SIEMENS

Data sheet

3VA1110-4ED46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=100A OVERLOAD PROTECTION IR=100A FIXED SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED CABLE 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 IP40 Protective function of the overcurrent release LI Switching capacity Switching capacity class of the circuit breaker S Dissipation Active power loss • maximum W 25 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 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 or DC / Rated value V 600 Operating current • at 40 °C / Rated value A 100 • at 50 °C / Rated value A 100 • at 60 °C / Rated value A 98 • at 60 °C / Rated value A 98 • at 60 °C / Rated value A 99 • at 65 °C / Rated value A 99 • at 65 °C / Rated value A 99 • at 65 °C / Rated value A 99 • at 65 °C / Rated value A 99 • at 65 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts OSuitability Sultability for use Adjustable parameters Adjustable parameters Adjustable response value current / of the current-dependent overload release / initial value • for N-conductor protection / initial value	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker Dissination Active power loss • maximum W 25 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 current- A 1000	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Dissipation Active power loss • maximum W 25	Protective function of the overcurrent release		Ц
Switching capacity class of the circuit breaker Dissipation	Switching capacity		
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Active power loss	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 • with AC / at 50/60 Hz / Rated value • for DC / Rated value • of or DC / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 55 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 94 • at 70 °C / Rated value A 91 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 / Full-scale value • dadjustable response value current / of the current- Adjustable response value current / of the current-	Active power loss		
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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 current-of the curre	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 of tor DC / Rated value of CP Rated value at 50 °C / Rated value at 50 °C / Rated value at 60 °C / Rated value at 70 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitabile parameters Adjustable parameters Adjustable parameters Adjustable response value current of It-trip / Full-scale value af 0 for N-conductor protection / initial value af 0 Adjustable response value current / of the current- Adjustable response value current / of the current-	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 V 690 Operating current at 40 °C / Rated value A 100 other at 50 °C / Rated value other at 50 °C / Rated value A 98 at 60 °C / Rated value A 96 at 65 °C / Rated value A 96 at 70 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 Adjustable response value current / of the current- Adjustable response value current / of the current-	Continuous current / Rated value	Α	100
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 50 °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 • at 70 °C / Rated value A 94 • at 70 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitable parameters 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 Adjustable response value current / of the current-	Adjustable response value current		
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 100 • at 50 °C / Rated value A 98 • at 55 °C / Rated value A 96 • at 65 °C / Rated value A 94 • at 70 °C / Rated value A 91 Auxiliary circuit Number of CO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current A 10 • for N-conductor protection / initial value A 0 • for N-conductor protection / Full-scale value A 0 Adjustable response value current / of the current- A 1		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 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 at	Main circuit		
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 at 65 °C / Rated value at 670 °C / Rated value 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 at 70 °C / Rated value efor N-conductor protection / initial value efor N-conductor protection / Full-scale value at 70 °C / Rated v	Operating voltage		
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at 40 °C / Rated value at 50 °C / Rated value at 55 °C / Rated value at 65 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value at 70 °C / Rated value A 94 at 70 °C / Rated value A 91 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-	• for DC / Rated value	V	600
at 50 °C / Rated value at 55 °C / Rated value A 98 at 60 °C / Rated value A 96 at 65 °C / Rated value A 99 at 70 °C / Rated value A 91 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 of or N-conductor protection / initial value of or N-conductor protection / Full-scale value Adjustable response value current 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-	Operating current		
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at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 94 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 Adjustable response value current A 10 Adjustable response value current / O Adjustable response value current / O Adjustable response value current / Of the current-	• at 50 °C / Rated value	Α	100
at 65 °C / Rated value at 70 °C / Rated value A 91 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	98
at 70 °C / Rated value A 91 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 60 °C / Rated value	Α	96
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 65 °C / Rated value	Α	94
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	91
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
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-	Suitability		
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 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 	Adjustable parameters		
for N-conductor protection / initial value for N-conductor protection / Full-scale value Adjustable response value current / of the current- A 1	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	0
	• for N-conductor protection / Full-scale value	Α	0
	•	Α	1
Product details	Product details		
Product component			

		N
• Trip indicator		No
display		No
Voltage trigger		No
undervoltage release		No
 undervoltage release with leading contact 		No
Product property		
 for neutral conductors / upgradeable/retrofittable / Short-circuit and overload proof 		No
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		3VA1110-4ED46-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(lcs)		
• 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 (Icm)		
• at 240 V / Rated value	kA	121
• at 415 V / Rated value	kA	75.6
• at 690 V / Rated value	kA	7.5
Connections		
Arrangement of electrical connectors / for main		Front terminal
current circuit		
Type of connectable conductor cross-section		

 of the round cond 	of the round conductor terminal / stranded			1	x (1.5 - 70 mm²)	
Type of electrical conn	be of electrical connection / for main current circuit			В	Box terminal	
Mechanical Design						
Height			mm	1	130	
Width			mm	1	101.6	
Depth			mm	7	70	
Mounting type				fi	ixed mounting	
Environmental conditi	ions					
Ambient temperature						
during operation	/ minimum		°C	-2	25	
during operation	during operation / maximum		°C	7	70	
• during storage /	minimum		°C	-4	40	
• during storage /	maximum		°C	8	30	
Certificates						
Equipment marking						
• acc. to DIN EN 61346-2			C	Q		
• acc. to DIN EN 81346-2			C	Q		
General	EMC	Declaration	ion of Ship		ing Approval	other

Product

Approval

other



Conformity





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/3VA11104ED460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11104ED460AA0/all

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

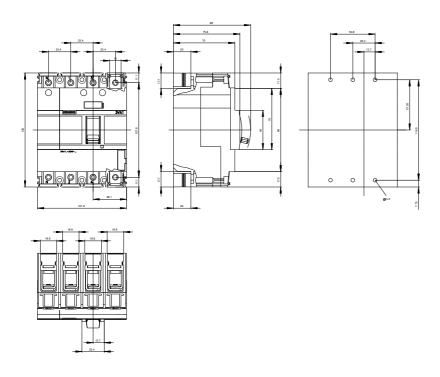
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA11104ED460AA0

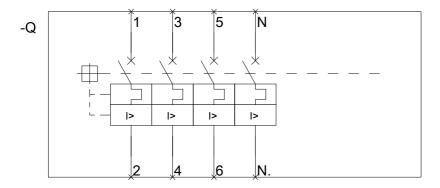
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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