



Withdrawable circuit breaker with guide frame, IEC 60947-2, frame size 1, 3-poles, $I_n=800\text{A}$ up to 690V AC 50/60Hz, breaking capacity N $I_{cu}=55/42\text{kA}$ at 500/690V, Trip unit ETU600 LSI upgrade ready, color display, bluetooth and USB interface, Protection LT, ST, INST, N-protection required an external N-sensor, incl. trip alarm switch (1xCO), rear connection vertical, guide frame with shutter and w/o position signalling switch, 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	Air circuit breaker
suitability for use	circuit breaker
size of the circuit-breaker	1
number of poles	3
position / of neutral conductor	no internal N-conductor
fastening method	withdrawable circuit breaker
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	73.949 kg
Net Weight	60.949 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	85 W
Current	
continuous current / rated value / maximum	800 A
continuous current / rated value	800 A
operational current	
• at 40 °C / rated value	800 A
• at 45 °C / rated value	800 A
• at 50 °C / rated value	800 A
• at 55 °C / rated value	800 A
• at 60 °C / rated value	800 A
• at 65 °C / rated value	800 A
• at 70 °C / rated value	800 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	
• for 0.5 s / rated value	55 kA
• for 1 s / rated value	50 kA
• for 2 s / rated value	35 kA
• for 3 s / rated value	30 kA
short-time withstand current (I _{cw}) / at 690 V AC	
• for 0.5 s / rated value	42 kA
• for 1 s / rated value	42 kA
• for 2 s / rated value	35 kA
• for 3 s / rated value	30 kA
Electronic release unit	
product feature	
• upgradable	Yes
• Bluetooth and USB interface	Yes
• decoder for basic protection functions	Yes
• display and function keys	Yes
• SENTRON powerconfig configuration software	Yes
Basic protection functions	
product feature / for L-tripping	
• can be switched on/off	Yes
• selectable characteristic function	Yes
• decoder and infinite adjustability are selectable with eSet	Yes
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic	0.5; 0.6; 0.7; 0.75; 0.8; 0.85; 0.9; 0.95; 1
reference value setting current (I _r) / for L-tripping / with I _{2t} characteristic	x I _n
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic	1;2;5;8;10;14;17;21;25
reference value delay time (t _r) / for L-tripping / with I _{2t} characteristic	s
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic / for eSet	0.4-1;0.001
adjustable absolute value setting current (I _r) / for L-tripping / with I _{2t} characteristic / for eSet	
• minimum	320 A
• maximum	800 A
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic / for eSet	0.5-30;0.001
set values setting current (I _r) / for L-tripping / with I _{4t} characteristic / for eSet	0.4-1;0.001
set values delay time (t _r) / for L-tripping / with I _{4t} characteristic / for eSet	0.5-5;0.001
adjustable absolute value setting current (I _r) / for L-tripping / with I _{4t} characteristic / for eSet	
• minimum	320 A
• maximum	800 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	0.2-2;0.001
reference value setting current (I _{nN}) / for N-tripping	x I _n
adjustable setting current (I _{nN}) / for N-tripping	
• minimum	160 A
• maximum	1600 A
S: delayed short-circuit protection ST	
product feature / for S-tripping	
• independent of direction / can be switched on/off	Yes
• independent of direction / selectable characteristic function	Yes
• 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 (I _{sd}) / for S-tripping / with I0t characteristic / for eSet / independent of direction	0.6-10;0.001
adjustable absolute value setting current (I _{sd})	
• for S-tripping / with I0t characteristic / for eSet / independent of direction / minimum	480 A
• at 500 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum	40 kA
• at 690 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum	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 (I _{sd}) / for S-tripping / with I2t characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (I _{sd}) / for S-tripping / with I2t characteristic	x I _r
set values delay time (tsd) / for S-tripping / with I2t characteristic	0.1;0.2;0.3;0.4
set values setting current (I _{sd}) / for S-tripping / with I2t characteristic / for eSet / independent of direction	0.6-10;0.001
adjustable absolute value setting current (I _{sd})	
• for S-tripping / with I2t characteristic / for eSet / independent of direction / minimum	480 A
• at 500 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum	40 kA
• at 690 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum	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	
• can be switched on/off	Yes
• decoder and infinite adjustability are selectable (with eSet)	Yes
set values setting current (I _i) / for I-tripping	1.5;2;3;4;6;8;10;12;15
reference value setting current (I _i) / for I-tripping	x I _n
tripping factor setting current (I _{imax}) / for I-tripping	0.8
reference value setting current (I _{imax}) / for I-tripping	x I _{cs}
set values setting current (I _i) / for I-tripping / for eSet	1.5-15;0.001
adjustable absolute value setting current (I _i)	
• for I-tripping / for eSet / minimum	1200 A
• at 500 V / for I-tripping / for eSet / maximum	44 kA
• at 690 V / for I-tripping / for eSet / maximum	33.6 kA
G: ground fault GF	
product feature / for G-tripping	
• selectable characteristic function	No
Further protective functions	
protection function	
• maintenance mode DAS+	Yes
Measuring functions	
measurement function	
• current measurement	Yes
Communication	
communication function	No
Service Life	
mechanical service life (operating cycles)	
• without support / typical	15000

<ul style="list-style-type: none"> with support / typical 	30000
electrical endurance (operating cycles)	
<ul style="list-style-type: none"> at 690 V / without support / typical 	10000
<ul style="list-style-type: none"> at 690 V / with support / typical 	30000

Dimensions	
height	468 mm
width	320 mm
depth	471 mm

Main connection	
arrangement of electrical connectors / for main current circuit	main connection on the rear, vertical

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	
<ul style="list-style-type: none"> undervoltage release 	No
<ul style="list-style-type: none"> voltage trigger 	No
<ul style="list-style-type: none"> trip indicator 	Yes
<ul style="list-style-type: none"> motor drive 	No

Environmental conditions	
protection class IP / on the front	IP20
ambient temperature / during operation	
<ul style="list-style-type: none"> minimum 	-40 °C
<ul style="list-style-type: none"> maximum 	70 °C
ambient temperature / during storage	
<ul style="list-style-type: none"> minimum 	-40 °C
<ul style="list-style-type: none"> maximum 	80 °C

Certificates	
reference code / according to IEC 81346-2	Q

Approvals / Certificates

Environment	General Product Approval
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General Product Approval	EMV	Radio Equipment Type Approval Certificate
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[Confirmation](#)



[Industry Canada \(IC\)](#)

[Miscellaneous](#)

Radio Equipment Type Approval Certificate	Test Certificates	Maritime application
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[FCC](#)

[Miscellaneous](#)

[Special Test Certificate](#)

[Miscellaneous](#)



Maritime application	other
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[CCS \(China Classification Society\)](#)

[Miscellaneous](#)

[Miscellaneous](#)

other	Dangerous goods
Manufacturer Declaration	Confirmation
	
Transport Information	Dangerous goods information

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3WA1108-2AE31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3WA1108-2AE31-0AA0>

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

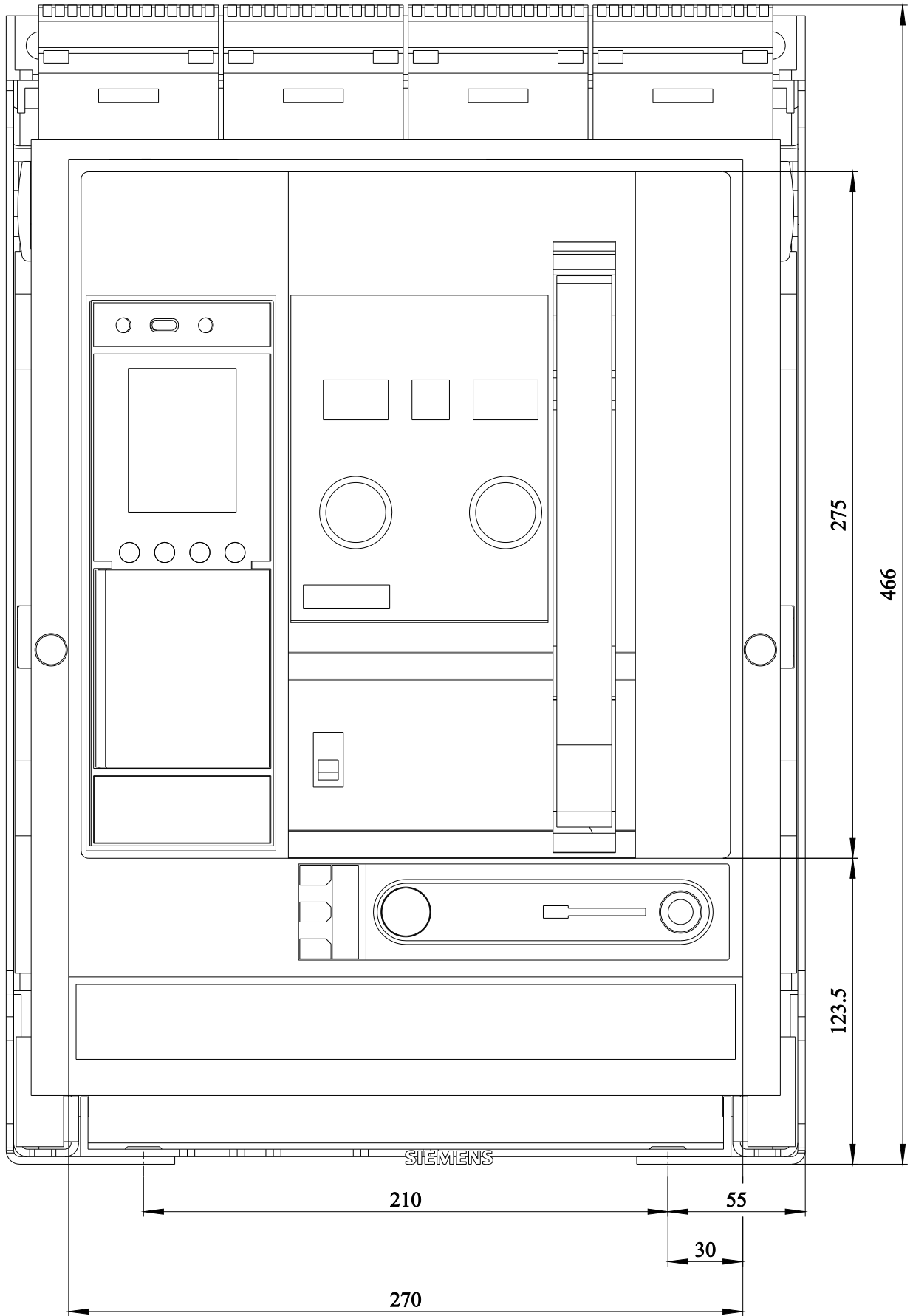
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1108-2AE31-0AA0

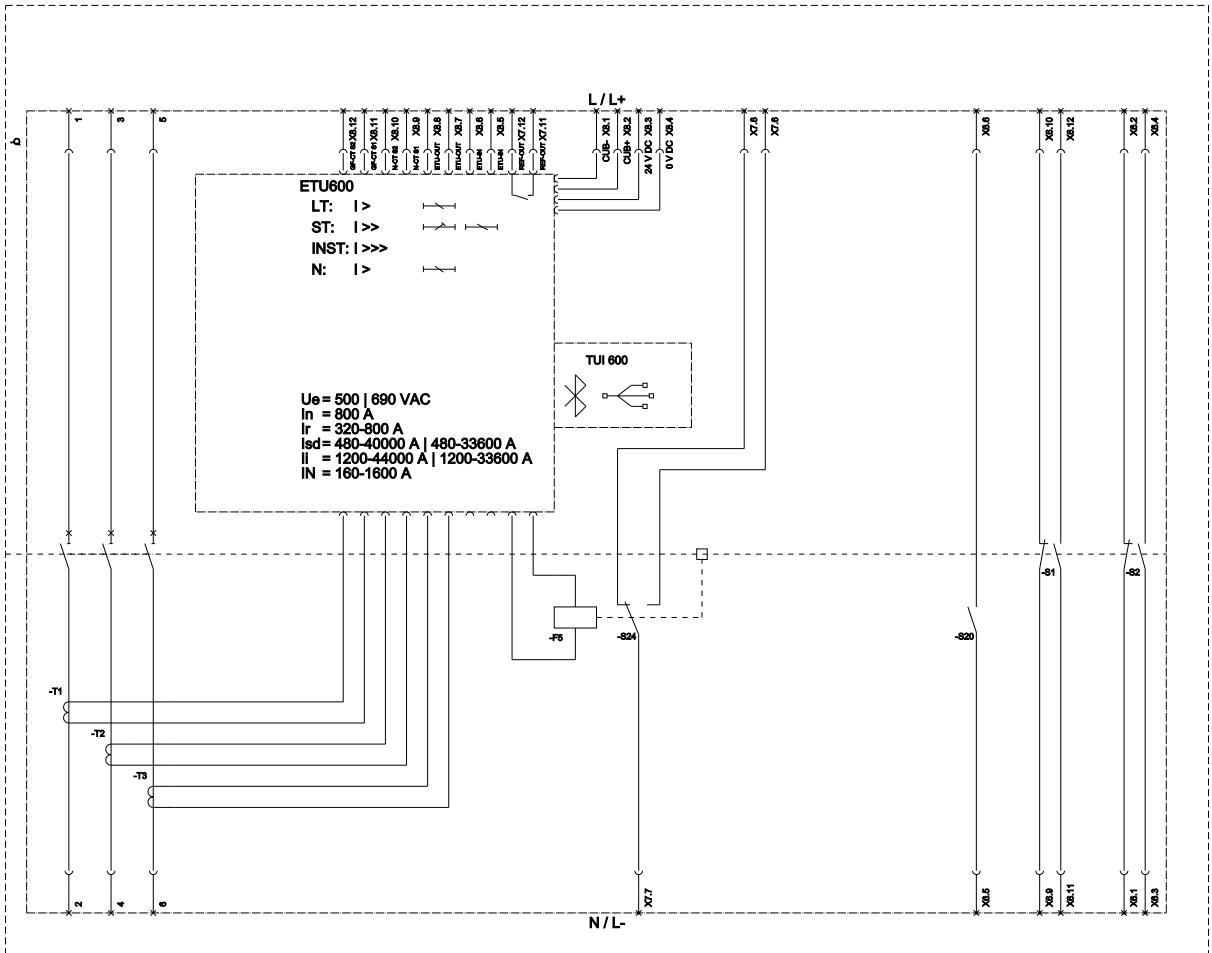
CAX-Online-Generator

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





LT (Long Time Delay / Überlastschutz), ST (Short Time Delay / Kurzschlusschutz, Inzertzeitgeber), INST (Instantaneous / Kurzschlusschutz, verzögert), N (Neutral Protection / Neutrallebensschutz), OP (Overload Protection / Überlastschutz),
 FS (highlight for trip unit / Auslöseorgan), S4 (TAS: let trip alarm switch (Reset position) / Status Anzeigeleuchte (Reset Position)), S1-S8 (AUX: Auxiliary switch / Hilfskontakt), S20 (RTIC: Ready to close signalling switch / Bereitschaftsschaltkontakt),
 F80: position signaling switch module / Positionsmeldemodul

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