

Siemens
EcoTech



Fixed-mounted circuit breaker IEC 60947-2, frame size 1, 3-poles, $I_n=630A$ up to 690V AC 50/60Hz, breaking capacity M $I_{cu}=85/66kA$ 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 horizontal, without Com & metering function with manual and motorized operating mechanism (M) 208-240 V AC / 220-250 V DC, Storage status and ready-to-close signaling switches, Auxiliary switches 2NO+2NC, Closing coil (CC) 100% OP 208-240 V AC / 220-250 V DC, applicable for continuous duty, without Remote trip alarm reset coil (RR), without 2nd shunt trip, Shunt trip (ST) 100% OP 24-30 V DC, suitable for continuous duty,

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	fixed-mounted circuit breakers
design of the product	AC application
type of the driving mechanism	manual operating mechanism/spring charging motor with spring charge signaling switch
design of the electronic trip unit	ETU600 LSI
Weight	48.537 kg
Net Weight	33.537 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	30 W
Current	
continuous current / rated value / maximum	630 A
continuous current / rated value	630 A
operational current	
• at 40 °C / rated value	630 A
• at 45 °C / rated value	630 A
• at 50 °C / rated value	630 A
• at 55 °C / rated value	630 A
• at 60 °C / rated value	630 A
• at 65 °C / rated value	630 A
• at 70 °C / rated value	630 A
Switching capacity and short-time withstand current, according to IEC 60947-2	
switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I_{cu})	
• at 500 V / rated value	85 kA
• at 690 V / rated value	66 kA
operating short-circuit current breaking capacity (I_{cs})	
• at 500 V / rated value	85 kA

<ul style="list-style-type: none"> at 690 V / rated value 	66 kA
short-circuit current making capacity (I _{cm})	
<ul style="list-style-type: none"> at 500 V / rated value 	187 kA
<ul style="list-style-type: none"> at 690 V / rated value 	145 kA
short-time withstand current (I _{cw}) / at 500 V AC	
<ul style="list-style-type: none"> for 0.5 s / rated value 	85 kA
<ul style="list-style-type: none"> for 1 s / rated value 	85 kA
<ul style="list-style-type: none"> for 2 s / rated value 	70 kA
<ul style="list-style-type: none"> for 3 s / rated value 	60 kA
short-time withstand current (I _{cw}) / at 690 V AC	
<ul style="list-style-type: none"> for 0.5 s / rated value 	66 kA
<ul style="list-style-type: none"> for 1 s / rated value 	66 kA
<ul style="list-style-type: none"> for 2 s / rated value 	66 kA
<ul style="list-style-type: none"> for 3 s / rated value 	60 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 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	
<ul style="list-style-type: none"> minimum 	252 A
<ul style="list-style-type: none"> maximum 	630 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	
<ul style="list-style-type: none"> minimum 	252 A
<ul style="list-style-type: none"> maximum 	630 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	
<ul style="list-style-type: none"> minimum 	126 A
<ul style="list-style-type: none"> maximum 	1260 A
S: delayed short-circuit protection ST	
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 (t _{sd}) / for S-tripping / with I0t characteristic	0.08;0.15;0.22;0.3;0.4
reference value delay time (t _{sd}) / 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})	
<ul style="list-style-type: none"> for S-tripping / with I0t characteristic / for eSet / independent of direction / minimum 	378 A
<ul style="list-style-type: none"> at 500 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum 	68 kA
<ul style="list-style-type: none"> at 690 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum 	52.8 kA
set values delay time (t _{sd}) / 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 (t _{sd}) / 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})	
<ul style="list-style-type: none"> for S-tripping / with I2t characteristic / for eSet / independent of direction / minimum 	378 A
<ul style="list-style-type: none"> at 500 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum 	68 kA
<ul style="list-style-type: none"> at 690 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum 	52.8 kA
set values delay time (t _{sd}) / 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 	Yes
<ul style="list-style-type: none"> 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)	
<ul style="list-style-type: none"> for I-tripping / for eSet / minimum 	945 A
<ul style="list-style-type: none"> at 500 V / for I-tripping / for eSet / maximum 	68 kA
<ul style="list-style-type: none"> at 690 V / for I-tripping / for eSet / maximum 	52.8 kA
G: ground fault GF	
product feature / for G-tripping	
<ul style="list-style-type: none"> selectable characteristic function 	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 	10000
<ul style="list-style-type: none"> with support / typical 	20000
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 	20000

Dimensions

height	437 mm
width	320 mm
depth	357 mm

Main connection

arrangement of electrical connectors / for main current circuit	main connection on the rear, horizontal
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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 	Yes
<ul style="list-style-type: none"> trip indicator 	Yes
<ul style="list-style-type: none"> motor drive 	Yes

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

Environmental footprint

Siemens Eco Profile (SEP)	Siemens EcoTech
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Certificates

reference code	
<ul style="list-style-type: none"> according to IEC 81346-2 	Q

Approvals / Certificates

General Product Approval	EMV
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Radio Equipment Type Approval Certificate	Test Certificates
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[Miscellaneous](#)



[Miscellaneous](#)

[FCC](#)

[Special Test Certificate](#)

[Miscellaneous](#)

Maritime application	other
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[Manufacturer Declaration](#)

other	Dangerous goods	Environment
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[Confirmation](#)

[Transport Information](#)

[Dangerous goods information](#)



Environment



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>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3WA1106-4AE02-4EA1>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3WA1106-4AE02-4EA1>

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

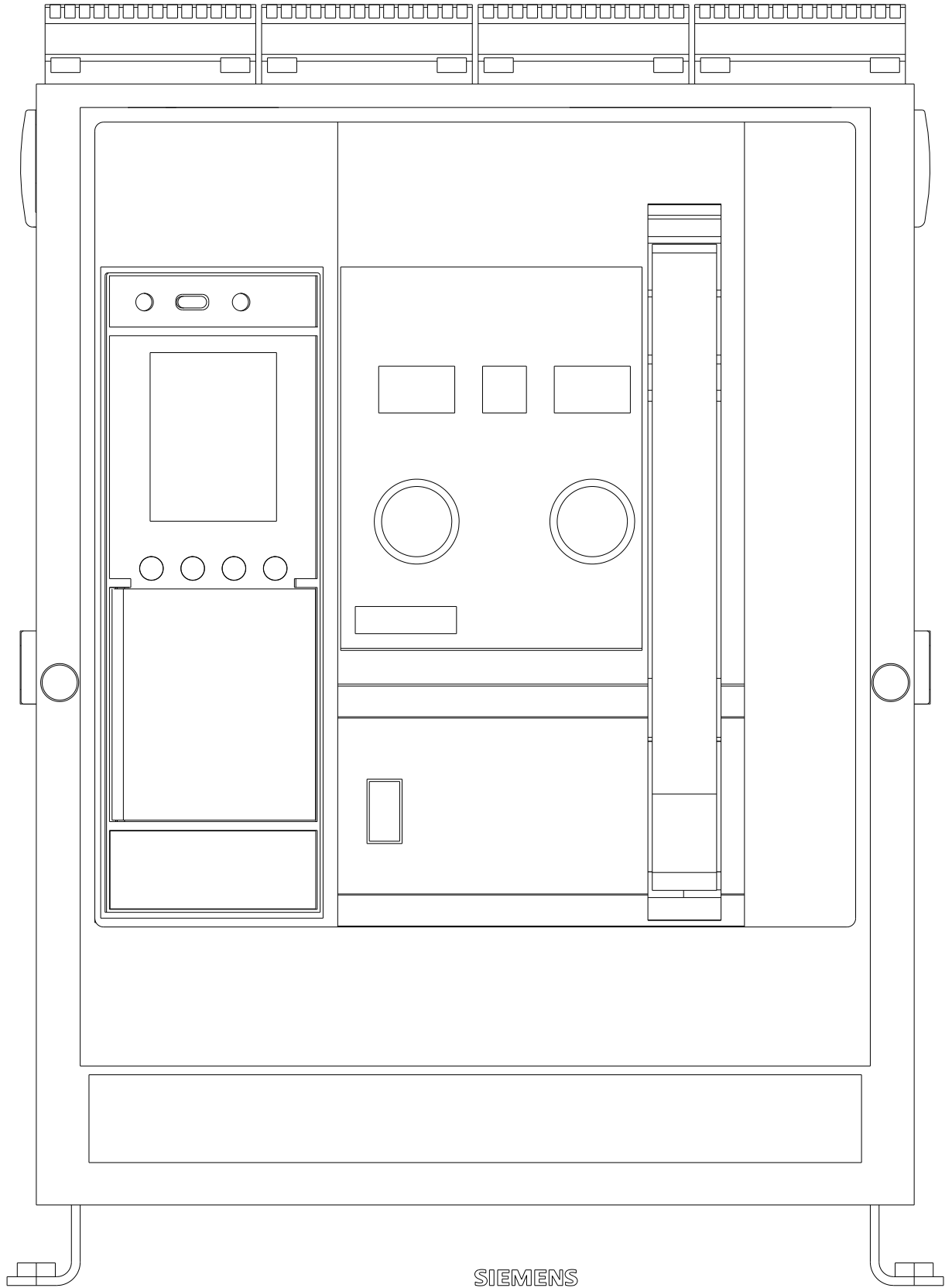
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1106-4AE02-4EA1

CAX-Online-Generator

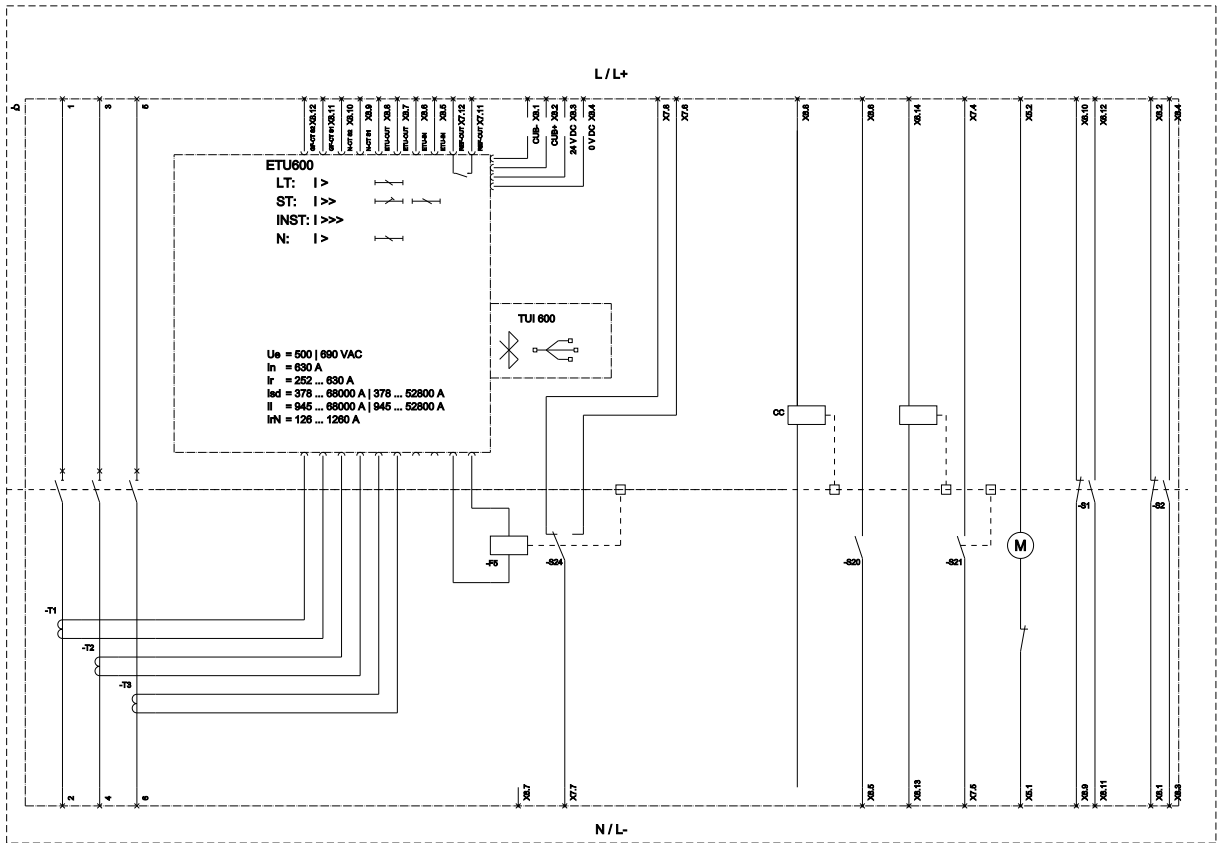
<https://www.siemens.com/cax>

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

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



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IZ (Long Time Delay / Überstromschutz), ST (Short Time Delay / Kurzstromschutz, kurzzeitverfüger), BHTZ (Brennstrom / Kurzstromschutz, vorzeitiger), XI (Ground Protection / Erdschutz), CP (Ground Fault Protection / Erdschutz), ST (Set auxiliary release / Einstellhilfen),
 S14 (On-off switch for auxiliary only about trip / Abschaltender für Ausschlagspule Spannungsunterbrecher), F1 (Magnetlock for trip coil / Anlaufmagnet), S24 (TAS: Set stop alarm switch (Reset position) / Fehler Anlaufstromschalter (Reset Position)), CC (Casting coil / Einschlagmagnet),
 S12 (On-off switch for auxiliary only about coil / Abschaltender für Ausschlagspule Handbuchunterbrecher), S20 (Ready to close signaling switch / Handbuchunterbrecher), S1-20 (ALUX: Auxiliary switch / Hilfskontakt), S20 (KTC: Ready to close signaling switch / Handbuchunterbrecher),
 S21 (Spring closed signaling switch / Springenschlusskontakt)

last modified:

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