



CIRCUIT BREAKER 3VA1 IEC FRAME 100 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=80A OVERLOAD PROTECTION IR=80A FIXED SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED BUSBAR CONNECTION SHUNT TRIP (STL) 220-250 V DC, 208-277 V AC 2 AUXILIARY SWITCH HQ 1 TRIP ALARM SWITCH HQ

Model	
product brandname	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
Design of the auxiliary release	Shunt trip (STL)
Design of the auxiliary switch	2 auxiliary switches + 1 trip alarm switch HQ
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
Operating power / at AC-3 / at 400 V	0 W
Operating power / at AC-3 / at 230 V	0 W
Active power loss / for rated value of the current / at AC / in hot operating state / per device	19.2 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	1.38 kg

### Electricity

Max. rated operational voltage of the size of the circuit-breaker	100 A
Courant permanent assigné Iu	80 A
Operating current	
• at 40 °C	80 A
• at 45 °C	80 A
• at 50 °C	80 A
• at 55 °C	76.8 A
• at 60 °C	75.2 A
• at 65 °C	73.6 A
• at 70 °C	72 A

### Switching capacity according to IEC 60947

Switching capacity class of the circuit breaker	N
Maximum short-circuit current breaking capacity (Icu)	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 690 V	5 kA
Operational short-circuit current breaking capacity (Ics)	
• at 240 V	36 kA
• at 415 V	25 kA
• at 440 V	16 kA
• at 690 V	5 kA
Short-circuit current making capacity (Icm)	
• at 240 V	75.6 kA
• at 415 V	52.5 kA
• at 440 V	32 kA
• at 690 V	7.5 kA

### Adjustable parameters

Adjustable response value current / I <sub>g</sub> min.	0 A
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Adjustable response value current / I <sub>g</sub> min.	0 A
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Adjustable response value current / I <sub>g</sub> min.	0 A
Adjustable response value current / I <sub>i</sub> min.	0 A
Adjustable response value current / I <sub>i</sub> max.	0 A
Design of the N-conductor protection	Without

Mechanical Design	
Height	130 mm
Width	101.6 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 0
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> </ul>	No
<ul style="list-style-type: none"> <li>• Voltage trigger</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• undervoltage release with leading contact</li> </ul>	No
<ul style="list-style-type: none"> <li>• Trip indicator</li> </ul>	Yes
Number of CO contacts / for auxiliary contacts	3

Accessories	
Product extension / optional / motor drive	No
Manufacturer's article number	
<ul style="list-style-type: none"> <li>• of the supplied basic switch</li> </ul>	<a href="#">3VA1080-3ED42-0AA0</a>
<ul style="list-style-type: none"> <li>• of the integrated auxiliary switch/alarm switch</li> </ul>	<a href="#">3VA9988-0AA12</a>
<ul style="list-style-type: none"> <li>• of the integrated auxiliary switch/alarm switch</li> </ul>	<a href="#">3VA9988-0AB12</a>
<ul style="list-style-type: none"> <li>• of the integrated auxiliary trip</li> </ul>	3VA9688-0BL33

Environmental conditions	
Protection class IP / on the front	IP40
Ambient temperature	
<ul style="list-style-type: none"> <li>• during operation / minimum</li> </ul>	-25 °C
<ul style="list-style-type: none"> <li>• during operation / maximum</li> </ul>	70 °C
<ul style="list-style-type: none"> <li>• during storage / minimum</li> </ul>	-40 °C
<ul style="list-style-type: none"> <li>• during storage / maximum</li> </ul>	80 °C

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

General Product Approval	EMC	Declaration of Conformity
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Test Certificates	Shipping Approval
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[Typprüfbescheinigung/Werkszeugnis](#)

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Shipping Approval	other
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#### Further information

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<http://www.siemens.com/lowvoltage/catalogs>

##### Industry Mall (Online ordering system)

<https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA1080-3ED42-0KH0>

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

<http://support.automation.siemens.com/WW/view/en/3VA1080-3ED42-0KH0/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mfb=3VA1080-3ED42-0KH0](http://www.automation.siemens.com/bilddb/cax_en.aspx?mfb=3VA1080-3ED42-0KH0)

##### CAX-Online-Generator

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

##### Tender specifications

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



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