



circuit breaker 3VA6 UL Frame 600 breaking capacity class H 65 kA @ 480 V 4-pole, line protection ETU830, LIG, In=400 A overload protection, 100% rated Ir=160 A...400 A short-circuit protection Ii=1.5...12 x In 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	HLAE
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	ETU830
protection function of the overcurrent release	LIG
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	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/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	Yes
Net Weight	6.9 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	H
maximum short-circuit current breaking capacity (Icu)	
• at 240 V	110 kA
• at 415 V	85 kA
• at 690 V	6 kA
operating short-circuit current breaking capacity (Ics)	
• at 240 V	110 kA
• at 415 V	85 kA
• at 690 V	6 kA

short-circuit current making capacity (I _{cm})	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	242 kA 187 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 65 kA 22 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 _l) / for I-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	600 A 4 800 A
adjustable current response value current / for G-tripping / with standard characteristic	
<ul style="list-style-type: none"> • initial value • full-scale value 	80 A 400 A
adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	0.05 s 0.8 s
adjustable response value setting current (I _g) / for G-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	80 A 400 A
adjustable response value delay time (t _g) / for G-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	0.05 s 0.8 s
adjustable setting current (I _{nN}) / for N-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	80 A 600 A
design of the N-conductor protection	adjustable OFF; 20% to 150%
product function / grounding protection	Yes
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]	7.24 in
width	184 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	
<ul style="list-style-type: none"> during operation / minimum 	-25 °C
<ul style="list-style-type: none"> during operation / maximum 	70 °C
<ul style="list-style-type: none"> during storage / minimum 	-40 °C
<ul style="list-style-type: none"> 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](#)



[Miscellaneous](#)



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



[Type Test Certificates/Test Report](#)



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

[Confirmation](#)

[Transport Information](#)



Environment



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?mifb=3VA6440-6KM41-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6440-6KM41-2AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mifb=3VA6440-6KM41-2AA0

CAX-Online-Generator

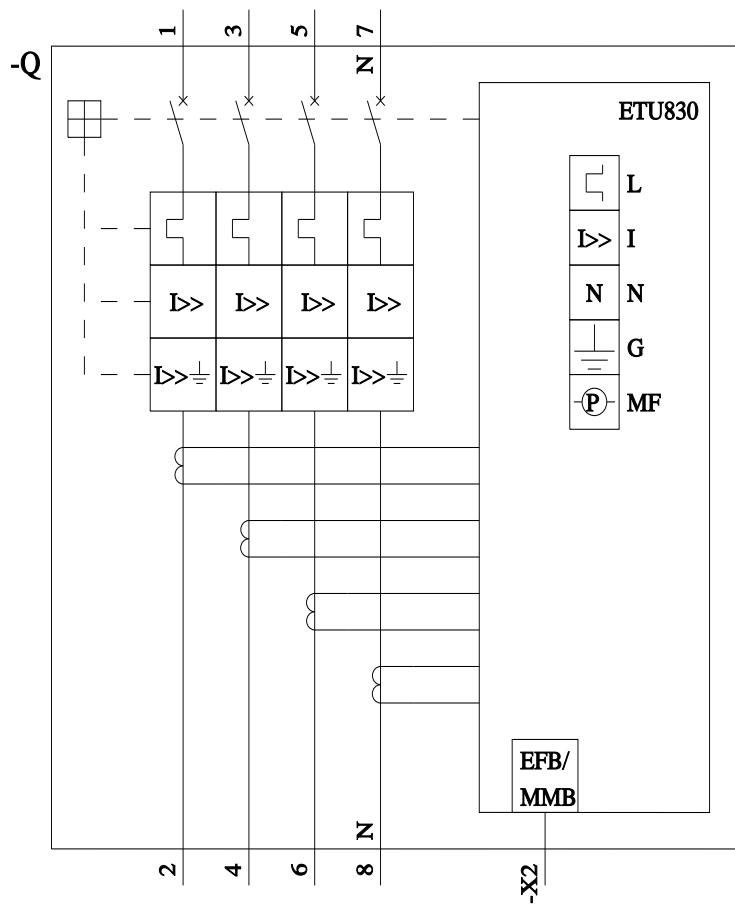
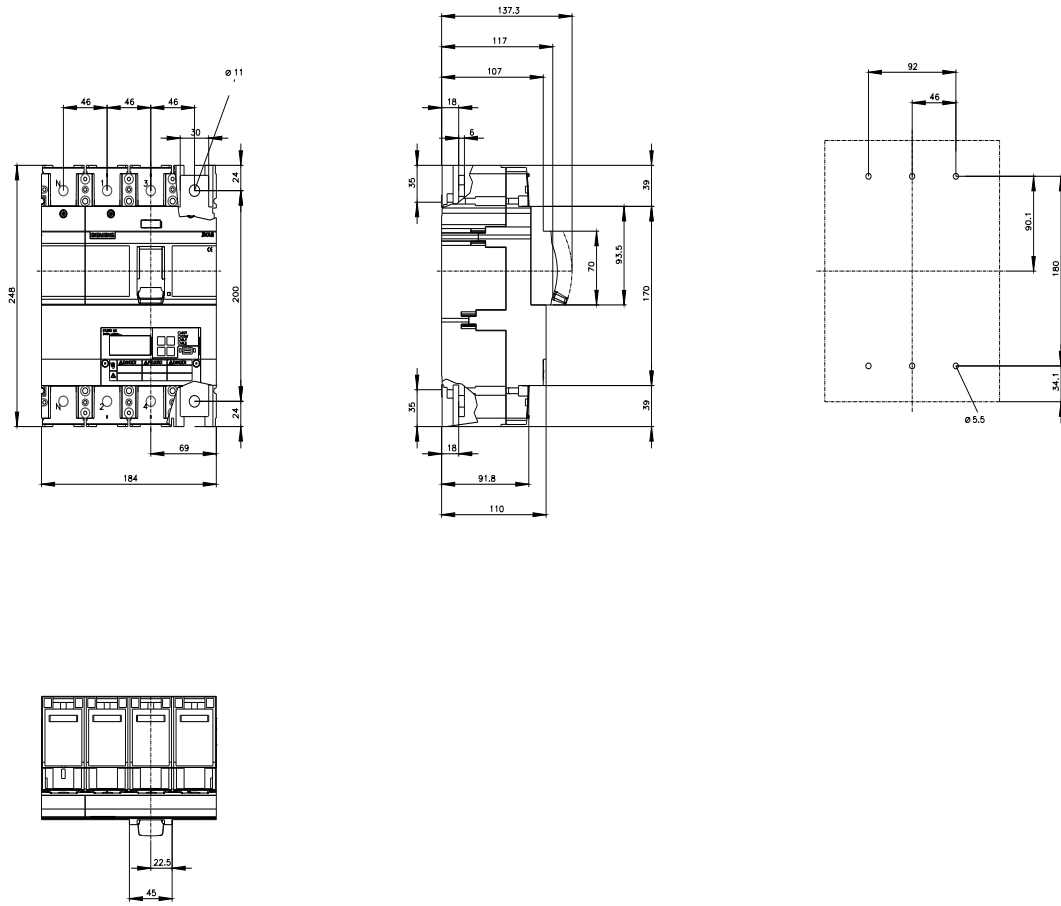
<https://www.siemens.com/cax>

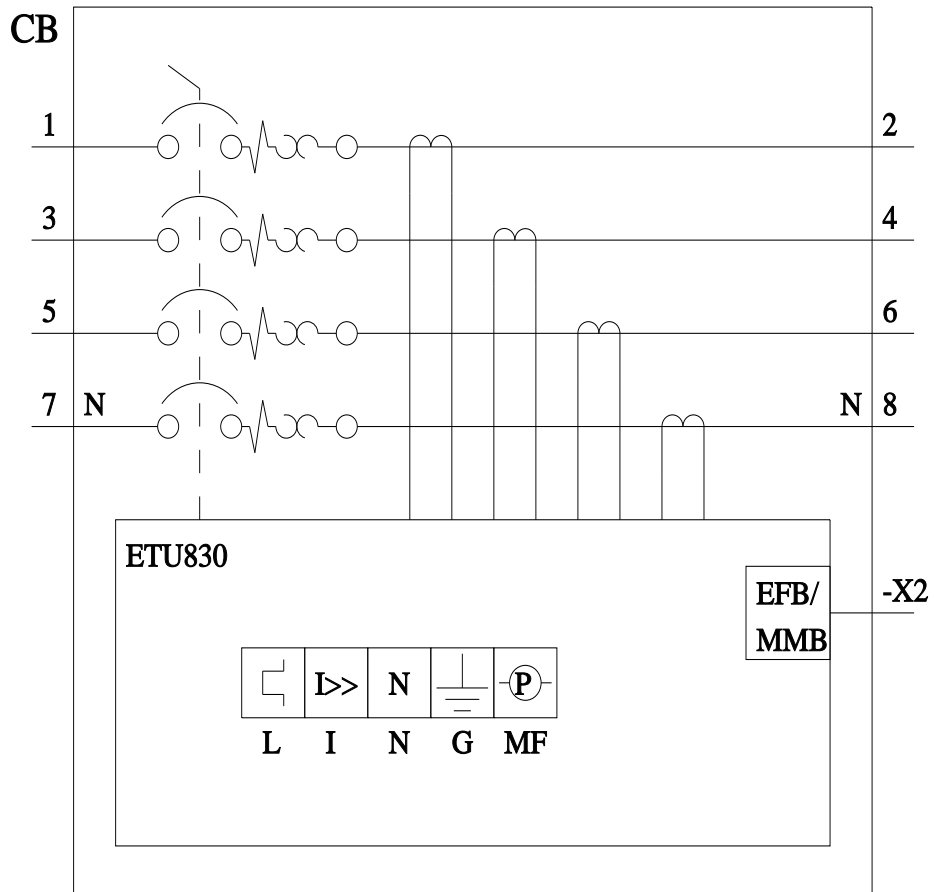
Tender specifications

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

Characteristic curves

https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>





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