



Figure similar

CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=160A OVERLOAD PROTECTION IR=112A ...160A SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED CABLE CONNECTION

| 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 | | TM220 |
| 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 | | IP40 |
| Protection class IP / on the front | | IP40 |
| Protective function of the overcurrent release | | LI |

Switching capacity

| | | |
|--|--|---|
| Switching capacity class of the circuit breaker | | S |
|--|--|---|

Dissipation

| | | |
|---|---|----|
| Active power loss | | |
| <ul style="list-style-type: none"> • maximum | W | 38 |

Electricity

| | | |
|--|---|-----|
| Continuous current / Rated value / maximum | A | 160 |
| Continuous current / Rated value | A | 160 |
| Adjustable response value current | | |
| <ul style="list-style-type: none"> • of the current-dependent overload release / Full-scale value | A | 1 |
| <ul style="list-style-type: none"> • of the instantaneous short-circuit release / initial value | A | 10 |

Main circuit

| | | |
|---|---|-----|
| Operating voltage | | |
| <ul style="list-style-type: none"> • with AC / at 50/60 Hz / Rated value | V | 690 |
| <ul style="list-style-type: none"> • for DC / Rated value | V | 600 |
| Operating current | | |
| <ul style="list-style-type: none"> • at 40 °C / Rated value | A | 160 |
| <ul style="list-style-type: none"> • at 50 °C / Rated value | A | 160 |
| <ul style="list-style-type: none"> • at 55 °C / Rated value | A | 158 |
| <ul style="list-style-type: none"> • at 60 °C / Rated value | A | 155 |
| <ul style="list-style-type: none"> • at 65 °C / Rated value | A | 153 |
| <ul style="list-style-type: none"> • at 70 °C / Rated value | A | 150 |

Auxiliary circuit

| | | |
|--|--|---|
| Number of CO contacts / for auxiliary contacts | | 0 |
|--|--|---|

Suitability

| | | |
|----------------------------|--|-------------------|
| Suitability for use | | system protection |
|----------------------------|--|-------------------|

Adjustable parameters

| | | |
|--|---|-----|
| Adjustable response value current | | |
| <ul style="list-style-type: none"> • of I-trip / Full-scale value | A | 10 |
| <ul style="list-style-type: none"> • for N-conductor protection / initial value | A | 0 |
| <ul style="list-style-type: none"> • for N-conductor protection / Full-scale value | A | 0 |
| Adjustable response value current / of the current-dependent overload release / initial value | A | 0.7 |

Product details

| | | |
|--------------------------|--|--|
| Product component | | |
|--------------------------|--|--|

| | | |
|--|--|-----|
| • Trip indicator | | No |
| • display | | No |
| • Voltage trigger | | No |
| • undervoltage release | | No |
| • undervoltage release with leading contact | | No |
| Product property | | |
| • for neutral conductors / upgradeable/retrofitable / Short-circuit and overload proof | | No |
| Product expansion / optional / motor drive | | Yes |

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 switch | | 3VA1116-4EE46-0AA0 |
|--|--|------------------------------------|

Short circuit

| | | |
|--|----|------|
| Operational short-circuit current breaking capacity (Ics) | | |
| • at 240 V / Rated value | kA | 55 |
| • at 415 V / Rated value | kA | 36 |
| • at 440 V / Rated value | kA | 25 |
| • at 500 V / Rated value | kA | 15 |
| • at 690 V / Rated value | kA | 5 |
| Maximum short-circuit current breaking capacity (Icu) | | |
| • at 240 V / Rated value | kA | 55 |
| • at 415 V / Rated value | kA | 36 |
| • at 440 V / Rated value | kA | 25 |
| • at 500 V / Rated value | kA | 16 |
| • at 690 V / Rated value | kA | 7 |
| Short-circuit current making capacity (Icm) | | |
| • at 240 V / Rated value | kA | 121 |
| • at 415 V / Rated value | kA | 75.6 |
| • at 690 V / Rated value | kA | 7.5 |

Connections

| | | |
|---|--|----------------|
| Arrangement of electrical connectors / for main current circuit | | Front terminal |
| Type of connectable conductor cross-section | | |

| | | |
|--|--|---------------------------------|
| • of the round conductor terminal / stranded | | 1 x (1.5 - 70 mm ²) |
| Type of electrical connection / for main current circuit | | Box terminal |

Mechanical Design

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

Environmental conditions

| | | |
|------------------------------|----|-----|
| Ambient temperature | | |
| • during operation / minimum | °C | -25 |
| • during operation / maximum | °C | 70 |
| • during storage / minimum | °C | -40 |
| • during storage / maximum | °C | 80 |

Certificates

| | | |
|--------------------------|--|---|
| Equipment marking | | |
| • acc. to DIN EN 61346-2 | | Q |
| • acc. to DIN EN 81346-2 | | Q |

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



[other](#)



GL

[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/3VA11164EE460AA0>

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

<http://support.automation.siemens.com/WW/view/en/3VA11164EE460AA0/all>

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

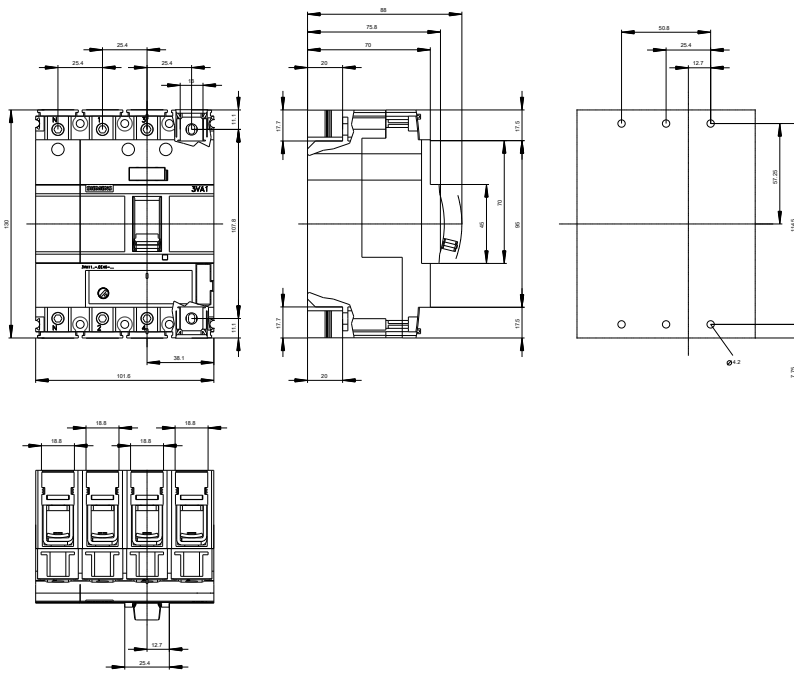
http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA11164EE460AA0

CAX-Online-Generator

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

Tender specifications

<http://ausschreibungstexte.siemens.com/tiplv>



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