

**Siemens  
EcoTech**



circuit breaker 3VA2 IEC Frame 160 breaking capacity class C  $I_{cu}=110 \text{ kA @ 415 V}$  3-pole, line protection ETU560, LSIG,  $I_n=40 \text{ A}$  overload protection  $I_r=16 \text{ A...40 A}$  short-circuit protection  $I_{sd}=0.6..10 \times I_n$ ,  $I_i=1.5..12 \times I_n$  neutral conductor protection optionally with external current transformer, up to 160% ground-fault protection, can be switched off  $I_g=0.4... 1 \times I_n$ ,  $t_g=0.05-0.8 \text{ s}$  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                                                                     | ETU560                                  |
| 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                                   |
| power loss [W] / maximum                                                                              | 1.6 W                                   |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 0.53 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                                   |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | Yes                                     |
| ground-fault monitoring version                                                                       | Summation current formation L-conductor |
| product function                                                                                      |                                         |
| • communication function                                                                              | Yes                                     |
| • other measurement function                                                                          | No                                      |
| Net Weight                                                                                            | 2.177 kg                                |
| Current                                                                                               |                                         |
| operational current                                                                                   |                                         |
| • at 40 °C                                                                                            | 40 A                                    |
| • at 45 °C                                                                                            | 40 A                                    |
| • at 50 °C                                                                                            | 40 A                                    |
| • at 55 °C                                                                                            | 40 A                                    |
| • at 60 °C                                                                                            | 40 A                                    |
| • at 65 °C                                                                                            | 40 A                                    |
| • at 70 °C                                                                                            | 40 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 (Ics) |        |
| • 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 (Icm)             |        |
| • 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                                                                                                          | 16 A   |
| • maximum                                                                                                          | 40 A   |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic      |        |
| • minimum                                                                                                          | 0.5 s  |
| • maximum                                                                                                          | 25 s   |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>0t</sub> characteristic     |        |
| • minimum                                                                                                          | 24 A   |
| • maximum                                                                                                          | 400 A  |
| adjustable response value setting current (I <sub>sd</sub> ) / of S-trip / with I <sub>2t</sub> characteristic     |        |
| • minimum                                                                                                          | 24 A   |
| • maximum                                                                                                          | 400 A  |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>0t</sub> characteristic     |        |
| • minimum                                                                                                          | 0.05 s |
| • maximum                                                                                                          | 0.5 s  |
| adjustable response value delay time (t <sub>sd</sub> ) / for S-tripping / with I <sub>2t</sub> characteristic     |        |
| • minimum                                                                                                          | 0.05 s |
| • maximum                                                                                                          | 0.5 s  |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping                                       |        |
| • minimum                                                                                                          | 60 A   |
| • maximum                                                                                                          | 480 A  |
| adjustable current response value current / for G-tripping / with standard characteristic                          |        |
| • initial value                                                                                                    | 16 A   |
| • full-scale value                                                                                                 | 40 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                                                                                                          | 16 A   |
| • maximum                                                                                                          | 40 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                               | 16 A                        |
| • maximum                               | 64 A                        |
| design of the N-conductor protection    | adjustable OFF; 40% to 160% |
| product function / grounding protection | Yes                         |

#### 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 |
| 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)        | 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



[Miscellaneous](#)



|     |                   |                      |
|-----|-------------------|----------------------|
| EMV | Test Certificates | Maritime application |
|-----|-------------------|----------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)



|                      |       |
|----------------------|-------|
| Maritime application | other |
|----------------------|-------|



CCS (China Classification Society)



Confirmation

other

Dangerous goods

Environment

Miscellaneous

Transport Information



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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=3VA2140-7JQ32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2140-7JQ32-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2140-7JQ32-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2140-7JQ32-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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





