



circuit breaker 3VA5 UL frame 250 breaking capacity class M 35kA @ 480 V 4-pole, line protection TM210, FTFM, In=225A without overload protection Ir=225A fixed short circuit protection Ii=10 x In neutral unprotected w/o connection

Model	
product brand name	SENTRON
product designation	Molded-case circuit breaker
product designation / according to UL file	MFAS
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	1 000 V
operating voltage / at AC / rated value	690 V
power loss [W] / maximum	51 W
power loss [W] / for rated value of the current / at AC / in hot operating state / per pole	17.1 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/retrofittable / short-circuit and overload proof	No
product function	
• communication function	No
• other measurement function	No
Net Weight	2 800 g
Current	
marking / according to UL 489 / 100%-rated breaker	Yes
operational current	
• at 40 °C	225 A
• at 45 °C	220 A
• at 50 °C	216 A
• at 55 °C	211 A
• at 60 °C	206 A
• at 65 °C	201 A
• at 70 °C	197 A

Switching capacity according to IEC 60947

switching capacity class of the circuit breaker	M
maximum short-circuit current breaking capacity (I _{cu}) <ul style="list-style-type: none">• at 240 V• at 415 V• at 690 V	85 kA 55 kA 7 kA
operating short-circuit current breaking capacity (I _{cs}) <ul style="list-style-type: none">• at 240 V• at 415 V• at 690 V	85 kA 55 kA 7 kA
short-circuit current making capacity (I _{cm}) <ul style="list-style-type: none">• at 240 V• at 415 V• at 690 V	187 kA 121 kA 11.9 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 <ul style="list-style-type: none">• at 240 V• at 480 V• at 600 V	85 kA 35 kA 18 kA
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Adjustable parameters

adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic <ul style="list-style-type: none">• minimum• maximum	225 A 225 A
adjustable response value delay time (t _r) / for L-tripping / with I _{2t} characteristic <ul style="list-style-type: none">• minimum• maximum	1 s 1 s
adjustable response value setting current (I _i) / for I-tripping <ul style="list-style-type: none">• minimum• maximum	2 250 A 2 250 A
adjustable setting current (I _{nN}) / for N-tripping <ul style="list-style-type: none">• minimum• maximum	0 A 0 A
design of the N-conductor protection	Without
product function / grounding protection	No

Mechanical Design

product component <ul style="list-style-type: none">• undervoltage release• voltage trigger• trip indicator	No No No
height [in]	7.28 in
height	185 mm
width [in]	5.51 in
width	140 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
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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Accessories

product extension / optional / motor drive	Yes
manufacturer's article number <ul style="list-style-type: none">• of the supplied basic switch	3VA52225ED412AA0

Environmental conditions

