# **SIEMENS**

## Data sheet

# 3VA1080-4ED42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 100 BREAKING CAPACITY CLASS S ICU=36KA @ 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

Figure similar

Model	
product brand name	SENTRON
Product designation	Molded case circuit breaker
Design of the product	Line protection
Product variations	General Applications
Ground fault monitoring version	Without
Design of the auxiliary release	Without auxiliary release
Design of the auxiliary switch	Without
Design of the operating mechanism	toggle handle
Type of the driving mechanism / motor drive	No
Design of the overcurrent release	TM210

General technical data				
Number of poles		4		
Trip class / of the L-trip / with I2t characteristic / initial value		1		
Trip class / of the L-trip / with I2t characteristic / Full-scale value		1		
Electrical endurance (switching cycles)				
• at AC-1 / at 380/415 V / at 50/60 Hz		8 000		
circuit-breaker / Design		3VA		
Mechanical service life (switching cycles) / typical		15 000		

Voltage		
Insulation voltage / Rated value	V	800
Insulation voltage / Rated value	V	800

#### Protection class

Protective function of the overcurrent release  LI  Switching capacity Switching capacity class of the circuit breaker  Sistending capacity  Active power loss  • maximum  Wighted continuous current / Rated value / maximum  A 100  Continuous current / Rated value / A 80  Adjustable response value current  • of the current-dependent overload release / A 1  Full-scale value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the current-dependent overload release / A 1  Full-scale value  • with AC / at 50/60 Hz / Rated value  • of the Circ / Rated value  • of the Circ / Rated value  • at 65 °C	Protection class IP		IP40
Switching capacity (ass of the circuit breaker S  Dissipation  Active power loss  • maximum W 19.2  Electricity  Continuous current / Rated value / maximum A 100  Continuous current / Rated value A 80  Adjustable response value current  • of the current-dependent overload release / A 1  Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value V 690  • for DC / Rated value V 600  Operating current  • at 40 °C / Rated value A 80  • at 55 °C / Rated value A 80  • at 55 °C / Rated value A 77  • at 65 °C / Rated value A 77  • at 65 °C / Rated value A 77  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Oscitability  Suitability  Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker  Active power loss  • maximum  **Maximum**  **Touthinous current / Rated value / maximum**  **Continuous current / Rated value / maximum**  **Continuous current / Rated value / maximum**  **Continuous current / Rated value / maximum**  **Adjustable response value current**  • of the current-dependent overload release / A 1  **Full-scale value**  • of the current-dependent overload release / initial value**  **Main circuit**  **Operating voltage**  • with AC / at 50/60 Hz / Rated value V 690  • for DC / Rated value V 600  **Operating current**  • at 40 °C / Rated value A 80  • at 50 °C / Rated value A 80  • at 60 °C / Rated value A 78  • at 60 °C / Rated value A 77  • at 65 °C / Rated value A 75  • at 65 °C / Rated value A 75  • at 65 °C / Rated value A 74  **Auxiliary circuit**  Number of CO contacts / for auxiliary contacts  **Output Department of CO contacts / for auxiliary contacts  **Adjustable parameters**  **Adjustable response value current**  • of I-trip / Full-scale value	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker  Active power loss  • maximum  * maximum	Switching capacity		
Active power loss  • maximum    M			S
Active power loss  • maximum    Maximum   Maxi	Dissipation		
Continuous current / Rated value / maximum			
Continuous current / Rated value / maximum A 100  Continuous current / Rated value A 80  Adjustable response value current  • of the current-dependent overload release / Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value V 690  • for DC / Rated value V 600  Operating current  • at 40 °C / Rated value A 80  • at 50 °C / Rated value A 80  • at 50 °C / Rated value A 78  • at 60 °C / Rated value A 77  • at 60 °C / Rated value A 75  • at 70 °C / Rated value A 75  • at 70 °C / Rated value A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Osuitability  Suitability Full-scale value A 10	• maximum	W	19.2
Continuous current / Rated value  Adjustable response value current  of the current-dependent overload release / Full-scale value  of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  with AC / at 50/60 Hz / Rated value  of to DC / Rated value  value  Operating current  at 40 °C / Rated value  A 80  at 55 °C / Rated value  A 80  at 55 °C / Rated value  A 78  at 60 °C / Rated value  A 77  at 65 °C / Rated value  A 75  at 70 °C / Rated value  A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Oglitability  Suitability for use  Adjustable parameters  Adjustable parameters  Adjustable response value current  of the current dependent overload release / A 1  a 10  10  10  10  10  10  10  10  10  10	Electricity		
Adjustable response value current  • of the current-dependent overload release / Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	Continuous current / Rated value / maximum	Α	100
of the current-dependent overload release / Full-scale value     of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage     with AC / at 50/60 Hz / Rated value     of DC / Rated value     verating current     at 40 °C / Rated value     A 80     of 350 °C / Rated value     A 80     of 450 °C / Rated value     A 78     of 60 °C / Rated value     A 77     of 60 °C / Rated value     A 75     of 77     of 77     of 78     of 79	Continuous current / Rated value	Α	80
Full-scale value  • of the instantaneous short-circuit release / initial value  Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  V 600  Operating current  • at 40 °C / Rated value  A 80  • at 50 °C / Rated value  A 78  • at 60 °C / Rated value  A 77  • at 65 °C / Rated value  A 75  • at 70 °C / Rated value  A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	Adjustable response value current		
Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 670 °C / Rated value  • at 70 °C / Rated value  A 74   Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10		Α	1
Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  V 600  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  A 77  • at 65 °C / Rated value  A 75  • at 70 °C / Rated value  A 75  • at 70 °C / Rated value  A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10		Α	10
with AC / at 50/60 Hz / Rated value     v 690     for DC / Rated value     V 600  Operating current     at 40 °C / Rated value     A 80     at 50 °C / Rated value     A 78     at 60 °C / Rated value     A 77     at 65 °C / Rated value     A 77     at 65 °C / Rated value     A 77     at 70 °C / Rated value     A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current     of I-trip / Full-scale value     A 10	Main circuit		
for DC / Rated value         V 600  Operating current	Operating voltage		
Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 55 °C / Rated value  • at 60 °C / Rated value  • at 60 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  A 75  • at 70 °C / Rated value  A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of l-trip / Full-scale value  A 80  A 78  A 77  A 78  A 77  A 77  A 75  B 76  B 77  B 76  B 77  B 76  B 77  B 78  B 7	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 77 at 65 °C / Rated value at 70 °C / Rated value At 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  O  Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current of I-trip / Full-scale value  A 80  A 78  A 78  A 77  A 75  A 74	• for DC / Rated value	V	600
at 50 °C / Rated value  at 55 °C / Rated value  at 60 °C / Rated value  at 60 °C / Rated value  A 78  at 65 °C / Rated value  A 75  at 70 °C / Rated value  A 74   Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability  Suitabile parameters  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 80  A 78  A 78  A 77  A 77  A 77  A 75  A 74   A 74	Operating current		
at 55 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  A 75  at 70 °C / Rated value  A 74   Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 78  A 78  A 77  A 77  A 78  A 77  A 75  A 74   A 74	• at 40 °C / Rated value	Α	80
<ul> <li>at 60 °C / Rated value</li> <li>at 65 °C / Rated value</li> <li>at 75</li> <li>at 70 °C / Rated value</li> <li>A 74</li> </ul> Auxiliary circuit Number of CO contacts / for auxiliary contacts <ul> <li>Suitability</li> <li>Suitability for use</li> <li>system protection</li> </ul> Adjustable parameters Adjustable response value current <ul> <li>of I-trip / Full-scale value</li> <li>A 10</li> </ul>	• at 50 °C / Rated value	Α	80
at 65 °C / Rated value  at 70 °C / Rated value  A 75  at 70 °C / Rated value  A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  of I-trip / Full-scale value  A 75  A 74	• at 55 °C / Rated value	Α	78
at 70 °C / Rated value  A 74  Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	• at 60 °C / Rated value	Α	77
Auxiliary circuit  Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	• at 65 °C / Rated value	Α	75
Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	• at 70 °C / Rated value	Α	74
Number of CO contacts / for auxiliary contacts  Suitability Suitability for use  Suitability for use  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	Auxiliary circuit		
Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10			0
Suitability for use system protection  Adjustable parameters  Adjustable response value current  • of I-trip / Full-scale value  A 10	Suitability		
Adjustable response value current  ● of I-trip / Full-scale value  A 10	· · · · · · · · · · · · · · · · · · ·		system protection
• of I-trip / Full-scale value A 10	Adjustable parameters		
	Adjustable response value current		
• for N-conductor protection / initial value A 0	• of I-trip / Full-scale value	Α	10
	• for N-conductor protection / initial value	Α	0
• for N-conductor protection / Full-scale value A 0	• for N-conductor protection / Full-scale value	Α	0
Adjustable response value current / of the current- A 1 dependent overload release / initial value	•	Α	1
Product details	Product details		
Product component			

Trip indicator		No
• display		No
<ul> <li>Voltage trigger</li> </ul>		No
undervoltage release		No
<ul> <li>undervoltage release with leading contact</li> </ul>		No
Product property		
<ul> <li>for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof</li> </ul>		No
Product expansion / optional / motor drive		No
Product function		
Product function		
Intrinsic device protection		Yes
communication function		No
Phase failure detection		No
other measurement function		No
Accessories	_	
Manufacturer article number / of the supplied basic		3VA1080-4ED42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		
• at 240 V / Rated value	kA	55
• at 415 V / Rated value	kA	36
● at 440 V / Rated value	kA	25
● at 500 V / Rated value	kA	15
● at 690 V / Rated value	kA	5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	55
● at 415 V / Rated value	kA	36
• at 440 V / Rated value	kA	25
• at 500 V / Rated value	kA	16
• at 690 V / Rated value	kA	7
Short-circuit current making capacity (lcm)		
• at 240 V / Rated value	kA	121
• at 415 V / Rated value	kA	75.6
• at 690 V / Rated value	kA	11.9
Connections		
Arrangement of electrical connectors / for main		Front terminal
current circuit		
Type of connectable conductor cross-section		

• for flat-bar terminal connection / minimum	12 x 0
• for flat-bar terminal connection / maximum	17 x 6.5
Type of electrical connection / for main current circuit	Lug terminal

Mechanical Design				
Height	mm	130		
Width	mm	101.6		
Depth	mm	70		
Mounting type		fixed mounting		

Environmental conditions				
Ambient temperature				
<ul><li>during operation / minimum</li></ul>	°C	-25		
<ul><li>during operation / maximum</li></ul>	°C	70		
<ul> <li>during storage / minimum</li> </ul>	°C	-40		
during storage / maximum	°C	80		

Certificates	
Equipment	marking

Q • acc. to DIN EN 61346-2 Q • acc. to DIN EN 81346-2

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	











other

other

### 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/3VA10804ED420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA10804ED420AA0/all

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

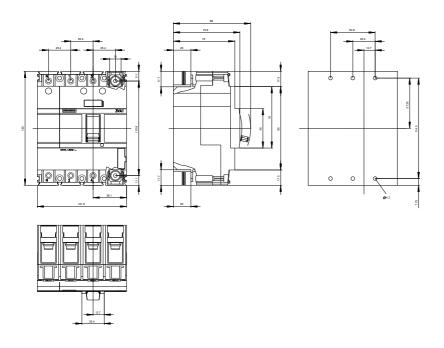
http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA10804ED420AA0

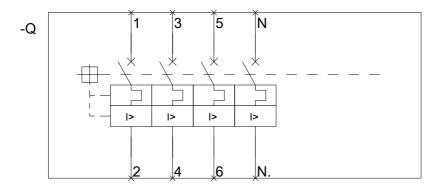
**CAx-Online-Generator** 

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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