



circuit breaker 3VA6 UL frame 250 breaking capacity class M 35kA @ 480V 3-pole, line protection ETU550, LSI,  $I_n=250A$  overload protection  $I_r=100A...250A$  short-circuit protection  $I_{sd}=0.6..10x I_n$ ,  $I_i=1.5..10x I_n$  N conductor protection optionally with external current transformer, up to 160% without connection

| Model   |                             |
|---|-----------------------------|
| product brand name  | SENTRON                     |
| product designation   | Molded-case circuit breaker |
| product designation / according to UL file  | MFAE-Y                      |
| Product version   | System protection           |
| design of the load switch / acc. to UL 489 / Heating, Air Conditioning, and Refrigeration circuit breaker (HACR Type) | Yes                         |
| design of the overcurrent release   | ETU550                      |
| protection function of the overcurrent release  | LSI                         |
| number of poles   | 3                           |
| General technical data  |                             |
| Tension assignée d'isolement $U_i$  | 600 V                       |
| power loss [W] / maximum  | 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  | 20 000                      |
| Electrical endurance (switching cycles) / at AC-1 / at 380/415 V 50/60 Hz   | 6 000                       |
| Electrical endurance (switching cycles) / at AC-1 / at 690 V 50/60 Hz   | 3 000                       |
| electrical endurance (switching cycles) / at 480 V  | 6 000                       |
| electrical endurance (switching cycles) / at 600 V  | 7 500                       |
| Neutral conductors / upgradeable/retrofitable   | Yes                         |
| ground-fault monitoring version   | Without                     |
| product function  |                             |
| • communication function  | Yes                         |
| • other measurement function  | No                          |
| Current   |                             |
| marking / acc. to UL 489 / 100%-rated breaker   | Yes                         |
| operational current   |                             |
| • at 55 °C  | 238 A                       |
| • at 60 °C  | 225 A                       |
| • at 65 °C  | 213 A                       |
| • at 70 °C  | 200 A                       |
| Switching capacity according to IEC 60947   |                             |
| switching capacity class of the circuit breaker   | M                           |
| breaking capacity maximum short-circuit current ( $I_{cu}$ )  |                             |
| • at 240 V  | 85 kA                       |

|  |                                    |
|--|------------------------------------|
| <ul style="list-style-type: none"> <li>• at 415 V</li> <li>• at 690 V</li> </ul>   | 55 kA<br>3 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 690 V</li> </ul>                                 | 85 kA<br>55 kA<br>3 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 690 V</li> </ul>   | 187 kA<br>121 kA<br>4.5 kA         |
| <b>Switching capacity according to UL 489</b>  |                                    |
| breaking capacity current <ul style="list-style-type: none"> <li>• at 240 V</li> <li>• at 480 V</li> <li>• at 600 Y/347 V</li> <li>• at 600 V</li> </ul>                                     | 100 kA<br>35 kA<br>18 kA<br>18 kA  |
| <b>Adjustable parameters</b>   |                                    |
| Adjustable response value current / I <sub>g</sub> min.  | 100 A                              |
| Adjustable response value current / I <sub>g</sub> min.  | 250 A                              |
| Adjustable response value current / I <sub>g</sub> min.  | 150 A                              |
| Adjustable response value current / I <sub>g</sub> min.  | 2 500 A                            |
| Adjustable response value current / I <sub>g</sub> min.  | 0.05 s                             |
| Adjustable response value current / I <sub>g</sub> min.  | 0.5 s                              |
| Adjustable response value current / I <sub>g</sub> min.  | 0.05 s                             |
| Adjustable response value current / I <sub>g</sub> min.  | 0.5 s                              |
| Adjustable response value current / I <sub>i</sub> min.  | 375 A                              |
| Adjustable response value current / I <sub>i</sub> max.  | 2 500 A                            |
| Ground fault protection / tripping switchable / I <sub>2t</sub> =ON/OFF  | No                                 |
| <b>Mechanical Design</b>   |                                    |
| height [in]  | 7.8 in                             |
| Height   | 198 mm                             |
| width [in]   | 4.1 in                             |
| Width  | 105 mm                             |
| depth [in]   | 3.4 in                             |
| depth  | 86 mm                              |
| <b>Connections</b>   |                                    |
| arrangement of electrical connectors / for main current circuit  | Without connection                 |
| type of electrical connection / for main current circuit   | Without                            |
| <b>Auxiliary circuit</b>   |                                    |
| number of CO contacts / for auxiliary contacts   | 0                                  |
| <b>Accessories</b>   |                                    |
| product extension / optional / motor drive   | Yes                                |
| <b>Environmental conditions</b>  |                                    |
| 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 |
| <b>Certificates</b>  |                                    |
| reference code / acc. to IEC 81346-2   | Q                                  |
| certificate of suitability / as approval for NAVAL (no combat vessels) / supplement SB   | Yes                                |
| <b>General Product Approval</b>  |                                    |



[Miscellaneous](#)



| EMC  | Declaration of Conformity   | Shipping Approval  |  |  | other                         |
|--|---|--|--|--|-------------------------------|
| <br>RCM | <br>EG-Konf. | <br>ABS | <br>ABS | <br>LRS | <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?mfb=3VA6225-5JP31-2AA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3VA6225-5JP31-2AA0>

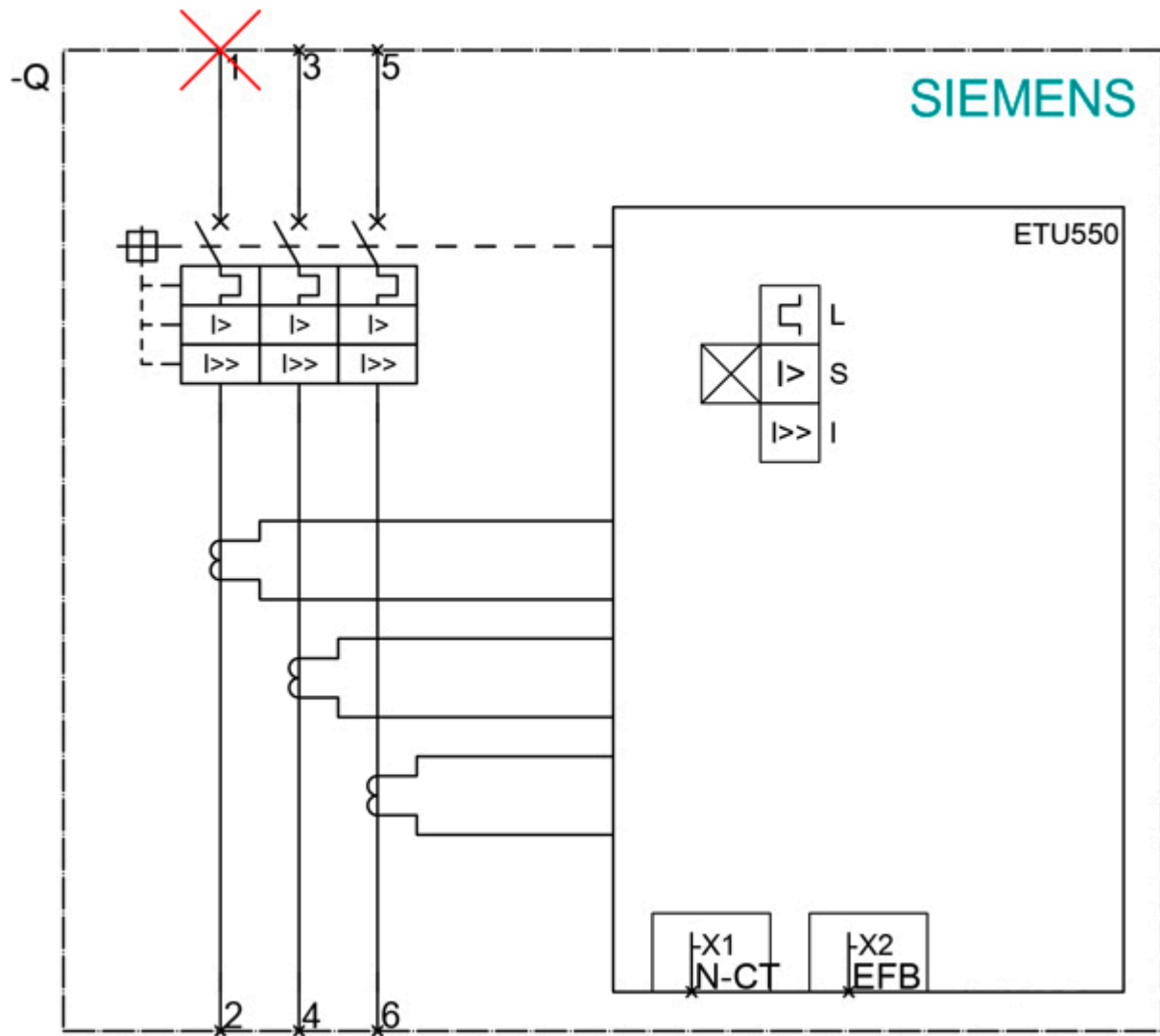
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)

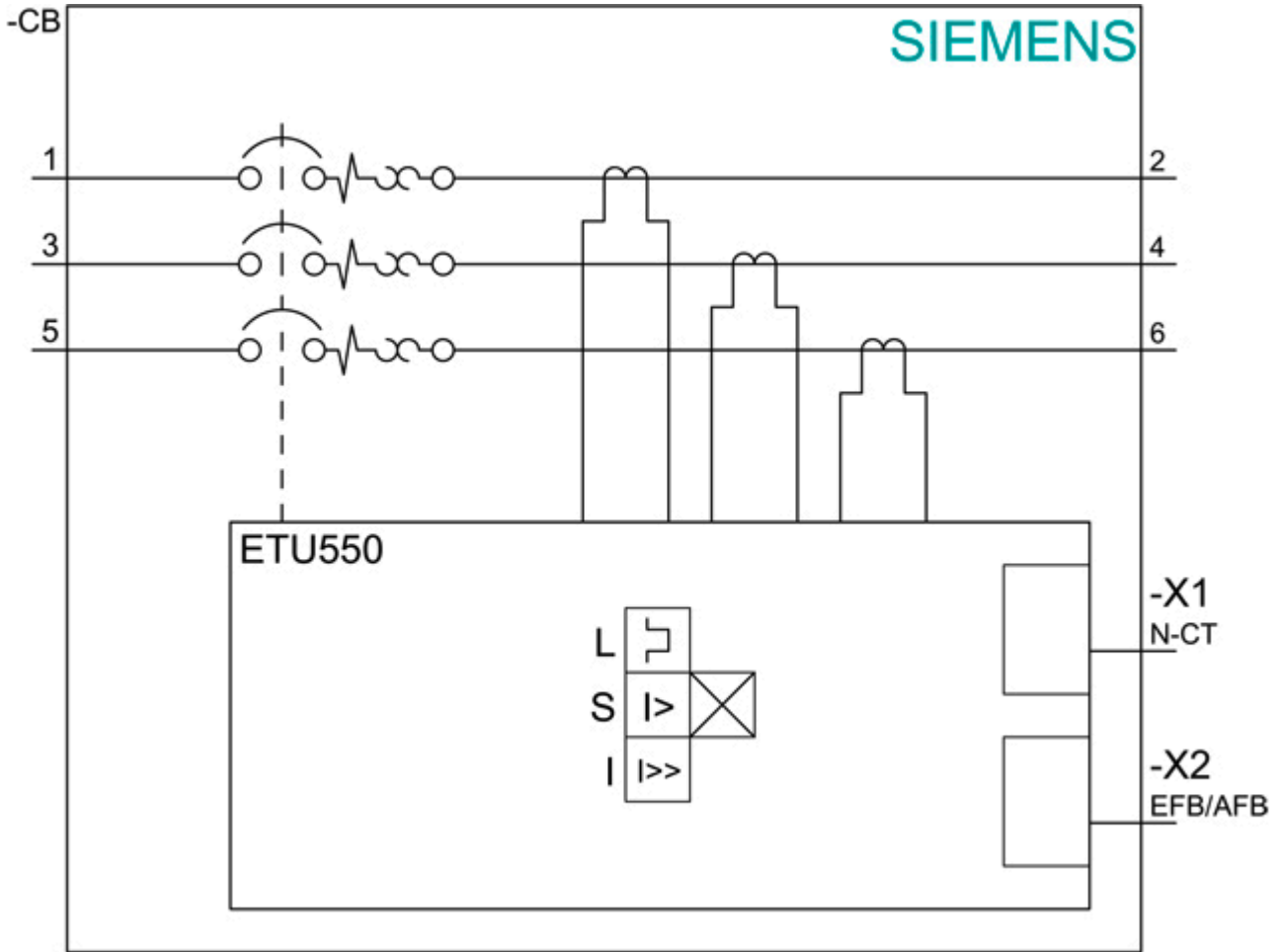
[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA6225-5JP31-2AA0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA6225-5JP31-2AA0)

Tender specifications

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







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