



circuit breaker 3VM1 IEC frame 630 breaking capacity class S  $I_{cu}=55kA @ 415V$   
3-pole, line protection TM220, ATFM,  $I_n=630A$  overload protection  $I_r=440A...630A$   
short-circuit protection  $I_i=8 \times I_n$  nut keeper kit (for products not manufactured in  
China, only CE and EEQCO Scheme-X certifications are available)

| 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                                                                                       | 3                           |
| 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                                                                              | 193 W                       |
| power loss [W] / for rated value of the current / at AC / in hot operating state / per pole           | 64.3 W                      |
| mechanical service life (operating cycles) / typical                                                  | 15 000                      |
| electrical endurance (operating cycles) / at AC-1 / at 380/415 V                                      | 4 000                       |
| product feature / for neutral conductors / upgradable/retrofitable / short-circuit and overload proof | No                          |
| ground-fault monitoring version                                                                       | Without                     |
| product function                                                                                      |                             |
| • communication function                                                                              | No                          |
| • other measurement function                                                                          | No                          |
| Net Weight                                                                                            | 5.01 kg                     |
| Current                                                                                               |                             |
| operational current                                                                                   |                             |
| • at 40 °C                                                                                            | 630 A                       |
| • at 45 °C                                                                                            | 630 A                       |
| • at 50 °C                                                                                            | 630 A                       |
| • at 55 °C                                                                                            | 618 A                       |
| • at 60 °C                                                                                            | 607 A                       |
| • at 65 °C                                                                                            | 595 A                       |
| • at 70 °C                                                                                            | 583 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 440 V                                                                                            | 55 kA                       |
| • at 500 V                                                                                            | 36 kA                       |
| operating short-circuit current breaking capacity ( $I_{cs}$ )                                        |                             |

|                                                                                                                                                                                   |                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> </ul>                                                          | 63 kA<br>41 kA<br>41 kA<br>27 kA                                                                                                                              |
| short-circuit current making capacity (I <sub>cm</sub> ) <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 415 V</li> <li>• at 440 V</li> <li>• at 500 V</li> </ul> | 187 kA<br>121 kA<br>121 kA<br>76 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

|                                                                                                                                                                                                  |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| product feature / for L-tripping / can be switched on/off                                                                                                                                        | No                 |
| adjustable response value setting current (I <sub>r</sub> ) / of the L-trip / with I <sub>2t</sub> characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul> | 441 A<br>630 A     |
| adjustable response value delay time (t <sub>r</sub> ) / for L-tripping / with I <sub>2t</sub> characteristic <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>     | 1 s<br>1 s         |
| adjustable response value setting current (I <sub>i</sub> ) / for I-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                      | 5 040 A<br>5 040 A |
| adjustable setting current (I <sub>N</sub> ) / for N-tripping <ul style="list-style-type: none"> <li>• minimum</li> <li>• maximum</li> </ul>                                                     | 0 A<br>0 A         |
| adjustable current response value current / of instantaneous short-circuit trip unit <ul style="list-style-type: none"> <li>• maximum</li> </ul>                                                 | 5 040 A            |
| product function / grounding protection                                                                                                                                                          | No                 |

#### Mechanical Design

|                                                                                                                                                 |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| product component <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• voltage trigger</li> <li>• trip indicator</li> </ul> | No<br>No<br>No |
| height [in]                                                                                                                                     | 9.76 in        |
| height                                                                                                                                          | 248 mm         |
| width [in]                                                                                                                                      | 5.43 in        |
| width                                                                                                                                           | 138 mm         |
| depth [in]                                                                                                                                      | 4.33 in        |
| depth                                                                                                                                           | 110 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-sections / for flat-bar terminal connection / minimum | 20 x 1 mm                   |
| type of connectable conductor cross-sections / for flat-bar terminal connection / maximum | 35 x 10 mm                  |
| 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)     | Silver                      |

#### Auxiliary circuit

|                                                |   |
|------------------------------------------------|---|
| 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 <ul style="list-style-type: none"> <li>• during operation / minimum</li> <li>• during operation / maximum</li> </ul> | -25 °C<br>70 °C |

- during storage / minimum
- during storage / maximum

-40 °C

80 °C

## Approvals / Certificates

### General Product Approval



[Miscellaneous](#)



### Test Certificates

### Maritime application

### other

[Type Test Certificates/Test Report](#)



[Confirmation](#)

## Environment

[Environmental Conformations](#)

[Environmental Conformations](#)

## 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)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3VM1463-5EE32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VM1463-5EE32-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VM1463-5EE32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VM1463-5EE32-0AA0)

### CAX-Online-Generator

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

### Tender specifications

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





