



circuit breaker 3VA5 UL frame 125 breaking capacity class M 35kA @ 277 V 1-pole, line protection TM210, FTFM, In=90A overload protection Ir=90A fixed short-circuit protection li=10 x In nut keeper kit on both sides

| Model | |
|--|-----------------------------|
| product brand name | SENTRON |
| product designation | Molded-case circuit breaker |
| product designation / according to UL file | MEAS |
| Product version | 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 | 1 |
| General technical data | |
| rated insulation voltage Ui | 500 V |
| Max. rated operational voltage Ue with DC | 125 V |
| operating voltage / at AC / rated value | 415 V |
| power loss [W] / maximum | 7.13 W |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 7.13 W |
| mechanical service life (switching cycles) / typical | 20 000 |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 8 000 |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz | 4 000 |
| electrical endurance (switching cycles) / at 480 V | 8 000 |
| electrical endurance (switching cycles) / at 600 V | 4 000 |
| Neutral conductors / upgradeable/retrofitable | No |
| ground-fault monitoring version | without |
| product function | |
| • communication function | No |
| • other measurement function | No |
| Net Weight | 0.407 kg |
| 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 | 86 A |

| | |
|------------|------|
| • at 55 °C | 84 A |
| • at 60 °C | 82 A |
| • at 65 °C | 80 A |
| • at 70 °C | 79 A |

Switching capacity according to IEC 60947

| | |
|---|--|
| switching capacity class of the circuit breaker | M |
| breaking capacity maximum short-circuit current (Icu) | |
| • at 240 V | 36 kA |
| • at 415 V | 5 kA |
| breaking capacity operating short-circuit current (Ics) | |
| • at 240 V | 36 kA |
| • at 415 V | 5 kA |
| short-circuit current making capacity (Icm) | |
| • at 240 V | 75.6 kA |
| • at 415 V | 7.5 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

| | |
|---------------------------|-------|
| breaking capacity current | |
| • at 120 V | 85 kA |
| • at 277 V | 35 kA |
| • at 347 V | 18 kA |

Adjustable parameters

| | |
|---|------|
| Adjustable response value current / I _g min. | 90 A |
| Adjustable response value current / I _g min. | 90 A |
| Ground fault protection / tripping switchable / I _{2t} =ON/OFF | No |

Mechanical Design

| | |
|-------------|---------|
| height [in] | 5.51 in |
| Height | 140 mm |
| width [in] | 1 in |
| Width | 25.4 mm |
| depth [in] | 3.01 in |
| depth | 76.5 mm |

Connections

| | |
|---|-----------------------------|
| arrangement of electrical connectors / for main current circuit | Front connection |
| type of electrical connection / for main current circuit | nut keeper kit on both ends |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 12 x 1 mm |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5 mm |

Auxiliary circuit

| | |
|--|----|
| product component | |
| • undervoltage release | No |
| • voltage trigger | No |
| • trip indicator | No |
| number of CO contacts / for auxiliary contacts | 0 |

Accessories

| | |
|--|----|
| product extension / optional / motor drive | No |
|--|----|

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 |

Certificates

| | |
|---|---|
| reference code / according to IEC 81346-2 | Q |
|---|---|

General Product Approval

EMC

Marine / Shipping



[Confirmation](#)



other

[Miscellaneous](#)

Further information

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?mfb=3VA5190-5ED12-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA5190-5ED12-0AA0>

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA5190-5ED12-0AA0

CAX-Online-Generator

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

Tender specifications

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





