



circuit breaker 3VA5 UL frame 1600 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM230, FTAM,  $I_n=1600A$  overload protection  $I_r=1600A$  fixed short circuit protection  $I_i=5 - 7,5 \times I_n$  UL489 SB (NAVAL), 50 deg. CEL. w/o connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MPAM
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	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	750 V
operating voltage / at AC / rated value	600 V
power loss [W] / maximum	423 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	423 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
product function	
• communication function	No
• phase failure detection	No
• other measurement function	No
Net Weight	3.133 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	1 600 A
• at 45 °C	1 577 A
• at 50 °C	1 554 A
• at 55 °C	1 531 A
• at 60 °C	1 508 A
• at 65 °C	1 485 A
• at 70 °C	1 462 A
Switching capacity according to IEC 60947	

switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I <sub>cu</sub> )	
• at 240 V	65 kA
• at 415 V	50 kA
• at 690 V	20 kA
operating short-circuit current breaking capacity (I <sub>cs</sub> )	
• at 240 V	35 kA
• at 415 V	25 kA
• at 690 V	15 kA
short-circuit current making capacity (I <sub>cm</sub> )	
• at 240 V	143 kA
• at 415 V	105 kA
• at 690 V	63 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	
• at 240 V	85 kA
• at 480 V	35 kA
• at 600 Y/347 V	25 kA
• at 600 V	25 kA

#### Adjustable parameters

adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic	
• minimum	1 600 A
• maximum	1 600 A
adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (I <sub>i</sub> ) / for I-tripping	
• minimum	7 000 A
• maximum	12 000 A
product function / grounding protection	No

#### Mechanical Design

product component	
• undervoltage release	No
• trip indicator	No
height [in]	8.14 in
height	207 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
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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

## Approvals / Certificates

General Product Approval

EMV

[Confirmation](#)[Miscellaneous](#)

Test Certificates

other

Environment

[Type Test Certificates/Test Report](#)[Confirmation](#)[Miscellaneous](#)[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=3VA5816-5EC31-1AA0>

## Service&amp;Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5816-5EC31-1AA0>

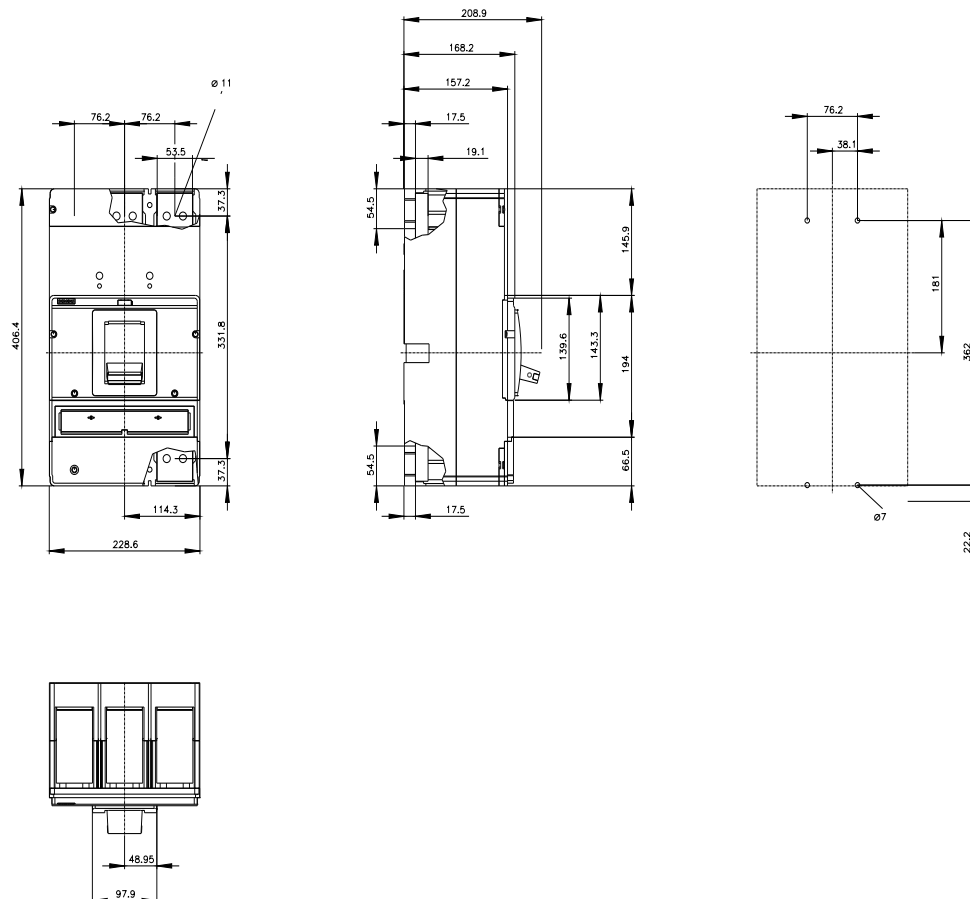
## Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

[https://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5816-5EC31-1AA0](https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5816-5EC31-1AA0)

## CAx-Online-Generator

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

## Tender specifications

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



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