



circuit breaker 3VA2 IEC Frame 630 breaking capacity class C $I_{cu}=110 \text{ kA @ 415 V}$ 4-pole, line protection ETU860, LSIG, $I_n=500 \text{ A}$ overload protection $I_r=200 \text{ A}$...500 A short-circuit protection $I_{sd}=0.6..10 \times I_n$, $I_i=1.5..14 \times I_n$ neutral conductor protection adjustable (OFF, up to 100%) ground-fault protection, can be switched off $I_g=0.2...1 \times I_n$ $t_g=0.05-0.8 \text{ s}$ nut keeper kit

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Line protection
design of the overcurrent release	ETU860
protection function of the overcurrent release	LSIG
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	99 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	33 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	5 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	3 500
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	Yes
• other measurement function	Yes
Net Weight	5.7 kg
Current	
short-time withstand current (I_{cw}) / limited to 1 s	6 kA
operational current	
• at 40 °C	500 A
• at 45 °C	500 A
• at 50 °C	500 A
• at 55 °C	477 A
• at 60 °C	455 A
• at 65 °C	432 A
• at 70 °C	410 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	C
maximum short-circuit current breaking capacity (I_{cu})	

• at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	150 kA 110 kA 110 kA 85 kA 6 kA
operating short-circuit current breaking capacity (Ics) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	150 kA 110 kA 110 kA 85 kA 6 kA
short-circuit current making capacity (Icm) • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V	330 kA 242 kA 242 kA 187 kA 9 kA

Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (Ir) / of the L-trip / with I2t characteristic • minimum • maximum	200 A 500 A
adjustable response value delay time (tr) / for L-tripping / with I2t characteristic • minimum • maximum	0.5 s 20 s
adjustable response value setting current (Isd) / of S-trip / with I0t characteristic • minimum • maximum	300 A 5 000 A
adjustable response value setting current (Isd) / of S-trip / with I2t characteristic • minimum • maximum	300 A 5 000 A
adjustable response value delay time (tsd) / for S-tripping / with I0t characteristic • minimum • maximum	0.05 s 0.5 s
adjustable response value delay time (tsd) / for S-tripping / with I2t characteristic • minimum • maximum	0.05 s 0.5 s
adjustable response value setting current (Ii) / for I-tripping • minimum • maximum	750 A 7 000 A
adjustable current response value current / for G-tripping / with standard characteristic • initial value • full-scale value	100 A 500 A
adjustable response value delay time (tg) / for G-tripping / with I0t characteristic • minimum • maximum	0.05 s 0.8 s
adjustable response value setting current (Ig) / for G-tripping / with I2t characteristic • minimum • maximum	100 A 500 A
adjustable response value delay time (tg) / for G-tripping / with I2t characteristic • minimum • maximum	0.05 s 0.8 s

adjustable setting current (InN) / for N-tripping	
• minimum	100 A
• maximum	500 A
design of the N-conductor protection	adjustable OFF; 20% to 100%
product function / grounding protection	Yes

Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	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	Front terminal
type of electrical connection / for main current circuit	on both sides nut keeper kit
type of connectable conductor cross-sections / for flat-bar terminal connection / minimum	20 x 1 mm
type of connectable conductor cross-sections / for flat-bar terminal connection / maximum	35 x 10 mm
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
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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

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	
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[Miscellaneous](#)



[Confirmation](#)

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

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Maritime application	other
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[CCS \(China Classification Society\)](#)

[Miscellaneous](#)

other	Dangerous goods	Environment
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[Miscellaneous](#)

[Confirmation](#)



[Transport Information](#)

[Environmental Confirmations](#)



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=3VA2450-7KQ42-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2450-7KQ42-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2450-7KQ42-0AA0

CAX-Online-Generator

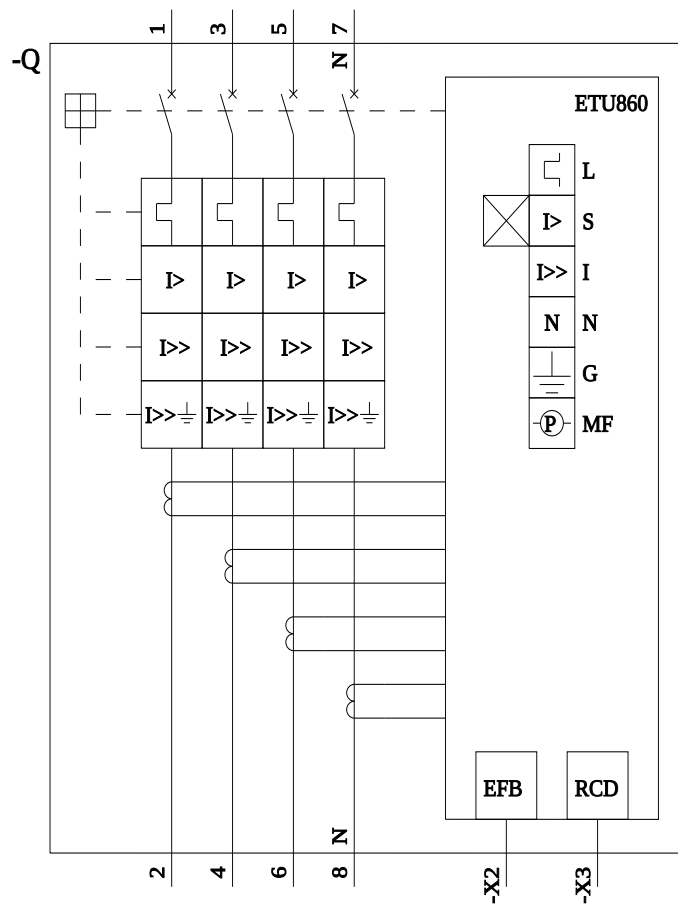
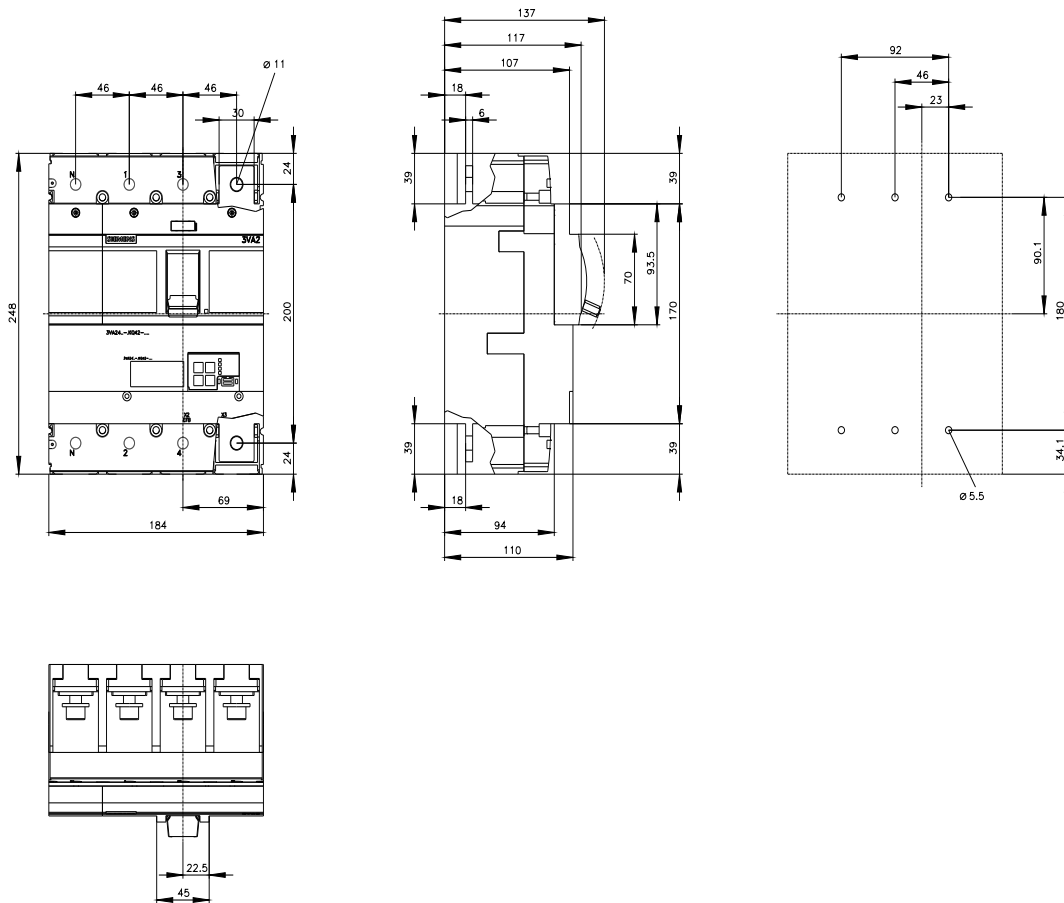
<https://www.siemens.com/cax>

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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