



circuit breaker 3VA1 IEC frame 160 breaking capacity class M Icu=55kA @ 415V 3-pole, line protection TM220, ATFM, In=16A overload protection Ir=11A...16A short-circuit protection Ii=20 x In 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 Ui                                                                    | 800 V                       |
| Max. rated operational voltage Ue with DC                                                      | 500 V                       |
| power loss [W] / maximum                                                                       | 10.6 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole | 3.53 W                      |
| mechanical service life (switching cycles) / typical                                           | 20 000                      |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz                      | 9 000                       |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz                          | 6 300                       |
| Neutral conductors / upgradeable/retrofitable                                                  | No                          |
| ground-fault monitoring version                                                                | Without                     |
| product function                                                                               |                             |
| • communication function                                                                       | No                          |
| • other measurement function                                                                   | No                          |
| net weight                                                                                     | 0.9 kg                      |
| Current                                                                                        |                             |
| Max. rated operational current of the frame size                                               | 160 A                       |
| Courant permanent assigné Iu                                                                   | 16 A                        |
| operational current                                                                            |                             |
| • at 40 °C                                                                                     | 16 A                        |
| • at 45 °C                                                                                     | 16 A                        |
| • at 50 °C                                                                                     | 16 A                        |
| • at 55 °C                                                                                     | 16 A                        |
| • at 60 °C                                                                                     | 15 A                        |
| • at 65 °C                                                                                     | 15 A                        |
| • at 70 °C                                                                                     | 15 A                        |
| Switching capacity according to IEC 60947                                                      |                             |
| switching capacity class of the circuit breaker                                                | M                           |
| breaking capacity maximum short-circuit current (Icu)                                          |                             |
| • at 240 V                                                                                     | 85 kA                       |
| • at 415 V                                                                                     | 55 kA                       |

|                                                                                                                                                                                                      |                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 440 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                                                                                                 | 36 kA<br>10 kA<br>10 kA                                                                                                                                        |
| breaking capacity operating short-circuit current (Ics) <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> <li>• at 690 V</li> </ul> | 85 kA<br>55 kA<br>36 kA<br>5 kA<br>5 kA                                                                                                                        |
| short-circuit current making capacity (Icm) <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> <li>• at 690 V</li> </ul>             | 187 kA<br>121 kA<br>75.6 kA<br>17 kA<br>17 kA                                                                                                                  |
| design of short-circuit protection                                                                                                                                                                   | For switching power values in DC networks, see the 3VA molded case circuit breaker device manual; link to be found under Service & Support in the last chapter |

| Adjustable parameters                                      |       |
|------------------------------------------------------------|-------|
| Adjustable response value current / li min.                | 320 A |
| Adjustable response value current / li max.                | 320 A |
| Ground fault protection / tripping switchable / I2t=ON/OFF | No    |

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

| Connections                                                                             |                             |
|-----------------------------------------------------------------------------------------|-----------------------------|
| arrangement of electrical connectors / for main current circuit                         | Front terminal              |
| type of electrical connection / for main current circuit                                | nut keeper kit on both ends |
| Type of connectable conductor cross-section, connection screw, width x thickness , min. | 12 x 1 mm                   |
| Type of connectable conductor cross-section, connection screw, width x thickness , max. | 17 x 6.5 mm                 |
| design of the surface / of the connections / on the bottom of the switch (N, 2, 4, 6)   | Tin                         |

| 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                                                                                                                                                                          |                                    |
| <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> | -25 °C<br>70 °C<br>-40 °C<br>80 °C |

| Certificates                         |   |
|--------------------------------------|---|
| reference code / acc. to IEC 81346-2 | Q |

|                                 |     |
|---------------------------------|-----|
| <b>General Product Approval</b> | EMC |
|---------------------------------|-----|



Miscellaneous

KC



Declaration of Conformity

Test Certificates

Marine / Shipping



[UK Declaration of Conformity](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

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Marine / Shipping



[CCS / China Classification Society](#)



other

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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?mfb=3VA1196-5EE32-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1196-5EE32-0AA0>

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

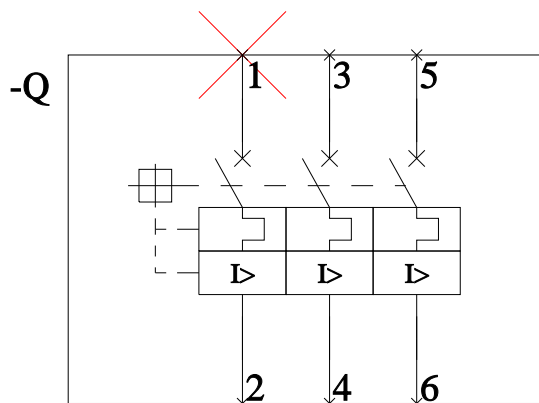
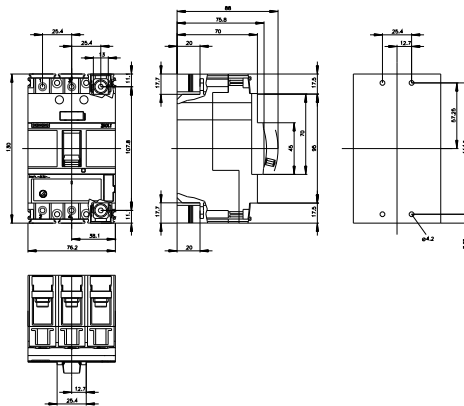
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA1196-5EE32-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA1196-5EE32-0AA0)

CAx-Online-Generator

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

Tender specifications

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



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