

**Siemens  
EcoTech**



circuit breaker 3VA2 IEC Frame 250 breaking capacity class H  $I_{cu}=85 \text{ kA} @ 415 \text{ V}$   
3-pole, line protection ETU850, LSI,  $I_n=160 \text{ A}$  overload protection  $I_r=63 \text{ A} \dots 160 \text{ A}$   
short-circuit protection  $I_{sd}=0.6 \dots 10 \times I_n$ ,  $I_i=1.5 \dots 12 \times I_n$  neutral conductor protection  
optionally with external current transformer, up to 160% 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                                                                                       | 3                           |
| General technical data                                                                                |                             |
| insulation voltage / rated value                                                                      | 800 V                       |
| operating voltage / at AC / rated value                                                               | 690 V                       |
| 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                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | Yes                         |
| ground-fault monitoring version                                                                       | Without                     |
| product function                                                                                      |                             |
| • communication function                                                                              | Yes                         |
| • other measurement function                                                                          | Yes                         |
| Net Weight                                                                                            | 2.287 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                                                       | H                           |
| maximum short-circuit current breaking capacity ( $I_{cu}$ )                                          |                             |
| • at 240 V                                                                                            | 110 kA                      |
| • at 415 V                                                                                            | 85 kA                       |
| • at 440 V                                                                                            | 85 kA                       |

|                                                                                                                                                                                                      |                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                                                                                                                     | 55 kA<br>3 kA                                  |
| operating short-circuit current breaking capacity (Ics) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | 110 kA<br>85 kA<br>85 kA<br>55 kA<br>3 kA      |
| short-circuit current making capacity (Icm) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>             | 242 kA<br>187 kA<br>187 kA<br>121 kA<br>4.5 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 <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul> | 63 A<br>160 A               |
| adjustable response value delay time (tr) / for L-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>     | 0.5 s<br>25 s               |
| adjustable response value setting current (Isd) / of S-trip / with I0t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>    | 96 A<br>1 600 A             |
| adjustable response value setting current (Isd) / of S-trip / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>    | 96 A<br>1 600 A             |
| adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>    | 0.05 s<br>0.5 s             |
| adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>    | 0.05 s<br>0.5 s             |
| adjustable response value setting current (Ii) / for I-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                          | 240 A<br>1 920 A            |
| adjustable setting current (InN) / for N-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                        | 32 A<br>256 A               |
| design of the N-conductor protection                                                                                                                                    | adjustable OFF; 20% to 160% |
| product function / grounding protection                                                                                                                                 | No                          |

#### Mechanical Design

|                                                                                                                                                 |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| product component <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul> | No<br>No<br>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          |

#### 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)        | silver    |
| 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

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

#### Approvals / Certificates

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



[Confirmation](#)



[Miscellaneous](#)



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

[Type Test Certificates/Test Report](#)

[Miscellaneous](#)

[Special Test Certificate](#)



|                   |       |
|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



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

[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)

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

[Transport Information](#)



Siemens EcoTech



[Environmental Confirmations](#)

[Environmental Confirmations](#)

#### 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)

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

