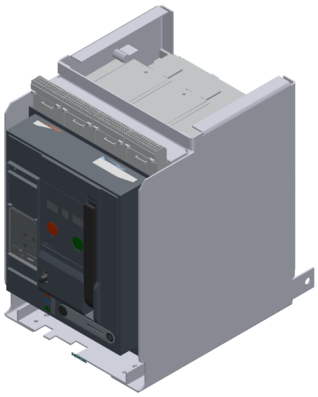
SIEMENS

Data sheet 3WA1116-4AB31-0EA4



Siemens EcoTech

Withdrawable circuit breaker with guide frame, IEC 60947-2, frame size 1, 3-poles, In=1600A up to 690V AC 50/60Hz, breaking capacity M Icu=85/66kA at 500/690V, Trip unit ETU300 LSI optimized for standard applica- tions, without display 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, 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,

Model	
product brand name	SENTRON
product designation	Air circuit breaker
suitability for use	circuit breaker
size of the circuit-breaker	I
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	ETU300 LSI
Weight	79.6 kg
Net Weight	66.6 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	310 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 70 °C / rated value	1545 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 (Icu)	
● at 500 V / rated value	85 kA
● at 690 V / rated value	66 kA
operating short-circuit current breaking capacity (Ics)	
● at 500 V / rated value	85 kA
● at 690 V / rated value	66 kA
short-circuit current making capacity (Icm)	
● at 500 V / rated value	187 kA

● at 690 V / rated value	145 kA
short-time withstand current (Icw) / at 500 V AC	
● for 0.5 s / rated value	85 kA
● for 1 s / rated value	85 kA
● for 2 s / rated value	70 kA
● for 3 s / rated value	60 kA
short-time withstand current (Icw) / at 690 V AC	
● for 0.5 s / rated value	66 kA
● for 1 s / rated value	66 kA
● for 2 s / rated value	66 kA
● for 3 s / rated value	60 kA
Electronic release unit	
product feature	
● upgradable	No
● Bluetooth and USB interface	No
● decoder for basic protection functions	Yes
● display and function keys	No
● SENTRON powerconfig configuration software	No
Basic protection functions	
product feature / for L-tripping	
● can be switched on/off	No
● selectable characteristic function	No
● decoder and infinite adjustability are selectable with eSet	No
set values setting current (Ir) / for L-tripping / with I2t 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 (Ir) / for L-tripping / with I2t characteristic	x In
set values delay time (tr) / for L-tripping / with I2t characteristic	0.75;1;2;5;8;10;14;17;21;25
reference value delay time (tr) / for L-tripping / with I2t characteristic	s
L: Overload protection N-conductor	
product feature / with neutral conductor protection / can be switched on/off	No
setting values setting current (InN) / for N-tripping	1
reference value setting current (InN) / for N-tripping	x In
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	No
S: delayed short-circuit protection ST, settings values I0t	
set values setting current (Isd) / for S-tripping / with I0t characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (Isd) / for S-tripping / with I0t characteristic	x Ir
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
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	0.08;0.15;0.22;0.3;0.4
product feature / for I-tripping	
● can be switched on/off	No
● 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	
● 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	10000
● with support / typical	20000
electrical endurance (operating cycles)	
● at 690 V / without support / typical	10000
● at 690 V / with support / typical	20000
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	
● undervoltage release	No
● voltage trigger	Yes
● 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
Environmental footprint	
Siemens Eco Profile (SEP)	Siemens EcoTech
Certificates	
reference code	
● according to IEC 81346-2	Q

General Product Approval					**Radio Equipment Type Approval Certificate**
CCC	Confirmation	CE EG-Konf.	UKCA	EAC	Miscellaneous

Test Certificates	**Marine / Shipping**			**other**	
Special Test Certificate	ABS	BUREAU VERITAS	LRS	Manufacturer Declaration	Confirmation

Dangerous goods	Environment

Transport Information

Further information

Information on the packaging
https://support.industry.siemens.com/cs/ww/en/view/109813875

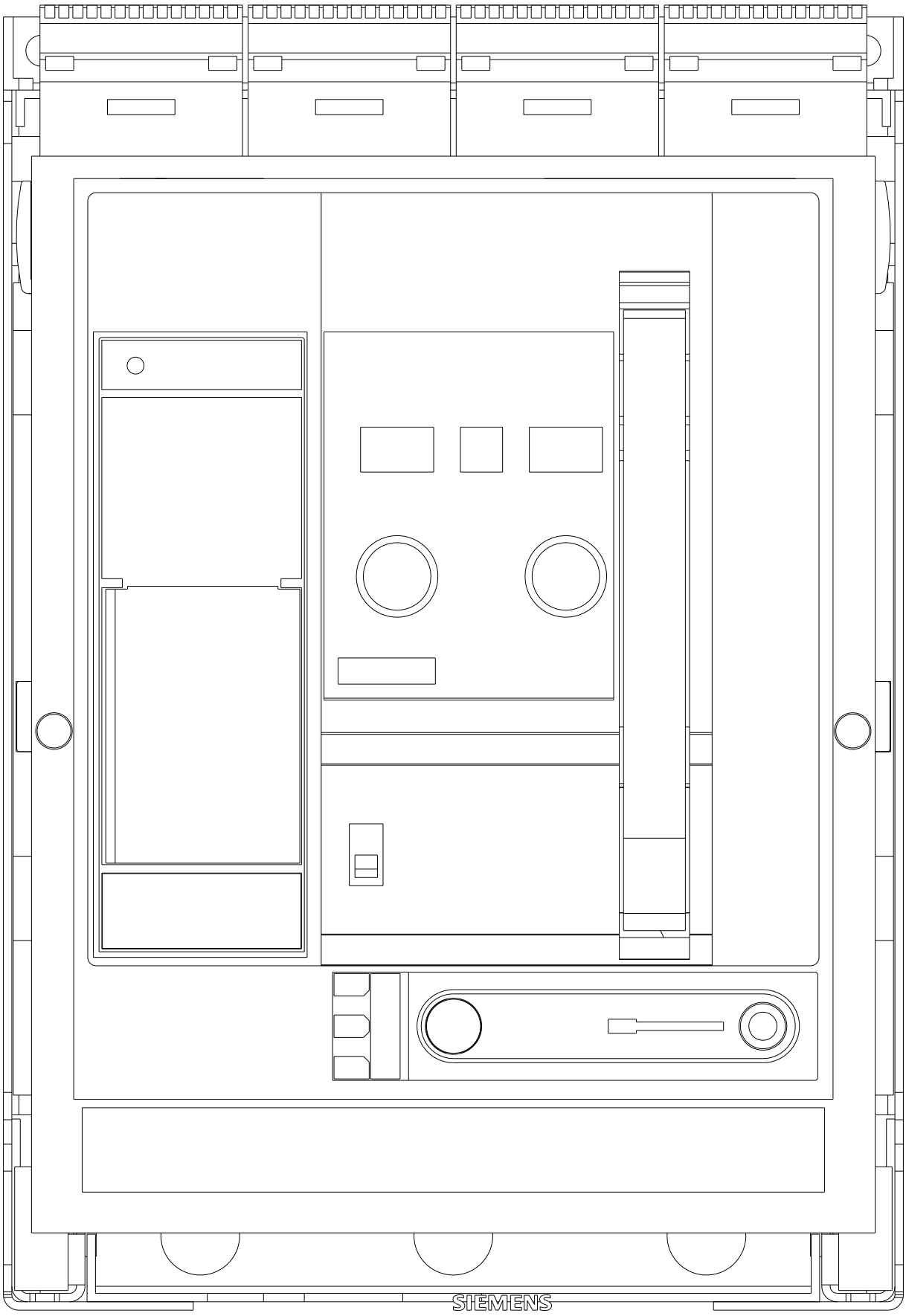
Industry Mall (Online ordering system)
https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3WA1116-4AB31-0EA4

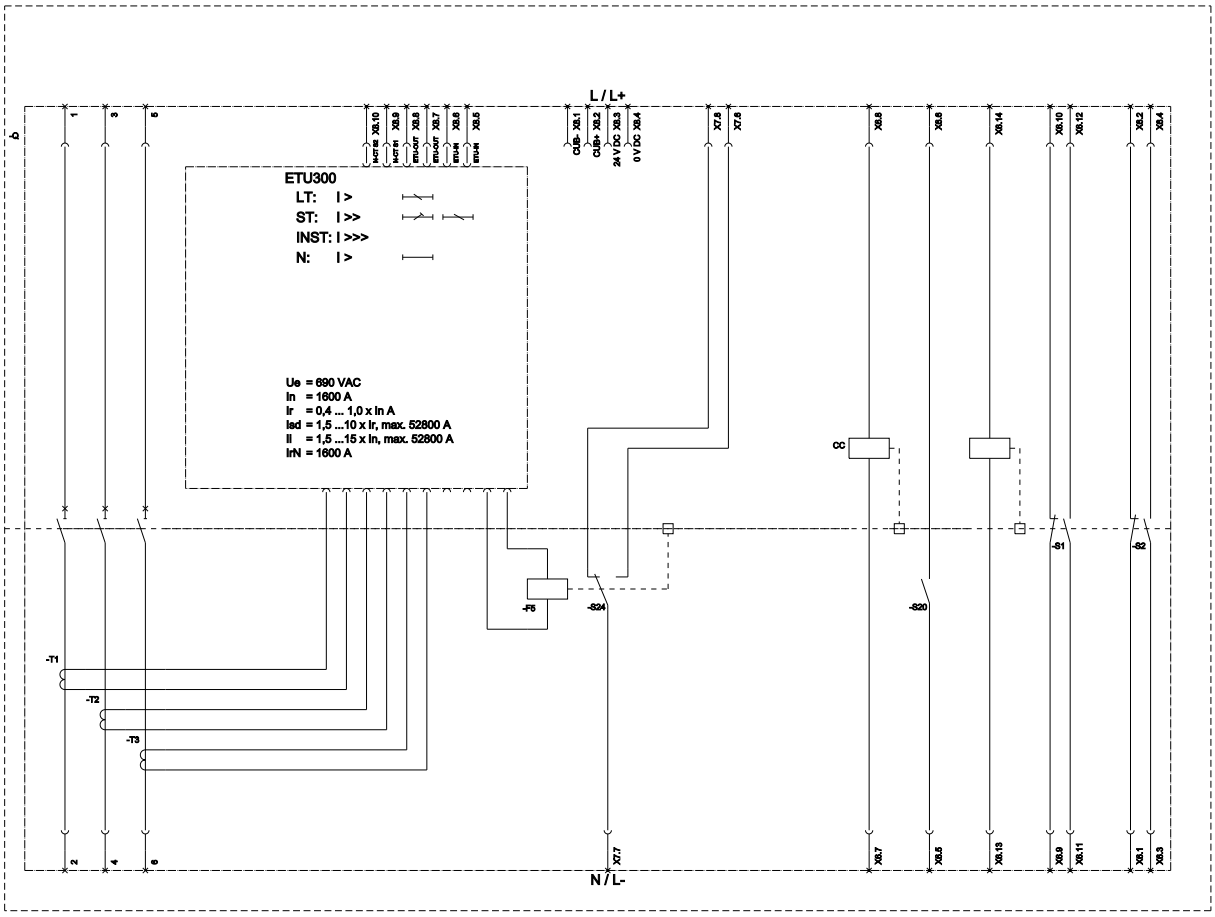
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)
https://support.industry.siemens.com/cs/ww/en/ps/3WA1116-4AB31-0EA4

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1116-4AB31-0EA4

CAx-Online-Generator
http://www.siemens.com/cax

Information- and Downloadcenter (catalogues, leaflets,...)
http://www.siemens.com/energy-automation





LT (Long Time Delay / Überlastauslöser); ST (Short Time Delay / Kurzzeitverzögerung, kurzzeitverzögert); INST (Instantaneous / Kurzzeitverzögerung, unverzögert); N (Neutral Protection / Neutralleiterschutz); GF (Ground Fault Protection / Erdschlussschutz);
ST (1st auxiliary release / Erster Hilfsauslöser); S14 (Cut-off switch for momentary duty shunt trip / Abschaltschalter für kurzzeitig erregten Spannungsauslöser); F5 (Magntech for trip unit / Auslösemagnet);
S24 (TAS: 1st trip alarm switch (Reset position) / Erster Ausgelöstmeldeschalter (Reset Position); CC (Closing coil / Einschaltmagnet);
S15 (Cut-off switch for momentary duty closing coil / Abschaltschalter für kurzzeitig erregten Einschaltmagneten); S20 (Ready to close signalling switch / Einschaltbereitschaftsmeldeschalter); S1-S8 (AUX: Auxiliary switch / Hilfsschalter);
S20 (RTC: Ready to close signalling switch / Einschaltbereitschaftsmeldeschalter); PSS: position signalling switch module / Positionsmeldeschaltermodul;

last modified: 1/6/2025