

Siemens  
EcoTech



circuit breaker 3VA2 IEC Frame 100 breaking capacity class L Icu=150 kA @ 415 V 4-pole, line protection ETU850, LSI, In=100 A overload protection Ir=40 A...100 A short-circuit protection Isd=0.6..10x In, li=1.5..12x In neutral conductor protection adjustable (OFF, up to 100%) nut keeper kit



| Model                                                                                                 |                             |
|-------------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                                    | SENTRON                     |
| product designation                                                                                   | Molded case circuit breaker |
| design of the product                                                                                 | Line protection             |
| design of the overcurrent release                                                                     | ETU850                      |
| protection function of the overcurrent release                                                        | LSI                         |
| 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                                                                              | 7.7 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 2.57 W                      |
| mechanical service life (operating cycles) / typical                                                  | 25 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                      | 15 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 690 V                                          | 10 500                      |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | No                          |
| ground-fault monitoring version                                                                       | Without                     |
| product function                                                                                      |                             |
| • communication function                                                                              | Yes                         |
| • other measurement function                                                                          | Yes                         |
| Net Weight                                                                                            | 3.2 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                                                       | L                           |
| maximum short-circuit current breaking capacity (Icu)                                                 |                             |
| • at 240 V                                                                                            | 200 kA                      |

|                                                         |         |
|---------------------------------------------------------|---------|
| • at 415 V                                              | 150 kA  |
| • at 440 V                                              | 150 kA  |
| • at 500 V                                              | 100 kA  |
| • at 690 V                                              | 25 kA   |
| operating short-circuit current breaking capacity (Ics) |         |
| • at 240 V                                              | 200 kA  |
| • at 415 V                                              | 150 kA  |
| • at 440 V                                              | 150 kA  |
| • at 500 V                                              | 100 kA  |
| • at 690 V                                              | 18 kA   |
| short-circuit current making capacity (Icm)             |         |
| • at 240 V                                              | 440 kA  |
| • at 415 V                                              | 330 kA  |
| • at 440 V                                              | 330 kA  |
| • at 500 V                                              | 220 kA  |
| • at 690 V                                              | 52.5 kA |

#### Adjustable parameters

|                                                                                          |                             |
|------------------------------------------------------------------------------------------|-----------------------------|
| product feature / for L-tripping / can be switched on/off                                | No                          |
| adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic |                             |
| • minimum                                                                                | 40 A                        |
| • maximum                                                                                | 100 A                       |
| adjustable response value delay time (tr) / for L-tripping / with I2t characteristic     |                             |
| • minimum                                                                                | 0.5 s                       |
| • maximum                                                                                | 25 s                        |
| adjustable response value setting current (Isd) / of S-trip / with I0t characteristic    |                             |
| • minimum                                                                                | 60 A                        |
| • maximum                                                                                | 1 000 A                     |
| adjustable response value setting current (Isd) / of S-trip / with I2t characteristic    |                             |
| • minimum                                                                                | 60 A                        |
| • maximum                                                                                | 1 000 A                     |
| adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic    |                             |
| • minimum                                                                                | 0.05 s                      |
| • maximum                                                                                | 0.5 s                       |
| adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic    |                             |
| • minimum                                                                                | 0.05 s                      |
| • maximum                                                                                | 0.5 s                       |
| adjustable response value setting current (Ii) / for I-tripping                          |                             |
| • minimum                                                                                | 150 A                       |
| • maximum                                                                                | 1 200 A                     |
| adjustable setting current (InN) / for N-tripping                                        |                             |
| • minimum                                                                                | 20 A                        |
| • maximum                                                                                | 100 A                       |
| design of the N-conductor protection                                                     | adjustable OFF; 20% to 100% |
| product function / grounding protection                                                  | No                          |

#### Mechanical Design

|                        |         |
|------------------------|---------|
| product component      |         |
| • undervoltage release | No      |
| • voltage trigger      | No      |
| • trip indicator       | No      |
| height [in]            | 7.13 in |
| height                 | 181 mm  |
| width [in]             | 5.51 in |
| width                  | 140 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                                  | 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)        | 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 |  |  |
|--------------------------|-----|-------------------|--|--|
|--------------------------|-----|-------------------|--|--|



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

##### Maritime application



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

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



[Confirmation](#)

[Miscellaneous](#)

[Transport Information](#)



Siemens EcoTech



##### Environment

#### 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=3VA2010-8KP42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2010-8KP42-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2010-8KP42-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2010-8KP42-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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





