# **SIEMENS**

## Data sheet

## 3VA1096-2ED42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 100 BREAKING CAPACITY CLASS B ICU=16KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=16A OVERLOAD PROTECTION IR=16A FIXED SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED BUSBAR CONNECTION

Figure similar

| Model                                       |                             |  |  |  |
|---|-----------------------------|--|--|--|
| product brand name                          | SENTRON                     |  |  |  |
| Product designation                         | Molded case circuit breaker |  |  |  |
| Design of the product                       | Line protection             |  |  |  |
| Product variations                          | General Applications        |  |  |  |
| Ground fault monitoring version             | Without                     |  |  |  |
| Design of the auxiliary release             | Without auxiliary release   |  |  |  |
| Design of the auxiliary switch              | Without                     |  |  |  |
| Design of the operating mechanism           | toggle handle               |  |  |  |
| Type of the driving mechanism / motor drive | No                          |  |  |  |
| Design of the overcurrent release           | TM210                       |  |  |  |

| General technical data  |  |        |  |  |
|---|--|--------|--|--|
| Number of poles   |  | 4      |  |  |
| Trip class / of the L-trip / with I2t characteristic / initial value    |  | 1      |  |  |
| Trip class / of the L-trip / with I2t characteristic / Full-scale value |  | 1      |  |  |
| Electrical endurance (switching cycles)                                 |  |        |  |  |
| ● at AC-1 / at 380/415 V / at 50/60 Hz                                  |  | 8 000  |  |  |
| circuit-breaker / Design  |  | 3VA    |  |  |
| Mechanical service life (switching cycles) / typical                    |  | 15 000 |  |  |

| Voltage                          |   |     |
|----------------------------------|---|-----|
| Insulation voltage / Rated value | V | 800 |
|                                  |   |     |

#### Protection class

| Protection class IP / on the front Protective function of the overcurrent release  LI  Switching capacity Switching capacity Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W  10.6  Electricity  Contlinuous current / Rated value / maximum  A  100  Continuous current / Rated value / maximum  • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the C / Rated value  • of r C / Rated value  • of r C / Rated value  • at 40 °C / Rated value  • at 60 °C / Rated  | Protection class IP                             |   | IP40              |
|--|---|---|-------------------|
| Switching capacity  Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W 10.6  Electricity  Continuous current / Rated value / maximum  A 100  Continuous current / Rated value — A 16  Adjustable response value current  • of the current-dependent overload release / Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at | Protection class IP / on the front              |   | IP40              |
| Switching capacity class of the circuit breaker    Dissipation   | Protective function of the overcurrent release  |   | Ц                 |
| Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W 10.6  Electricity  Continuous current / Rated value / maximum  | Switching capacity                              |   |                   |
| Active power loss  • maximum    M  |   |   | В                 |
| Active power loss  | Dissipation                                     |   |                   |
| Continuous current / Rated value / maximum   |   |   |                   |
| Continuous current / Rated value / maximum   | • maximum                                       | W | 10.6              |
| Continuous current / Rated value / maximum   | Electricity                                     |   |                   |
| Adjustable response value current  • of the current-dependent overload release / Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  A 16  • at 50 °C / Rated value  A 16  • at 60 °C / Rated value  A 16  • at 60 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Oglitability  Suitability  Suitability Full-scale value  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 10  10  11  10  10  10  10  10  10  10   |   | Α | 100               |
| of the current-dependent overload release / Full-scale value     of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage     with AC / at 50/60 Hz / Rated value     of or DC / Rated value  Operating current     at 40 °C / Rated value  A 16     at 50 °C / Rated value  A 16     at 50 °C / Rated value  A 16     at 60 °C / Rated value  A 16     at 60 °C / Rated value  A 15     at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitable parameters  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 10     of I-trip / Full-scale value  A 10     of N-conductor protection / initial value  A 0  | Continuous current / Rated value                | Α | 16                |
| Full-scale value  • of the instantaneous short-circuit release / initial value   Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  A 16  • at 50 °C / Rated value  • at 55 °C / Rated value  A 16  • at 60 °C / Rated value  A 15  • at 60 °C / Rated value  A 15  • at 60 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 0  | Adjustable response value current               | _ |                   |
| Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  A 16  • at 50 °C / Rated value  A 16  • at 50 °C / Rated value  A 16  • at 60 °C / Rated value  A 15  • at 60 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 0   |   | Α | 1                 |
| Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  V 600  Operating current  • at 40 °C / Rated value  A 16  • at 50 °C / Rated value  A 16  • at 50 °C / Rated value  A 16  • at 60 °C / Rated value  A 15  • at 65 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 0  |   | Α | 10                |
| with AC / at 50/60 Hz / Rated value     v 690     for DC / Rated value     V 600  Operating current     at 40 °C / Rated value     at 50 °C / Rated value     at 55 °C / Rated value     at 60 °C / Rated value     at 60 °C / Rated value     at 65 °C / Rated value     at 70 °C / Rated value     A 15     at 70 °C / Rated value     A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current     of I-trip / Full-scale value     for N-conductor protection / initial value     for N-conductor protection / initial value     A 0  | Main circuit                                    |   |                   |
| for DC / Rated value         V 600  Operating current         at 40 °C / Rated value         at 50 °C / Rated value         at 55 °C / Rated value         at 60 °C / Rated value         at 60 °C / Rated value         at 65 °C / Rated value         at 65 °C / Rated value         at 65 °C / Rated value         at 70 °C / Rated value         A 15         at 70 °C / Rated value         A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable parameters  Adjustable response value current         of I-trip / Full-scale value         A 10         of or N-conductor protection / initial value         A 0  | Operating voltage                               |   |                   |
| Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  A 15  • at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 10  • of N-conductor protection / initial value  A 10   | • with AC / at 50/60 Hz / Rated value           | V | 690               |
| at 40 °C / Rated value  at 50 °C / Rated value  at 55 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 65 °C / Rated value  at 65 °C / Rated value  At 15  at 65 °C / Rated value  At 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability  Suitable parameters  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  A 16  A 16  A 15  A 15  A 15  A 10  of or N-conductor protection / initial value  A 0   | • for DC / Rated value                          | V | 600               |
| at 50 °C / Rated value  at 55 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  At 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  A 16  A 15  A 15  A 15  A 15  Auxiliary circuit  O  Suitability  Adjustable parameters  Adjustable parameters  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 10  A 0  | Operating current                               | _ |                   |
| at 55 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 10  for N-conductor protection / initial value  A 16  A 15  Auxiliary circuit  A 15  A 15  A 10  of or N-conductor protection / initial value  A 0   | • at 40 °C / Rated value                        | Α | 16                |
| at 60 °C / Rated value at 65 °C / Rated value A 15 at 70 °C / Rated value A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value A 10  for N-conductor protection / initial value A 10  | • at 50 °C / Rated value                        | Α | 16                |
| at 65 °C / Rated value  at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  A 10  A 10  | ● at 55 °C / Rated value                        | Α | 16                |
| at 70 °C / Rated value  A 15  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Suitabile parameters  Adjustable response value current  of I-trip / Full-scale value  for N-conductor protection / initial value  A 10  A 10   | • at 60 °C / Rated value                        | Α | 15                |
| Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 0   | ● at 65 °C / Rated value                        | Α | 15                |
| Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  O  System protection  A 10  A 0   | • at 70 °C / Rated value                        | Α | 15                |
| Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  O  System protection  A 10  A 0   | Auxiliary circuit                               |   |                   |
| Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 0   |   |   | 0                 |
| Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 0   | Suitability                                     |   |                   |
| Adjustable response value current  • of I-trip / Full-scale value  • for N-conductor protection / initial value  A 10  A 0   | · · · · · · · · · · · · · · · · · · ·           |   | system protection |
| <ul> <li>of I-trip / Full-scale value</li> <li>for N-conductor protection / initial value</li> <li>A</li> <li>D</li> </ul>   | Adjustable parameters                           |   |                   |
| • for N-conductor protection / initial value A 0   | Adjustable response value current               |   |                   |
|  | ● of I-trip / Full-scale value                  | Α | 10                |
| • for N-conductor protection / Full-scale value A 0  | • for N-conductor protection / initial value    | Α | 0                 |
|  | • for N-conductor protection / Full-scale value | Α | 0                 |
| Adjustable response value current / of the current- A 1 dependent overload release / initial value   | -   | Α | 1                 |
| Product details  | Product details                                 |   |                   |
| Product component Product component  |   |   |                   |

| Trip indicator  |    | No                 |
|---|----|--------------------|
| • display   |    | No                 |
| <ul> <li>Voltage trigger</li> </ul>   |    | No                 |
| undervoltage release  |    | No                 |
| <ul> <li>undervoltage release with leading contact</li> </ul>   |    | No                 |
| Product property  |    |                    |
| <ul> <li>for neutral conductors /<br/>upgradeable/retrofittable / Short-circuit and<br/>overload proof</li> </ul> |    | No                 |
| Product expansion / optional / motor drive  |    | No                 |
| Product function  |    |                    |
| Product function  |    |                    |
| Intrinsic device protection   |    | Yes                |
| communication function  |    | No                 |
| Phase failure detection   |    | No                 |
| other measurement function  |    | No                 |
| Accessories   | _  |                    |
| Manufacturer article number / of the supplied basic   |    | 3VA1096-2ED42-0AA0 |
| switch  |    |                    |
| Short circuit   |    |                    |
| Operational short-circuit current breaking capacity   |    |                    |
| (Ics)   |    |                    |
| • at 240 V / Rated value  | kA | 25                 |
| • at 415 V / Rated value  | kA | 16                 |
| ● at 440 V / Rated value  | kA | 8                  |
| ● at 500 V / Rated value  | kA | 5                  |
| ● at 690 V / Rated value  | kA | 5                  |
| Maximum short-circuit current breaking capacity (Icu)   |    |                    |
| • at 240 V / Rated value  | kA | 25                 |
| ● at 415 V / Rated value  | kA | 16                 |
| • at 440 V / Rated value  | kA | 8                  |
| • at 500 V / Rated value  | kA | 5                  |
| • at 690 V / Rated value  | kA | 5                  |
| Short-circuit current making capacity (lcm)   |    |                    |
| • at 240 V / Rated value  | kA | 52.5               |
| ● at 415 V / Rated value  | kA | 32                 |
| ● at 690 V / Rated value  | kA | 7.5                |
| Connections   |    |                    |
| Arrangement of electrical connectors / for main   |    | Front terminal     |
| current circuit   |    |                    |
| Type of connectable conductor cross-section   |    |                    |

| • for flat-bar terminal connection / minimum             | 12 x 0       |
|--|--------------|
| • for flat-bar terminal connection / maximum             | 17 x 6.5     |
| Type of electrical connection / for main current circuit | Lug terminal |

| Mechanical Design |    |                |  |  |
|-------------------|----|----------------|--|--|
| Height            | mm | 130            |  |  |
| Width             | mm | 101.6          |  |  |
| Depth             | mm | 70             |  |  |
| Mounting type     |    | fixed mounting |  |  |

| Environmental conditions                     |    |     |  |  |
|--|----|-----|--|--|
| Ambient temperature                          |    |     |  |  |
| <ul><li>during operation / minimum</li></ul> | °C | -25 |  |  |
| <ul><li>during operation / maximum</li></ul> | °C | 70  |  |  |
| <ul> <li>during storage / minimum</li> </ul> | °C | -40 |  |  |
| during storage / maximum                     | °C | 80  |  |  |

| OCI tilloutes     | ı |
|-------------------|---|
| Equipment marking |   |

Certificates

• acc. to DIN EN 61346-2 Q Q • acc. to DIN EN 81346-2

| General Product Approval | EMC | Declaration of | Shipping Approval |
|--------------------------|-----|----------------|-------------------|
|                          |     | Conformity     |                   |











other

other

#### 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/3VA10962ED420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA10962ED420AA0/all

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

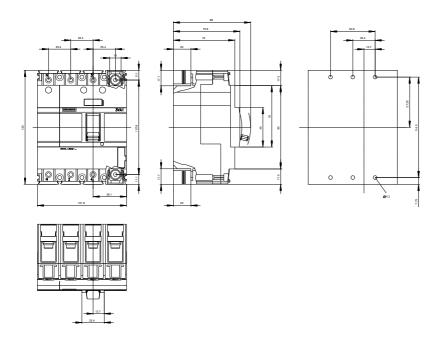
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA10962ED420AA0

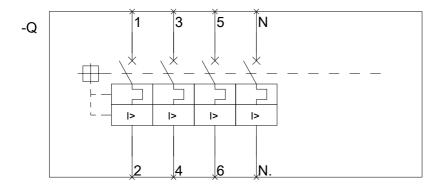
**CAx-Online-Generator** 

http://www.siemens.com/cax

**Tender specifications** 

http://ausschreibungstexte.siemens.com/tiplv





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