

Siemens
EcoTech



circuit breaker 3VA2 IEC Frame 160 breaking capacity class L Icu=150 kA @ 415 V 4-pole, line protection ETU850, 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%) 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	ETU850
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	19.7 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	6.57 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	Yes
Net Weight	2.95 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	L
maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	200 kA
• at 415 V	150 kA
• at 440 V	150 kA

<ul style="list-style-type: none"> • at 500 V • at 690 V 	<p>100 kA</p> <p>25 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>200 kA</p> <p>150 kA</p> <p>150 kA</p> <p>100 kA</p> <p>18 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>440 kA</p> <p>330 kA</p> <p>330 kA</p> <p>220 kA</p> <p>52.5 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>63 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
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	on both sides nut keeper kit

type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	13 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	25 x 8 mm
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
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Accessories

product extension / optional / motor drive	Yes
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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



[Confirmation](#)



EG-Konf.



VDE

[Miscellaneous](#)

General Product Approval **EMV** **Test Certificates** **Marine / Shipping**



RCM

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

[Miscellaneous](#)



ABS

Marine / Shipping **other**



BUREAU VERITAS



DNV



LRS



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Siemens EcoTech



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Environment

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Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

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

Industry Mall (Online ordering system)

<http://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA2116-8KP42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2116-8KP42-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2116-8KP42-0AA0

CAX-Online-Generator

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

Tender specifications

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



