



circuit breaker 3VM1 IEC frame 160 breaking capacity class N  $I_{cu}=25\text{kA}$  @ 415V 3-pole, line protection TM220, ATFM,  $I_n=50\text{A}$  overload protection  $I_r=35\text{A}...50\text{A}$  short-circuit protection  $I_i=10 \times I_n$  nut keeper kit

| Model                                                                                          |                             |
|------------------------------------------------------------------------------------------------|-----------------------------|
| product brand name                                                                             | SENTRON                     |
| product designation                                                                            | Molded case circuit breaker |
| Product version                                                                                | Line protection             |
| design of the overcurrent release                                                              | TM220                       |
| protection function of the overcurrent release                                                 | LI                          |
| number of poles                                                                                | 3                           |
| General technical data                                                                         |                             |
| rated insulation voltage $U_i$                                                                 | 800 V                       |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                                           | 500 V                       |
| Max. rated operational voltage $U_e$ with DC                                                   | 500 V                       |
| operating voltage / at AC / rated value                                                        | 690 V                       |
| power loss [W] / maximum                                                                       | 15 W                        |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 4.87 W                      |
| mechanical service life (switching cycles) / typical                                           | 15 000                      |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz                      | 6 000                       |
| Neutral conductors / upgradeable/retrofitable                                                  | No                          |
| ground-fault monitoring version                                                                | Without                     |
| product function                                                                               |                             |
| • communication function                                                                       | No                          |
| • other measurement function                                                                   | No                          |
| Net Weight                                                                                     | 963 g                       |
| Current                                                                                        |                             |
| operational current                                                                            |                             |
| • at 40 °C                                                                                     | 50 A                        |
| • at 45 °C                                                                                     | 50 A                        |
| • at 50 °C                                                                                     | 50 A                        |
| • at 55 °C                                                                                     | 49 A                        |
| • at 60 °C                                                                                     | 48 A                        |
| • at 65 °C                                                                                     | 46 A                        |
| • at 70 °C                                                                                     | 45 A                        |
| Switching capacity according to IEC 60947                                                      |                             |
| switching capacity class of the circuit breaker                                                | N                           |
| breaking capacity maximum short-circuit current ( $I_{cu}$ )                                   |                             |
| • at 240 V                                                                                     | 36 kA                       |
| • at 415 V                                                                                     | 25 kA                       |
| • at 440 V                                                                                     | 16 kA                       |
| • at 500 V                                                                                     | 7 kA                        |

|                                                         |                                                                                                                                                               |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| breaking capacity operating short-circuit current (Ics) |                                                                                                                                                               |
| • 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 |

|                                                            |       |
|------------------------------------------------------------|-------|
| <b>Adjustable parameters</b>                               |       |
| Adjustable response value current / Ii max.                | 500 A |
| Ground fault protection / tripping switchable / I2t=ON/OFF | No    |

|                          |         |
|--------------------------|---------|
| <b>Mechanical Design</b> |         |
| height [in]              | 5.12 in |
| Height                   | 130 mm  |
| width [in]               | 3 in    |
| Width                    | 76.2 mm |
| depth [in]               | 2.76 in |
| depth                    | 70 mm   |

|                                                                                       |                  |
|---------------------------------------------------------------------------------------|------------------|
| <b>Connections</b>                                                                    |                  |
| arrangement of electrical connectors / for main current circuit                       | Front connection |
| design of the surface / of the connections / on the top of the switch (N, 1, 3, 5)    | Silver           |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6) | Tin              |

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

|                                            |    |
|--------------------------------------------|----|
| <b>Accessories</b>                         |    |
| product extension / optional / motor drive | No |

|                                    |        |
|------------------------------------|--------|
| <b>Environmental conditions</b>    |        |
| 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  |

|                                           |   |
|-------------------------------------------|---|
| <b>Certificates</b>                       |   |
| reference code / according to IEC 81346-2 | Q |

|                                 |                                  |
|---------------------------------|----------------------------------|
| <b>General Product Approval</b> | <b>Declaration of Conformity</b> |
|---------------------------------|----------------------------------|

[Confirmation](#)



[Miscellaneous](#)



|                                  |                          |                          |
|----------------------------------|--------------------------|--------------------------|
| <b>Declaration of Conformity</b> | <b>Test Certificates</b> | <b>Marine / Shipping</b> |
|----------------------------------|--------------------------|--------------------------|

[Miscellaneous](#)



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?mlfb=3VM1150-3EE32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VM1150-3EE32-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VM1150-3EE32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1150-3EE32-0AA0)

**CAX-Online-Generator**

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

**Tender specifications**

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

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