SIEMENS

Data sheet



circuit breaker 3VM1 IEC frame 160 breaking capacity class N Icu=25kA @ 415V 4-pole, line protection TM220, ATFM, In=63A overload protection Ir=44A...63A short-circuit protection Ii=10 x In N conductor protection 100% nut keeper kit

| Model | |
|--|-----------------------------|
| product brand name | SENTRON |
| product designation | Molded case circuit breaker |
| design of the product | Line protection |
| design of the overcurrent release | TM220 |
| protection function of the overcurrent release | LI |
| number of poles | 4 |
| General technical data | |
| insulation voltage / rated value | 800 V |
| operating voltage / at AC / at 50/60 Hz / rated value | 500 V |
| operating voltage / at DC / rated value | 500 V |
| operating voltage / at AC / rated value | 690 V |
| power loss [W] / maximum | 17 W |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole | 5.77 W |
| mechanical service life (operating cycles) / typical | 15 000 |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V | 6 000 |
| product feature / for neutral conductors / upgradable/retrofittable / short-circuit and overload proof | No |
| ground-fault monitoring version | Without |
| product function | |
| communication function | No |
| other measurement function | No |
| Net Weight | 1.269 kg |
| Current | |
| operational current | |
| • at 40 °C | 63 A |
| • at 45 °C | 63 A |
| ● at 50 °C | 63 A |
| • at 55 °C | 62 A |
| • at 60 °C | 61 A |
| • at 65 °C | 60 A |
| • at 70 °C | 58 A |
| Switching capacity according to IEC 60947 | |
| switching capacity class of the circuit breaker | N |
| maximum short-circuit current breaking capacity (lcu) | |
| • at 240 V | 36 kA |
| • at 415 V | 25 kA |
| • at 440 V | 16 kA |
| ● at 500 V | 7 kA |
| operating short-circuit current breaking capacity (lcs) | |

| • at 240 V | 27 kA |
|---|--|
| ● at 415 V | 18 kA |
| ● at 440 V | 12 kA |
| ● at 500 V | 5 kA |
| short-circuit current making capacity (Icm) | |
| ● at 240 V | 76 kA |
| ● at 415 V | 53 kA |
| ● at 440 V | 32 kA |
| ● at 500 V | 12 kA |
| design of short-circuit protection | For switching capacity values in DC power systems, see the 3VA Molded Case |
| | Circuit Breaker Manual; link available under Service & Support in the last chapter |
| Adjustable parameters | Chapter |
| product feature / for L-tripping / can be switched on/off | No |
| adjustable response value setting current (Ir) / of the L-trip / with | INO |
| I2t characteristic | |
| • minimum | 44 A |
| • maximum | 63 A |
| adjustable response value delay time (tr) / for L-tripping / with l2t characteristic | |
| • minimum | 1 s |
| maximum | 1 s |
| adjustable response value setting current (li) / for I-tripping | |
| • minimum | 630 A |
| • maximum | 630 A |
| adjustable setting current (InN) / for N-tripping | |
| • minimum | 63 A |
| • maximum | 63 A |
| adjustable current response value current / of instantaneous short-circuit trip unit | |
| • maximum | 630 A |
| design of the N-conductor protection | 100% |
| product function / grounding protection | No |
| Mechanical Design | |
| product component | |
| undervoltage release | No |
| voltage trigger | No |
| trip indicator | No |
| height [in] | 5.12 in |
| height | 130 mm |
| width [in] | 4 in |
| width | 101.6 mm |
| depth [in] | 2.76 in |
| | |
| depth | 70 mm |
| depth Connections | 70 mm |
| · | 70 mm Front connection |
| Connections | |
| Connections arrangement of electrical connectors / for main current circuit | Front connection |
| Connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar | Front connection nut keeper kit on both ends |
| connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the | Front connection nut keeper kit on both ends 12 x 1 mm |
| connections arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum | Front connection nut keeper kit on both ends 12 x 1 mm 17 x 6.5 mm |
| arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the | Front connection nut keeper kit on both ends 12 x 1 mm 17 x 6.5 mm Silver |
| arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) | Front connection nut keeper kit on both ends 12 x 1 mm 17 x 6.5 mm Silver |
| arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit | Front connection nut keeper kit on both ends 12 x 1 mm 17 x 6.5 mm Silver Tin |
| arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts | Front connection nut keeper kit on both ends 12 x 1 mm 17 x 6.5 mm Silver Tin |
| arrangement of electrical connectors / for main current circuit type of electrical connection / for main current circuit type of connectable conductor cross-sections / for flat-bar terminal connection / minimum type of connectable conductor cross-sections / for flat-bar terminal connection / maximum design of the surface / of the connections / on the top of the switch (N, 1, 3, 5) design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) Auxiliary circuit number of CO contacts / for auxiliary contacts Accessories | Front connection nut keeper kit on both ends 12 x 1 mm 17 x 6.5 mm Silver Tin |
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- during operation / maximum
- during storage / minimum
- during storage / maximum

70 °C -40 °C 80 °C

Approvals / Certificates

General Product Approval

Confirmation









Miscellaneous

General Product Approval

Test Certificates

Marine / Shipping



Miscellaneous









Marine / Shipping

other

Environment



Miscellaneous

Confirmation

Environmental Confirmations Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

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

Industry Mall (Online ordering system)

 $\underline{https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1163-3GE42-0AA0}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3VM1163-3GE42-0AA0

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

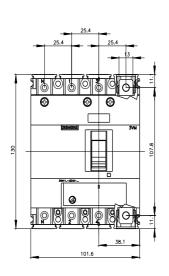
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1163-3GE42-0AA0

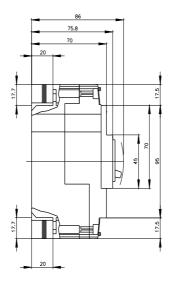
CAx-Online-Generator

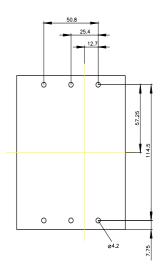
http://www.siemens.com/cax

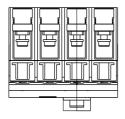
Tender specifications

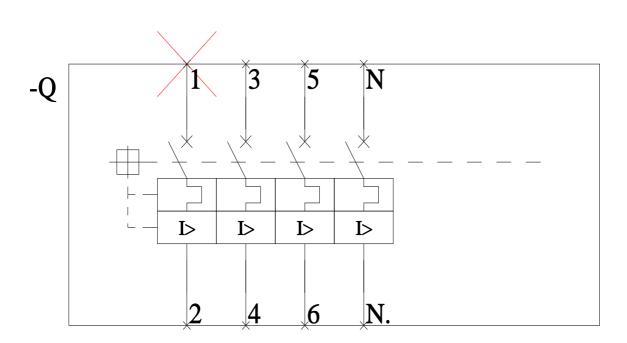
http://www.siemens.com/specifications











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