



Fixed-mounted circuit breaker IEC 60947-2, frame size 1, 4-poles, N-pole left, $I_n=2000A$ up to 690V AC 50/60Hz, breaking capacity N $I_{cu}=55/42kA$ at 500/690V, Trip unit ETU600 LSI upgrade ready, color display, bluetooth and USB interface, Protection LT, ST, INST, include N-protection, (internal N-sensor available), incl. trip alarm switch (1xCO), rear connection horizontal, without Com & metering function Manual operating mechanism with mechanical closing, without Spring charging motor, Ready-to-close signal. switch, Auxiliary switches 2NO+2NC, without Closing coil (CC), manual operating mechanism with mechanical closing, without Remote trip alarm reset coil (RR), without 2nd shunt trip, without 1st Shunt trip

| Model | |
|---|--|
| product brand name | SENTRON |
| product designation | 3WA air circuit breaker |
| suitability for use | circuit breaker |
| size of the circuit-breaker | I |
| number of poles | 4 |
| position / of neutral conductor | neutral left |
| fastening method | fixed-mounted circuit breakers |
| design of the product | AC application |
| type of the driving mechanism | manual operating mechanism with mechanical or electrical closing |
| design of the electronic trip unit | ETU600 LSI |
| Weight | 54.81 kg |
| Net Weight | 39.81 kg |
| General technical data | |
| insulation voltage / rated value | 1000 V |
| operating voltage / at AC / at 50/60 Hz / rated value | 690 V |
| power loss [W] / maximum | 240 W |
| Current | |
| continuous current / rated value / maximum | 2000 A |
| continuous current / rated value | 2000 A |
| operational current | |
| • at 40 °C / rated value | 2000 A |
| • at 45 °C / rated value | 2000 A |
| • at 50 °C / rated value | 2000 A |
| • at 55 °C / rated value | 2000 A |
| • at 60 °C / rated value | 2000 A |
| • at 65 °C / rated value | 2000 A |
| • at 70 °C / rated value | 2000 A |
| Switching capacity and short-time withstand current, according to IEC 60947-2 | |
| switching capacity class of the circuit breaker | N |
| maximum short-circuit current breaking capacity (I_{cu}) | |
| • at 500 V / rated value | 55 kA |
| • at 690 V / rated value | 42 kA |
| operating short-circuit current breaking capacity (I_{cs}) | |
| • at 500 V / rated value | 55 kA |
| • at 690 V / rated value | 42 kA |
| short-circuit current making capacity (I_{cm}) | |
| • at 500 V / rated value | 121 kA |
| • at 690 V / rated value | 88 kA |
| short-time withstand current (I_{cw}) / at 500 V AC | |

| | |
|---|-------|
| <ul style="list-style-type: none"> • for 0.5 s / rated value | 55 kA |
| <ul style="list-style-type: none"> • for 1 s / rated value | 50 kA |
| <ul style="list-style-type: none"> • for 2 s / rated value | 45 kA |
| <ul style="list-style-type: none"> • for 3 s / rated value | 35 kA |
| short-time withstand current (I _{cw}) / at 690 V AC | |
| <ul style="list-style-type: none"> • for 0.5 s / rated value | 42 kA |
| <ul style="list-style-type: none"> • for 1 s / rated value | 42 kA |
| <ul style="list-style-type: none"> • for 2 s / rated value | 42 kA |
| <ul style="list-style-type: none"> • for 3 s / rated value | 35 kA |

Electronic release unit

| | |
|--|-----|
| product feature | |
| <ul style="list-style-type: none"> • upgradable | Yes |
| <ul style="list-style-type: none"> • Bluetooth and USB interface | Yes |
| <ul style="list-style-type: none"> • decoder for basic protection functions | Yes |
| <ul style="list-style-type: none"> • display and function keys | Yes |
| <ul style="list-style-type: none"> • SENTRON powerconfig configuration software | Yes |

Basic protection functions

| | |
|---|--|
| product feature / for L-tripping | |
| <ul style="list-style-type: none"> • can be switched on/off | Yes |
| <ul style="list-style-type: none"> • selectable characteristic function | Yes |
| <ul style="list-style-type: none"> • decoder and infinite adjustability are selectable with eSet | Yes |
| set values setting current (I _r) / for L-tripping / with I2t characteristic | 0.5;0.6;0.7;0.75;0.8;0.85;0.9;0.95;1.0 |
| reference value setting current (I _r) / for L-tripping / with I2t characteristic | x I _n |
| set values delay time (tr) / for L-tripping / with I2t characteristic | 1;2;5;8;10;14;17;21;25 |
| reference value delay time (tr) / for L-tripping / with I2t characteristic | s |
| set values setting current (I _r) / for L-tripping / with I2t characteristic / for eSet | 0.4-1;0.001 |
| adjustable absolute value setting current (I _r) / for L-tripping / with I2t characteristic / for eSet | |
| <ul style="list-style-type: none"> • minimum | 800 A |
| <ul style="list-style-type: none"> • maximum | 2000 A |
| set values delay time (tr) / for L-tripping / with I2t characteristic / for eSet | 0.5-30;0.001 |
| set values setting current (I _r) / for L-tripping / with I4t characteristic / for eSet | 0.4-1;0.001 |
| set values delay time (tr) / for L-tripping / with I4t characteristic / for eSet | 0.5-5;0.001 |
| reference value delay time (tr) / for L-tripping / with I4t characteristic | s |
| adjustable absolute value setting current (I _r) / for L-tripping / with I4t characteristic / for eSet | |
| <ul style="list-style-type: none"> • minimum | 800 A |
| <ul style="list-style-type: none"> • maximum | 2000 A |

L: Overload protection N-conductor

| | |
|--|------------------|
| product feature / with neutral conductor protection / can be switched on/off | Yes |
| setting values setting current (I _{nN}) / for N-tripping | 0.2-1;0.001 |
| reference value setting current (I _{nN}) / for N-tripping | x I _n |
| adjustable setting current (I _{nN}) / for N-tripping | |
| <ul style="list-style-type: none"> • minimum | 400 A |
| <ul style="list-style-type: none"> • maximum | 2000 A |

S: delayed short-circuit protection ST

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|---|-----|
| product feature / for S-tripping | |
| <ul style="list-style-type: none"> • independent of direction / can be switched on/off | Yes |
| <ul style="list-style-type: none"> • independent of direction / selectable characteristic function | Yes |
| <ul style="list-style-type: none"> • decoder and infinite adjustability are selectable with eSet | Yes |

S: delayed short-circuit protection ST, settings values I0t

| | |
|---|------------------------|
| set values setting current (I _{sd}) / for S-tripping / with I0t characteristic | 1.5;2;2.5;3;4;5;6;8;10 |
| reference value setting current (I _{sd}) / for S-tripping / with I0t characteristic | x I _r |

| | |
|--|----------------------------|
| set values delay time (tsd) / for S-tripping / with I0t characteristic | 0.08;0.15;0.22;0.3;0.4 |
| reference value delay time (tsd) / for S-tripping / with I0t characteristic | s |
| set values setting current (Isd) / for S-tripping / with I0t characteristic / for eSet / independent of direction | 0.6-10;0.001 |
| adjustable absolute value setting current (Isd) <ul style="list-style-type: none"> for S-tripping / with I0t characteristic / for eSet / independent of direction / minimum at 500 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum at 690 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum | 1200 A 40 kA 33.6 kA |
| set values delay time (tsd) / for S-tripping / with I0t characteristic / for eSet / independent of direction | 0.02-0.4;0.001 |
| S: delayed short-circuit protection ST, settings values I2t | |
| set values setting current (Isd) / for S-tripping / with I2t characteristic | 1.5;2;2.5;3;4;5;6;8;10 |
| reference value setting current (Isd) / for S-tripping / with I2t characteristic | x Ir |
| set values delay time (tsd) / for S-tripping / with I2t characteristic | 0.1;0.2;0.3;0.4 |
| set values setting current (Isd) / for S-tripping / with I2t characteristic / for eSet / independent of direction | 0.6-10;0.001 |
| adjustable absolute value setting current (Isd) <ul style="list-style-type: none"> for S-tripping / with I2t characteristic / for eSet / independent of direction / minimum at 500 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum at 690 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum | 1200 A 40 kA 33.6 kA |
| set values delay time (tsd) / for S-tripping / with I2t characteristic / for eSet / independent of direction | 0.02-0.4;0.001 |
| product feature / for I-tripping <ul style="list-style-type: none"> can be switched on/off decoder and infinite adjustability are selectable (with eSet) | Yes Yes |
| set values setting current (Ii) / for I-tripping | 1.5;2;3;4;6;8;10;12;15 |
| reference value setting current (Ii) / for I-tripping | x In |
| tripping factor setting current (Iimax) / for I-tripping | 0.8 |
| reference value setting current (Iimax) / for I-tripping | x Ics |
| set values setting current (Ii) / for I-tripping / for eSet | 1.5-15;0.001 |
| adjustable absolute value setting current (Ii) <ul style="list-style-type: none"> for I-tripping / for eSet / minimum at 500 V / for I-tripping / for eSet / maximum at 690 V / for I-tripping / for eSet / maximum | 3000 A 44 kA 33.6 kA |
| G: ground fault GF | |
| product feature / for G-tripping <ul style="list-style-type: none"> can be switched on/off selectable characteristic function | No No |
| Further protective functions | |
| protection function <ul style="list-style-type: none"> maintenance mode DAS+ | Yes |
| Measuring functions | |
| measurement function <ul style="list-style-type: none"> current measurement | Yes |
| Communication | |
| communication function | No |
| Service Life | |
| mechanical service life (operating cycles) <ul style="list-style-type: none"> without support / typical with support / typical | 15000 30000 |
| electrical endurance (operating cycles) <ul style="list-style-type: none"> at 690 V / without support / typical at 690 V / with support / typical | 10000 30000 |
| Dimensions | |
| height | 437 mm |

| | |
|---|---|
| width | 410 mm |
| depth | 357 mm |
| Main connection | |
| arrangement of electrical connectors / for main current circuit | main connection on the rear, horizontal |
| Auxiliary circuit | |
| design of the auxiliary switch | 2 NO + 2 NC |
| number of NC contacts / for auxiliary contacts | 2 |
| number of NO contacts / for auxiliary contacts | 2 |
| number of CO contacts / for auxiliary contacts | 0 |
| Internal accessories | |
| product component | |
| • undervoltage release | No |
| • voltage trigger | No |
| • trip indicator | Yes |
| • motor drive | No |
| Environmental conditions | |
| protection class IP / on the front | IP20 |
| ambient temperature / during operation | |
| • minimum | -40 °C |
| • maximum | 70 °C |
| ambient temperature / during storage | |
| • minimum | -40 °C |
| • maximum | 80 °C |
| Certificates | |
| reference code | |
| • according to IEC 81346-2 | Q |

| | | |
|---------------------------------|------------|--------------------------|
| General Product Approval | EMV | Test Certificates |
|---------------------------------|------------|--------------------------|



[Miscellaneous](#)



[Type Test Certificates/Test Report](#)

| | | | |
|--------------------------|--------------|------------------------|--------------------|
| Marine / Shipping | other | Dangerous goods | Environment |
|--------------------------|--------------|------------------------|--------------------|



[Confirmation](#)

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[Transport Information](#)

[Environmental Confirmations](#)

Environment

[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3WA1120-2AE12-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3WA1120-2AE12-0AA0>

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

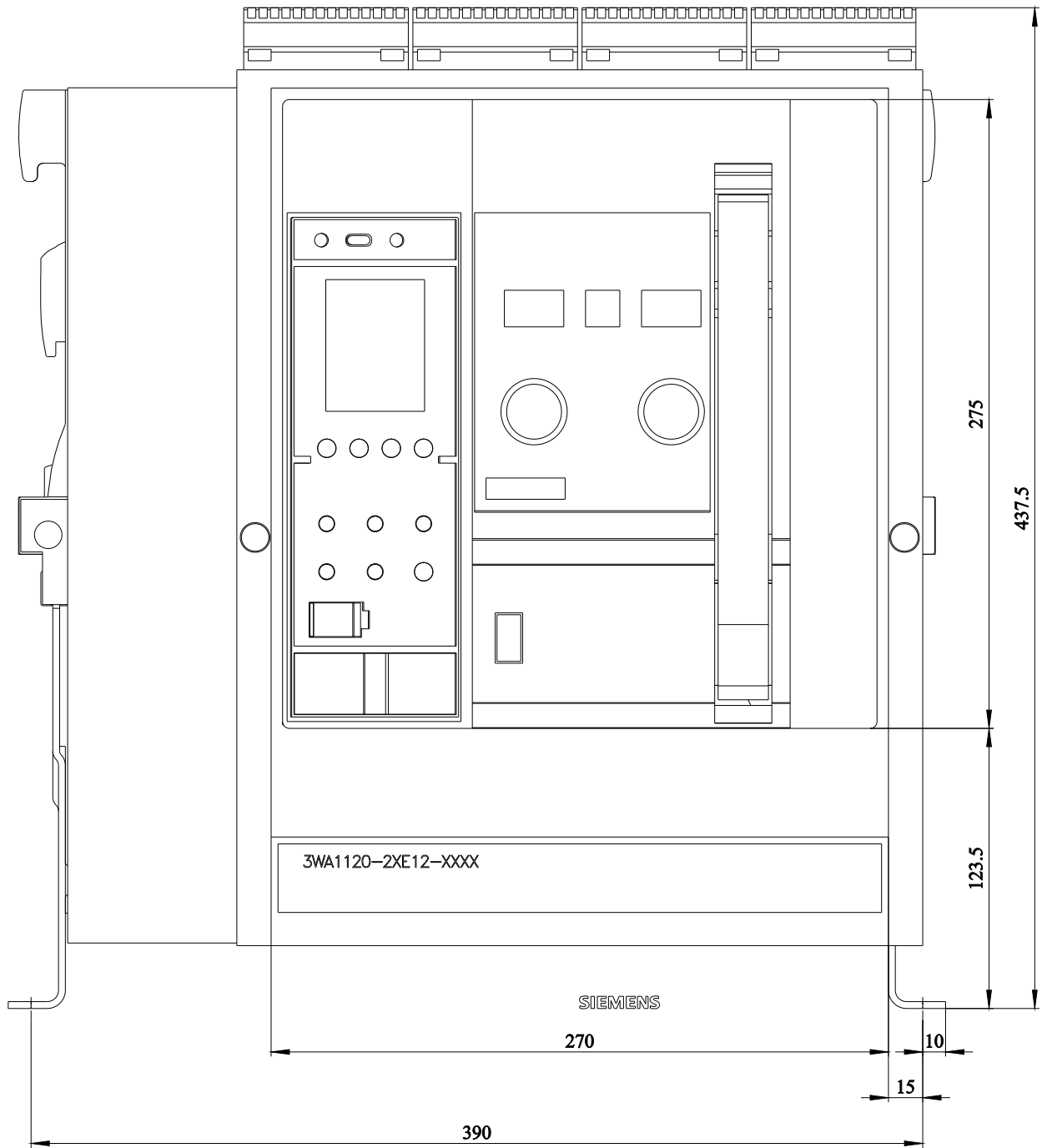
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1120-2AE12-0AA0

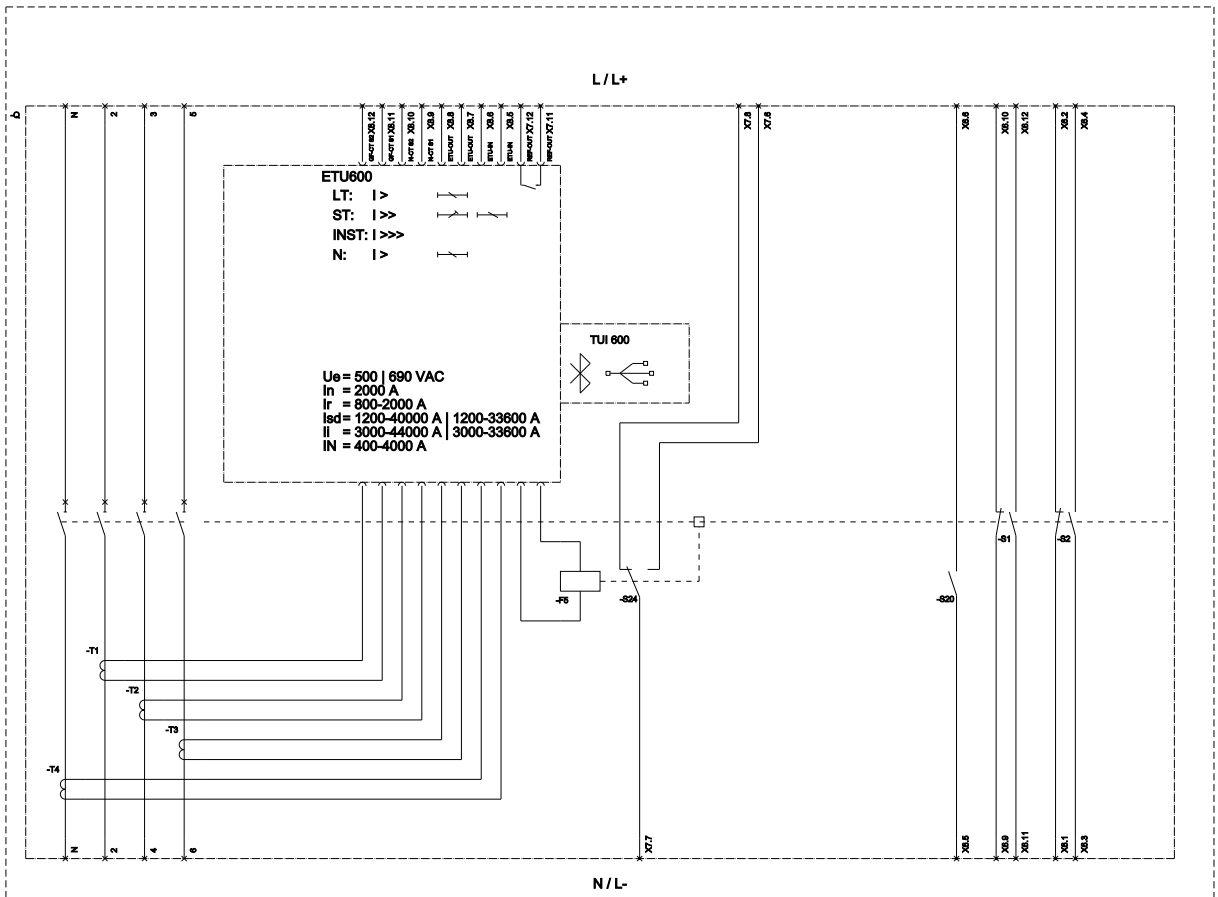
CAX-Online-Generator

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

Information- and Downloadcenter (catalogues, leaflets,...)

<http://www.siemens.com/energy-automation>





LT (Long Time Delay / Überstromschutz), ST (Short Time Delay / Kurzschlusschutz, Inzertwertschutz), INST (Instantaneous / Kurzschlusschutz, verzögert), N (Neutral Protection / Neutralstromeinschutz), GF (Ground Fault Protection / Erdlebensschutz), PS (Magnetisch für trip unit / Antriebsmagnet), S04 (FA: 1st trip alarm switch (Reset position) / 1ster Anzeigebetriebschalter (Reset Position)), S1-S3 (ALC: Auxiliary switch / Hilfschalter), S20 (RTIC: Ready to close signalling switch / Betriebsbereitschaftsschaltmechanismus)

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