

Siemens
EcoTech



circuit breaker 3VA6 UL Frame 600 breaking capacity class M 35 kA @ 480 V 3-pole, line protection ETU850, LSI, $I_n=400$ A overload protection, 100% rated $I_r=160$ A...400 A short-circuit protection $I_{sd}=0.6..10 \times I_n$, $I_i=1.5..12 \times I_n$ neutral conductor protection optionally with external current transformer, up to 160% 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	ETU850
protection function of the overcurrent release	LSI
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	without
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

<ul style="list-style-type: none"> 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}) <ul style="list-style-type: none"> at 240 V at 415 V at 690 V 	85 kA 55 kA 6 kA
operating short-circuit current breaking capacity (I _{cs}) <ul style="list-style-type: none"> at 240 V at 415 V at 690 V 	85 kA 55 kA 6 kA
short-circuit current making capacity (I _{cm}) <ul style="list-style-type: none"> at 240 V at 415 V at 690 V 	187 kA 121 kA 9 kA
Switching capacity according to UL 489	
current breaking capacity <ul style="list-style-type: none"> at 240 V at 480 V at 600 V 	100 kA 35 kA 18 kA
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 	150 A 400 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic <ul style="list-style-type: none"> minimum maximum 	0.5 s 25 s
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic <ul style="list-style-type: none"> minimum maximum 	240 A 4 000 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic <ul style="list-style-type: none"> minimum maximum 	240 A 4 000 A
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic <ul style="list-style-type: none"> minimum maximum 	0.05 s 0.5 s
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic <ul style="list-style-type: none"> minimum maximum 	0.05 s 0.5 s
adjustable response value setting current (I _l) / for I-tripping <ul style="list-style-type: none"> minimum maximum 	600 A 4 800 A
adjustable setting current (I _{nN}) / for N-tripping <ul style="list-style-type: none"> minimum maximum 	0 A 0 A
design of the N-conductor protection	adjustable OFF; 20% to 160%
product function / grounding protection	No
Mechanical Design	
product component <ul style="list-style-type: none"> undervoltage release voltage trigger trip indicator 	No No 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

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



[Confirmation](#)



General Product Approval	EMV	Test Certificates	Maritime application
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[Miscellaneous](#)



[Type Test Certificates/Test Report](#)



Maritime application	other	Dangerous goods	Environment
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[Confirmation](#)

[Miscellaneous](#)

[Transport Information](#)



Environment



[Environmental Confirmations](#)

Further information

Information on the packaging

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

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA6440-5KP31-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6440-5KP31-2AA0>

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

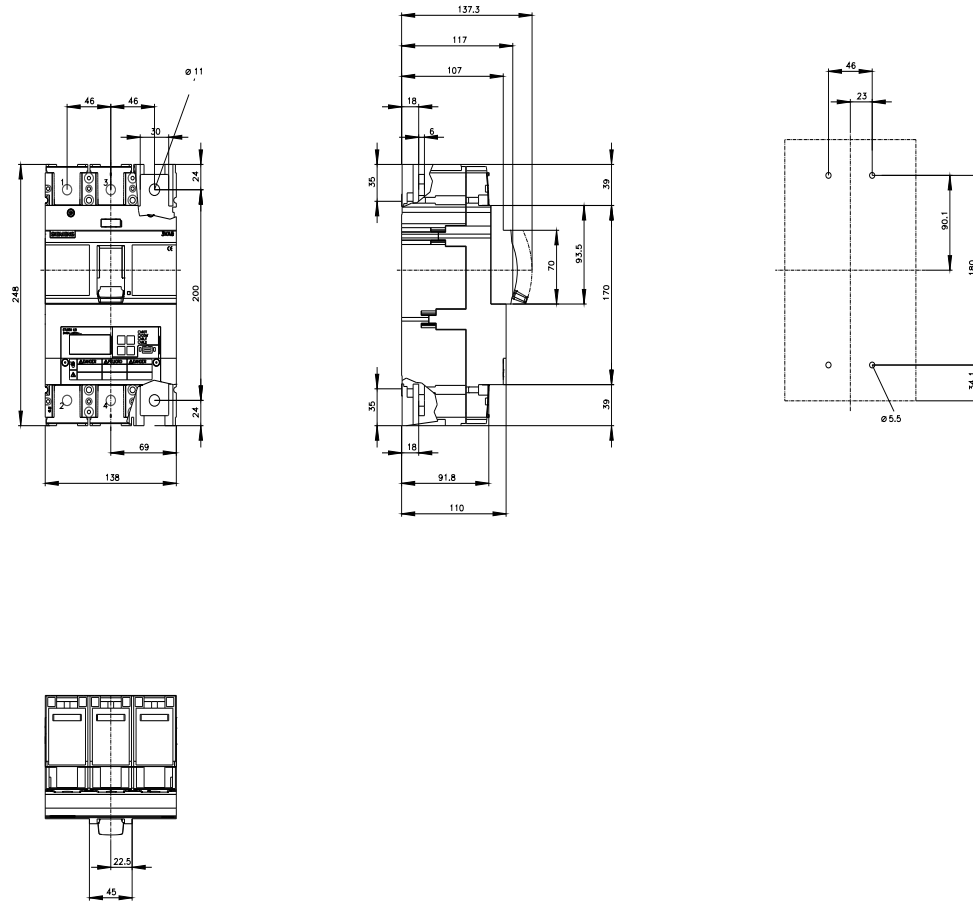
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6440-5KP31-2AA0

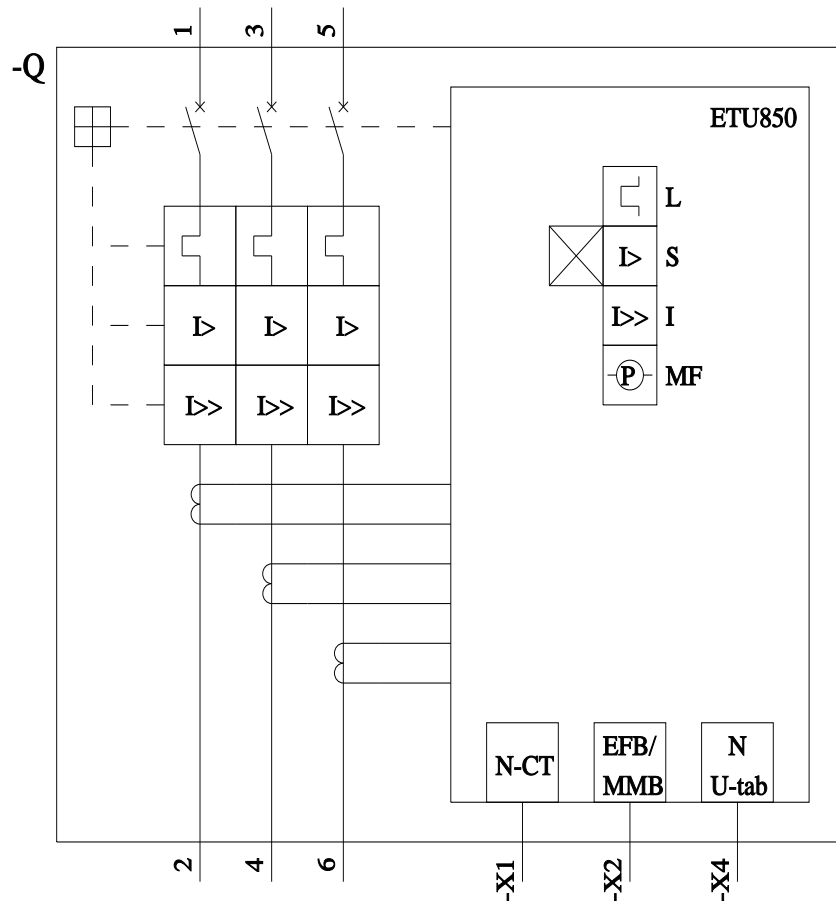
CAX-Online-Generator

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

Tender specifications

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





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