



circuit breaker 3VA6 UL frame 600 breaking capacity class H 65kA @ 480V 3-pole, line protection ETU560, LSIG, $I_n=600A$ overload protection $I_r=240A...600A$ short-circuit protection $I_{sd}=0.6...9 \times I_n$, $I_i=1.5...9 \times I_n$ N conductor protection optionally with external current transformer, up to 160% ground-fault protection $I_g=0.2...1 \times I_n$, $t_g=0.05-0.8s$ without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	H LAE
design of the product	System protection
design of the load switch / according to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type)	Yes
design of the overcurrent release	ETU560
protection function of the overcurrent release	LSIG
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	151 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	50.33 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	4 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	3 500
electrical endurance (operating cycles) / at 480 V	4 000
electrical endurance (operating cycles) / at 600 V	3 500
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	Yes
ground-fault monitoring version	Summation current formation L-conductor
product function	
• communication function	Yes
• other measurement function	No
Net Weight	5.01 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	600 A
• at 45 °C	600 A
• at 50 °C	570 A
• at 55 °C	540 A
• at 60 °C	510 A
• at 65 °C	480 A
• at 70 °C	450 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 • at 415 V • at 690 V	110 kA 85 kA 6 kA
operating short-circuit current breaking capacity (Ics) • at 240 V • at 415 V • at 690 V	110 kA 85 kA 6 kA
short-circuit current making capacity (Icm) • at 240 V • at 415 V • at 690 V	242 kA 187 kA 9 kA

Switching capacity according to UL 489

current breaking capacity • at 240 V • at 480 V • at 600 V	100 kA 65 kA 22 kA
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Adjustable parameters

adjustable response value setting current (I _r) / of the L-trip / with I ₂ t characteristic • minimum • maximum	240 A 600 A
adjustable response value delay time (t _r) / for L-tripping / with I ₂ t characteristic • minimum • maximum	0.5 s 15 s
adjustable response value setting current (I _{sd}) / of S-trip / with I ₀ t characteristic • minimum • maximum	360 A 5 400 A
adjustable response value setting current (I _{sd}) / of S-trip / with I ₂ t characteristic • minimum • maximum	360 A 5 400 A
adjustable response value delay time (t _{sd}) / for S-tripping / with I ₀ t characteristic • minimum • maximum	0.05 s 0.5 s
adjustable response value delay time (t _{sd}) / for S-tripping / with I ₂ t characteristic • minimum • maximum	0.05 s 0.5 s
adjustable response value setting current (I _i) / for I-tripping • minimum • maximum	900 A 5 400 A
adjustable current response value current / for G-tripping / with standard characteristic • initial value • full-scale value	120 A 600 A
adjustable response value delay time (t _g) / for G-tripping / with I ₀ t characteristic • minimum • maximum	0.05 s 0.8 s
adjustable response value setting current (I _g) / for G-tripping / with I ₂ t characteristic • minimum • maximum	120 A 600 A
adjustable response value delay time (t _g) / for G-tripping / with I ₂ t characteristic • minimum • maximum	0.05 s 0.8 s
adjustable setting current (I _{nN}) / for N-tripping • minimum • maximum	0.2 A 1.6 A
adjustable delay time / of S-trip / with I ₂ t characteristic	0.5 s

adjustable current response value current / of instantaneous short-circuit trip unit	
• minimum	900 A
• maximum	5 400 A
design of the N-conductor protection	adjustable OFF; 20% to 160%
product function / grounding protection	Yes
total break time / for G-tripping / with standard characteristic	
• initial value	0.05 s
• full-scale value	0.8 s

Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	9.76 in
height	248 mm
width [in]	5.43 in
width	138 mm
depth [in]	4.33 in
depth	110 mm

Connections

arrangement of electrical connectors / for main current circuit	Without connection
type of electrical connection / for main current circuit	Without

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

Certificates

reference code / according to IEC 81346-2	Q
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Yes

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Approval	EMC	Declaration of Conformity	Marine / Shipping
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EG-Konf.



ABS



BUREAU VERITAS

Marine / Shipping	other
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DNV



LRS



RMRS

[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)

Dangerous Good	Environment
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Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

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)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6460-6JQ31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6460-6JQ31-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6460-6JQ31-0AA0

CAX-Online-Generator

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

Tender specifications

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



