



circuit breaker 3VA2 IEC Frame 160 breaking capacity class M Icu=55 kA @ 415 V 3-pole, motor protection ETU860M, LSIG, In=100 A overload protection Ir=40 A...100 A short-circuit protection I_{sd}=1.2..15x I_n, I_i=3..15x I_n ground-fault protection, can be switched off I_g=0.2...1 x I_n, t_g=0.05-0.8s terminal connection

Model	
product brand name	SENTRON
product designation	Molded case circuit breaker
design of the product	Motor protection
design of the overcurrent release	ETU860M
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	690 V
operating power / at AC-3 / at 400 V	55 000 W
operating power / at AC-3 / at 230 V	30 000 W
power loss [W] / maximum	10 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	3.33 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 AC-3 / at 380/415 V	5 000
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
ground-fault monitoring version	Summation current formation L-conductor
product function	
• communication function	Yes
• phase failure detection	Yes
• other measurement function	Yes
Net Weight	2.318 kg
Current	
operational current	
• at 40 °C	100 A
• at 45 °C	100 A
• at 50 °C	100 A
• at 55 °C	100 A
• at 60 °C	100 A
• at 65 °C	100 A
• at 70 °C	100 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	E
maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	55 kA
• at 500 V	36 kA
• at 690 V	3 kA
operating short-circuit current breaking capacity (I _{cs})	
• at 240 V	85 kA
• at 415 V	55 kA
• at 440 V	55 kA

<ul style="list-style-type: none"> • at 500 V • at 690 V 	<p>36 kA</p> <p>2.5 kA</p>
<p>short-circuit current making capacity (I_{cm})</p> <ul style="list-style-type: none"> • at 240 V • at 415 V • at 440 V • at 500 V • at 690 V 	<p>187 kA</p> <p>121 kA</p> <p>121 kA</p> <p>75.5 kA</p> <p>3.7 kA</p>

Adjustable parameters

product feature / for L-tripping / can be switched on/off	No
adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>40 A</p> <p>100 A</p>
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>3 s</p> <p>25 s</p>
adjustable response value setting current (I _{sd}) / of S-trip / with I _{0t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>120 A</p> <p>1 500 A</p>
adjustable response value delay time (t _{sd}) / for S-tripping / with I _{0t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0.03 s</p> <p>0.03 s</p>
adjustable response value setting current (I _i) / for I-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>300 A</p> <p>1 500 A</p>
adjustable current response value current / for G-tripping / with standard characteristic	
<ul style="list-style-type: none"> • initial value • full-scale value 	<p>20 A</p> <p>100 A</p>
adjustable response value delay time (t _g) / for G-tripping / with I _{0t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0.05 s</p> <p>0.8 s</p>
adjustable response value setting current (I _g) / for G-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>20 A</p> <p>100 A</p>
adjustable response value delay time (t _g) / for G-tripping / with I _{2t} characteristic	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0.05 s</p> <p>0.8 s</p>
adjustable setting current (I _{nN}) / for N-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	<p>0 A</p> <p>0 A</p>
product function / grounding protection	Yes
adjustable trip class (T _c CLASS)	10A, 10/10E, 20/ 20E, 30/30E
tripping time (T _p) / with adjustable trip class (T _c CLASS)	
<ul style="list-style-type: none"> • minimum • maximum 	<p>3 s</p> <p>25 s</p>

Mechanical Design

product component	
<ul style="list-style-type: none"> • undervoltage release • voltage trigger • trip indicator 	<p>No</p> <p>No</p> <p>No</p>
height [in]	7.13 in
height	181 mm
width [in]	4.13 in

type of connectable conductor cross-sections / of the round conductor terminal / stranded	1 x (6 - 120 mm ²)
width	105 mm
depth [in]	3.39 in
depth	86 mm

Connections	
arrangement of electrical connectors / for main current circuit	Front terminal
type of electrical connection / for main current circuit	double-sided box terminal
design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)	tin
design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)	tin

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 during operation / maximum during storage / minimum during storage / maximum 	-25 °C 70 °C -40 °C 80 °C

Environmental footprint	
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](#)



[Confirmation](#)

General Product Approval	EMV	Test Certificates
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EG-Konf.



RCM

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

Maritime application	other
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DNV

[CCS \(China Classification Society\)](#)

[Miscellaneous](#)

[Miscellaneous](#)

[Confirmation](#)

other	Dangerous goods	Environment
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[Transport Information](#)

[Environmental Confirmations](#)



[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=3VA2110-5MQ36-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA2110-5MQ36-0AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA2110-5MQ36-0AA0

CAX-Online-Generator

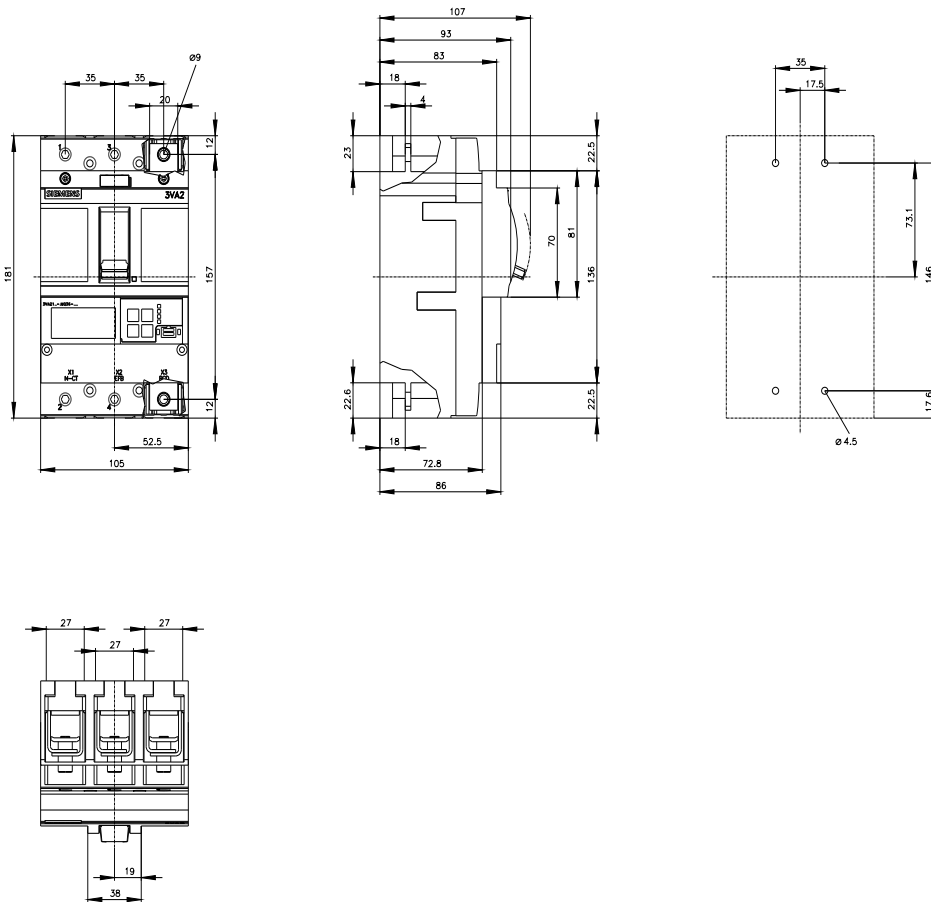
<https://www.siemens.com/cax>

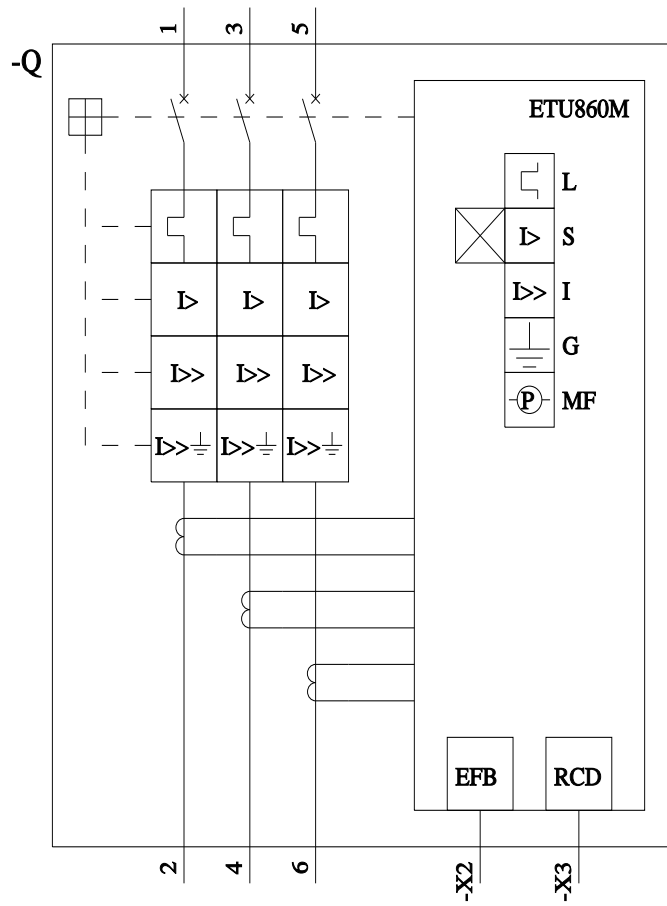
Tender specifications

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

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP=)





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