



CIRCUIT BREAKER 3VA1 IEC FRAME 250 BREAKING CAPACITY  
CLASS M ICU=55KA @ 415 V 3-POLE,MOTOR STARTER  
PROTECTION TM120M, AM, IN=200A WITHOUT OVERLOAD  
PROTECTION SHORT CIRCUIT PROTECTION II=6...14 X IN  
BUSBAR CONNECTION

| Model                                                                                            |                             |
|--------------------------------------------------------------------------------------------------|-----------------------------|
| Product brand name                                                                               | SENTRON                     |
| Product designation                                                                              | Molded case circuit breaker |
| Design of the product                                                                            | Starter protection          |
| Design of the overcurrent release                                                                | TM120M                      |
| Protective function of the overcurrent release                                                   | I                           |
| Number of poles                                                                                  | 3                           |
| General technical data                                                                           |                             |
| Tension assignée d'isolement Ui                                                                  | 800 V                       |
| Max. rated operational voltage Ue with AC 50/60Hz                                                | 690 V                       |
| Operating power / at AC-3 / at 400 V                                                             | 110 000 W                   |
| Operating power / at AC-3 / at 230 V                                                             | 55 000 W                    |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 42 W                        |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 14 W                        |
| Mechanical service life (switching cycles) / typical                                             | 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                                    | 1.8 kg  |

## Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Max. rated operational voltage of the size of the circuit-breaker | 250 A |
| Courant permanent assigné lu                                      | 200 A |
| Operating current                                                 |       |
| • at 40 °C                                                        | 200 A |
| • at 45 °C                                                        | 200 A |
| • at 50 °C                                                        | 200 A |
| • at 55 °C                                                        | 194 A |
| • at 60 °C                                                        | 188 A |
| • at 65 °C                                                        | 182 A |
| • at 70 °C                                                        | 176 A |

## Switching capacity according to IEC 60947

|                                                           |        |
|-----------------------------------------------------------|--------|
| Switching capacity class of the circuit breaker           | M      |
| Maximum short-circuit current breaking capacity (Icu)     |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 36 kA  |
| • at 500 V                                                | 15 kA  |
| • at 690 V                                                | 3 kA   |
| Operational short-circuit current breaking capacity (Ics) |        |
| • at 240 V                                                | 85 kA  |
| • at 415 V                                                | 55 kA  |
| • at 440 V                                                | 36 kA  |
| • at 500 V                                                | 10 kA  |
| • at 690 V                                                | 3 kA   |
| Short-circuit current making capacity (Icm)               |        |
| • at 240 V                                                | 187 kA |
| • at 415 V                                                | 121 kA |
| • at 440 V                                                | 76 kA  |
| • at 500 V                                                | 30 kA  |
| • at 690 V                                                | 4.5 kA |

## Adjustable parameters

|                                                            |         |
|------------------------------------------------------------|---------|
| Short-term delayed / tripping switchable / I2t=ON/OFF      | No      |
| Adjustable response value current / li min.                | 1 200 A |
| Adjustable response value current / li max.                | 2 800 A |
| Ground fault protection / tripping switchable / I2t=ON/OFF | No      |

#### Mechanical Design

|             |        |
|-------------|--------|
| Height [in] | 6.2 in |
| Height      | 158 mm |
| Width [in]  | 4.1 in |
| Width       | 105 mm |
| Depth [in]  | 2.8 in |
| 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. | 13 x 1         |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 25 x 8         |

#### Auxiliary circuit

|                                                |   |
|------------------------------------------------|---|
| Number of CO contacts / for auxiliary contacts | 0 |
|------------------------------------------------|---|

#### Accessories

|                                            |     |
|--------------------------------------------|-----|
| Product extension / optional / motor drive | Yes |
|--------------------------------------------|-----|

#### 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

|                                            |   |
|--------------------------------------------|---|
| Equipment marking / acc. to DIN EN 81346-2 | Q |
|--------------------------------------------|---|

| General Product Approval                                                                 |                                                                                          |                    |                                                                                          | EMC                                                                                        | Declaration of<br>Conformity                                                                    |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <a href="#">KC</a> | <br>EAC | <br>RCM | <br>EG-Konf. |

| Test Certificates             | other                                    |                              |                               |  |
|-------------------------------|------------------------------------------|------------------------------|-------------------------------|--|
| <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a> | <a href="#">Confirmation</a> | <a href="#">Miscellaneous</a> |  |

#### 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=3VA1220-5MH32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1220-5MH32-0AA0>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1220-5MH32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1220-5MH32-0AA0)

##### CAX-Online-Generator

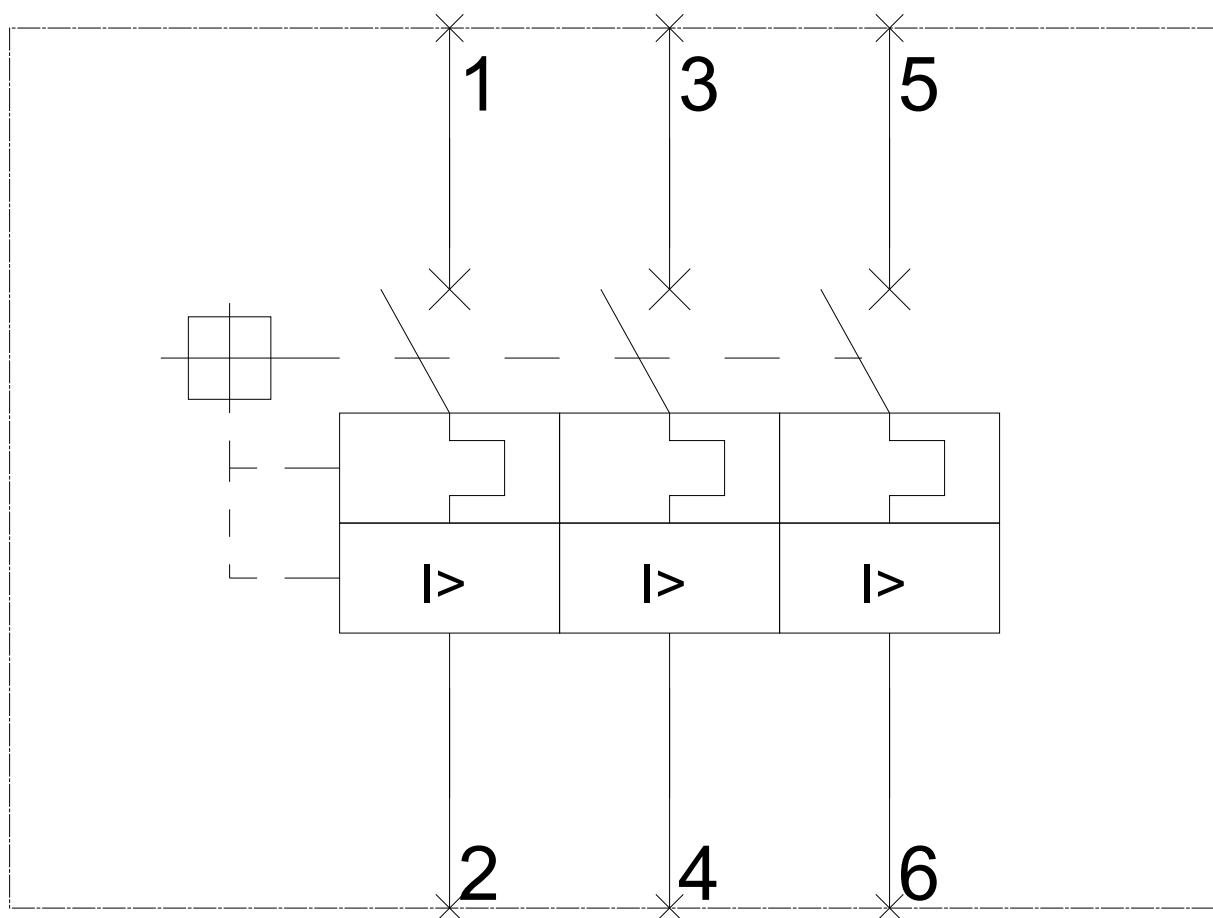
<http://www.siemens.com/cax>

##### Tender specifications

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



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