



circuit breaker 3VA5 UL Frame 125 breaking capacity class H 65 kA @ 480 V 4-pole, line protection TM210, FTFM, $I_n=90$ A overload protection $I_r=90$ A permanently set short-circuit protection $I_i=10 \times I_n$ N conductor unprotected without connection

Model	
product brand name	SETRON
product designation	Molded-case circuit breaker
product designation / according to UL file	HEAS
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	TM210
protection function of the overcurrent release	LI
number of poles	4
General technical data	
insulation voltage / rated value	800 V
operating voltage / at DC / rated value	600 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	21.4 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	7.13 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	952 g
Current	
marking / according to UL 489 / 100%-rated breaker	No
operational current	
• at 40 °C	90 A
• at 45 °C	88 A

- at 50 °C
- at 55 °C
- at 60 °C
- at 65 °C
- at 70 °C

86 A
84 A
82 A
80 A
79 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	H
maximum short-circuit current breaking capacity (I _{cu})	
• at 240 V	150 kA
• at 415 V	70 kA
• at 690 V	10 kA
operating short-circuit current breaking capacity (I _{cs})	
• at 240 V	150 kA
• at 415 V	70 kA
• at 690 V	5 kA
short-circuit current making capacity (I _{cm})	
• at 240 V	330 kA
• at 415 V	154 kA
• at 690 V	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

Switching capacity according to UL 489

current breaking capacity	
• at 240 V	150 kA
• at 480 V	65 kA
• at 600 Y/347 V	25 kA

Adjustable parameters

adjustable response value setting current (I _r) / of the L-trip / with I2t characteristic	
• minimum	90 A
• maximum	90 A
adjustable response value delay time (t _r) / for L-tripping / with I2t characteristic	
• minimum	1 s
• maximum	1 s
adjustable response value setting current (I _i) / for I-tripping	
• minimum	900 A
• maximum	900 A
adjustable setting current (I _{nN}) / for N-tripping	
• minimum	0 A
• maximum	0 A
design of the N-conductor protection	Without
product function / grounding protection	No

Mechanical Design

product component	
• undervoltage release	No
• voltage trigger	No
• trip indicator	No
height [in]	5.51 in
height	140 mm
width [in]	4 in
width	101.5 mm
depth [in]	3.01 in
depth	76.5 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
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
reference code / according to IEC 81346-2	Q
Approvals / Certificates	
General Product Approval	



[Miscellaneous](#)



[Miscellaneous](#)



General Product Approval	EMV
 Confirmation	 EG-Konf.   

Test Certificates	Maritime application
Type Test Certificates/Test Report	Special Test Certificate
	   

Maritime application	other	Environment
	Miscellaneous	Confirmation 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=3VA5190-6ED41-0AA0
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3VA5190-6ED41-0AA0
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) https://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5190-6ED41-0AA0
CAX-Online-Generator https://www.siemens.com/cax
Tender specifications https://www.siemens.com/specifications
Characteristic curves <a href='https://curves.simar.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>'>https://curves.simar.siemens.com/curves/<mmp_prod_noCOMP="HAUPT"></mmp_prod_no>





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