



circuit breaker 3VA5 UL frame 125 3-pole, starter protection TM120M, AM, In=40A without overload protection short-circuit protection Ii=5...12 x In cable connection on both sides

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HEAP
Product version	Starter 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	TM120M
protection function of the overcurrent release	I
number of poles	3
General technical data	
insulation voltage / rated value	800 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	3.6 W
Active power loss / for rated value of the current / at AC / in hot operating state / per pole	1.2 W
mechanical service life (switching cycles) / typical	20 000
Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz	8 000
Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz	4 000
electrical endurance (switching cycles) / at 480 V	8 000
electrical endurance (switching cycles) / at 600 V	4 000
Neutral conductors / upgradeable/retrofitable	No
ground-fault monitoring version	without
product function	
• communication function	No
• phase failure detection	No
• other measurement function	No
Net Weight	1.017 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	40 A
• at 45 °C	40 A
• at 50 °C	40 A
• at 55 °C	40 A
• at 60 °C	40 A

- at 65 °C
- at 70 °C

40 A  
40 A

### Switching capacity according to IEC 60947

breaking capacity maximum short-circuit current (I<sub>cu</sub>)

- at 240 V
- at 415 V
- at 690 V

150 kA  
70 kA  
10 kA

breaking capacity operating short-circuit current (I<sub>cs</sub>)

- at 240 V
- at 415 V
- at 690 V

150 kA  
70 kA  
5 kA

short-circuit current making capacity (I<sub>cm</sub>)

- at 240 V
- at 415 V
- at 690 V

330 kA  
154 kA  
17 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

### Adjustable parameters

product feature / for L-tripping / selectable characteristic function

No

product feature / for S-tripping / independent of direction / selectable characteristic function

No

product feature / for I-tripping / can be switched on/off design of I-trip / adjustable

No  
Yes

reference value setting current (I<sub>i</sub>) / for I-tripping

x I<sub>n</sub>

set values setting current (I<sub>i</sub>) / for I-tripping

5;6;7;8;9;10;11;12

adjustable response factor setting current (I<sub>i</sub>) / for I-tripping / minimum

5

adjustable response factor setting current (I<sub>i</sub>) / for I-tripping / maximum

12

adjustable response value setting current (I<sub>i</sub>) / for I-tripping / minimum

200 A

adjustable response value setting current (I<sub>i</sub>) / for I-tripping / maximum

480 A

product feature / for G-tripping / selectable characteristic function

No

product feature / with neutral conductor protection / can be switched on/off

No

product feature / with neutral conductor protection / adjustable

Yes

type of value list setting current (I<sub>nN</sub>) / for N-tripping

St

reference value setting current (I<sub>nN</sub>) / for N-tripping

x I<sub>n</sub>

adjustable absolute value setting current (I<sub>nN</sub>) / for N-tripping / minimum

0 A

adjustable absolute value setting current (I<sub>nN</sub>) / for N-tripping / maximum

0 A

tripping characteristic / of the upper tolerance band

AK\_3VA5\_1\_40A\_TM120M1\_H\_oT

let-through energy characteristic / at 240 V

DE\_3VA5\_1\_40A\_TM\_line u starter\_3u4p\_240V

let-through energy characteristic / at 415 V

DE\_3VA5\_1\_40A\_TM\_line u starter\_3u4p\_415V

let-through energy characteristic / at 690 V

DE\_3VA5\_1\_40A\_TM\_line u starter\_3u4p\_690V

type of value list setting current (I<sub>i</sub>) / for I-tripping

St

tripping characteristic / of the let-through current characteristic / at 240 V

DS\_3VA5\_1\_40A\_TM\_line u starter\_3u4p\_240V

tripping characteristic / of the let-through current characteristic / at 415 V

DS\_3VA5\_1\_40A\_TM\_line u starter\_3u4p\_415V

tripping characteristic / of the let-through current characteristic / at 690 V

DS\_3VA5\_1\_40A\_TM\_line u starter\_3u4p\_690V

Ground fault protection / tripping switchable / I<sub>2t</sub>=ON/OFF

No

### Mechanical Design

product component

- undervoltage release
- voltage trigger
- trip indicator

No

No

No

height [in]

5.51 in

Height

140 mm

width [in]	3 in
Type of connectable conductor cross-section, round conductor terminal, stranded	1 x (8 AWG - 3/0)
Width	76.2 mm
depth [in]	3.01 in
depth	76.5 mm

### Connections

arrangement of electrical connectors / for main current circuit	Front connection
type of electrical connection / for main current circuit	circular conductor terminal on both sides

### 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

### Certificates

reference code / according to IEC 81346-2	Q
certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB	Yes

<b>General Product Approval</b>	<b>EMC</b>	<b>Declaration of Conformity</b>
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[Confirmation](#)

[Miscellaneous](#)



<b>Marine / Shipping</b>	<b>other</b>
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[Miscellaneous](#)

### Further information

**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=3VA5140-1MH36-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5140-1MH36-0AA0>

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

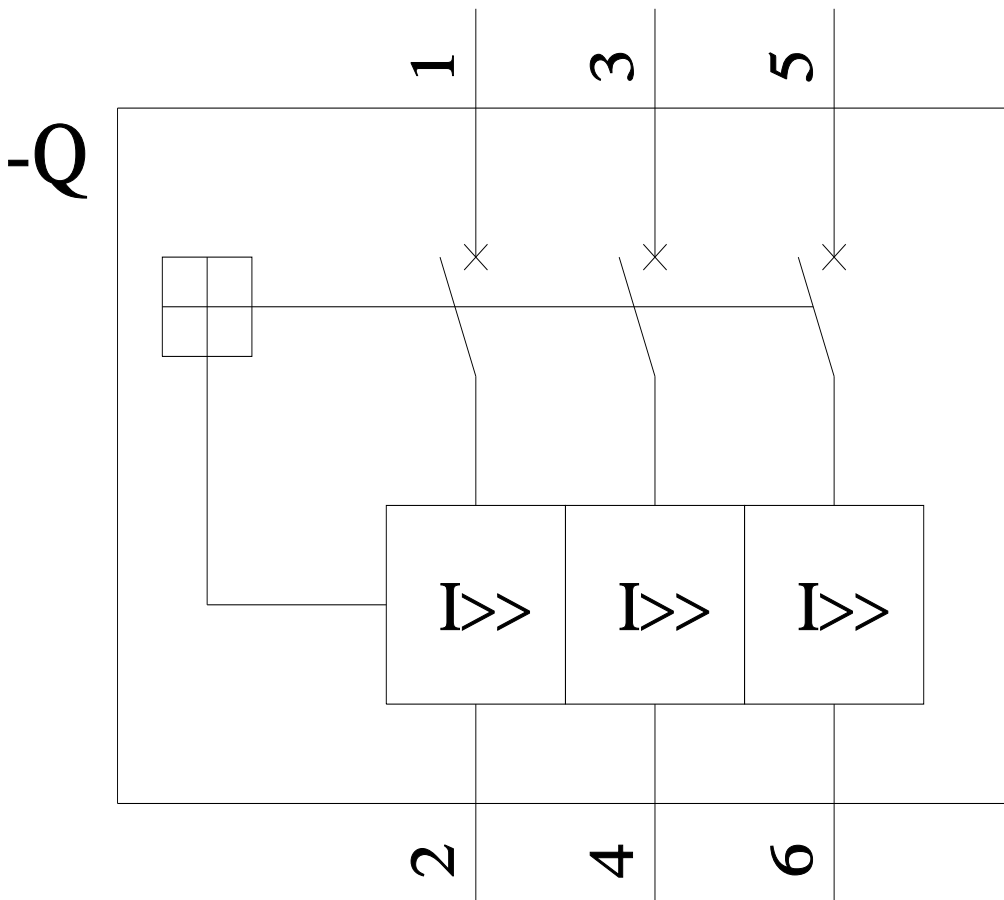
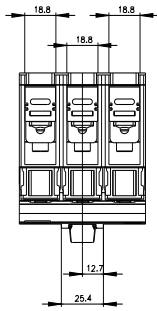
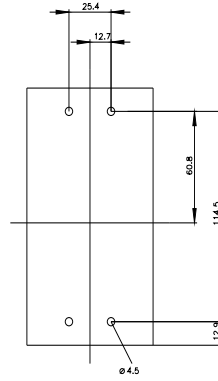
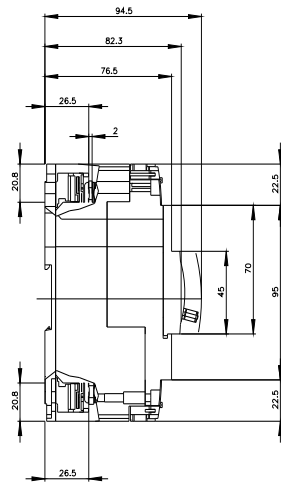
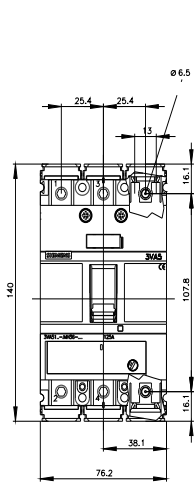
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5140-1MH36-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5140-1MH36-0AA0)

**CAX-Online-Generator**

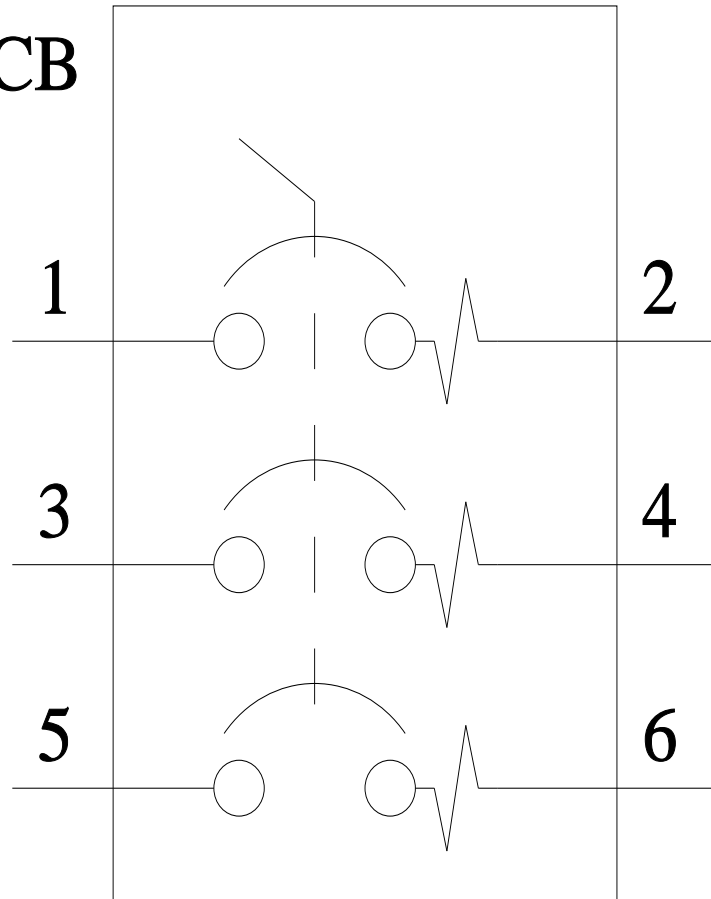
<http://www.siemens.com/cax>

**Tender specifications**

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



**CB**



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