110 kA  |
| • at 500 V                                                                                                         | 85 kA   |
| • at 690 V                                                                                                         | 3 kA    |
| operating short-circuit current breaking capacity (I <sub>cs</sub> )                                               |         |
| • at 240 V                                                                                                         | 150 kA  |
| • at 415 V                                                                                                         | 110 kA  |
| • at 440 V                                                                                                         | 110 kA  |
| • at 500 V                                                                                                         | 85 kA   |
| • at 690 V                                                                                                         | 2.5 kA  |
| short-circuit current making capacity (I <sub>cm</sub> )                                                           |         |
| • at 240 V                                                                                                         | 330 kA  |
| • at 415 V                                                                                                         | 242 kA  |
| • at 440 V                                                                                                         | 242 kA  |
| • at 500 V                                                                                                         | 187 kA  |
| • at 690 V                                                                                                         | 3.7 kA  |
| Adjustable parameters                                                                                              |         |
| product feature / for L-tripping / can be switched on/off                                                          | No      |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic  |         |
| • minimum                                                                                                          | 40 A    |
| • maximum                                                                                                          | 100 A   |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic      |         |
| • minimum                                                                                                          | 3 s     |
| • maximum                                                                                                          | 25 s    |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>0t</sub> characteristic     |         |
| • minimum                                                                                                          | 120 A   |
| • maximum                                                                                                          | 1 500 A |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>0t</sub> characteristic     |         |
| • minimum                                                                                                          | 0.03 s  |
| • maximum                                                                                                          | 0.03 s  |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                       |         |
| • minimum                                                                                                          | 300 A   |
| • maximum                                                                                                          | 1 500 A |
| adjustable current response value current / for G-tripping / with standard characteristic                          |         |
| • initial value                                                                                                    | 20 A    |
| • full-scale value                                                                                                 | 100 A   |
| adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>0t</sub> characteristic      |         |
| • minimum                                                                                                          | 0.05 s  |
| • maximum                                                                                                          | 0.8 s   |
| adjustable response value setting current (I <sub>g</sub> ) / for G-tripping / with I <sub>2t</sub> characteristic |         |
| • minimum                                                                                                          | 20 A    |
| • maximum                                                                                                          | 100 A   |
| adjustable response value delay time (t <sub>g</sub> ) / for G-tripping / with I <sub>2t</sub> characteristic      |         |
| • minimum                                                                                                          | 0.05 s  |
| • maximum                                                                                                          | 0.8 s   |
| adjustable setting current (I <sub>nN</sub> ) / for N-tripping                                                     |         |
| • minimum                                                                                                          | 0 A     |
| • maximum                                                                                                          | 0 A     |
| product function / grounding protection                                                                            | Yes     |

|                                                            |                              |
|------------------------------------------------------------|------------------------------|
| adjustable trip class (Tc CLASS)                           | 10A, 10/10E, 20/ 20E, 30/30E |
| tripping time (Tp) / with adjustable trip class (Tc CLASS) |                              |
| • minimum                                                  | 3 s                          |
| • maximum                                                  | 25 s                         |

#### Mechanical Design

|                                                                                           |                                |
|-------------------------------------------------------------------------------------------|--------------------------------|
| product component                                                                         |                                |
| • undervoltage release                                                                    | No                             |
| • voltage trigger                                                                         | No                             |
| • trip indicator                                                                          | No                             |
| height [in]                                                                               | 7.13 in                        |
| height                                                                                    | 181 mm                         |
| width [in]                                                                                | 4.13 in                        |
| type of connectable conductor cross-sections / of the round conductor terminal / stranded | 1 x (6 - 120 mm <sup>2</sup> ) |
| width                                                                                     | 105 mm                         |
| depth [in]                                                                                | 3.39 in                        |
| depth                                                                                     | 86 mm                          |

#### Connections

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

#### Auxiliary circuit

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

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

#### Approvals / Certificates

|                          |  |
|--------------------------|--|
| General Product Approval |  |
|--------------------------|--|



[Confirmation](#)



[Miscellaneous](#)



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



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)



|                      |       |                 |
|----------------------|-------|-----------------|
| Maritime application | other | Dangerous goods |
|----------------------|-------|-----------------|



[CCS \(China Classification Society\)](#)



[Confirmation](#)

[Miscellaneous](#)

[Transport Information](#)

## Environment



[Environmental Confirmations](#)

[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=3VA2110-7MQ36-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2110-7MQ36-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2110-7MQ36-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2110-7MQ36-0AA0)

### CAX-Online-Generator

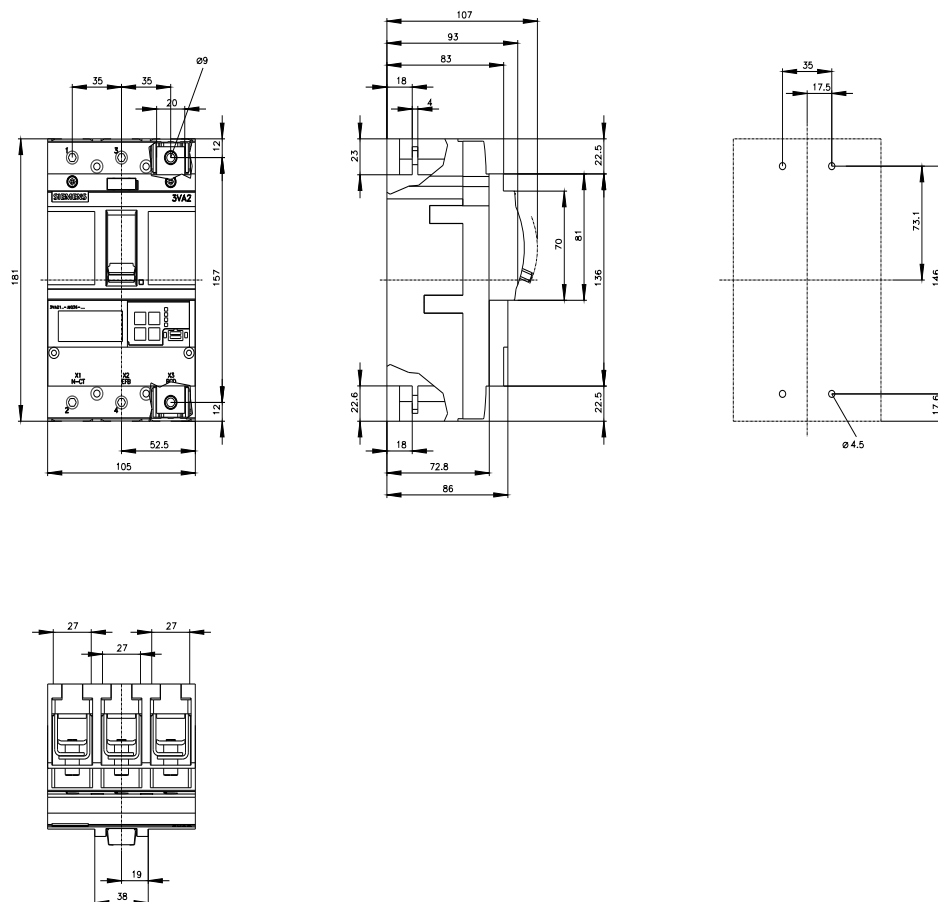
<https://www.siemens.com/cax>

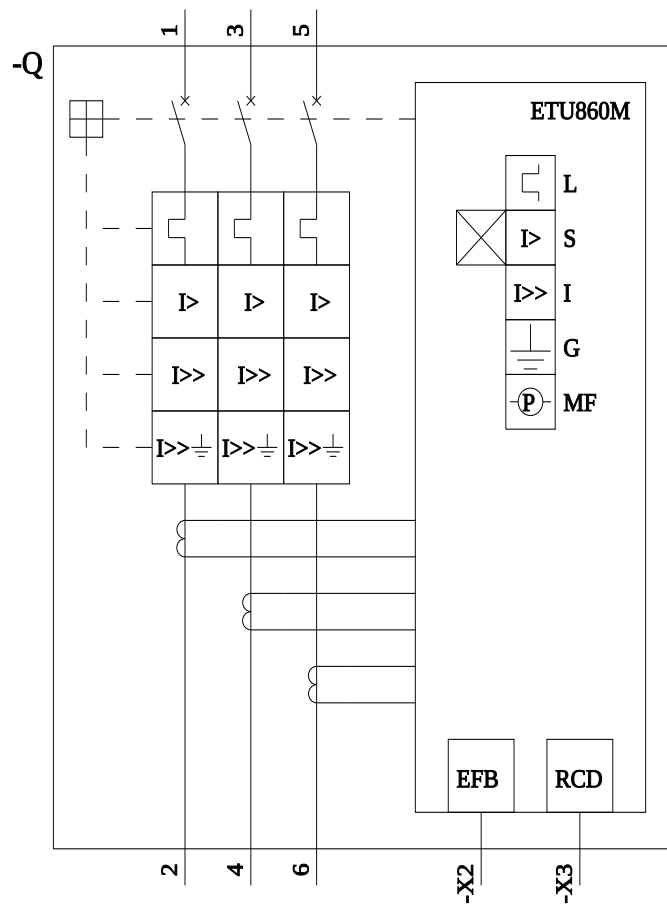
### Tender specifications

<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>)





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