










Fixed-mounted circuit breaker IEC 60947-2, frame size 1, 3-poles, $I_n=1600A$ up to 690V AC 50/60Hz, breaking capacity $N I_{cu}=55/42kA$ at 500/690V, Trip unit ETU300 LSI optimized for standard applications, without display 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 4NO+4NC, 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 208-240 V AC / 220-250 V DC, suitable for continuous duty, Option T40 = Door sealing frame IP41

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	ETU300 LSI
Weight	45.747 kg
Net Weight	32.747 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	135 W
Current	
continuous current / rated value / maximum	1600 A
continuous current / rated value	1600 A
operational current	
• at 40 °C / rated value	1600 A
• at 45 °C / rated value	1600 A
• at 50 °C / rated value	1600 A
• at 55 °C / rated value	1600 A
• at 60 °C / rated value	1600 A
• at 65 °C / rated value	1600 A
• at 70 °C / rated value	1600 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

<ul style="list-style-type: none"> • at 690 V / rated value 	42 kA
short-circuit current making capacity (I _{cm})	
<ul style="list-style-type: none"> • at 500 V / rated value 	121 kA
<ul style="list-style-type: none"> • 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 	No
<ul style="list-style-type: none"> • Bluetooth and USB interface 	No
<ul style="list-style-type: none"> • decoder for basic protection functions 	Yes
<ul style="list-style-type: none"> • display and function keys 	No
<ul style="list-style-type: none"> • SENTRON powerconfig configuration software 	No
Basic protection functions	
product feature / for L-tripping	
<ul style="list-style-type: none"> • can be switched on/off 	No
<ul style="list-style-type: none"> • selectable characteristic function 	No
<ul style="list-style-type: none"> • decoder and infinite adjustability are selectable with eSet 	No
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic	0.4;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 I _{2t} characteristic	x I _n
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic	0.75;1;2;5;8;10;14;17;21;25
reference value delay time (t _r) / for L-tripping / with I _{2t} characteristic	s
L: Overload protection N-conductor	
product feature / with neutral conductor protection / can be switched on/off	No
setting values setting current (I _{nN}) / for N-tripping	1
reference value setting current (I _{nN}) / for N-tripping	x I _n
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 	No
S: delayed short-circuit protection ST, settings values I_{0t}	
set values setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (I _{sd}) / for S-tripping / with I _{0t} characteristic	x I _r
set values delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic	0.08;0.15;0.22;0.3;0.4
reference value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic	s
S: delayed short-circuit protection ST, settings values I_{2t}	
set values setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (I _{sd}) / for S-tripping / with I _{2t} characteristic	x I _r
set values delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic	0.08;0.15;0.22;0.3;0.4
product feature / for I-tripping	
<ul style="list-style-type: none"> • can be switched on/off 	No
<ul style="list-style-type: none"> • decoder and infinite adjustability are selectable (with eSet) 	No

set values setting current (Ii) / for I-tripping	1.5;2;3;4;5;6;8;10;12;15					
reference value setting current (Ii) / for I-tripping	x In					
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 	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	437 mm					
width	320 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	4 NO + 4 NC					
number of NC contacts / for auxiliary contacts	4					
number of NO contacts / for auxiliary contacts	4					
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	IP41					
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	EMV				
						
Maritime application						



ABS



LRS

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=3WA1116-2AB02-8EA4-Z T40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3WA1116-2AB02-8EA4-Z T40>

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

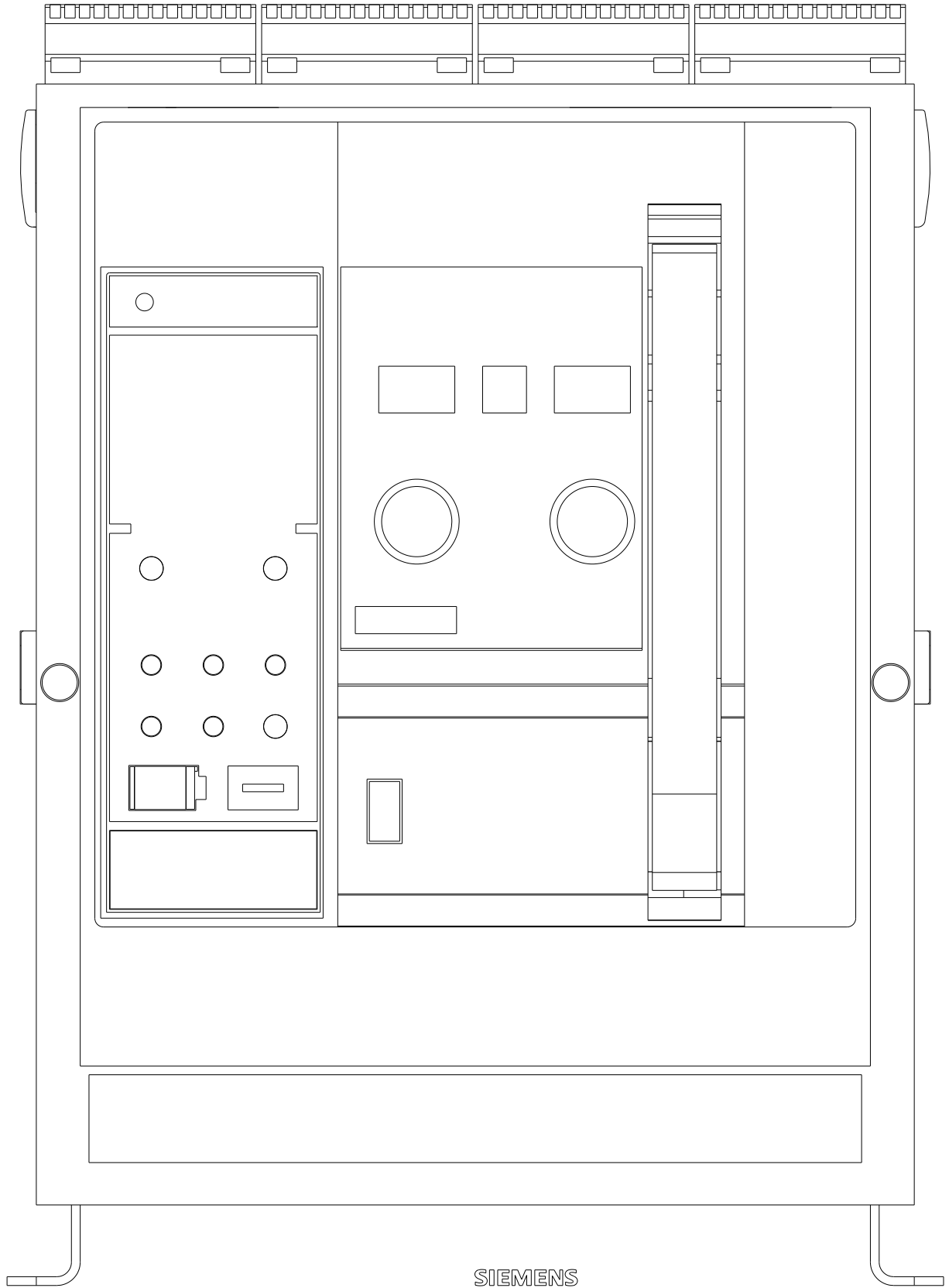
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1116-2AB02-8EA4-Z T40

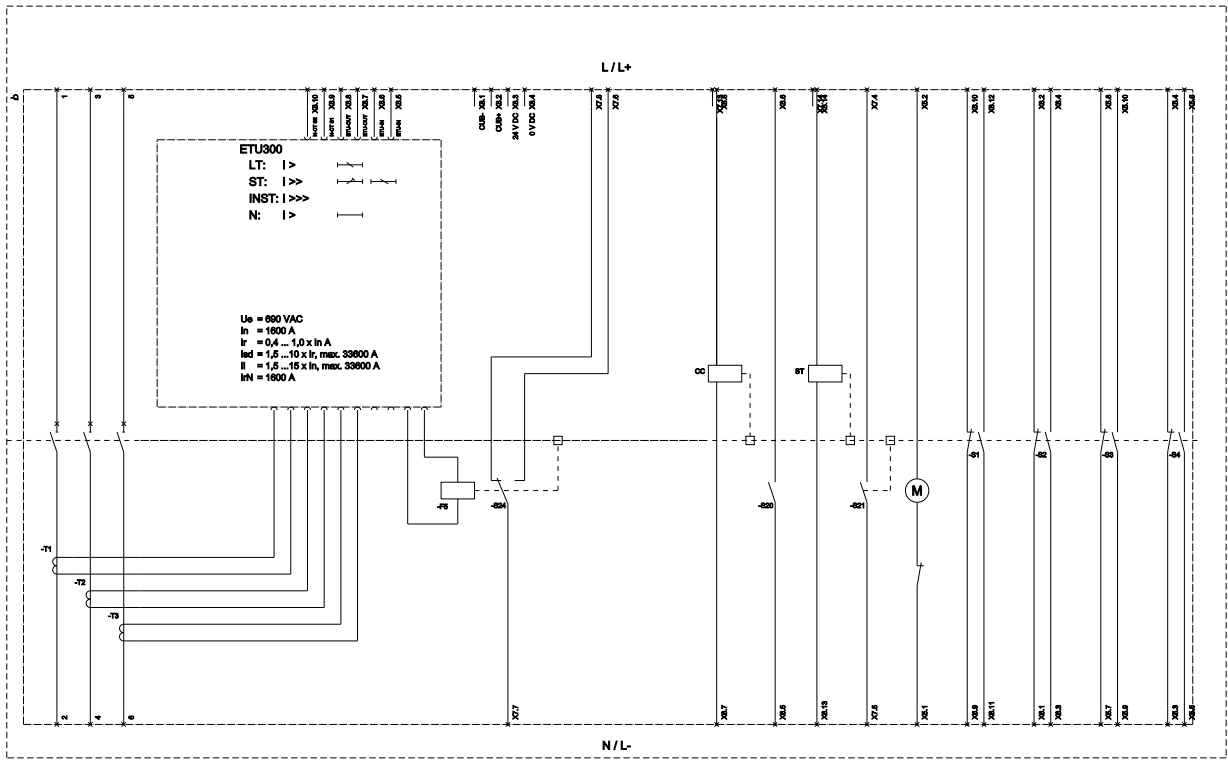
CAX-Online-Generator

<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=)





17 (Long Time Delay / Chronschaltwerk), 17 (Short Time Delay / Kurzschaltwerk, Inerenzschaltwerk), 20T (Automatic / Automatische, unversperrt), 21 (Fixed Protection / Festblockschaltwerk), 22 (Fixed Peak Protection / Höchstblockschaltwerk), 23 (60 auxiliary relays / 60 Hilfskontakte),
 24 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 25 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 26 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 27 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 28 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 29 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 30 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 31 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 32 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 33 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 34 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 35 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 36 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 37 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 38 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 39 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 40 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 41 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 42 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 43 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 44 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 45 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 46 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 47 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 48 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 49 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 50 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 51 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 52 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 53 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 54 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 55 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 56 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 57 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 58 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 59 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais), 60 (On-off switch for auxiliary relay / Auswahlschalter für Hilfsrelais).

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