



CIRCUIT BREAKER 3VA1 IEC FRAME 100 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 3-POLE, LINE PROTECTION TM210, FTFM, IN=20A OVERLOAD PROTECTION IR=20A FIXED SHORT CIRCUIT PROTECTION II=16 X IN BUSBAR CONNECTION SHUNT TRIP (STL) 12-30 V DC, 24 V AC 50/60 HZ 2 AUXILIARY SWITCH HQ 1 TRIP ALARM SWITCH HQ

| Model                                          |                                               |
|------------------------------------------------|-----------------------------------------------|
| product brandname                              | SENTRON                                       |
| Product designation                            | Molded case circuit breaker                   |
| Design of the product                          | Line protection                               |
| Design of the overcurrent release              | TM210                                         |
| Protective function of the overcurrent release | LI                                            |
| Number of poles                                | 3                                             |
| Design of the auxiliary release                | Shunt trip (STL)                              |
| Design of the auxiliary switch                 | 2 auxiliary switches + 1 trip alarm switch HQ |

| General technical data                                                                           |        |
|--------------------------------------------------------------------------------------------------|--------|
| Tension assignée d'isolement Ui                                                                  | 800 V  |
| Max. rated operational voltage Ue with AC 50/60Hz                                                | 690 V  |
| Max. rated operational voltage Ue with DC                                                        | 500 V  |
| Operating power / at AC-3 / at 400 V                                                             | 0 W    |
| Operating power / at AC-3 / at 230 V                                                             | 0 W    |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 12 W   |
| Mechanical service life (switching cycles) / typical                                             | 15 000 |

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 8 000   |
| Neutral conductors / upgradeable/retrofitable                             | No      |
| Ground fault monitoring version                                           | Without |
| Product function                                                          |         |
| • communication function                                                  | No      |
| • Phase failure detection                                                 | No      |
| • other measurement function                                              | No      |
| Net weight                                                                | 1.08 kg |

## Electricity

|                                                                   |        |
|-------------------------------------------------------------------|--------|
| Max. rated operational voltage of the size of the circuit-breaker | 100 A  |
| Courant permanent assigné Iu                                      | 20 A   |
| Operating current                                                 |        |
| • at 40 °C                                                        | 20 A   |
| • at 45 °C                                                        | 20 A   |
| • at 50 °C                                                        | 20 A   |
| • at 55 °C                                                        | 19.2 A |
| • at 60 °C                                                        | 18.8 A |
| • at 65 °C                                                        | 18.4 A |
| • at 70 °C                                                        | 18 A   |

## Switching capacity according to IEC 60947

|                                                           |         |
|-----------------------------------------------------------|---------|
| Switching capacity class of the circuit breaker           | N       |
| Maximum short-circuit current breaking capacity (Icu)     |         |
| • at 240 V                                                | 36 kA   |
| • at 415 V                                                | 25 kA   |
| • at 440 V                                                | 16 kA   |
| • at 690 V                                                | 5 kA    |
| Operational short-circuit current breaking capacity (Ics) |         |
| • at 240 V                                                | 36 kA   |
| • at 415 V                                                | 25 kA   |
| • at 440 V                                                | 16 kA   |
| • at 690 V                                                | 5 kA    |
| Short-circuit current making capacity (Icm)               |         |
| • at 240 V                                                | 75.6 kA |
| • at 415 V                                                | 52.5 kA |
| • at 440 V                                                | 32 kA   |
| • at 690 V                                                | 7.5 kA  |

## Adjustable parameters

|                                                         |     |
|---------------------------------------------------------|-----|
| Adjustable response value current / I <sub>g</sub> min. | 0 A |
|---------------------------------------------------------|-----|

|                                             |     |
|---------------------------------------------|-----|
| Adjustable response value current / lg min. | 0 A |
| Adjustable response value current / lg min. | 0 A |
| Adjustable response value current / lg min. | 0 A |
| Adjustable response value current / li min. | 0 A |
| Adjustable response value current / li max. | 0 A |

## Mechanical Design

|        |         |
|--------|---------|
| Height | 130 mm  |
| Width  | 76.2 mm |
| Depth  | 70 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. | 12 x 0         |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5       |

## Auxiliary circuit

|                                                |     |
|------------------------------------------------|-----|
| Product component                              |     |
| • undervoltage release                         | No  |
| • Voltage trigger                              | Yes |
| • undervoltage release with leading contact    | No  |
| • Trip indicator                               | Yes |
| Number of CO contacts / for auxiliary contacts | 3   |

## Accessories

|                                                   |                                    |
|---------------------------------------------------|------------------------------------|
| Product extension / optional / motor drive        | No                                 |
| Manufacturer's article number                     |                                    |
| • of the supplied basic switch                    | <a href="#">3VA1020-3ED32-0AA0</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 trip                | 3VA9688-0BL30                      |

## 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<br>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 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/3VA1020-3ED32-0HH0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1020-3ED32-0HH0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1020-3ED32-0HH0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1020-3ED32-0HH0)

##### CAX-Online-Generator

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

##### Tender specifications

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



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