



CIRCUIT BREAKER 3VA2 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 3-POLE, LINE PROTECTION ETU850, LSI, IN=160A OVERLOAD PROTECTION IR=63A ...160A SHORT CIRCUIT PROTECTION ISD=0,6..10X IN, II=1,5..10X IN NEUTRAL PROTECTION OPTIONAL WITH EXT. CT BUSBAR CONNECTION UNDERVOLTAGE RELEASE (UVR) 208-230 V AC 50/50 HZ 2 AUXILIARY SWITCH HQ 1 TRIP ALARM SWITCH HQ 1 ELECTRICAL ALARM SWITCH HQ

| Model                                          |                                                                           |
|------------------------------------------------|---------------------------------------------------------------------------|
| product brandname                              | SENTRON                                                                   |
| Product designation                            | Molded case circuit breaker                                               |
| Design of the product                          | Line protection                                                           |
| Design of the overcurrent release              | ETU850                                                                    |
| Protective function of the overcurrent release | LSI                                                                       |
| Number of poles                                | 3                                                                         |
| Design of the auxiliary release                | Undervoltage release (UVR)                                                |
| Design of the auxiliary switch                 | 2 auxiliary switches + 1 trip alarm switch + 1 electrical alarm switch HQ |

| 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 | 28 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                                                    | Yes    |

|                                 |         |
|---------------------------------|---------|
| Ground fault monitoring version | Without |
| Product function                |         |
| • communication function        | Yes     |
| • Phase failure detection       | No      |
| • other measurement function    | Yes     |
| Net weight                      | 2.54 kg |

#### Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné lu                                      | 160 A |
| Operating current                                                 |       |
| • at 40 °C                                                        | 160 A |
| • at 45 °C                                                        | 160 A |
| • at 50 °C                                                        | 160 A |
| • at 55 °C                                                        | 154 A |
| • at 60 °C                                                        | 148 A |
| • at 65 °C                                                        | 142 A |
| • at 70 °C                                                        | 136 A |

#### Switching capacity according to IEC 60947

|                                                           |         |
|-----------------------------------------------------------|---------|
| Switching capacity class of the circuit breaker           | M       |
| Maximum short-circuit current breaking capacity (Icu)     |         |
| • at 240 V                                                | 85 kA   |
| • at 415 V                                                | 55 kA   |
| • at 440 V                                                | 55 kA   |
| • at 500 V                                                | 36 kA   |
| • at 690 V                                                | 2.5 kA  |
| Operational short-circuit current breaking capacity (Ics) |         |
| • at 240 V                                                | 85 kA   |
| • at 415 V                                                | 55 kA   |
| • at 440 V                                                | 55 kA   |
| • at 500 V                                                | 36 kA   |
| • at 690 V                                                | 2.5 kA  |
| Short-circuit current making capacity (Icm)               |         |
| • at 240 V                                                | 187 kA  |
| • at 415 V                                                | 121 kA  |
| • at 440 V                                                | 121 kA  |
| • at 500 V                                                | 79 kA   |
| • at 690 V                                                | 4.25 kA |

#### Adjustable parameters

|                                             |      |
|---------------------------------------------|------|
| Adjustable response value current / Ig min. | 64 A |
|---------------------------------------------|------|

|                                                                    |         |
|--------------------------------------------------------------------|---------|
| Adjustable response value current / I <sub>g</sub> min.            | 160 A   |
| Adjustable response value current / I <sub>g</sub> min.            | 0.5     |
| Adjustable response value current / I <sub>g</sub> min.            | 20      |
| Adjustable response value current / I <sub>g</sub> min.            | 96 A    |
| Adjustable response value current / I <sub>g</sub> min.            | 1 600 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.            | 240 A   |
| Adjustable response value current / I <sub>i</sub> max.            | 1 600 A |

## Mechanical Design

|        |        |
|--------|--------|
| Height | 181 mm |
| Width  | 105 mm |
| Depth  | 86 mm  |

## Connections

|                                                                                         |                |
|-----------------------------------------------------------------------------------------|----------------|
| Arrangement of electrical connectors / for main current circuit                         | Front terminal |
| Type of electrical connection / for main current circuit                                | Lug terminal   |
| 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       |

## Auxiliary circuit

|                                                |     |
|------------------------------------------------|-----|
| Product component                              |     |
| • undervoltage release                         | Yes |
| • Voltage trigger                              | No  |
| • undervoltage release with leading contact    | No  |
| • Trip indicator                               | Yes |
| Number of CO contacts / for auxiliary contacts | 4   |

## Accessories

|                                                   |                                    |
|---------------------------------------------------|------------------------------------|
| Product extension / optional / motor drive        | Yes                                |
| Manufacturer's article number                     |                                    |
| • of the supplied basic switch                    | <a href="#">3VA2116-5KP32-0AA0</a> |
| • of the integrated auxiliary switch/alarm switch | <a href="#">3VA9988-0AA12</a>      |
| • of the integrated auxiliary switch/alarm switch | <a href="#">3VA9988-0AB12</a>      |
| • of the integrated auxiliary switch/alarm switch | <a href="#">3VA9988-0AB22</a>      |
| • of the integrated auxiliary trip                | <a href="#">3VA9608-0BB25</a>      |

## 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

Equipment marking / acc. to DIN EN 81346-2 Q

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

| Test Certificates                                 |                         | Shipping Approval                                                                        |                                                                                                        |                                                                                           |                                                                                            |
|---------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <a href="#">Typprüfbescheinigung/Werkszeugnis</a> | <a href="#">sonstig</a> | <br>ABS | <br>BUREAU<br>VERITAS | <br>GL | <br>LRS |

| Shipping Approval                                                                           | other                   |
|---------------------------------------------------------------------------------------------|-------------------------|
| <br>RMRS | <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/3VA2116-5KP32-0DL0>

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

<http://support.automation.siemens.com/WW/view/en/3VA2116-5KP32-0DL0/all>

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

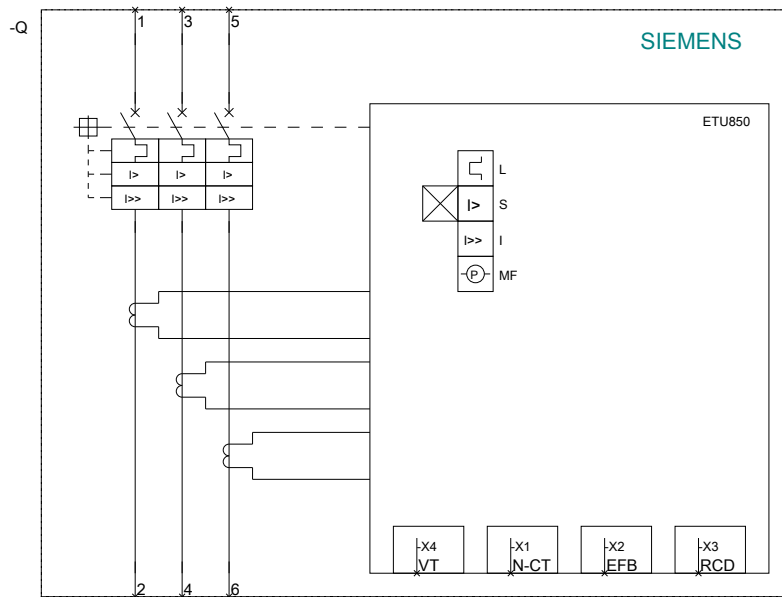
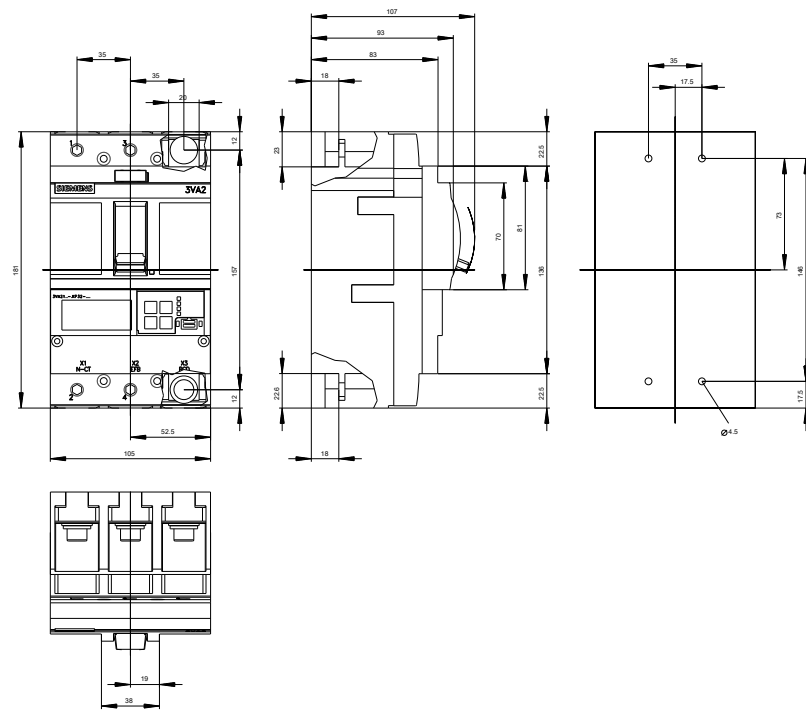
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2116-5KP32-0DL0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2116-5KP32-0DL0)

CAX-Online-Generator

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

Tender specifications

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



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