



circuit breaker 3VA6 UL frame 1600 breaking capacity class H 65kA @ 480 V 3-pole, line protection ETU330, LIG, $I_n=1600A$ 100%-rated, overload protection $I_r=600A - 1600A$ short circuit protection $I_i=1,5-7,5 \times I_n$ ground fault protection $I_g=0,156 - 1 \times I_n$, $t_g=0,1/0,3s$ w/o connection

Model	
product brand name	SETRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HPAE
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	ETU330
protection function of the overcurrent release	LIG
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	600 V
power loss [W] / maximum	433 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	433 W
mechanical service life (operating cycles) / typical	3 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	1 500
electrical endurance (operating cycles) / at AC-1 / at 690 V	500
electrical endurance (operating cycles) / at 480 V	1 500
electrical endurance (operating cycles) / at 600 V	500
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	No
• other measurement function	No
Net Weight	25.6 kg
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
operational current	
• at 40 °C	1 600 A
• at 45 °C	1 600 A
• at 50 °C	1 600 A
• at 55 °C	1 568 A
• at 60 °C	1 536 A
• at 65 °C	1 504 A
• at 70 °C	1 472 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	70 kA
• at 690 V	30 kA
operating short-circuit current breaking capacity (I _{cs})	
• at 240 V	55 kA
• at 415 V	35 kA
• at 690 V	15 kA
short-circuit current making capacity (I _{cm})	
• at 240 V	242 kA
• at 415 V	154 kA
• at 690 V	63 kA
Switching capacity according to UL 489	
current breaking capacity	
• at 240 V	100 kA
• at 480 V	65 kA
• at 600 V	35 kA
Adjustable parameters	
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic	
• minimum	600 A
• maximum	1 600 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
• minimum	2.5 s
• maximum	30 s
adjustable response value setting current (I _l) / for I-tripping	
• minimum	2 400 A
• maximum	12 000 A
adjustable current response value current / for G-tripping / with standard characteristic	
• initial value	320 A
• full-scale value	1 200 A
adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic	
• minimum	0.1 s
• maximum	0.3 s
product function / grounding protection	Yes
Mechanical Design	
product component	
• undervoltage release	No
• trip indicator	No
height [in]	8.14 in
height	206.9 mm
width [in]	8.99 in
width	228.4 mm
depth [in]	16 in
depth	406.4 mm
Connections	
type of electrical connection / for main current circuit	without terminals
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	silver
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	silver
Auxiliary circuit	
number of CO contacts / for auxiliary contacts	0
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

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Approvals / Certificates

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Ap-
proval

EMV

Test Certificates

Maritime application

other



[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Miscellaneous](#)

Dangerous goods

Environment

[Transport Information](#)

[Environmental Con-
firmations](#)

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=3VA6816-6HM31-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6816-6HM31-2AA0>

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

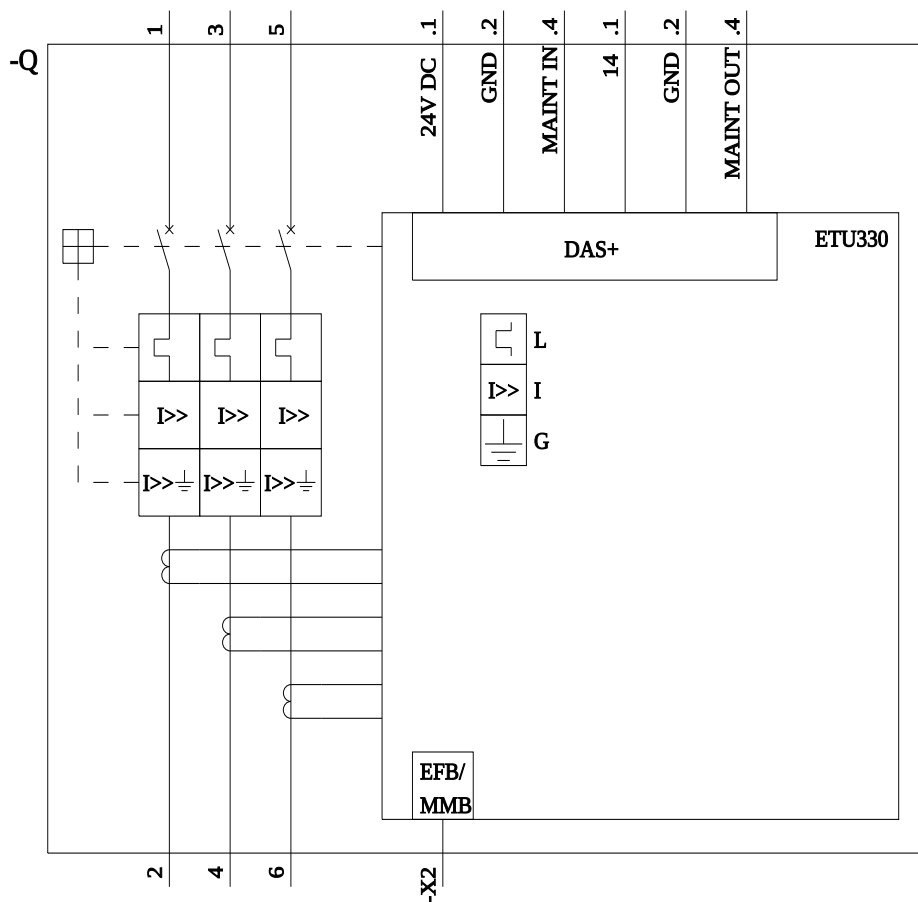
https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6816-6HM31-2AA0

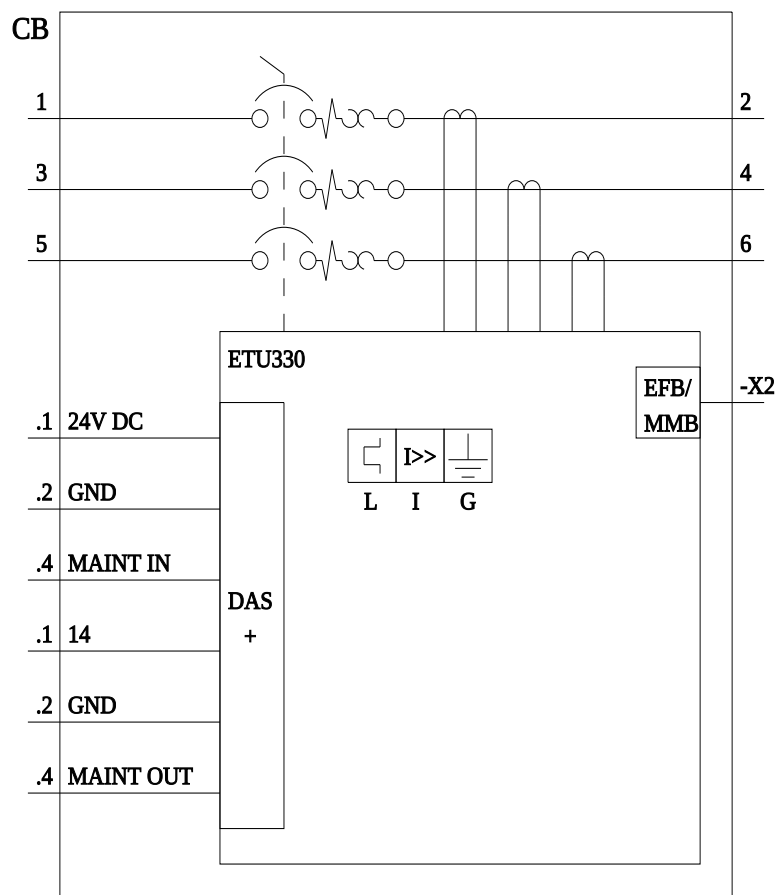
CAX-Online-Generator

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

Tender specifications

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





last modified:

3/31/2025

