SIEMENS

Data sheet

3VA1112-3ED42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=125A OVERLOAD PROTECTION IR=125A 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

Protection class

Protection class IP / on the front Protective function of the overcurrent release Switching capacity Switching capacity Switching capacity class of the circuit breaker N Dissipation Active power loss • maximum W 23.2 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum • 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 Operating voltage • with AC / at 50/60 Hz / Rated value • v 600 Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 55 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 23.2 Electricity Continuous current / Rated value / maximum • of the current-dependent overload release / A 125 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 or DC / Rated value • of the OC / Rated value • of DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated value •	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 23.2 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 value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • for DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value •	Protective function of the overcurrent release		Ц
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 23.2 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 value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • for DC / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value •	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 • 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 A 125 • of the instantaneous short-circuit release / initial value • of or N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value	Active power loss		
Continuous current / Rated value / maximum Continuous current / Rated value A 125 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 current-dependent overload release / initial value A 10 • of the current-dependent overload release / initial value A 10 • of the current-dependent overload release / initial value Interval 10 • of the current-dependent overload release / initial value	• maximum	W	23.2
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 r DC / Rated value v 690 Operating current of the instantaneous short-circuit release / initial value V 690 Operating voltage viith AC / at 50/60 Hz / Rated value v 690 Operating current of the instantaneous short-circuit release / initial value v 690 Operating voltage v 690 Operating current of the viith AC / Rated value v 600 Operating current of the viith AC / Rated value of viith AC / Rated	Electricity		
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-ci	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 v 690 for DC / Rated value v 690 Operating current at 40 °C / Rated value at 40 °C / Rated value at 55 °C / Rated value at 65 °C / Rated value at 70 °C / Rated valu	Continuous current / Rated value	Α	125
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 690 Operating current • at 40 °C / Rated value A 125 • at 50 °C / Rated value A 122 • at 60 °C / Rated value A 120 • at 60 °C / Rated value A 120 • at 65 °C / Rated value A 117 • at 70 °C / Rated value A 114 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-dependent overload release / initial value	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 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value A 117 • at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value • for N-conductor protection / Full-scale value • for N-conductor protection / Full-scale value • A 10 Adjustable response value current / of the current-dependent overload release / initial value		Α	1
Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value V 690 Operating current • at 40 °C / Rated value A 125 • at 50 °C / Rated value A 122 • at 50 °C / Rated value A 122 • at 60 °C / Rated value A 120 • at 60 °C / Rated value A 120 • at 65 °C / Rated value A 117 • at 70 °C / Rated value A 117 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 A 1 Adjustable response value current / of the current-dependent overload release / initial value A 1		Α	10
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 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 65 °C / Rated value at 70 °C / Rated value A 1114 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable 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-dependent overload release / initial value A 1	Main circuit		
for DC / Rated value	Operating voltage		
Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value A 117 • at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts O 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 • for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value	• with AC / at 50/60 Hz / Rated value	V	690
at 40 °C / Rated value at 50 °C / Rated value A 125 at 50 °C / Rated value A 122 at 60 °C / Rated value A 120 at 65 °C / Rated value A 117 at 70 °C / Rated value A 114 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use 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-dependent overload release / initial value A 1 Adjustable response value current / of the current-dependent overload release / initial value	• for DC / Rated value	V	600
at 55 °C / Rated value at 65 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value At 117 at 70 °C / Rated value 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-dependent overload release / initial value A 1 Adjustable response value current / of the current-dependent overload release / initial value	Operating current		
at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value A 117 at 70 °C / Rated value A 114 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 of or N-conductor protection / initial value of N-conductor protection / Full-scale value Adjustable response value current of N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value	• at 40 °C / Rated value	Α	125
at 60 °C / Rated value at 65 °C / Rated value A 117 at 70 °C / Rated value A 114 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-dependent overload release / Initial value A 10 Adjustable response value current / of the current-dependent overload release / Initial value	• at 50 °C / Rated value	Α	125
at 65 °C / Rated value at 70 °C / Rated value A 114 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 Adjustable response value current / of the current Adjustable response value current / of the current Adjustable response value current / of the current- Adjustable response value current / of the current- dependent overload release / initial value	• at 55 °C / Rated value	Α	122
at 70 °C / Rated value 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-dependent overload release / initial value A 10 Adjustable response value current / of the current-dependent overload release / initial value	• at 60 °C / Rated value	Α	120
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-dependent overload release / initial value	• at 65 °C / Rated value	Α	117
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-dependent overload release / initial value 0 System protection A 10 A 0 A 10 A 1	• at 70 °C / Rated value	Α	114
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-dependent overload release / initial value 0 System protection A 10 0 10 10 10 10 10 10 10 10	Auxiliary circuit		
Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of Intrip / Full-scale value A 10 of Intrip / Full-scale value A 0 of Intrip / Full-scale value A 10 Adjustable response value current / of the current-dependent overload release / initial value			0
Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value of Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale value Intrip / Full-scale value A of Intrip / Full-scale value Intrip / Full-scale	Suitability		
Adjustable response value current of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current-dependent overload release / initial value	Suitability for use		system protection
of I-trip / Full-scale value of r N-conductor protection / initial value of r N-conductor protection / Full-scale value of r N-conductor protection / Full-scale value A of r N-conductor protection / Full-scale value A A of r N-conductor protection / Full-scale value A A of r N-conductor protection / Full-scale value A A of r N-conductor protection / Full-scale value A of r N-con	Adjustable parameters		
 for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value A 0 A 1	Adjustable response value current		
◆ for N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value	● of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- A 1 dependent overload release / initial value	• for N-conductor protection / initial value	Α	0
dependent overload release / initial value	• for N-conductor protection / Full-scale value	Α	0
Developed details	-	Α	1
Product details	Product details		
Product component			

Trip indicator		No
		No
display Voltage trigger		No
Voltage triggerundervoltage release		No
•		No
undervoltage release with leading contact Product property		INO
Product property for neutral conductors /		No
upgradeable/retrofittable / Short-circuit and		140
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		3VA1112-3ED42-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		
● 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
<u> </u>	10 (
Short-circuit current making capacity (Icm)	-	
• at 240 V / Rated value	kA	75.6
• at 240 V / Rated value	kA	75.6
 at 240 V / Rated value at 415 V / Rated value at 690 V / Rated value Connections	kA kA	75.6 52.5 7.5
 at 240 V / Rated value at 415 V / Rated value at 690 V / Rated value Connections Arrangement of electrical connectors / for main	kA kA	75.6 52.5
 at 240 V / Rated value at 415 V / Rated value at 690 V / Rated value Connections	kA kA	75.6 52.5 7.5

• 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

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	





other



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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/3VA11123ED420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11123ED420AA0/all

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

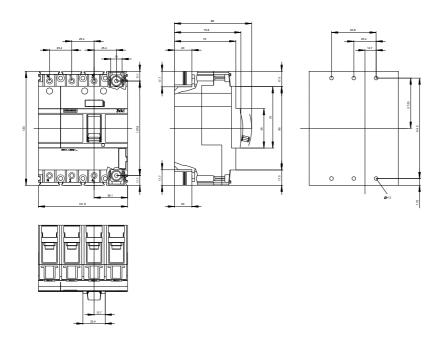
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11123ED420AA0

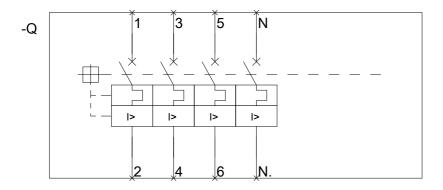
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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