

CIRCUIT BREAKER 3VA6 UL FRAME 150 BREAKING CAPACITY CLASS C 100KA @ 480V 3-POLE, LINE PROTECTION ETU830, LIG, IN=40A OVERLOAD PROTECTION IR=16A ...40A SHORT CIRCUIT PROTECTION II=1,5...12 X IN GROUND-FAULT-PROTECTION IG=0,375...1X IN, TG=0,05-0,8S W/O CONNECTION



| Model   |                             |
|---|-----------------------------|
| Product brand name  | SENTRON                     |
| Product designation   | Molded-case circuit breaker |
| Design of the product   | System protection           |
| Design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| Design of the overcurrent release   | ETU830                      |
| Protective function of the overcurrent release  | LIG                         |
| Number of poles   | 3                           |

| General technical data   |        |
|--|--------|
| Tension assignée d'isolement $U_i$   | 600 V  |
| Max. rated operational voltage $U_e$ with AC 50/60Hz   | 600 V  |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 2.4 W  |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 0.8 W  |
| Mechanical service life (switching cycles) / typical   | 20 000 |

|   |   |
|---|---|
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 9 000                                   |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz     | 5 000                                   |
| Electrical endurance (switching cycles) / at 480 V / at 50/60 Hz          | 9 000                                   |
| Electrical endurance (switching cycles) / at 600 V / at 50/60 Hz          | 9 000                                   |
| Neutral conductors / upgradeable/retrofitable                             | No                                      |
| Ground fault monitoring version   | Summation current formation L-conductor |
| Product function  |   |
| • communication function  | Yes                                     |
| • other measurement function  | Yes                                     |

### Electricity

|   |       |
|---|-------|
| Marking / acc. to UL 489 / 100%-rated breaker                     | Yes   |
| Max. rated operational voltage of the size of the circuit-breaker | 150 A |
| Courant permanent assigné lu                                      | 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  | 38 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 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 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 690 V   | 3.8 kA |

### Switching capacity according to UL 489

|  |        |
|--|--------|
| Breaking capacity current  |        |
| <ul style="list-style-type: none"> <li>• at 240 V</li> </ul>       | 200 kA |
| <ul style="list-style-type: none"> <li>• at 480 Y/277 V</li> </ul> | 100 kA |
| <ul style="list-style-type: none"> <li>• at 480 V</li> </ul>       | 100 kA |
| <ul style="list-style-type: none"> <li>• at 600 Y/347 V</li> </ul> | 35 kA  |
| <ul style="list-style-type: none"> <li>• at 600 V</li> </ul>       | 35 kA  |

#### Adjustable parameters

|   |        |
|---|--------|
| Adjustable response value current / I <sub>g</sub> min.                 | 15 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>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.                 | 15 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  |

#### Mechanical Design

|             |        |
|-------------|--------|
| Height [in] | 7.8 in |
| Height      | 198 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 | Without connection |
| Type of electrical connection / for main current circuit        | Without            |

#### 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  |        |
| <ul style="list-style-type: none"> <li>• during operation / minimum</li> </ul> | -25 °C |
| <ul style="list-style-type: none"> <li>• during operation / maximum</li> </ul> | 70 °C  |
| <ul style="list-style-type: none"> <li>• during storage / minimum</li> </ul>   | -40 °C |

• during storage / maximum

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 Conformity  | Shipping Approval  |   |  |
|--|---|--|--|---|--|
| <br>CSA | <br>UL | <br>EAC | <br>RCM | <br>EG-Konf. | <br>ABS |

## other

[Miscellaneous](#)

## 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=3VA6140-7KM31-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6140-7KM31-2AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA6140-7KM31-2AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6140-7KM31-2AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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







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