



CIRCUIT BREAKER 3VA2 IEC FRAME 160 BREAKING CAPACITY  
CLASS H ICU=85KA @ 415 V 4POLE, LINE PROTECTION  
ETU330, LIG, IN=40A OVERLOAD PROTECTION IR=16A ...40A  
SHORT CIRCUIT PROTECTION II=1,5...12 X IN NEUTRAL  
PROTECTION ADJUSTABLE(OFF,100%)  
GROUNDFULTPROTECTION IG=0,4... 1 X IN, TG=0,1/0,3S  
CABLE CONNECTION

| Model                                                                                                                |                             |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------|
| product brandname                                                                                                    | SENTRON                     |
| Product designation                                                                                                  | Molded case circuit breaker |
| Design of the product                                                                                                | Line protection             |
| Type of load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release                                                                                    | ETU330                      |
| Protective function of the overcurrent release                                                                       | LIG                         |
| Number of poles                                                                                                      | 4                           |
| General technical data                                                                                               |                             |
| Tension assignée d'isolement Ui                                                                                      | 800 V                       |
| Max. rated operational voltage Ue with AC 50/60Hz                                                                    | 690 V                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device                     | 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                                      |
| Neutral conductors / upgradeable/retrofitable                             | No                                          |
| Ground fault monitoring version                                           | Summation current formation L + N conductor |
| Product function                                                          |                                             |
| • communication function                                                  | No                                          |
| • other measurement function                                              | No                                          |
| Net weight                                                                | 3.13 kg                                     |

## Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Marking / according to UL 489 / 100%-rated breaker                | No    |
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné Iu                                      | 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           | H      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 110 kA |
| • at 415 V                                                | 85 kA  |
| • at 440 V                                                | 85 kA  |
| • at 500 V                                                | 55 kA  |
| • at 690 V                                                | 2.5 kA |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 110 kA |
| • at 415 V                                                | 85 kA  |
| • at 440 V                                                | 85 kA  |
| • at 500 V                                                | 55 kA  |
| • at 690 V                                                | 2.5 kA |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 242 kA |
| • at 415 V                                                | 187 kA |
| • at 440 V                                                | 187 kA |
| • at 500 V                                                | 121 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.                                         | 17                           |
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF                              | No                           |
| Adjustable response value current / I <sub>i</sub> min.                                         | 60 A                         |
| Adjustable response value current / I <sub>i</sub> max.                                         | 480 A                        |
| Design of the N-conductor protection                                                            | adjustable OFF; 100%         |
| Ground fault protection can be switched ON/OFF                                                  | No                           |
| 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.                                         | 0.1 s                        |
| Adjustable response value current / I <sub>g</sub> min.                                         | 0.3 s                        |
| Adjustable response value current / for G-tripping / with I <sub>2t</sub> characteristic / min. | 0 A                          |
| Adjustable response value current / for G-tripping / with I <sub>2t</sub> characteristic / max. | 0 A                          |
| Mechanical Design                                                                               |                              |
| Height [in]                                                                                     | 7.1 in                       |
| Height                                                                                          | 181 mm                       |
| Width [in]                                                                                      | 5.5 in                       |
| Width                                                                                           | 140 mm                       |
| Depth [in]                                                                                      | 4.2 in                       |
| Depth                                                                                           | 107 mm                       |
| Connections                                                                                     |                              |
| Arrangement of electrical connectors / for main current circuit                                 | Front terminal               |
| Type of electrical connection / for main current circuit                                        | Box terminal                 |
| Type of connectable conductor cross-section, round conductor terminal, stranded                 | 1 x (6-120 mm <sup>2</sup> ) |
| 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
- during storage / minimum
- during storage / maximum

70 °C  
-40 °C  
80 °C

## Certificates

|                                                                                        |    |
|----------------------------------------------------------------------------------------|----|
| Equipment marking / acc. to DIN EN 81346-2                                             | Q  |
| Certificate of suitability / as approval for NAVAL (no combat vessels) / Supplement SB | No |

| General Product Approval                                                                 |                                                                                          | EMC                                                                                      | Declaration of<br>Conformity                                                             | Test<br>Certificates                                                                            |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <br>EAC | <br>RCM | <br>EG-Konf. |
| <a href="#">Typprüfbescheinigung/Werkszeugnis</a>                                        |                                                                                          |                                                                                          |                                                                                          |                                                                                                 |

| Test<br>Certificates    | Shipping Approval                                                                        | other                                                                                    |                         |
|-------------------------|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------|
| <a href="#">sonstig</a> | <br>ABS | <br>LRS | <a href="#">sonstig</a> |

## Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA2140-6HM46-0AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA2140-6HM46-0AA0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2140-6HM46-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2140-6HM46-0AA0)

CAX-Online-Generator

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

Tender specifications

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



last modified:

10/29/2016