

**Siemens**  
**EcoTech**



circuit breaker 3VA2 IEC Frame 250 breaking capacity class C Icu=110 kA @ 415 V 3-pole, motor protection ETU860M, LSIG, In=160 A overload protection Ir=63 A...160 A short-circuit protection Isd=1.2...15x In, li=3...15x In ground-fault protection, can be switched off Ig=0.2...1 x In, tg=0.05-0.8s nut keeper kit



| 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                                                                  | 75 000 W                                |
| operating power / at AC-3 / at 230 V                                                                  | 45 000 W                                |
| power loss [W] / maximum                                                                              | 19.7 W                                  |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 6.57 W                                  |
| mechanical service life (operating cycles) / typical                                                  | 25 000                                  |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                      | 12 000                                  |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                          | 8 400                                   |
| electrical endurance (operating cycles) / at AC-3 / at 380/415 V                                      | 6 500                                   |
| 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                                                                              | Yes                                     |
| • phase failure detection                                                                             | Yes                                     |
| • other measurement function                                                                          | Yes                                     |
| Net Weight                                                                                            | 2.269 kg                                |
| Current                                                                                               |                                         |
| operational current                                                                                   |                                         |
| • at 40 °C                                                                                            | 160 A                                   |
| • at 45 °C                                                                                            | 160 A                                   |
| • at 50 °C                                                                                            | 160 A                                   |
| • at 55 °C                                                                                            | 160 A                                   |
| • at 60 °C                                                                                            | 160 A                                   |
| • at 65 °C                                                                                            | 160 A                                   |
| • at 70 °C                                                                                            | 160 A                                   |
| Switching capacity according to IEC 60947                                                             |                                         |
| switching capacity class of the circuit breaker                                                       | C                                       |

|                                                                                                   |                          |
|---------------------------------------------------------------------------------------------------|--------------------------|
| maximum short-circuit current breaking capacity ( $I_{cu}$ )                                      |                          |
| • 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 ( $I_{cs}$ )                                    |                          |
| • 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                     |
| short-circuit current making capacity ( $I_{cm}$ )                                                |                          |
| • at 240 V                                                                                        | 330 kA                   |
| • at 415 V                                                                                        | 242 kA                   |
| • at 440 V                                                                                        | 242 kA                   |
| • at 500 V                                                                                        | 187 kA                   |
| • at 690 V                                                                                        | 4.5 kA                   |
| <b>Adjustable parameters</b>                                                                      |                          |
| product feature / for L-tripping / can be switched on/off                                         | No                       |
| adjustable response value setting current ( $I_r$ ) / of the L-trip / with $I_2t$ characteristic  |                          |
| • minimum                                                                                         | 63 A                     |
| • maximum                                                                                         | 160 A                    |
| adjustable response value delay time ( $t_r$ ) / for L-tripping / with $I_2t$ characteristic      |                          |
| • minimum                                                                                         | 3 s                      |
| • maximum                                                                                         | 20 s                     |
| adjustable response value setting current ( $I_{sd}$ ) / of S-trip / with $I_0t$ characteristic   |                          |
| • minimum                                                                                         | 192 A                    |
| • maximum                                                                                         | 2 400 A                  |
| adjustable response value delay time ( $t_{sd}$ ) / for S-tripping / with $I_0t$ characteristic   |                          |
| • minimum                                                                                         | 0.03 s                   |
| • maximum                                                                                         | 0.03 s                   |
| adjustable response value setting current ( $I_i$ ) / for I-tripping                              |                          |
| • minimum                                                                                         | 480 A                    |
| • maximum                                                                                         | 2 400 A                  |
| adjustable current response value current / for G-tripping / with standard characteristic         |                          |
| • initial value                                                                                   | 32 A                     |
| • full-scale value                                                                                | 160 A                    |
| adjustable response value delay time ( $t_g$ ) / for G-tripping / with $I_0t$ characteristic      |                          |
| • maximum                                                                                         | 0.8 s                    |
| adjustable response value setting current ( $I_g$ ) / for G-tripping / with $I_2t$ characteristic |                          |
| • minimum                                                                                         | 32 A                     |
| • maximum                                                                                         | 160 A                    |
| adjustable response value delay time ( $t_g$ ) / for G-tripping / with $I_2t$ characteristic      |                          |
| • minimum                                                                                         | 0.05 s                   |
| • maximum                                                                                         | 0.8 s                    |
| adjustable setting current ( $I_{nN}$ ) / for N-tripping                                          |                          |
| • minimum                                                                                         | 0 A                      |
| • maximum                                                                                         | 0 A                      |
| product function / grounding protection                                                           | Yes                      |
| adjustable trip class ( $T_c$ CLASS)                                                              | 10A, 10/10E, 20/ 20E, 30 |
| tripping time ( $T_p$ ) / with adjustable trip class ( $T_c$ CLASS)                               |                          |
| • minimum                                                                                         | 3 s                      |
| • maximum                                                                                         | 20 s                     |
| <b>Mechanical Design</b>                                                                          |                          |

|                                                                                           |                              |
|-------------------------------------------------------------------------------------------|------------------------------|
| product component                                                                         |                              |
| • undervoltage release                                                                    | No                           |
| • voltage trigger                                                                         | No                           |
| • trip indicator                                                                          | No                           |
| height [in]                                                                               | 7.13 in                      |
| height                                                                                    | 181 mm                       |
| width [in]                                                                                | 4.13 in                      |
| width                                                                                     | 105 mm                       |
| depth [in]                                                                                | 3.39 in                      |
| depth                                                                                     | 86 mm                        |
| <b>Connections</b>                                                                        |                              |
| arrangement of electrical connectors / for main current circuit                           | Front terminal               |
| type of electrical connection / for main current circuit                                  | on both sides nut keeper kit |
| type of connectable conductor cross-sections / for flat-bar terminal connection / minimum | 13 x 1 mm                    |
| type of connectable conductor cross-sections / for flat-bar terminal connection / maximum | 25 x 8 mm                    |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)        | silver                       |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)     | tin                          |
| <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                                                 | 251 kg                       |
| Global Warming Potential [CO2 eq] / during manufacturing                                  | 20.4 kg                      |
| Global Warming Potential [CO2 eq] / during operation                                      | 235 kg                       |
| Global Warming Potential [CO2 eq] / after end of life                                     | -3.75 kg                     |
| Siemens Eco Profile (SEP)                                                                 | Siemens EcoTech              |
| reference code / according to IEC 81346-2                                                 | Q                            |
| <b>Approvals / Certificates</b>                                                           |                              |
| <b>General Product Approval</b>                                                           |                              |
| EMV                                                                                       |                              |



[Confirmation](#)



[Miscellaneous](#)



|                   |                   |       |
|-------------------|-------------------|-------|
| Test Certificates | Marine / Shipping | other |
|-------------------|-------------------|-------|

[Special Test Certificate](#)

[Miscellaneous](#)



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

[Confirmation](#)

|       |                 |             |
|-------|-----------------|-------------|
| other | Dangerous goods | Environment |
|-------|-----------------|-------------|

[Miscellaneous](#)

[Miscellaneous](#)

[Transport Information](#)



Siemens EcoTech



[Environmental Confirmations](#)

[Environmental Conformations](#)

## Further information

### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

### 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=3VA2216-7MQ32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2216-7MQ32-0AA0>

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

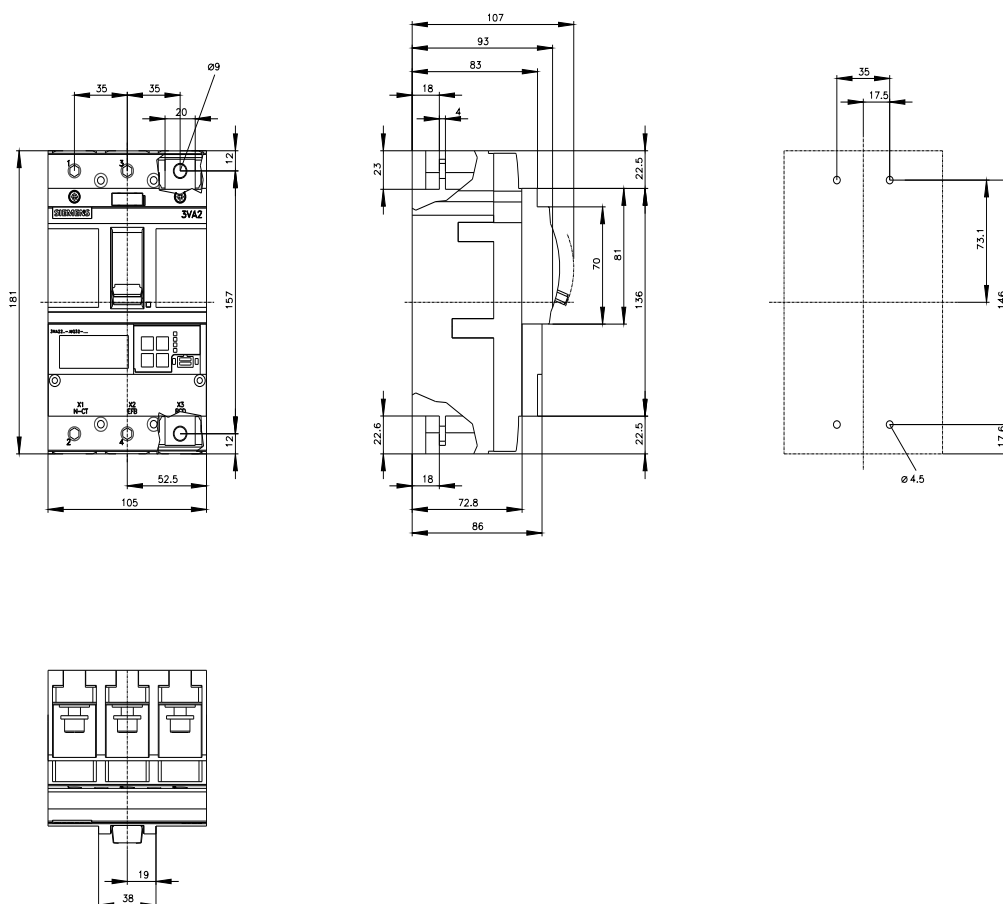
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2216-7MQ32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2216-7MQ32-0AA0)

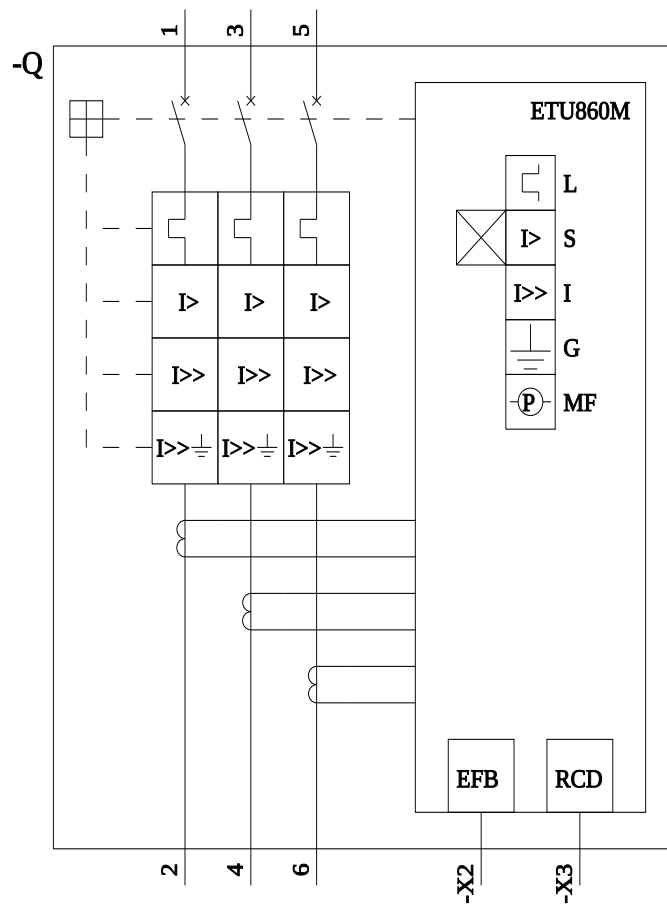
### CAX-Online-Generator

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

### Tender specifications

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





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