















Fixed-mounted circuit breaker IEC 60947-2, frame size 1, 3-poles,  $I_n=2000A$  up to 690V AC 50/60Hz, breaking capacity  $N I_{cu}=55/42kA$  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), Undervoltage release (UVR-t) with time delay 0,2-3,2 s 208-240 V AC / 220-250 V DC, 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	ETU600 LSI
Weight	46.285 kg
Net Weight	33.285 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	240 W
Current	
continuous current / rated value / maximum	2000 A
continuous current / rated value	2000 A
operational current	
• at 40 °C / rated value	2000 A
• at 45 °C / rated value	2000 A
• at 50 °C / rated value	2000 A
• at 55 °C / rated value	2000 A
• at 60 °C / rated value	2000 A
• at 65 °C / rated value	2000 A
• at 70 °C / rated value	2000 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"> <li>• at 690 V / rated value</li> </ul>	42 kA
short-circuit current making capacity (I <sub>cm</sub> )	
<ul style="list-style-type: none"> <li>• at 500 V / rated value</li> </ul>	121 kA
<ul style="list-style-type: none"> <li>• at 690 V / rated value</li> </ul>	88 kA
short-time withstand current (I <sub>cw</sub> ) / at 500 V AC	
<ul style="list-style-type: none"> <li>• for 0.5 s / rated value</li> </ul>	55 kA
<ul style="list-style-type: none"> <li>• for 1 s / rated value</li> </ul>	50 kA
<ul style="list-style-type: none"> <li>• for 2 s / rated value</li> </ul>	45 kA
<ul style="list-style-type: none"> <li>• for 3 s / rated value</li> </ul>	35 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>	42 kA
<ul style="list-style-type: none"> <li>• for 1 s / rated value</li> </ul>	42 kA
<ul style="list-style-type: none"> <li>• for 2 s / rated value</li> </ul>	42 kA
<ul style="list-style-type: none"> <li>• for 3 s / rated value</li> </ul>	35 kA
<b>Electronic release unit</b>	
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
<b>Basic protection functions</b>	
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 I <sub>2t</sub> characteristic	0.5; 0.6; 0.7; 0.75; 0.8; 0.85; 0.9; 0.95; 1
reference value setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic	x I <sub>n</sub>
set values delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic	1;2;5;8;10;14;17;21;25
reference value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic	s
set values setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / for eSet	0.4-1;0.001
adjustable absolute value setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / for eSet	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	800 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2000 A
set values delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic / for eSet	0.5-30;0.001
set values setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>4t</sub> characteristic / for eSet	0.4-1;0.001
set values delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>4t</sub> characteristic / for eSet	0.5-5;0.001
adjustable absolute value setting current (I <sub>r</sub> ) / for L-tripping / with I <sub>4t</sub> characteristic / for eSet	
<ul style="list-style-type: none"> <li>• minimum</li> </ul>	800 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	2000 A
<b>L: Overload protection N-conductor</b>	
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>	400 A
<ul style="list-style-type: none"> <li>• maximum</li> </ul>	4000 A
<b>S: delayed short-circuit protection ST</b>	
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
<b>S: delayed short-circuit protection ST, settings values I0t</b>	
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 (t <sub>sd</sub> ) / for S-tripping / with I0t characteristic	0.08;0.15;0.22;0.3;0.4
reference value delay time (t <sub>sd</sub> ) / for S-tripping / with I0t characteristic	s
set values setting current (I <sub>sd</sub> ) / for S-tripping / with I0t characteristic / for eSet / independent of direction	0.6-10;0.001
adjustable absolute value setting current (I <sub>sd</sub> )	
<ul style="list-style-type: none"> <li>for S-tripping / with I0t characteristic / for eSet / independent of direction / minimum</li> </ul>	1200 A
<ul style="list-style-type: none"> <li>at 500 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum</li> </ul>	40 kA
<ul style="list-style-type: none"> <li>at 690 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum</li> </ul>	33.6 kA
set values delay time (t <sub>sd</sub> ) / 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 (I <sub>sd</sub> ) / for S-tripping / with I2t characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (I <sub>sd</sub> ) / for S-tripping / with I2t characteristic	x I <sub>r</sub>
set values delay time (t <sub>sd</sub> ) / for S-tripping / with I2t characteristic	0.1;0.2;0.3;0.4
set values setting current (I <sub>sd</sub> ) / for S-tripping / with I2t characteristic / for eSet / independent of direction	0.6-10;0.001
adjustable absolute value setting current (I <sub>sd</sub> )	
<ul style="list-style-type: none"> <li>for S-tripping / with I2t characteristic / for eSet / independent of direction / minimum</li> </ul>	1200 A
<ul style="list-style-type: none"> <li>at 500 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum</li> </ul>	40 kA
<ul style="list-style-type: none"> <li>at 690 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum</li> </ul>	33.6 kA
set values delay time (t <sub>sd</sub> ) / 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> </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>i</sub> ) / for I-tripping	1.5;2;3;4;6;8;10;12;15
reference value setting current (I <sub>i</sub> ) / for I-tripping	x I <sub>n</sub>
tripping factor setting current (I <sub>imax</sub> ) / for I-tripping	0.8
reference value setting current (I <sub>imax</sub> ) / for I-tripping	x I <sub>cs</sub>
set values setting current (I <sub>i</sub> ) / for I-tripping / for eSet	1.5-15;0.001
adjustable absolute value setting current (I <sub>i</sub> )	
<ul style="list-style-type: none"> <li>for I-tripping / for eSet / minimum</li> </ul>	3000 A
<ul style="list-style-type: none"> <li>at 500 V / for I-tripping / for eSet / maximum</li> </ul>	44 kA
<ul style="list-style-type: none"> <li>at 690 V / for I-tripping / for eSet / maximum</li> </ul>	33.6 kA
<b>G: ground fault GF</b>	
product feature / for G-tripping	
<ul style="list-style-type: none"> <li>selectable characteristic function</li> </ul>	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> </ul>	15000
<ul style="list-style-type: none"> <li>with support / typical</li> </ul>	30000
electrical endurance (operating cycles)	
<ul style="list-style-type: none"> <li>at 690 V / without support / typical</li> </ul>	7500
<ul style="list-style-type: none"> <li>at 690 V / with support / typical</li> </ul>	30000
<b>Dimensions</b>	
height	437 mm
width	320 mm
depth	357 mm
<b>Main connection</b>	
arrangement of electrical connectors / for main current circuit	main connection on the rear, horizontal
<b>Auxiliary circuit</b>	
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
<b>Internal accessories</b>	
product component	
<ul style="list-style-type: none"> <li>undervoltage release</li> </ul>	Yes
<ul style="list-style-type: none"> <li>voltage trigger</li> </ul>	Yes
<ul style="list-style-type: none"> <li>trip indicator</li> </ul>	Yes
<ul style="list-style-type: none"> <li>motor drive</li> </ul>	Yes
<b>Environmental conditions</b>	
protection class IP / on the front	IP41
ambient temperature / during operation	
<ul style="list-style-type: none"> <li>minimum</li> </ul>	-40 °C
<ul style="list-style-type: none"> <li>maximum</li> </ul>	70 °C
ambient temperature / during storage	
<ul style="list-style-type: none"> <li>minimum</li> </ul>	-40 °C
<ul style="list-style-type: none"> <li>maximum</li> </ul>	80 °C
<b>Certificates</b>	
reference code / according to IEC 81346-2	Q
<b>Approvals / Certificates</b>	
<b>Environment</b>	<b>General Product Approval</b>
    	<a href="#">Confirmation</a>
<b>General Product Approval</b>	<b>EMV</b>
   	<a href="#">Miscellaneous</a> <a href="#">Industry Canada (IC)</a>
<b>Radio Equipment Type Approval Certificate</b>	<b>Test Certificates</b>
<a href="#">Miscellaneous</a>	<a href="#">Special Test Certificate</a>
	
	
<b>Maritime application</b>	<b>other</b>



[Manufacturer Declaration](#)

[Confirmation](#)

## Dangerous goods

[Transport 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=3WA1120-2AE02-4EV4-Z T40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3WA1120-2AE02-4EV4-Z T40>

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

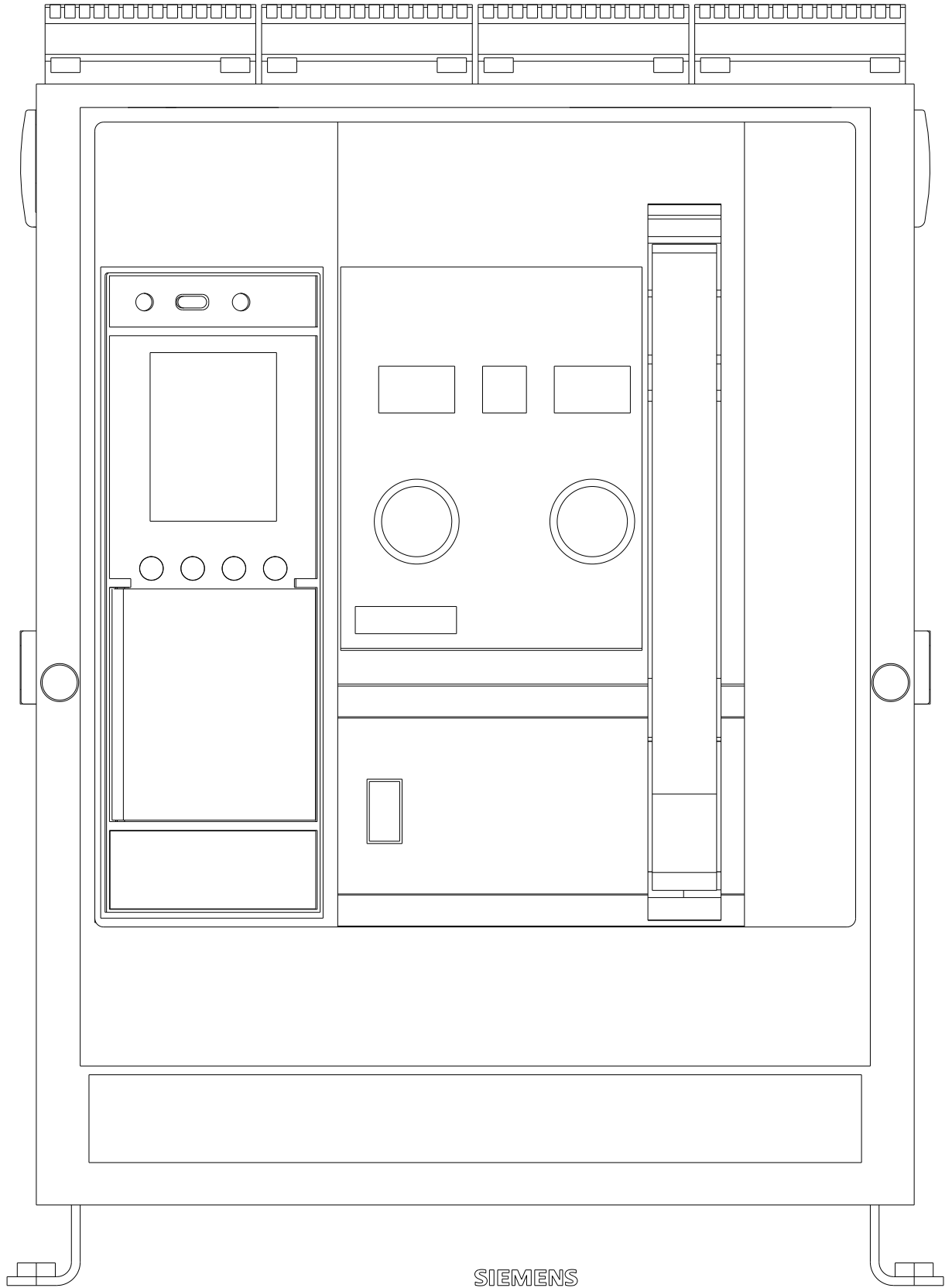
[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3WA1120-2AE02-4EV4-Z T40](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1120-2AE02-4EV4-Z T40)

**CAX-Online-Generator**

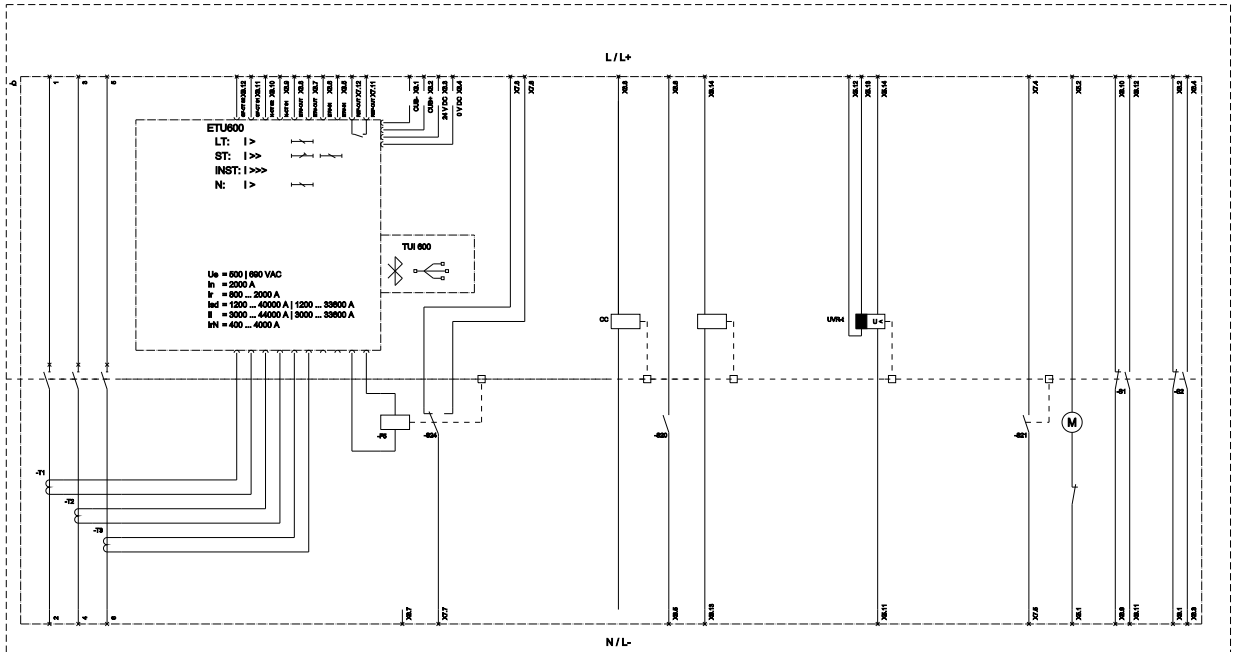
<https://www.siemens.com/cax>

**Characteristic curves**

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP="HAUPT"></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)



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12 (Symbol for delay / Verzögerung) 13 (Symbol for delay / Verzögerung) 14 (Symbol for delay / Verzögerung) 15 (Symbol for delay / Verzögerung) 16 (Symbol for delay / Verzögerung) 17 (Symbol for delay / Verzögerung) 18 (Symbol for delay / Verzögerung) 19 (Symbol for delay / Verzögerung) 20 (Symbol for delay / Verzögerung) 21 (Symbol for delay / Verzögerung) 22 (Symbol for delay / Verzögerung) 23 (Symbol for delay / Verzögerung) 24 (Symbol for delay / Verzögerung) 25 (Symbol for delay / Verzögerung) 26 (Symbol for delay / Verzögerung) 27 (Symbol for delay / Verzögerung) 28 (Symbol for delay / Verzögerung) 29 (Symbol for delay / Verzögerung) 30 (Symbol for delay / Verzögerung) 31 (Symbol for delay / Verzögerung) 32 (Symbol for delay / Verzögerung) 33 (Symbol for delay / Verzögerung) 34 (Symbol for delay / Verzögerung) 35 (Symbol for delay / Verzögerung) 36 (Symbol for delay / Verzögerung) 37 (Symbol for delay / Verzögerung) 38 (Symbol for delay / Verzögerung) 39 (Symbol for delay / Verzögerung) 40 (Symbol for delay / Verzögerung) 41 (Symbol for delay / Verzögerung) 42 (Symbol for delay / Verzögerung) 43 (Symbol for delay / Verzögerung) 44 (Symbol for delay / Verzögerung) 45 (Symbol for delay / Verzögerung) 46 (Symbol for delay / Verzögerung) 47 (Symbol for delay / Verzögerung) 48 (Symbol for delay / Verzögerung) 49 (Symbol for delay / Verzögerung) 50 (Symbol for delay / Verzögerung) 51 (Symbol for delay / Verzögerung) 52 (Symbol for delay / Verzögerung) 53 (Symbol for delay / Verzögerung) 54 (Symbol for delay / Verzögerung) 55 (Symbol for delay / Verzögerung) 56 (Symbol for delay / Verzögerung) 57 (Symbol for delay / Verzögerung) 58 (Symbol for delay / Verzögerung) 59 (Symbol for delay / Verzögerung) 60 (Symbol for delay / Verzögerung) 61 (Symbol for delay / Verzögerung) 62 (Symbol for delay / Verzögerung) 63 (Symbol for delay / Verzögerung) 64 (Symbol for delay / Verzögerung) 65 (Symbol for delay / Verzögerung) 66 (Symbol for delay / Verzögerung) 67 (Symbol for delay / Verzögerung) 68 (Symbol for delay / Verzögerung) 69 (Symbol for delay / Verzögerung) 70 (Symbol for delay / Verzögerung) 71 (Symbol for delay / Verzögerung) 72 (Symbol for delay / Verzögerung) 73 (Symbol for delay / Verzögerung) 74 (Symbol for delay / Verzögerung) 75 (Symbol for delay / Verzögerung) 76 (Symbol for delay / Verzögerung) 77 (Symbol for delay / Verzögerung) 78 (Symbol for delay / Verzögerung) 79 (Symbol for delay / Verzögerung) 80 (Symbol for delay / Verzögerung) 81 (Symbol for delay / Verzögerung) 82 (Symbol for delay / Verzögerung) 83 (Symbol for delay / Verzögerung) 84 (Symbol for delay / Verzögerung) 85 (Symbol for delay / Verzögerung) 86 (Symbol for delay / Verzögerung) 87 (Symbol for delay / Verzögerung) 88 (Symbol for delay / Verzögerung) 89 (Symbol for delay / Verzögerung) 90 (Symbol for delay / Verzögerung) 91 (Symbol for delay / Verzögerung) 92 (Symbol for delay / Verzögerung) 93 (Symbol for delay / Verzögerung) 94 (Symbol for delay / Verzögerung) 95 (Symbol for delay / Verzögerung) 96 (Symbol for delay / Verzögerung) 97 (Symbol for delay / Verzögerung) 98 (Symbol for delay / Verzögerung) 99 (Symbol for delay / Verzögerung) 100 (Symbol for delay / Verzögerung)

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