

circuit breaker 3VA1 IEC frame 160 breaking capacity class M  
 $I_{cu}=55kA @ 415V$  3-pole, starter protection TM120M, AM,  $I_n=125A$   
 without overload protection short-circuit protection  $I_i=5...15 \times I_n$  nut  
 keeper kit 2 auxiliary switches HP



| Model   |                             |
|---|-----------------------------|
| Product brand name  | SENTRON                     |
| Product designation   | Molded case circuit breaker |
| Product version   | Starter protection          |
| Design of the overcurrent release   | TM120M                      |
| Protective function of the overcurrent release                            | I                           |
| Number of poles   | 3                           |
| Design of the auxiliary release   | without auxiliary release   |
| Auxiliary contact version   | 2 auxiliary switches HP     |
| General technical data  |                             |
| Rated insulation voltage $U_i$  | 800 V                       |
| Max. rated operational voltage $U_e$ with AC 50/60Hz                      | 690 V                       |
| Max. rated operational voltage $U_e$ with DC                              | 500 V                       |
| Latching - endurance  | 15 000                      |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz | 8 000                       |
| Neutral conductors / upgradeable/retrofitable                             | No                          |
| Ground fault monitoring version   | Without                     |
| Product function  |                             |

|                              |         |
|------------------------------|---------|
| • communication function     | No      |
| • Phase failure detection    | No      |
| • other measurement function | No      |
| Net weight                   | 0.96 kg |

### Current

|  |       |
|--|-------|
| Max. rated operational current of the frame size | 160 A |
| Rated continuous current I <sub>u</sub>          | 125 A |
| Operating current                                |       |
| • at 40 °C                                       | 125 A |
| • at 45 °C                                       | 125 A |
| • at 50 °C                                       | 125 A |
| • at 55 °C                                       | 122 A |
| • at 60 °C                                       | 120 A |
| • at 65 °C                                       | 117 A |
| • at 70 °C                                       | 114 A |

### Switching capacity according to IEC 60947

|  |         |
|--|---------|
| Switching capacity class of the circuit breaker                        | M       |
| Maximum short-circuit current breaking capacity (I <sub>cu</sub> )     |         |
| • at 240 V   | 85 kA   |
| • at 415 V   | 55 kA   |
| • at 440 V   | 36 kA   |
| • at 690 V   | 5 kA    |
| Operational short-circuit current breaking capacity (I <sub>cs</sub> ) |         |
| • at 240 V   | 85 kA   |
| • at 415 V   | 55 kA   |
| • at 440 V   | 36 kA   |
| • at 690 V   | 5 kA    |
| Short-circuit current making capacity (I <sub>cm</sub> )               |         |
| • at 240 V   | 187 kA  |
| • at 415 V   | 121 kA  |
| • at 440 V   | 75.6 kA |
| • at 690 V   | 8.5 kA  |

### Adjustable parameters

|  |         |
|--|---------|
| Adjustable response value current / I <sub>r</sub> min.            | 0 A     |
| Adjustable response value current / I <sub>r</sub> max.            | 0 A     |
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF | No      |
| Adjustable response value current / I <sub>i</sub> min.            | 875 A   |
| Adjustable response value current / I <sub>i</sub> max.            | 2 000 A |

### Mechanical Design

|        |         |
|--------|---------|
| Height | 130 mm  |
| Width  | 76.2 mm |
| Depth  | 70 mm   |

### Connections

|   |                |
|---|----------------|
| Arrangement of electrical connectors / for main current circuit                         | Front terminal |
| Type of electrical connection / for main current circuit                                | lug terminal   |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 12 x 1         |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5       |

### Auxiliary circuit

|  |   |
|--|---|
| Product component  |   |
| <ul style="list-style-type: none"> <li>• undervoltage release</li> <li>• Voltage trigger</li> <li>• undervoltage release with leading contact</li> <li>• Trip indicator</li> </ul> | <p>No</p> <p>No</p> <p>No</p> <p>No</p> |
| Number of CO contacts / for auxiliary contacts   | 2                                       |

### Accessories

|   |                               |
|---|-------------------------------|
| Product extension / optional / motor drive  | Yes                           |
| Manufacturer's article number   |                               |
| <ul style="list-style-type: none"> <li>• of the integrated auxiliary switch/alarm switch</li> </ul> | <a href="#">3VA9988-0AA11</a> |

### 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> <li>• during storage / minimum</li> <li>• during storage / maximum</li> </ul> | <p>-25 °C</p> <p>70 °C</p> <p>-40 °C</p> <p>80 °C</p> |

### Certificates

|   |   |
|---|---|
| Reference code / acc. to DIN EN 81346-2 | Q |
|---|---|

|                          |     |                           |
|--------------------------|-----|---------------------------|
| General Product Approval | EMC | Declaration of Conformity |
|--------------------------|-----|---------------------------|



CCC



VDE

[Miscellaneous](#)



RCM



EG-Konf.

|                   |                   |       |
|-------------------|-------------------|-------|
| Test Certificates | Shipping Approval | other |
|-------------------|-------------------|-------|

[Miscellaneous](#)

[Special Test Certificate](#)



LRS

[CCS / China Classification Society](#)

[Confirmation](#)

[Manufacturer Declaration](#)

|       |
|-------|
| 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=3VA1112-5MH32-0AB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1112-5MH32-0AB0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1112-5MH32-0AB0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1112-5MH32-0AB0)

**CAX-Online-Generator**

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

**Tender specifications**

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





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