

circuit breaker 3VA2 IEC frame 160 breaking capacity class C  
 $I_{cu}=110\text{kA}$  @ 415V 3-pole, line protection ETU560, LSIG,  $I_n=40\text{A}$   
 overload protection  $I_r=16\text{A}...40\text{A}$  short-circuit protection  $I_{sd}=0.6...10\times I_n$ ,  $I_i=1.5...12\times I_n$  N conductor protection optionally with external current transformer, up to 160% gr.-fault prot., can be sw. 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 |
| Product version                                | Line protection             |
| design of the overcurrent release              | ETU560                      |
| protection function of the overcurrent release | LSIG                        |
| number of poles                                | 3                           |

| 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                                                                       | 1.6 W                                   |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 0.53 W                                  |
| mechanical service life (switching cycles) / typical                                           | 20 000                                  |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz                      | 12 000                                  |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz                          | 8 000                                   |
| Neutral conductors / upgradeable/retrofitable                                                  | Yes                                     |
| ground fault monitoring version                                                                | Summation current formation L-conductor |
| product function                                                                               |                                         |
| • communication function                                                                       | Yes                                     |
| • other measurement function                                                                   | No                                      |
| net weight                                                                                     | 2.29 kg                                 |

| Current                                          |       |
|--------------------------------------------------|-------|
| Max. rated operational current of the frame size | 160 A |
| Courant permanent assigné $I_u$                  | 40 A  |
| operating 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 <sub>cu</sub> )     |        |
| • 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 |
| operational short-circuit current breaking capacity (I <sub>cs</sub> ) |        |
| • 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 (I <sub>cm</sub> )               |        |
| • at 240 V                                                             | 330 kA |
| • at 415 V                                                             | 242 kA |
| • at 440 V                                                             | 242 kA |
| • at 500 V                                                             | 187 kA |
| • at 690 V                                                             | 3.8 kA |

#### Adjustable parameters

|                                                                         |        |
|-------------------------------------------------------------------------|--------|
| Adjustable response value current / I <sub>g</sub> min.                 | 16 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 40 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 0.5    |
| Adjustable response value current / I <sub>g</sub> min.                 | 25     |
| Adjustable response value current / I <sub>g</sub> min.                 | 24 A   |
| Adjustable response value current / I <sub>g</sub> min.                 | 400 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.                 | 60 A   |
| Adjustable response value current / I <sub>i</sub> max.                 | 480 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.                                         | 16 A   |
| Adjustable response value current / I <sub>g</sub> max.                                         | 40 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. | 0.4 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]  | 4.1 in |
| Width       | 105 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                                | on both sides nut keeper kit |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 13 x 1 mm                    |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 25 x 8.5 mm                  |

## 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 | Q |
|-----------------------------------------|---|

| General Product Approval                                                                 |                                                                                          |                                                                                         |                               |                                                                                            | EMC                                                                                        |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <br>CB | <a href="#">Miscellaneous</a> | <br>EAC | <br>RCM |

| Declaration of Conformity                                                                     | Test Certificates                                  |                               |                                          | Shipping Approval                                                                          |                                                                                                       |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>EG-Konf. | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a> | <br>ABS | <br>BUREAU VERITAS |

| Shipping Approval                                                                        | other                                                                                     |                                                    |                                          |                               |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------|-------------------------------|
| <br>LRS | <br>RMRS | <a href="#">CCS / China Classification Society</a> | <a href="#">Manufacturer Declaration</a> | <a href="#">Miscellaneous</a> |

#### 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=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, ...)

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

##### CAX-Online-Generator

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

##### Tender specifications

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



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