



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS M ICU=55KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=40A OVERLOAD PROTECTION IR=40A FIXED SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL PROTECTION 100% CABLE CONNECTION

| Model                                                                                            |                             |
|--------------------------------------------------------------------------------------------------|-----------------------------|
| Product brand name                                                                               | SENTRON                     |
| Product designation                                                                              | Molded case circuit breaker |
| Design of the product                                                                            | Line protection             |
| Design of the overcurrent release                                                                | TM210                       |
| Protective function of the overcurrent release                                                   | LI                          |
| Number of poles                                                                                  | 4                           |
| General technical data                                                                           |                             |
| Tension assignée d'isolement Ui                                                                  | 800 V                       |
| Max. rated operational voltage Ue with AC 50/60Hz                                                | 690 V                       |
| Max. rated operational voltage Ue with DC                                                        | 600 V                       |
| Active power loss / for rated value of the current / at AC / in hot operating state / per device | 10.8 W                      |
| Active power loss / for rated value of the current / at AC / in hot operating state / per pole   | 3.6 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/retrofittable                                                   | No                          |

|                                 |         |
|---------------------------------|---------|
| Ground fault monitoring version | Without |
| Product function                |         |
| • communication function        | No      |
| • other measurement function    | No      |
| Net weight                      | 1.2 kg  |

#### Electricity

|                                                                   |       |
|-------------------------------------------------------------------|-------|
| Max. rated operational voltage of the size of the circuit-breaker | 160 A |
| Courant permanent assigné lu                                      | 40 A  |
| Operating current                                                 |       |
| • at 40 °C                                                        | 40 A  |
| • at 45 °C                                                        | 40 A  |
| • at 50 °C                                                        | 40 A  |
| • at 55 °C                                                        | 39 A  |
| • at 60 °C                                                        | 39 A  |
| • at 65 °C                                                        | 38 A  |
| • at 70 °C                                                        | 37 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                                                | 10 kA  |
| • at 690 V                                                | 10 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                                                | 5 kA   |
| • at 690 V                                                | 5 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                                                | 17 kA  |
| • at 690 V                                                | 17 kA  |

#### Adjustable parameters

|                                             |      |
|---------------------------------------------|------|
| Adjustable response value current / Ig min. | 40 A |
| Adjustable response value current / Ig min. | 40 A |

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| Short-term delayed / tripping switchable / I <sub>2t</sub> =ON/OFF      | No    |
| Adjustable response value current / I <sub>i</sub> min.                 | 400 A |
| Adjustable response value current / I <sub>i</sub> max.                 | 400 A |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF | No    |

#### Mechanical Design

|             |          |
|-------------|----------|
| Height [in] | 5.1 in   |
| Height      | 130 mm   |
| Width [in]  | 4 in     |
| Width       | 101.6 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                        | box terminal                    |
| Type of connectable conductor cross-section, round conductor terminal, stranded | 1 x (1.5 - 70 mm <sup>2</sup> ) |

#### 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                                                                                        |
|------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------|--------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <br>CCC | <br>VDE | <a href="#">Miscellaneous</a> | <a href="#">KC</a> | <br>EAC | <br>RCM |

| Declaration of Conformity                                                                     | Test Certificates                                  |                               |                                          | Shipping Approval                                                                          |                                                                                                       |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <br>EG-Konf. | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Miscellaneous</a> | <a href="#">Special Test Certificate</a> | <br>ABS | <br>BUREAU VERITAS |

| Shipping Approval                                                                       | other                                                                                    |                                                                                           |                               |  |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------|--|
| <br>GL | <br>LRS | <br>RMRS | <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=3VA1140-5GD46-0AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA1140-5GD46-0AA0>

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

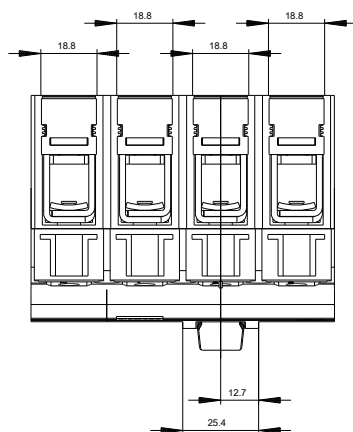
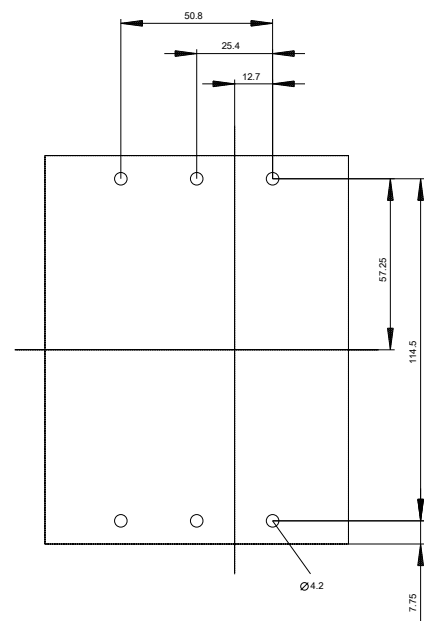
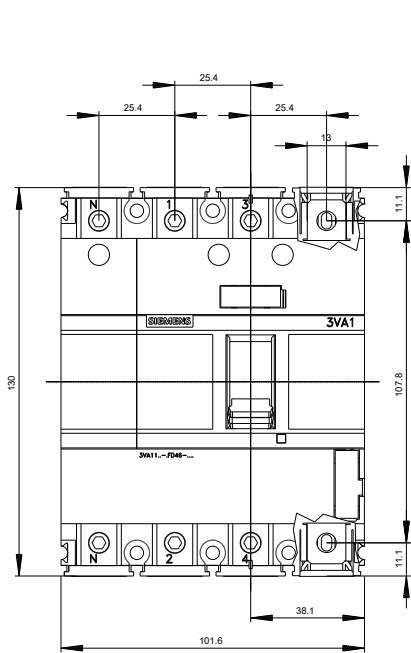
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3VA1140-5GD46-0AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA1140-5GD46-0AA0)

##### CAX-Online-Generator

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

##### Tender specifications

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





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