SIEMENS

Data sheet

3VA1180-3GD42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 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 PROTECTION 100% 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		
	tage	
Insulation voltage / Rated value V 800	sulation voltage / Rated value	V

Protection class

Protection class IP / on the front IP40 Protective function of the overcurrent release LI Switching capacity Switching capacity class of the circuit breaker N Dissipation Active power loss • maximum W 19,2 Electricity Continuous current / Rated value / maximum A 160 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 A 10 walue Main circuit Operating voltage • with AC / at 50/80 Hz / Rated value V 690 • for DC / Rated value A 80 Operating current • at 40 °C / Rated value A 80 Operating current • at 50 °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 75 • at 65 °C / Rated value A 74 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Sultability Sultability for use system protection Adjustable parameters Adjustable response value current of the current-dependent overload release / initial value • for N-conductor protection / Full-scale value A 100 Adjustable response value current / of the current-dependent overload release / initial value A 100 Adjustable response value current / of the current-dependent overload release / initial value A 100 Adjustable response value current / of the current-dependent overload release / initial value	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 19.2 Electricity Continuous current / Rated value / maximum Adjustable response value current • of the current-dependent overload release / 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 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 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 or N-conductor protection / initial value • of the instantaneous short-circuit presented value Adjustable response value current • of I-trip / Full-scale value • of or N-conductor protection / initial value • of or N-conductor protection / initial value • of or N-conductor protection / initial value • of the N-conductor protection / initial value • of or N-conductor protection / initial value	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum M	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum M	Switching capacity		
Active power loss			N
Active power loss • maximum Maximum Maxi	Dissipation		
Electricity Continuous current / Rated value / maximum A 160 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 • of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • of or DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 75 • at 65 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current-			
Continuous current / Rated value / maximum	• 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 or DC / Rated value V 690 Operating current at 40 °C / Rated value A 80 oat 55 °C / Rated value at 55 °C / Rated value A 77 at 65 °C / Rated value A 77 at 65 °C / Rated value A 77 at 65 °C / Rated value A 74 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 Adjustable response value current of I-trip / Full-scale value A 10 Adjustable response value current of or N-conductor protection / Full-scale value A 100 Adjustable response value current / of the current- Adjustable response value current / of the current-	Electricity		
Adjustable response value current • of the current-dependent overload release / Full-scale value • of the instantaneous short-circuit release / initial value • of the current-of the current-of the current-of the current-of the current-of initial value A 10	Continuous current / Rated value / maximum	А	160
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 or DC / Rated value verified	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 • at 40 °C / Rated value • at 40 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 60 °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 Suitabile parameters Adjustable parameters Adjustable response value current / • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	Adjustable response value current		
Main circuit		Α	1
Operating voltage		Α	10
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 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 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 parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	Main circuit		
for DC / Rated value	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 77 • at 65 °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 • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	• 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 65 °C / Rated value at 65 °C / Rated value at 77 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 Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	• for DC / Rated value	V	600
at 50 °C / Rated value 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 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 10 for N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current / for the current- Adjustable response value current / of the current- Adjustable response value current / of the current- A 10	Operating current		
at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value At 75 at 70 °C / Rated value At 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 for N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current- Adjustable response value current / of the current-	• at 40 °C / Rated value	Α	80
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 Suitabile parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	• at 50 °C / Rated value	Α	80
at 65 °C / Rated value at 70 °C / Rated value A 75 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 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	• at 55 °C / Rated value	Α	78
at 70 °C / Rated value A 74 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	• 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 for N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	• at 65 °C / Rated value	Α	75
Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	• at 70 °C / Rated value	Α	74
Number of CO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / initial value • for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	Auxiliary circuit		
Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-			0
Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- Adjustable response value current / of the current-	Suitability		
Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 1	· · · · · · · · · · · · · · · · · · ·		system protection
 of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 100 Adjustable response value current / of the current- A 1 	Adjustable parameters		
 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 100 Adjustable response value current / of the current-	Adjustable response value current		
 ◆ for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 1 	• of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- A 1	• for N-conductor protection / initial value	Α	100
	• for N-conductor protection / Full-scale value	Α	100
	•	Α	1
Product details	Product details		
Product component			

Trip indicator		No
·		No
• display		No
Voltage trigger		No
undervoltage release		
undervoltage release with leading contact		No
Product property		No
 for neutral conductors / upgradeable/retrofittable / Short-circuit and 		INO
overload proof		
Product expansion / optional / motor drive		Yes
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		3VA1180-3GD42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• at 240 V / Rated value	kA	36
• at 415 V / Rated value	kA	25
• at 440 V / Rated value	kA	16
• at 500 V / Rated value	kA	8
• at 690 V / Rated value	kA	5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	36
● at 415 V / Rated value	kA	25
● at 440 V / Rated value	kA	16
● at 500 V / Rated value	kA	8
● at 690 V / Rated value	kA	7
Short-circuit current making capacity (lcm)		
• at 240 V / Rated value	kA	75.6
● at 415 V / Rated value	kA	52.5
• at 690 V / Rated value	kA	7.5
Connections	kA	
Connections Arrangement of electrical connectors / for main	kA	7.5 Front terminal
Connections	kA	

• 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				
during operation / minimum	°C	-25		
during operation / maximum	°C	70		
 during storage / minimum 	°C	-40		
during storage / maximum	°C	80		

Certificates	
Equipment	marking

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

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	





<u>other</u>





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/3VA11803GD420AA0

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

http://support.automation.siemens.com/WW/view/en/3VA11803GD420AA0/all

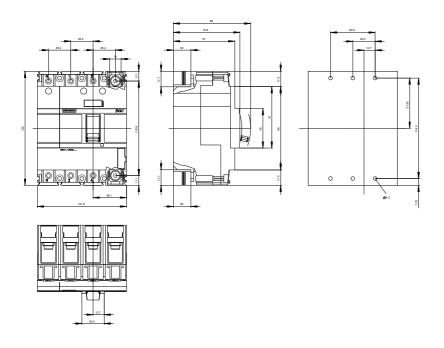
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11803GD420AA0

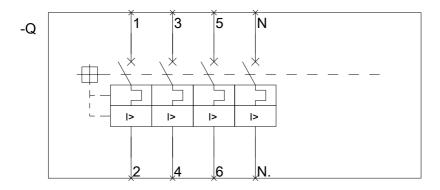
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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