



circuit breaker 3VA2 IEC Frame 630 breaking capacity class M Icu=55 kA @ 415 V 4-pole, line protection ETU550, LSI, In=500 A overload protection Ir=200 A...500 A short-circuit protection I<sub>sd</sub>=0.6..10x I<sub>n</sub>, I<sub>i</sub>=1.5..14x I<sub>n</sub> neutral conductor protection adjustable (OFF, up to 100%) nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	ETU550
protection function of the overcurrent release	LSI
number of poles	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	99 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	33 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	5 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	3 500
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Without
product function	
• communication function	Yes
• other measurement function	No
Net Weight	6.475 kg
Current	
short-time withstand current (I <sub>cw</sub> ) / limited to 1 s	6 kA
operational current	
• at 40 °C	500 A
• at 45 °C	500 A
• at 50 °C	500 A
• at 55 °C	477 A
• at 60 °C	455 A
• at 65 °C	432 A
• at 70 °C	410 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I <sub>cu</sub> )	

<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	85 kA 55 kA 55 kA 36 kA 6 kA
operating short-circuit current breaking capacity (Ics)	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	85 kA 55 kA 55 kA 36 kA 6 kA
short-circuit current making capacity (Icm)	
<ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>	187 kA 121 kA 121 kA 75.5 kA 9 kA

### Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	200 A 500 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.5 s 20 s
adjustable response value setting current (Isd) / of S-trip / with I0t characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	300 A 5 000 A
adjustable response value setting current (Isd) / of S-trip / with I2t characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	300 A 5 000 A
adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.05 s 0.5 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	0.05 s 0.5 s
adjustable response value setting current (Ii) / for I-tripping	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	750 A 7 000 A
adjustable setting current (InN) / for N-tripping	
<ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>	100 A 500 A
design of the N-conductor protection	adjustable OFF; 20% to 100%
product function / grounding protection	No

### Mechanical Design

product component	
<ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul>	No No No
height [in]	9.76 in
height	248 mm
width [in]	7.24 in
width	184 mm
depth [in]	4.33 in

depth	110 mm
<b>Connections</b>	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	on both sides nut keeper kit
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	20 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	35 x 10 mm
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	silver

<b>Auxiliary circuit</b>	
number of CO contacts / for auxiliary contacts	0





<b>Accessories</b>	
product extension / optional / motor drive	Yes




<b>Environmental conditions</b>	
protection class IP / on the front	IP40
ambient temperature	
• during operation / minimum	-25 °C
• during operation / maximum	70 °C
• during storage / minimum	-40 °C
• during storage / maximum	80 °C

<b>Environmental footprint</b>	
global warming potential [CO2 eq] / total	495 kg
global warming potential [CO2 eq] / during manufacturing	28.7 kg
global warming potential [CO2 eq] / during operation	470 kg
global warming potential [CO2 eq] / after end of life	-4.07 kg
Siemens Eco Profile (SEP)	Siemens EcoTech
reference code / according to IEC 81346-2	Q

**Approvals / Certificates**

**General Product Approval**



[Miscellaneous](#)


[Confirmation](#)


General Product Approval	EMV	Test Certificates		
  <small>EG-Konf.</small>	 <small>RCM</small>	<a href="#">Miscellaneous</a>	<a href="#">Special Test Certificate</a>	<a href="#">Type Test Certificates/Test Report</a>

**Maritime application**






[CCS \(China Classification Society\)](#)

<b>other</b>			<b>Dangerous goods</b>	<b>Environment</b>
<a href="#">Miscellaneous</a>	<a href="#">Miscellaneous</a>	<a href="#">Confirmation</a>		<a href="#">Transport Information</a>
				<a href="#">Environmental Confirmations</a>

**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>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA2450-5JP42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2450-5JP42-0AA0>

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

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA2450-5JP42-0AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2450-5JP42-0AA0)

CAx-Online-Generator

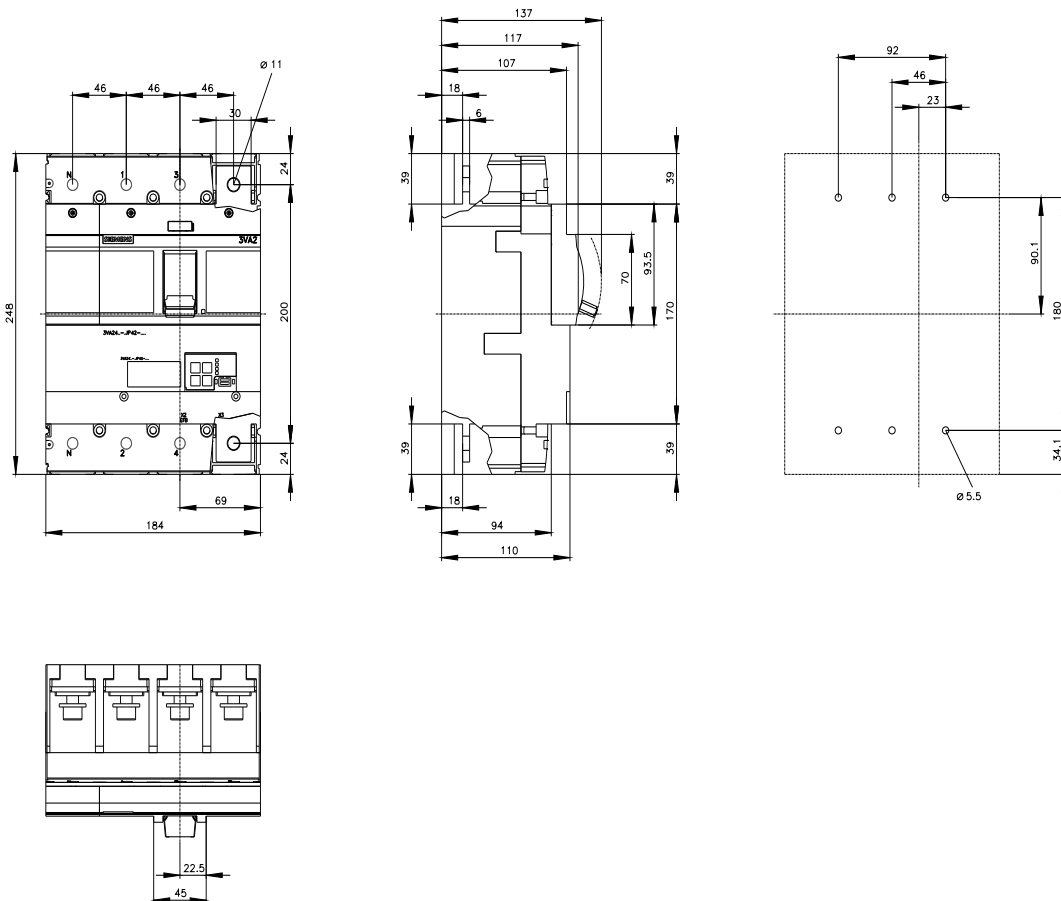
<https://www.siemens.com/cax>

Tender specifications

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

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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