

Siemens
EcoTech



circuit breaker 3VA6 UL Frame 150 breaking capacity class H 65 kA @ 480 V 3-pole, line protection ETU850, LSI, In=40 A overload protection, 100% rated Ir=16 A..40 A short-circuit protection I_{sd}=0.6..10x I_n, I_i=1.5..12x 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	HDAE
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	2.4 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	0.8 W
mechanical service life (operating cycles) / typical	25 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	14 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	9 800
electrical endurance (operating cycles) / at 480 V	14 000
electrical endurance (operating cycles) / at 600 V	9 800
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	2.3 kg
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
operational current	
• at 40 °C	40 A
• at 45 °C	40 A
• at 50 °C	40 A
• at 55 °C	40 A
• at 60 °C	40 A
• at 65 °C	40 A

● at 70 °C	40 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	110 kA
● at 415 V	85 kA
● at 690 V	2.5 kA
operating short-circuit current breaking capacity (I _{cs})	
● at 240 V	110 kA
● at 415 V	85 kA
● at 690 V	2.5 kA
short-circuit current making capacity (I _{cm})	
● at 240 V	242 kA
● at 415 V	187 kA
● at 690 V	3.8 kA
Switching capacity according to UL 489	
current breaking capacity	
● at 240 V	100 kA
● at 480 V	65 kA
● at 600 V	22 kA
Adjustable parameters	
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic	
● minimum	15 A
● maximum	40 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
● minimum	0.5 s
● maximum	25 s
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic	
● minimum	24 A
● maximum	400 A
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic	
● minimum	24 A
● maximum	400 A
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic	
● minimum	0.05 s
● maximum	0.5 s
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic	
● minimum	0.05 s
● maximum	0.5 s
adjustable response value setting current (I _l) / for I-tripping	
● minimum	60 A
● maximum	480 A
adjustable setting current (I _{nN}) / for N-tripping	
● minimum	0 A
● maximum	0 A
design of the N-conductor protection	adjustable OFF; 40% to 160%
product function / grounding protection	No
Mechanical Design	
product component	
● undervoltage release	No
● voltage trigger	No
● trip indicator	No
height [in]	7.8 in
height	198 mm

width [in]	4.13 in
width	105 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
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other	Dangerous goods	Environment
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[Confirmation](#)

[Miscellaneous](#)

[Transport Information](#)



[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=3VA6140-6KP31-2AA0>

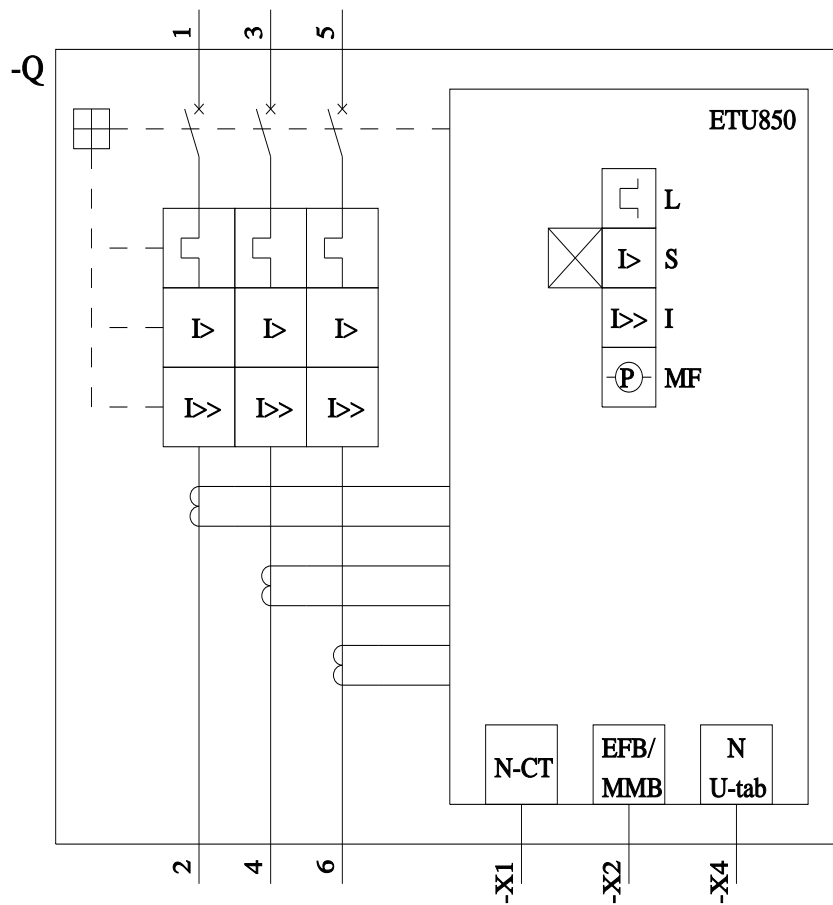
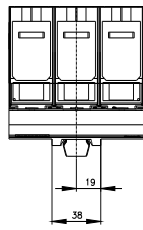
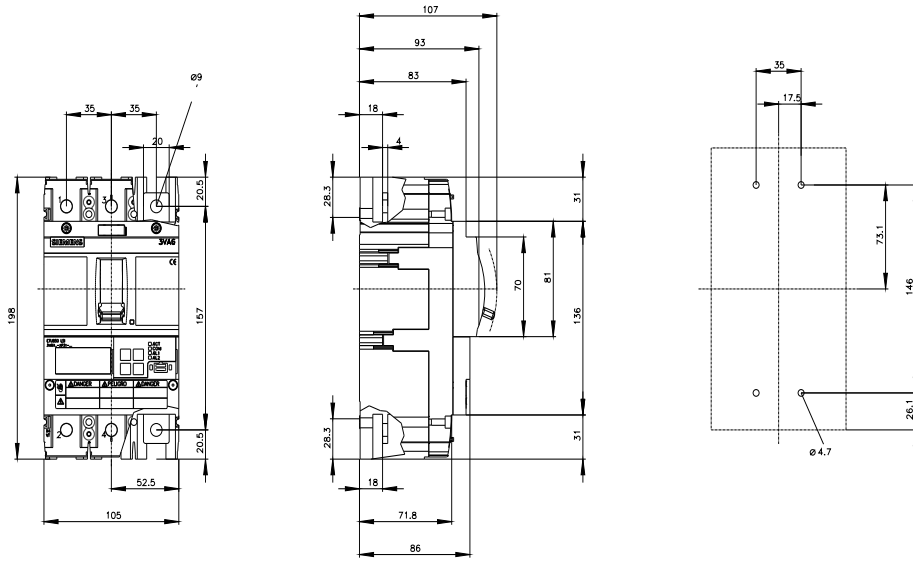
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

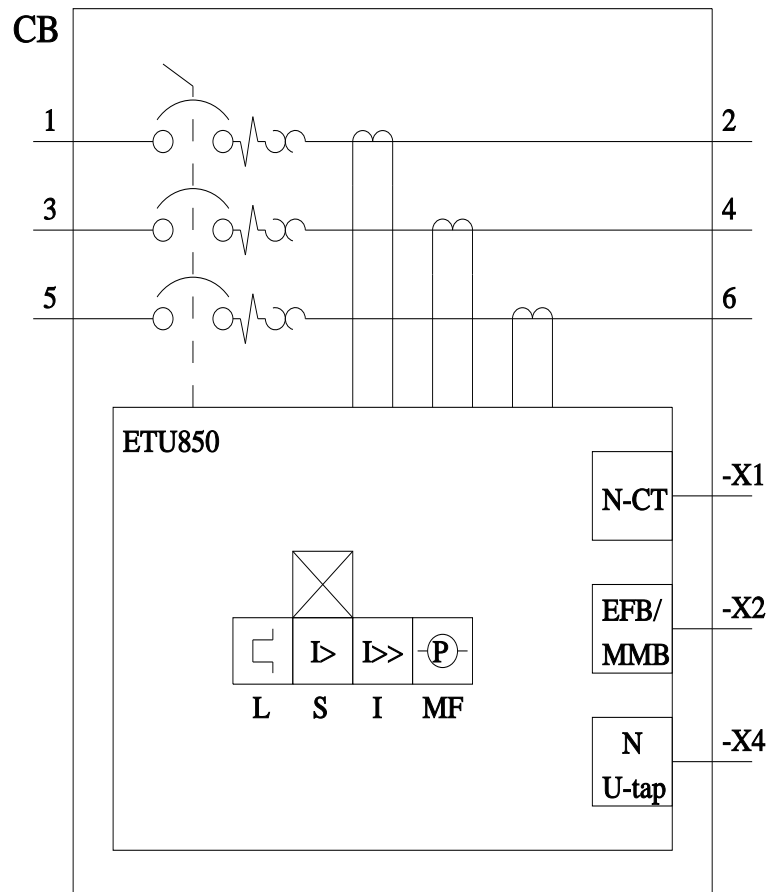
<https://support.industry.siemens.com/cs/ww/en/ps/3VA6140-6KP31-2AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6140-6KP31-2AA0

[CAx-Online-Generator](#)





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5/2/2025

