



circuit breaker 3VA5 UL Frame 250 breaking capacity class M 35 kA @ 480 V 3-pole, line protection TM210, FTFM, $I_n=110$ A overload protection, 100%-rated $I_r=110$ A permanently set short-circuit protection $I_i=10 \times I_n$ without 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 | 3 |
| General technical data | |
| insulation voltage / rated value | 800 V |
| operating voltage / at DC / rated value | 750 V |
| operating voltage / at AC / rated value | 690 V |
| power loss [W] / maximum | 23 W |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 7.5 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 | 2 100 g |
| Current | |
| marking / according to UL 489 / 100%-rated breaker | Yes |
| operational current | |
| • at 40 °C | 110 A |
| • at 45 °C | 107 A |
| • at 50 °C | 104 A |
| • at 55 °C | 100 A |
| • at 60 °C | 97 A |
| • at 65 °C | 94 A |
| • at 70 °C | 91 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 | 85 kA |
| • at 415 V | 55 kA |
| • at 690 V | 7 kA |
| operating short-circuit current breaking capacity (I _{cs}) | |
| • at 240 V | 85 kA |
| • at 415 V | 55 kA |
| • at 690 V | 7 kA |
| short-circuit current making capacity (I _{cm}) | |
| • at 240 V | 187 kA |
| • at 415 V | 121 kA |
| • at 690 V | 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 | |
| • at 240 V | 85 kA |
| • at 480 V | 35 kA |
| • at 600 V | 18 kA |

Adjustable parameters

| | |
|---|---------|
| adjustable response value setting current (I _r) / of the L-trip / with I _{2t} characteristic | |
| • minimum | 110 A |
| • maximum | 110 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 | 1 100 A |
| • maximum | 1 100 A |
| adjustable setting current (I _{nN}) / for N-tripping | |
| • minimum | 0 A |
| • maximum | 0 A |
| product function / grounding protection | No |

Mechanical Design

| | |
|------------------------|---------|
| product component | |
| • undervoltage release | No |
| • voltage trigger | No |
| • trip indicator | 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 |
| 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 |
|--|---|

Accessories

| | |
|--|----------------------------------|
| product extension / optional / motor drive | Yes |
| manufacturer's article number | |
| • of the supplied basic switch | 3VA52115ED312AA0 |

Environmental conditions

| | |
|------------------------------------|------|
| protection class IP / on the front | IP40 |
|------------------------------------|------|



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