

**Siemens
EcoTech**



circuit breaker 3VA6 UL Frame 250 breaking capacity class H 65 kA @ 480 V 4-pole, line protection ETU560, LSIG, In=250 A overload protection, 100% rated Ir=100 A...250 A short-circuit protection Isd=0.6..10x In, li=1.5..10x In neutral conductor protection adjustable (OFF, up to 100%) ground-fault protection Ig=0.2...1 x In= tg=0.05-0.8s without connection



Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HFAE
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	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	42 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	14 W
mechanical service life (operating cycles) / typical	25 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	12 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	8 400
electrical endurance (operating cycles) / at 480 V	12 000
electrical endurance (operating cycles) / at 600 V	8 400
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
ground-fault monitoring version	Summation current formation L + N-conductor
product function	
• communication function	Yes
• other measurement function	No
Net Weight	2.9 kg
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
operational current	
• at 40 °C	250 A
• at 45 °C	250 A
• at 50 °C	250 A
• at 55 °C	238 A
• at 60 °C	225 A
• at 65 °C	213 A
• at 70 °C	200 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 3 kA
operating short-circuit current breaking capacity (I _{cs}) • at 240 V • at 415 V • at 690 V	110 kA 85 kA 3 kA
short-circuit current making capacity (I _{cm}) • at 240 V • at 415 V • at 690 V	242 kA 187 kA 4.5 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 _{2t} characteristic • minimum • maximum	100 A 250 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic • minimum • maximum	0.5 s 13 s
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic • minimum • maximum	150 A 2 500 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic • minimum • maximum	150 A 2 500 A
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic • minimum • maximum	0.05 s 0.5 s
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic • minimum • maximum	0.05 s 0.5 s
adjustable response value setting current (I _i) / for I-tripping • minimum • maximum	375 A 2 500 A
adjustable current response value current / for G-tripping / with standard characteristic • initial value • full-scale value	50 A 250 A
adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic • minimum • maximum	0.05 s 0.8 s
adjustable response value setting current (I _g) / for G-tripping / with I _{2t} characteristic • minimum • maximum	50 A 250 A
adjustable response value delay time (t _g) / for G-tripping / with I _{2t} characteristic • minimum • maximum	0.05 s 0.8 s
adjustable setting current (I _N) / for N-tripping	

• minimum	50 A
• maximum	250 A
design of the N-conductor protection	adjustable OFF; 20% to 100%
product function / grounding protection	Yes

Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	7.8 in
height	198 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	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

Environmental footprint

Environmental Product Declaration (EPD)	Yes
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](#)

General Product Approval

EMV

Maritime application



[BIS CRS](#)



other

Dangerous goods

Environment

[Confirmation](#)

[Miscellaneous](#)

[Transport Information](#)



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[Environmental Confirmations](#)

Further information

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

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

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6225-6JQ41-2AA0>

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6225-6JQ41-2AA0>

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6225-6JQ41-2AA0

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

Tender specifications

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





