



circuit breaker 3VA5 UL Frame 600 breaking capacity class M 35 kA @ 480 V 3-pole, line protection TM230, FTAM, In=600 A overload protection Ir=600 A permanently set short-circuit protection Ii=4...8 x In without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MLAS
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 load switch / according to UL 489 / High-Intensity-Discharge circuit breaker (HID Type)	No
design of the load switch / according to UL 489 / Switching Duty circuit breaker (SWD Type)	No
design of the overcurrent release	TM230
protection function of the overcurrent release	LI
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	500 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	175 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	58.33 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	4 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	2 700
electrical endurance (operating cycles) / at 480 V	4 000
electrical endurance (operating cycles) / at 600 V	2 700
product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof	No
product function	
• communication function	No
• other measurement function	No
Net Weight	4.734 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	600 A
• at 45 °C	587 A
• at 50 °C	574 A
• at 55 °C	560 A
• at 60 °C	547 A
• at 65 °C	534 A
• at 70 °C	521 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I _{cu}) <ul style="list-style-type: none">• at 240 V• at 415 V• at 690 V	85 kA 55 kA 7 kA
operating short-circuit current breaking capacity (I _{cs}) <ul style="list-style-type: none">• at 240 V• at 415 V• at 690 V	85 kA 55 kA 6 kA
short-circuit current making capacity (I _{cm}) <ul style="list-style-type: none">• at 240 V• at 415 V• at 690 V	187 kA 121 kA 11.9 kA
design of short-circuit protection	For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter

Switching capacity according to UL 489

current breaking capacity <ul style="list-style-type: none">• at 240 V• at 480 V• at 600 V	85 kA 35 kA 18 kA
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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 600 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic <ul style="list-style-type: none">• minimum• maximum	1 s 1 s
adjustable response value setting current (I _i) / for I-tripping <ul style="list-style-type: none">• minimum• maximum	2 400 A 4 800 A
adjustable setting current (I _{nN}) / for N-tripping <ul style="list-style-type: none">• minimum• maximum	0 A 0 A
product function / grounding protection	No

Mechanical Design

product component <ul style="list-style-type: none">• undervoltage release• voltage trigger• trip indicator	No No No
height [in]	9.76 in
height	248 mm
width [in]	5.43 in
width	138 mm
depth [in]	4.33 in
depth	110 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 <ul style="list-style-type: none">• during operation / minimum• during operation / maximum	-25 °C 70 °C

- during storage / minimum
- during storage / maximum

-40 °C

80 °C

reference code / according to IEC 81346-2

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Approvals / Certificates

General Product Approval



General Product Approval

EMV

Marine / Shipping

[Miscellaneous](#)



[BIS CRS](#)



other

Environment

[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)

[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=3VA5460-5EC31-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5460-5EC31-0AA0>

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

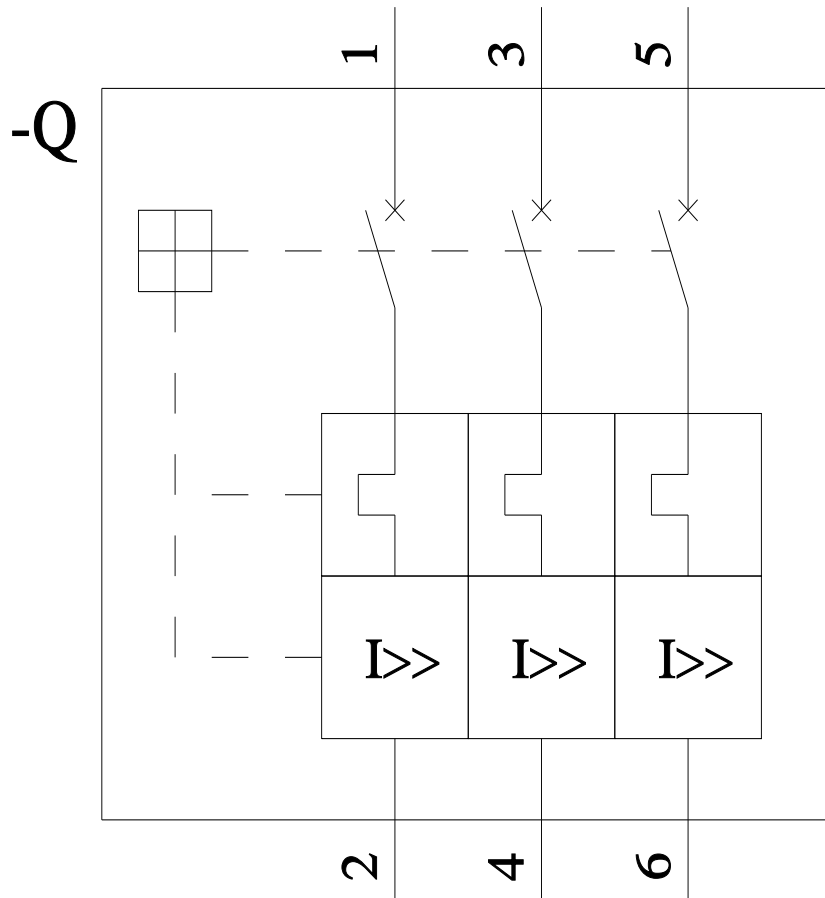
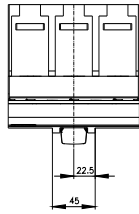
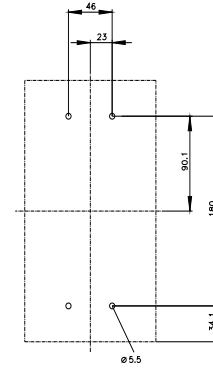
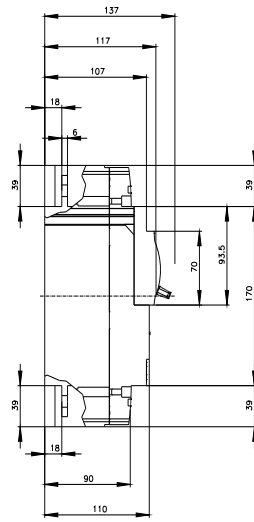
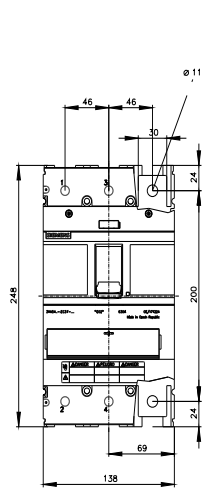
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5460-5EC31-0AA0

CAx-Online-Generator

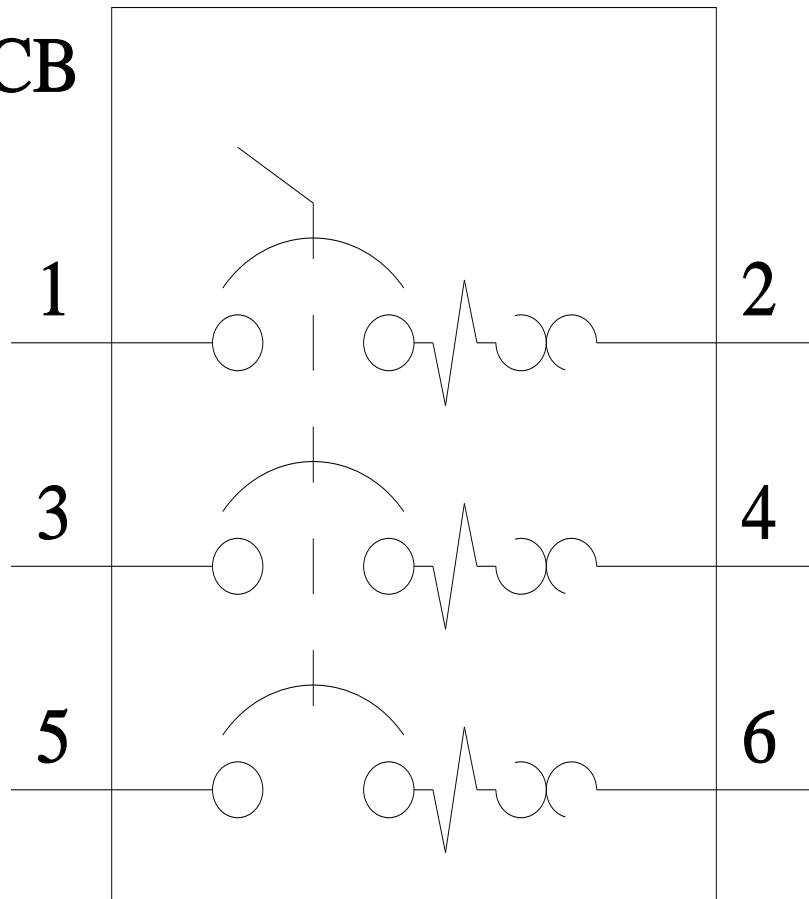
<http://www.siemens.com/cax>

Tender specifications

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



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last modified:

3/31/2025 

