

Fixed-mounted circuit breaker IEC 60947-2, frame size 2, 3-poles,  $I_n=2500A$  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 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	II
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 with mechanical or electrical closing
design of the electronic trip unit	ETU600 LSI
Weight	59.931 kg
Net Weight	44.931 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	270 W
Current	
continuous current / rated value / maximum	2500 A
continuous current / rated value	2500 A
operational current	
• at 40 °C / rated value	2500 A
• at 45 °C / rated value	2500 A
• at 50 °C / rated value	2500 A
• at 55 °C / rated value	2500 A
• at 60 °C / rated value	2500 A
• at 65 °C / rated value	2500 A
• at 70 °C / rated value	2500 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
• at 690 V / rated value	66 kA
short-circuit current making capacity ( $I_{cm}$ )	
• at 500 V / rated value	187 kA
• at 690 V / rated value	145 kA
short-time withstand current ( $I_{cw}$ ) / at 500 V AC	

<ul style="list-style-type: none"> <li>• for 0.5 s / rated value</li> </ul>	85 kA
<ul style="list-style-type: none"> <li>• for 1 s / rated value</li> </ul>	85 kA
<ul style="list-style-type: none"> <li>• for 2 s / rated value</li> </ul>	66 kA
<ul style="list-style-type: none"> <li>• for 3 s / rated value</li> </ul>	55 kA
short-time withstand current (I <sub>cw</sub> ) / at 690 V AC	
<ul style="list-style-type: none"> <li>• for 0.5 s / rated value</li> </ul>	66 kA
<ul style="list-style-type: none"> <li>• for 1 s / rated value</li> </ul>	66 kA
<ul style="list-style-type: none"> <li>• for 2 s / rated value</li> </ul>	66 kA
<ul style="list-style-type: none"> <li>• for 3 s / rated value</li> </ul>	55 kA

**Electronic release unit**

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

**Basic protection functions**

product feature / for L-tripping	
<ul style="list-style-type: none"> <li>• can be switched on/off</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• selectable characteristic function</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• decoder and infinite adjustability are selectable with eSet</li> </ul>	Yes
set values setting current (I <sub>r</sub> ) / 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 <sub>r</sub> ) / for L-tripping / with I2t characteristic	x I <sub>n</sub>
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 <sub>r</sub> ) / for L-tripping / with I2t characteristic / for eSet	0.4-1;0.001
adjustable absolute value setting current (I <sub>r</sub> ) / for L-tripping / with I2t characteristic / for eSet	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	1000 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2500 A
set values delay time (tr) / for L-tripping / with I2t characteristic / for eSet	0.5-30;0.001
set values setting current (I <sub>r</sub> ) / 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 <sub>r</sub> ) / for L-tripping / with I4t characteristic / for eSet	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	1000 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2500 A

**L: Overload protection N-conductor**

product feature / with neutral conductor protection / can be switched on/off	Yes
setting values setting current (I <sub>nN</sub> ) / for N-tripping	0.2-2;0.001
reference value setting current (I <sub>nN</sub> ) / for N-tripping	x I <sub>n</sub>
adjustable setting current (I <sub>nN</sub> ) / for N-tripping	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	500 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	5000 A

**S: delayed short-circuit protection ST**

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

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

set values setting current (I <sub>sd</sub> ) / for S-tripping / with I0t characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (I <sub>sd</sub> ) / for S-tripping / with I0t characteristic	x I <sub>r</sub>

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"> <li>for S-tripping / with I0t characteristic / for eSet / independent of direction / minimum</li> <li>at 500 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum</li> <li>at 690 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum</li> </ul>	1500 A 68 kA 52.8 kA
set values delay time (tsd) / for S-tripping / with I0t characteristic / for eSet / independent of direction	0.02-0.4;0.001
<b>S: delayed short-circuit protection ST, settings values I2t</b>	
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"> <li>for S-tripping / with I2t characteristic / for eSet / independent of direction / minimum</li> <li>at 500 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum</li> <li>at 690 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum</li> </ul>	1500 A 68 kA 52.8 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"> <li>can be switched on/off</li> <li>decoder and infinite adjustability are selectable (with eSet)</li> </ul>	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"> <li>for I-tripping / for eSet / minimum</li> <li>at 500 V / for I-tripping / for eSet / maximum</li> <li>at 690 V / for I-tripping / for eSet / maximum</li> </ul>	3750 A 68 kA 52.8 kA
<b>G: ground fault GF</b>	
product feature / for G-tripping <ul style="list-style-type: none"> <li>can be switched on/off</li> <li>selectable characteristic function</li> </ul>	No No
<b>Further protective functions</b>	
protection function <ul style="list-style-type: none"> <li>maintenance mode DAS+</li> </ul>	Yes
<b>Measuring functions</b>	
measurement function <ul style="list-style-type: none"> <li>current measurement</li> </ul>	Yes
<b>Communication</b>	
communication function	No
<b>Service Life</b>	
mechanical service life (operating cycles) <ul style="list-style-type: none"> <li>without support / typical</li> <li>with support / typical</li> </ul>	10000 20000
electrical endurance (operating cycles) <ul style="list-style-type: none"> <li>at 690 V / without support / typical</li> <li>at 690 V / with support / typical</li> </ul>	7500 20000
<b>Dimensions</b>	
height	437 mm

width	460 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"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> <li>• motor drive</li> </ul>	<p>No</p> <p>No</p> <p>Yes</p> <p>No</p>

### Environmental conditions

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

### Certificates

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

### General Product Approval

EMV



[Confirmation](#)

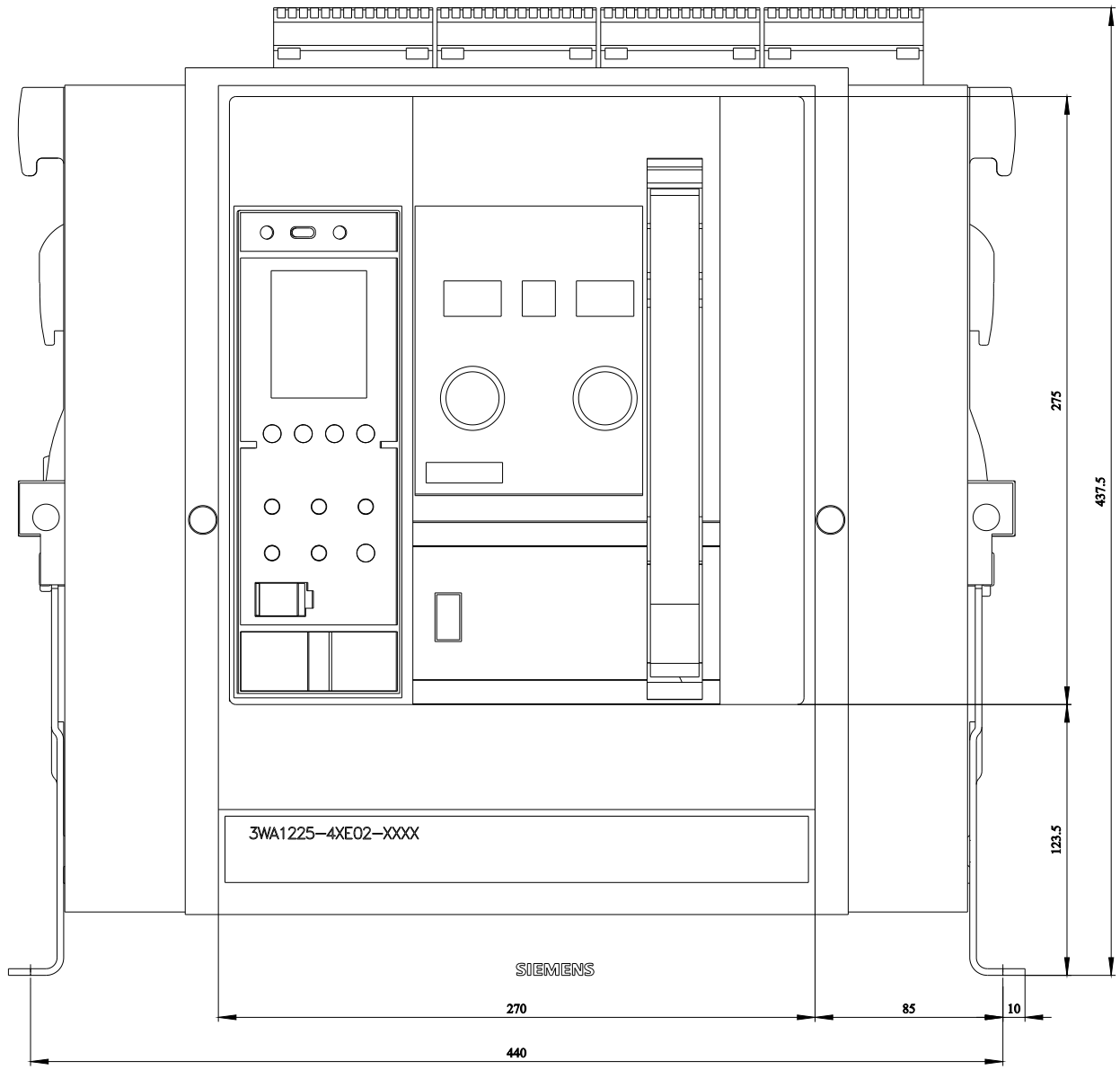


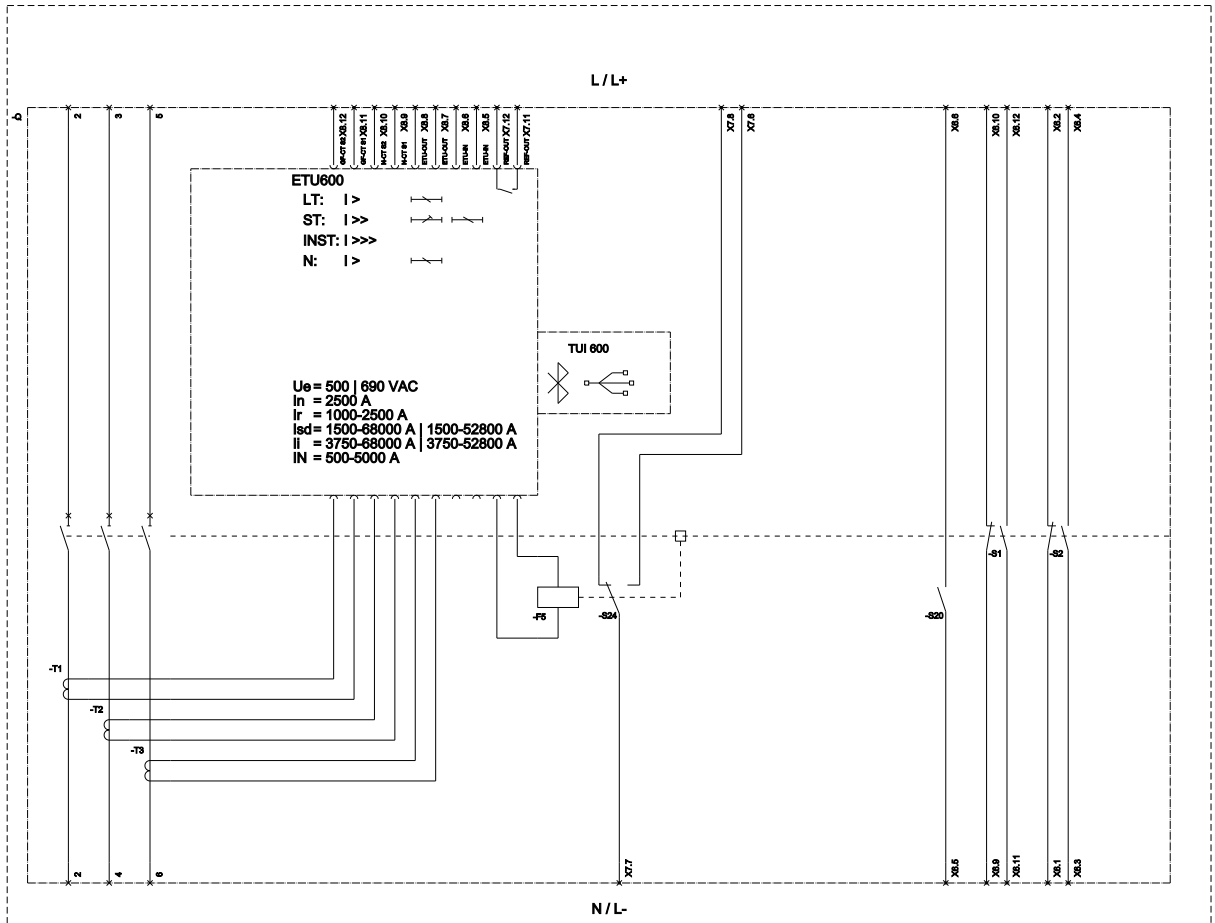
Test Certificates	other	Railway	Environment
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<a href="#">Type Test Certificates/Test Report</a>	<a href="#">Special Test Certificate</a>	<a href="#">Confirmation</a>		<a href="#">Special Test Certificate</a>	<a href="#">Environmental Confirmations</a>
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### 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=3WA1225-4AE02-0AA0>
- Service&Support (Manuals, Certificates, Characteristics, FAQs,...)  
<https://support.industry.siemens.com/cs/ww/en/ps/3WA1225-4AE02-0AA0>
- Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)  
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3WA1225-4AE02-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1225-4AE02-0AA0)
- CAx-Online-Generator  
<http://www.siemens.com/cax>
- Information- and Downloadcenter (catalogues, leaflets,...)  
<http://www.siemens.com/energy-automation>





LT (Long Time Delay / Überspannung), ST (Short Time Delay / Kurzschlusszeit, kurzzeitverzögerung), INST (Instantaneous / Kurzschlusszeit, unverzögert), N (Neutral Protection / Neutralüberwachung), GF (Ground Fault Protection / Erdlebensüberwachung),  
 F5 (Interlock for trip unit / Anlaufverriegelung), S24 (TAR: Trip alarm switch (Reset position) / Fehler Anzeigebetriebsüberwachung (Reset Position)), S1-S3 (ALUX: Auxiliary switch / Hilfskontakt), S20 (RTCC: Ready to close signaling switch / Abschaltbetriebsüberwachung)

last modified:

5/29/2021

