

**Siemens
EcoTech**



circuit breaker 3VA6 UL Frame 600 breaking capacity class M 35 kA @ 480 V 3-pole, line protection ETU860, LSIG, In=400 A overload protection, 100% rated Ir=160 A...400 A short-circuit protection Isd=0.6..10x In, li=1.5..12x In neutral conductor protection optionally with external current transformer, up to 160% 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	MLAE
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	ETU860
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	70 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	23.33 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	Yes
Net Weight	5.3 kg
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
operational current	
• at 40 °C	400 A
• at 45 °C	400 A
• at 50 °C	400 A
• at 55 °C	400 A
• at 60 °C	400 A
• at 65 °C	400 A
• at 70 °C	400 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I _{cu}) • at 240 V • at 415 V • at 690 V	85 kA 55 kA 6 kA
operating short-circuit current breaking capacity (I _{cs}) • at 240 V • at 415 V • at 690 V	85 kA 55 kA 6 kA
short-circuit current making capacity (I _{cm}) • at 240 V • at 415 V • at 690 V	187 kA 121 kA 9 kA

Switching capacity according to UL 489

current breaking capacity • at 240 V • at 480 V • at 600 V	100 kA 35 kA 18 kA
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Adjustable parameters

adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic • minimum • maximum	150 A 400 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic • minimum • maximum	0.5 s 25 s
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic • minimum • maximum	240 A 4 000 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic • minimum • maximum	240 A 4 000 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	600 A 4 800 A
adjustable current response value current / for G-tripping / with standard characteristic • initial value • full-scale value	80 A 400 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	80 A 400 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 _{nN}) / for N-tripping	

• minimum	0 A
• maximum	0 A
design of the N-conductor protection	adjustable OFF; 20% to 160%
product function / grounding protection	Yes
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
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	
Environmental Product Declaration (EPD)	Yes
global warming potential [CO2 eq] / total	495 kg
global warming potential [CO2 eq] / during manufacturing	28.7 kg
global warming potential [CO2 eq] / during operation	470 kg
global warming potential [CO2 eq] / after end of life	-4.07 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	Marine / Shipping	other
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[Confirmation](#)

other	Dangerous goods	Environment
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[Miscellaneous](#)

[Miscellaneous](#)

[Transport Information](#)



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[Environmental Confirmations](#)

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=3VA6440-5KQ31-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6440-5KQ31-2AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6440-5KQ31-2AA0

CAx-Online-Generator

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

Tender specifications

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





