



circuit breaker 3VA2 IEC Frame 160 breaking capacity class H Icu=85 kA @ 415 V 4-pole, line protection ETU550, LSI, In=160 A overload protection Ir=63 A...160 A short-circuit protection I_{sd}=0.6..10x I_n, I_i=1.5..10x I_n neutral conductor protection adjustable (OFF, up to 100%) terminal connection

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	25.5 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	8.5 W
mechanical service life (operating cycles) / typical	25 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	14 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	9 800
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	3.2 kg
Current	
operational current	
• at 40 °C	160 A
• at 45 °C	160 A
• at 50 °C	160 A
• at 55 °C	160 A
• at 60 °C	160 A
• at 65 °C	160 A
• at 70 °C	160 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	H
maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	110 kA

<ul style="list-style-type: none"> • at 415 V • at 440 V • at 500 V • at 690 V 	<p>85 kA</p> <p>85 kA</p> <p>55 kA</p> <p>3 kA</p>
operating short-circuit current breaking capacity (Ics)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	<p>110 kA</p> <p>85 kA</p> <p>85 kA</p> <p>55 kA</p> <p>2.5 kA</p>
short-circuit current making capacity (Icm)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	<p>242 kA</p> <p>187 kA</p> <p>187 kA</p> <p>121 kA</p> <p>3.7 kA</p>

Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>64 A</p> <p>160 A</p>
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0.5 s</p> <p>20 s</p>
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>96 A</p> <p>1 600 A</p>
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>96 A</p> <p>1 600 A</p>
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0.05 s</p> <p>0.5 s</p>
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0.05 s</p> <p>0.5 s</p>
adjustable response value setting current (I _i) / for I-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>240 A</p> <p>1 600 A</p>
adjustable setting current (I _{nN}) / for N-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>32 A</p> <p>160 A</p>
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"> • undervoltage release • voltage trigger • trip indicator 	<p>No</p> <p>No</p> <p>No</p>
height [in]	7.13 in
height	181 mm
width [in]	5.51 in
type of connectable conductor cross-sections / of the round conductor terminal / stranded	1 x (25 - 185 mm ²)
width	140 mm

depth [in]	3.39 in
depth	86 mm
Connections	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	double-sided box terminal
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	tin
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	tin
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	Yes
Environmental conditions	
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
Environmental footprint	
global warming potential [CO2 eq] / total	61.814 kg
global warming potential [CO2 eq] / during manufacturing	14.6 kg
global warming potential [CO2 eq] / during operation	48.9 kg
global warming potential [CO2 eq] / after end of life	-2.2 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	Maritime application
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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Maritime application	other
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[CCS \(China Classification Society\)](#)

[Miscellaneous](#)

other	Dangerous goods	Environment
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[Miscellaneous](#)

[Confirmation](#)



[Transport Information](#)

[Environmental Confirmations](#)



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=3VA2116-6JP46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2116-6JP46-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2116-6JP46-0AA0

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>



