



circuit breaker 3VA6 UL Frame 1000 breaking capacity class H 65 kA @ 480 V 4-pole, line protection ETU856, LSI, In=1000 A overload protection Ir=400 A ...1000 A short-circuit protection I_{sd}=0.6..10x I_n, I_{ii}=1.5..10x I_n neutral conductor protection adjustable (OFF, up to 160%) ground fault alarm signaled via EFB300 or COM nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HMNAE
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	ETU856
protection function of the overcurrent release	LSI-G-alarm only
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	330 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	110 W
mechanical service life (operating cycles) / typical	10 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	4 900
electrical endurance (operating cycles) / at AC-1 / at 690 V	3 400
electrical endurance (operating cycles) / at 480 V	4 900
electrical endurance (operating cycles) / at 600 V	3 400
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Summation current formation L + N-conductor
product function	
• communication function	Yes
• other measurement function	Yes
Net Weight	16.3 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	1 000 A
• at 45 °C	940 A
• at 50 °C	880 A
• at 55 °C	840 A
• at 60 °C	800 A
• at 65 °C	750 A
• at 70 °C	700 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	H
maximum short-circuit current breaking capacity (I _{cu})	

<ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	<p>110 kA</p> <p>85 kA</p> <p>35 kA</p>
operating short-circuit current breaking capacity (Ics) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	<p>110 kA</p> <p>85 kA</p> <p>19 kA</p>
short-circuit current making capacity (Icm) <ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	<p>242 kA</p> <p>187 kA</p> <p>74 kA</p>

Switching capacity according to UL 489

current breaking capacity <ul style="list-style-type: none"> • at 240 V • at 480 V • at 600 V 	<p>150 kA</p> <p>65 kA</p> <p>35 kA</p>
--	---

Adjustable parameters

adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic <ul style="list-style-type: none"> • minimum • maximum 	<p>400 A</p> <p>1 000 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>25 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>600 A</p> <p>10 000 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>600 A</p> <p>10 000 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>1 500 A</p> <p>10 000 A</p>
adjustable current response value current / for G-tripping / with standard characteristic <ul style="list-style-type: none"> • initial value • full-scale value 	<p>200 A</p> <p>1 000 A</p>
adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic <ul style="list-style-type: none"> • minimum • maximum 	<p>0.05 s</p> <p>0.8 s</p>
adjustable response value setting current (I _g) / for G-tripping / with I _{2t} characteristic <ul style="list-style-type: none"> • minimum • maximum 	<p>200 A</p> <p>1 000 A</p>
adjustable response value delay time (t _g) / for G-tripping / with I _{2t} characteristic <ul style="list-style-type: none"> • minimum • maximum 	<p>0.05 s</p> <p>0.8 s</p>
adjustable setting current (I _{nN}) / for N-tripping <ul style="list-style-type: none"> • minimum • maximum 	<p>200 A</p> <p>1 000 A</p>
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]	12.91 in
height	328 mm
width [in]	11.02 in
width	280 mm
depth [in]	4.72 in
depth	120 mm
Connections	
arrangement of electrical connectors / for main current circuit	Front connection
type of electrical connection / for main current circuit	nut keeper kit on both ends
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	20 x 4 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	50 x 28 mm
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
Accessories	
product extension / optional / motor drive	No
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
reference code / according to IEC 81346-2	Q

Approvals / Certificates

General Product Approval



[Confirmation](#)



General Product Approval

EMV

Marine / Shipping



[Miscellaneous](#)



other

Dangerous goods

Environment

[Confirmation](#)

[Miscellaneous](#)

[Miscellaneous](#)

[Transport Information](#)

[Environmental Confirmations](#)

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)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6610-6KT42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6610-6KT42-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA6610-6KT42-0AA0

CAX-Online-Generator

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

Tender specifications

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





