



circuit breaker 3VA6 UL frame 1600 breaking capacity class H 65kA @ 480 V 3-pole, line protection ETU360, LSIG, In=1600A overload protection Ir=600A - 1600A short circuit protection I_{sd}=1,5-10x I_n, I_i=1,5-7,5x I_n w/o connection

Model	
product brand name	SENTRON
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	ETU360
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	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	No
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})	

<ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	110 kA 70 kA 30 kA
operating short-circuit current breaking capacity (Ics)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	55 kA 35 kA 15 kA
short-circuit current making capacity (Icm)	
<ul style="list-style-type: none"> • at 240 V • at 415 V • at 690 V 	242 kA 154 kA 63 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 35 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 	600 A 1 600 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	10 s 20 s
adjustable response value setting current (I _{sd}) / of S-trip / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	2 400 A 16 000 A
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	0.0001 s 0.4 s
adjustable response value setting current (I _i) / for I-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	12 000 A 12 000 A
adjustable current response value current / for G-tripping / with standard characteristic	
<ul style="list-style-type: none"> • initial value • full-scale value 	320 A 1 200 A
adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	0.1 s 0.3 s
design of the N-conductor protection	adjustable OFF; 50%; 75%; 100%; 125%; 150%
product function / grounding protection	Yes

Mechanical Design

product component	
<ul style="list-style-type: none"> • undervoltage release • trip indicator 	No 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	F

Approvals / Certificates

General Product Approval



[Confirmation](#)



[Miscellaneous](#)

General Product Approval	EMV	Test Certificates	Marine / Shipping	other
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[Type Test Certificates/Test Report](#)



[Confirmation](#)

[Miscellaneous](#)

other	Dangerous goods	Environment
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[Miscellaneous](#)

[Transport Information](#)

[Environmental Confirmations](#)

Further information

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=3VA6816-6HQ31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6816-6HQ31-0AA0>

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

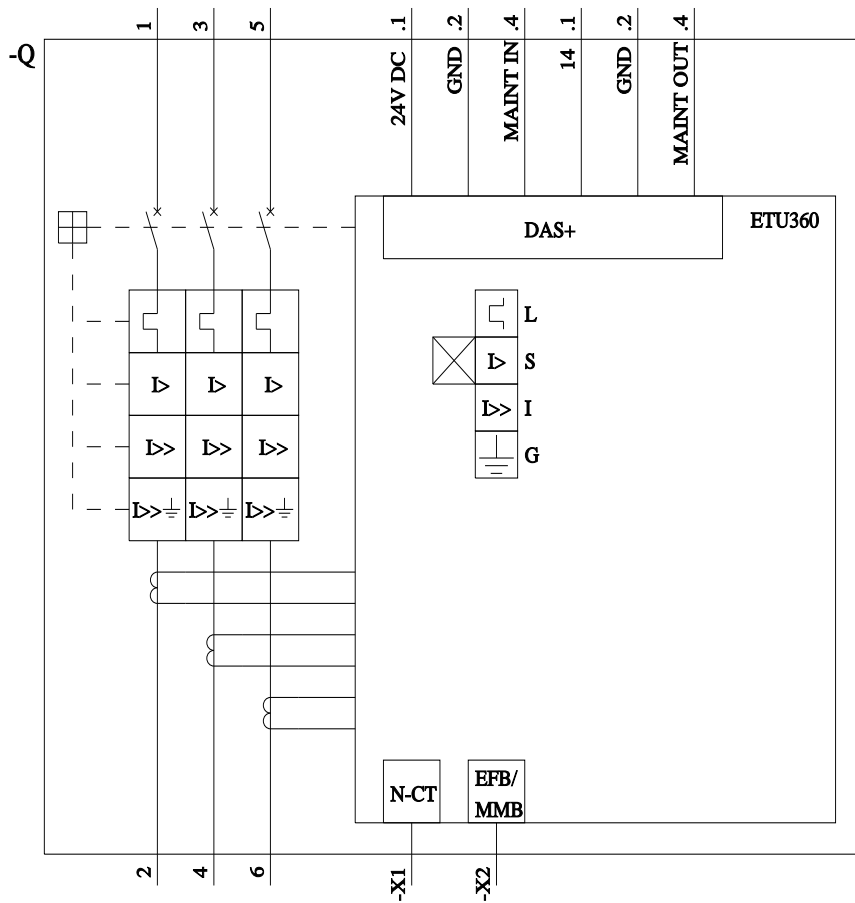
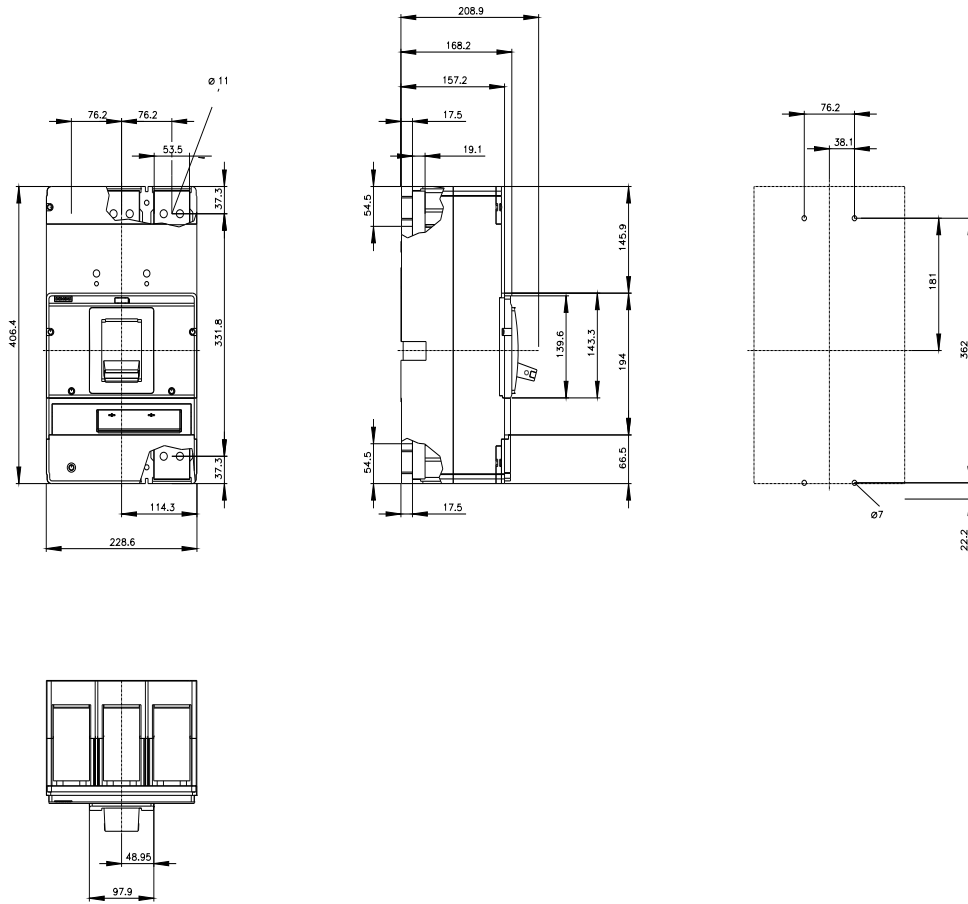
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA6816-6HQ31-0AA0

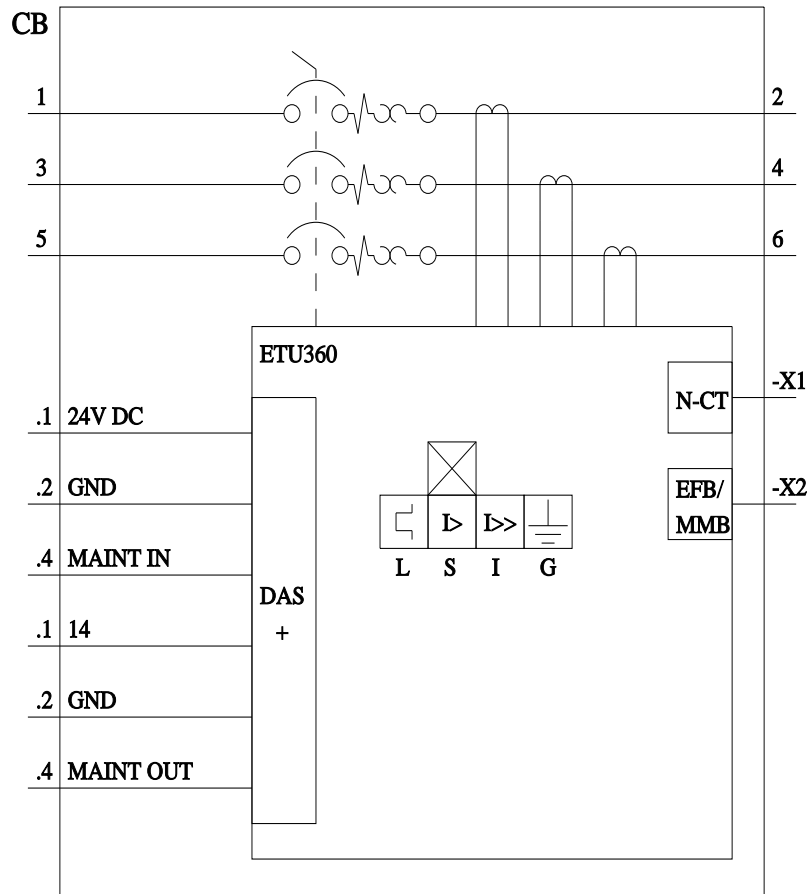
CAx-Online-Generator

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

Tender specifications

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





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