



circuit breaker 3VA5 UL Frame 250 breaking capacity class M 35 kA @ 480 V 3-pole, line protection TM230, FTAM, In=80 A overload protection Ir=80 A permanently set short-circuit protection Ii=5...10 x In UL 489 SB (naval), 50° C without connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MFAM
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	
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	20 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	6.8 W
mechanical service life (operating cycles) / typical	20 000
electrical endurance (operating cycles) / at AC-1 / at 380/415 V	8 000
electrical endurance (operating cycles) / at AC-1 / at 690 V	4 000
electrical endurance (operating cycles) / at 480 V	8 000
electrical endurance (operating cycles) / at 600 V	4 000
product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof	No
product function	
• communication function	No
• other measurement function	No
Net Weight	2 kg
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	80 A
• at 45 °C	80 A
• at 50 °C	80 A
• at 55 °C	77.6 A
• at 60 °C	76 A
• at 65 °C	73.6 A
• at 70 °C	70.4 A
Switching capacity according to IEC 60947	
switching capacity class of the circuit breaker	M

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"> <li>at 240 V</li> <li>at 480 V</li> <li>at 600 V</li> </ul>	85 kA 35 kA 18 kA

### Adjustable parameters

adjustable response value setting current ( $I_r$ ) / of the L-trip / with I2t characteristic	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	80 A 80 A
adjustable response value delay time ( $t_r$ ) / for L-tripping / with I2t characteristic	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	1 s 1 s
adjustable response value setting current ( $I_i$ ) / for I-tripping	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	400 A 800 A
adjustable setting current ( $I_{nN}$ ) / for N-tripping	
<ul style="list-style-type: none"> <li>minimum</li> <li>maximum</li> </ul>	0 A 0 A
product function / grounding protection	No

### Mechanical Design

product component	
<ul style="list-style-type: none"> <li>undervoltage release</li> <li>voltage trigger</li> <li>trip indicator</li> </ul>	No No No
height [in]	7.28 in
height	185 mm
width [in]	4.13 in
width	105 mm
depth [in]	3.27 in
depth	83 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
--	---

### Accessories

product extension / optional / motor drive	Yes
--	-----

### Environmental conditions

protection class IP / on the front	IP40
ambient temperature	
<ul style="list-style-type: none"> <li>during operation / minimum</li> <li>during operation / maximum</li> <li>during storage / minimum</li> <li>during storage / maximum</li> </ul>	-25 °C 70 °C -40 °C 80 °C

### Approvals / Certificates

#### General Product Approval



[Confirmation](#)



General Product Approval	EMV	Marine / Shipping	other
--------------------------	-----	-------------------	-------



other	Environment
-------	-------------

**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=3VA5280-5EC31-1AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5280-5EC31-1AA0>

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

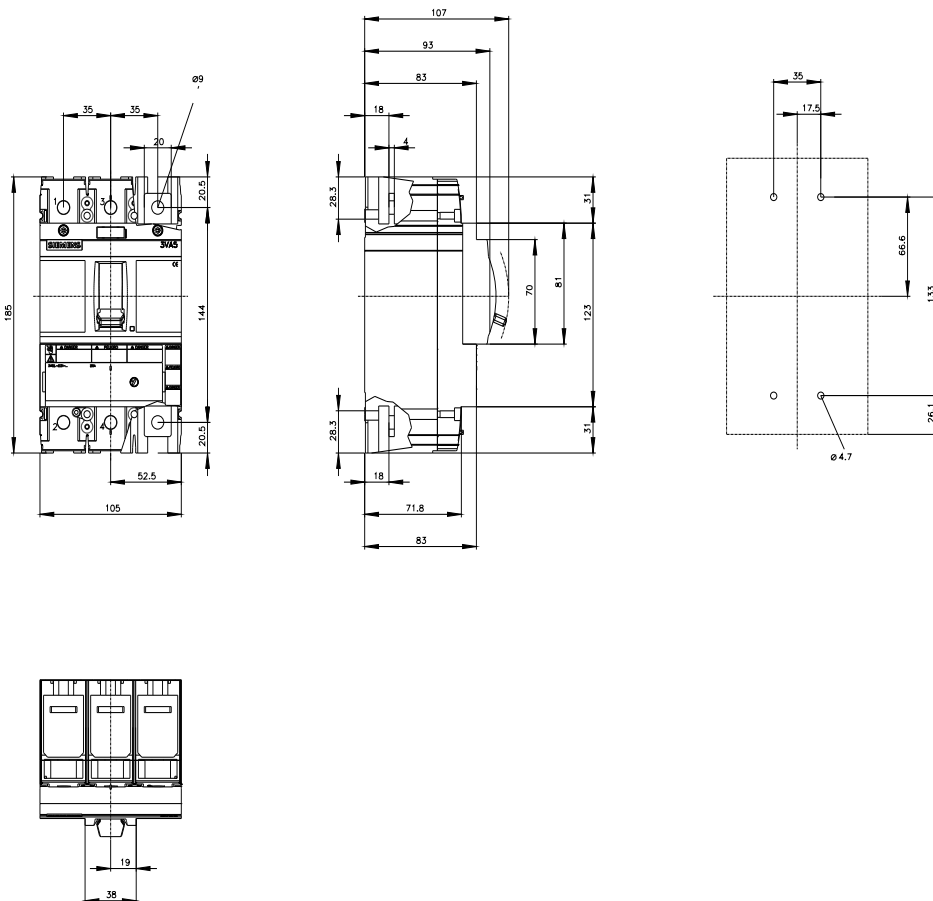
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA5280-5EC31-1AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5280-5EC31-1AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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





last modified:

6/16/2022

