



circuit breaker 3VA2 IEC frame 100 breaking capacity class M  
 $I_{cu}=55kA$  @ 415V 4-pole, line protection ETU860, LSIG,  $I_n=100A$   
 overload protection  $I_r=40A...100A$  short-circuit protection  
 $I_{sd}=0.6..10 \times I_n$ ,  $I_i=1.5..12 \times I_n$  N conductor protection adjustable  
 (OFF, up to 100%) gr.-fault prot., can be sw. off  $I_g=0.2...1 \times I_n$   
 $t_g=0.05-0.8s$  clamp connection

| Model                                          |                             |
|------------------------------------------------|-----------------------------|
| product brand name                             | SENTRON                     |
| product designation                            | Molded case circuit breaker |
| Product version                                | Line protection             |
| design of the overcurrent release              | ETU860                      |
| protection function of the overcurrent release | LSIG                        |
| number of poles                                | 4                           |

| General technical data                                                                         |        |
|------------------------------------------------------------------------------------------------|--------|
| Tension assignée d'isolement $U_i$                                                             | 800 V  |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                                           | 690 V  |
| power loss [W] / maximum                                                                       | 13.5 W |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 4.5 W  |
| mechanical service life (switching cycles) / typical                                           | 20 000 |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz                      | 14 000 |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz                          | 8 000  |
| Neutral conductors / upgradeable/retrofittable                                                 | No     |

|                                 |                                             |
|---------------------------------|---------------------------------------------|
| ground fault monitoring version | Summation current formation L + N conductor |
| product function                |                                             |
| • communication function        | Yes                                         |
| • other measurement function    | Yes                                         |
| net weight                      | 3.15 kg                                     |

#### Current

|                                                  |       |
|--------------------------------------------------|-------|
| Max. rated operational current of the frame size | 100 A |
| Courant permanent assigné lu                     | 100 A |
| operating 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           | M      |
| maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 55 kA  |
| • at 500 V                                                | 36 kA  |
| • at 690 V                                                | 2 kA   |
| operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 55 kA  |
| • at 500 V                                                | 36 kA  |
| • at 690 V                                                | 2 kA   |
| short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 187 kA |
| • at 415 V                                                | 121 kA |
| • at 440 V                                                | 121 kA |
| • at 500 V                                                | 76 kA  |
| • at 690 V                                                | 3 kA   |

#### Adjustable parameters

|                                             |       |
|---------------------------------------------|-------|
| Adjustable response value current / Ig min. | 40 A  |
| Adjustable response value current / Ig min. | 100 A |
| Adjustable response value current / Ig min. | 0.5   |

|                                                                                                 |         |
|-------------------------------------------------------------------------------------------------|---------|
| Adjustable response value current / I <sub>g</sub> min.                                         | 25      |
| Adjustable response value current / I <sub>g</sub> min.                                         | 60 A    |
| Adjustable response value current / I <sub>g</sub> min.                                         | 1 000 A |
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF                              | Yes     |
| Adjustable response value current / I <sub>g</sub> min.                                         | 0.05 s  |
| Adjustable response value current / I <sub>g</sub> min.                                         | 0.5 s   |
| Adjustable response value current / I <sub>g</sub> min.                                         | 0.05 s  |
| Adjustable response value current / I <sub>g</sub> min.                                         | 0.5 s   |
| Adjustable response value current / I <sub>i</sub> min.                                         | 150 A   |
| Adjustable response value current / I <sub>i</sub> max.                                         | 1 200 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.                                         | 20 A    |
| Adjustable response value current / I <sub>g</sub> max.                                         | 100 A   |
| Adjustable response value current / t <sub>g</sub> min.                                         | 0.05 s  |
| Adjustable response value current / I <sub>g</sub> min.                                         | 0.8 s   |
| Adjustable response value current / for G-tripping / with I <sub>2t</sub> characteristic / min. | 0.2 A   |
| Adjustable response value current / for G-tripping / with I <sub>2t</sub> characteristic / max. | 1 A     |

#### Mechanical Design

|             |        |
|-------------|--------|
| height [in] | 7.1 in |
| Height      | 181 mm |
| width [in]  | 5.5 in |
| Width       | 140 mm |
| depth [in]  | 3.4 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    |
| Type of connectable conductor cross-section, round conductor terminal, stranded | 1 x (6-120 mm <sup>2</sup> ) |

#### 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

## Certificates

reference code / acc. to DIN EN 81346-2

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### General Product Approval

### EMC



[Miscellaneous](#)



### Declaration of Conformity

### Test Certificates

### Shipping Approval



[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



### Shipping Approval

### other



[CCS / China Classification Society](#)

[Manufacturer Declaration](#)

[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=3VA2010-5KQ46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2010-5KQ46-0AA0>

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

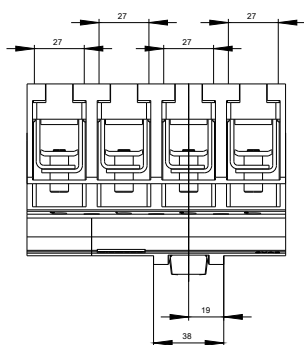
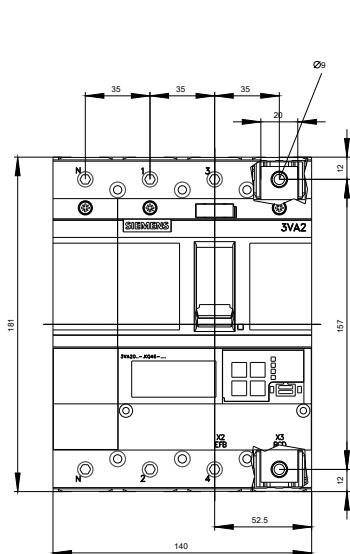
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2010-5KQ46-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2010-5KQ46-0AA0)

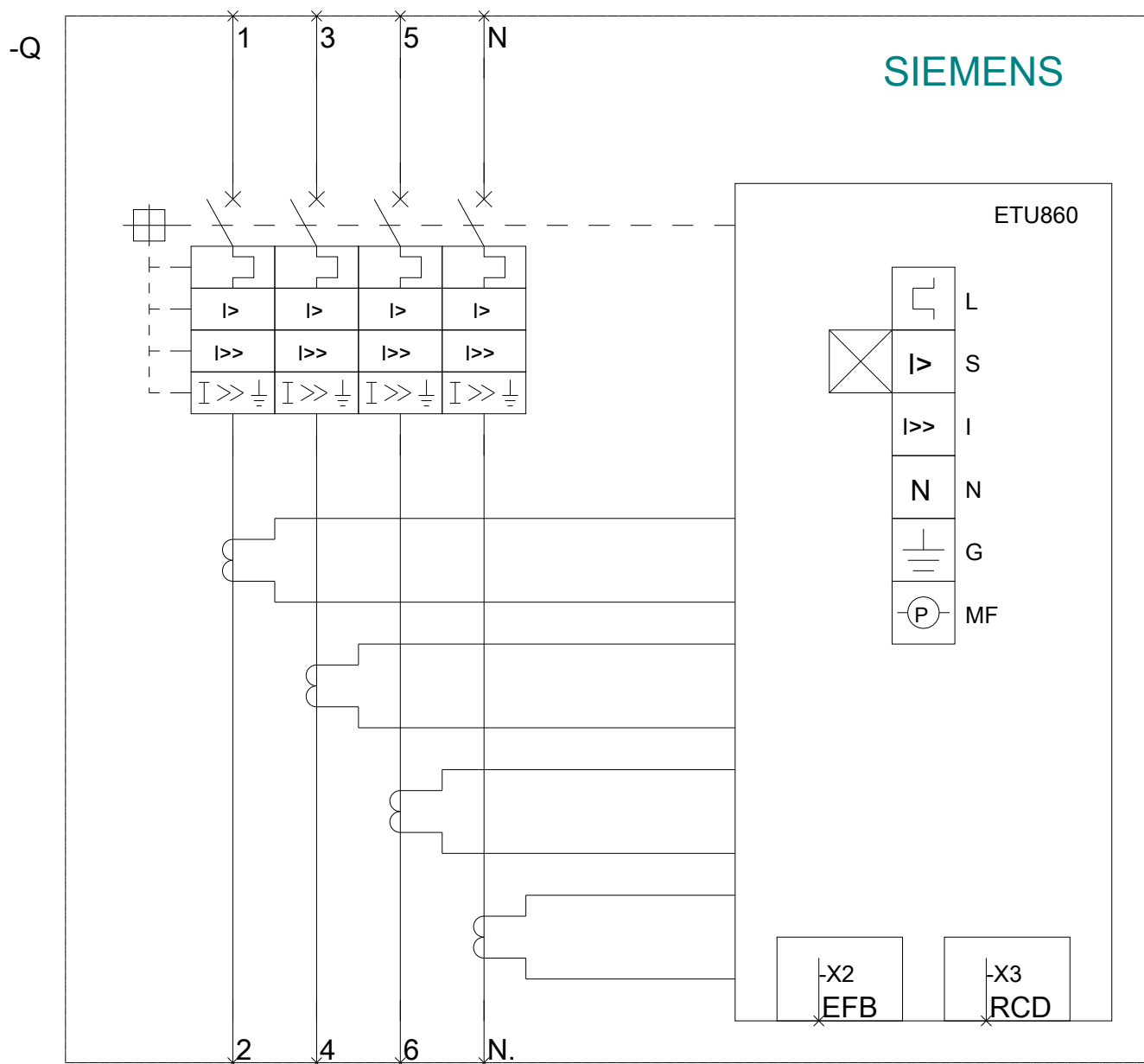
### CAX-Online-Generator

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

### Tender specifications

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





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