



circuit breaker 3VA5 UL frame 1200 breaking capacity class M 35kA @ 480 V 3-pole, line protection TM230, FTAM, In=800A overload protection Ir=800A fixed short circuit protection Ii=5 - 10 x In 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	MNAM
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	134 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	134 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	800 A
• at 45 °C	776 A
• at 50 °C	752 A
• at 55 °C	728 A
• at 60 °C	704 A
• at 65 °C	680 A
• at 70 °C	655 A
Switching capacity according to IEC 60947	

switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	65 kA
• at 415 V	50 kA
• at 690 V	20 kA
operating short-circuit current breaking capacity (I _{cs})	
• at 240 V	35 kA
• at 415 V	25 kA
• at 690 V	15 kA
short-circuit current making capacity (I _{cm})	
• 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 _r) / of the L-trip / with I _{2t} characteristic	
• minimum	800 A
• maximum	800 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (I _i) / for I-tripping	
• minimum	4 000 A
• maximum	8 000 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
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 Con- firmations

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=3VA5780-5EC31-1AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5780-5EC31-1AA0>

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

https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5780-5EC31-1AA0

CAX-Online-Generator
<https://www.siemens.com/cax>

Tender specifications

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





