



circuit breaker 3VA5 UL Frame 250 breaking capacity class M 35 kA @ 480 V 4-pole, line protection TM230, FTAM, In=200 A overload protection, 100%-rated Ir=200 A permanently set short-circuit protection Ii=5...10 x In N conductor unprotected 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 | TM230 |
| 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 | 43 W |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 14.2 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 | 200 A |
| • at 45 °C | 194 A |
| • at 50 °C | 189 A |
| • at 55 °C | 183 A |
| • at 60 °C | 178 A |
| • at 65 °C | 172 A |
| • at 70 °C | 167 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 |
|--|-------------------------|

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 | 200 A 200 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 | 1 000 A 2 000 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 |
|--|---|

Accessories

| | |
|--|----------------------------------|
| product extension / optional / motor drive | Yes |
| manufacturer's article number <ul style="list-style-type: none">• of the supplied basic switch | 3VA52205EC412AA0 |

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



| | | | | |
|--------------------------|-----|----------------------|-------|-------------|
| General Product Approval | EMV | Maritime application | other | Environment |
|--------------------------|-----|----------------------|-------|-------------|



Confirmation

Miscellaneous

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,...)

<http://www.siemens.com/lowvoltage/catalogs>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VA5220-5EC41-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5220-5EC41-2AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA5220-5EC41-2AA0

CAX-Online-Generator

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

Tender specifications

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





