Data sheet

3VA2110-7KQ42-0AA0



CIRCUIT BREAKER 3VA2 IEC FRAME 160 BREAKING CAPACITY CLASS C ICU=110KA @ 415 V 4POLE, LINE PROTECTION ETU860, LSIG, IN=100A OVERLOAD PROTECTION IR=40A ...100A SHORT CIRCUIT PROTECTION ISD=0,6..10X IN, II=1,5..12X IN NEUTRAL PROTECTION ADJUSTABLE (OFF, UPTO 160%) GROUNDFAULT, SWITCHABLE IG=0,2... 1 X IN, TG=0,050,8MS BUSBAR CONNECTION

Model	
product brand name	SENTRON
Product designation	Molded case circuit breaker
Design of the product	Line protection
Product variations	Selective Applications
Ground fault monitoring version	Summation current formation L + N conductor
Design of the auxiliary release	without auxiliaryrelease
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	ETU860

General technical data		
Number of poles		4
Trip class / of the L-trip / with I2t characteristic / initial value		0.5
Trip class / of the L-trip / with I2t characteristic / Full-scale value		25
Electrical endurance (switching cycles)		
● at AC-1 / at 380/415 V / at 50/60 Hz		12 000
Total disconnection time / for G-tripping / with standard characteristic / initial value	S	0.05
Total disconnection time / for G-tripping / with standard characteristic / Full-scale value	S	0.8
circuit-breaker / Design		3VA
Mechanical service life (switching cycles) / typical		20 000

Insulation voltage / Rated value Protection class Protection class IP IP40 Protection class IP IP40 Protective function of the overcurrent release Switching capacity Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 70	Voltage				
Protection class IP Protection class IP / on the front Protective function of the overcurrent release Switching capacity Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value •		V	800		
Protection class IP Protection class IP / on the front Protective function of the overcurrent release Switching capacity Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / maximum A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value • at 40 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value •	Protection class				
Protective function of the overcurrent release Switching capacity Switching capacity Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value / A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 67 °C / Rated value • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts 0 Suitability Suitability Suitability Suitability Suitabile response value current • for G-tripping / with 12t characteristic / initial value • for G-tripping / with 12t characteristic / Full-scale value • for G-tripping / with 12t characteristic / Full-scale value			IP40		
Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • at 40 °C / Rated value A 100 • at 50 °C / Rated value A 100 • at 60 °C / Rated value A 100 • at 65 °C / Rated value A 100 • at 67 °C / Rated value A 100 • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Output Adjustable parameters Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value					
Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70			LSIG		
Switching capacity class of the circuit breaker C Dissipation Active power loss • maximum W 10 Electricity Continuous current / Rated value / maximum A 160 Continuous current / Rated value A 100 Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70					
Dissipation Active power loss • maximum M			C		
Active power loss	Switching capacity class of the circuit breaker		C		
maximum W 10 Electricity Continuous current / Rated value / maximum					
Electricity Continuous current / Rated value / maximum	Active power loss				
Continuous current / Rated value / maximum	• maximum	W	10		
Continuous current / Rated value Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rated value • for G - In auxiliary contacts Number of NO contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitable parameters Adjustable parameters Adjustable response value current • for G-tripping / with 12t characteristic / initial value • for G-tripping / with 12t characteristic / Full-scale value • for G-tripping / with 12t characteristic / Full-scale value	Electricity				
Adjustable response value current / of the instantaneous short-circuit release / initial value Main circuit		A	160		
instantaneous short-circuit release / initial value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value V 690 Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °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 • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current • for G-tripping / with 12t characteristic / initial value • for G-tripping / with 12t characteristic / Full-scale value • for G-tripping / with 12t characteristic / Full-scale value	Continuous current / Rated value	Α	100		
Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 100 • at 70 °C / Rated value • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current • for G-tripping / with 12t characteristic / initial value • for G-tripping / with 12t characteristic / Full-scale value • for G-tripping / with 12t characteristic / Full-scale value		Α	1.5		
Operating voltage • with AC / at 50/60 Hz / Rated value Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 100 • at 70 °C / Rated value • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale value	instantaneous short-circuit release / initial value				
with AC / at 50/60 Hz / Rated value Operating current at 40 °C / Rated value at 50 °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 A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitability or use Adjustable parameters Adjustable response value current of or G-tripping / with 12t characteristic / initial value of or G-tripping / with 12t characteristic / Full-scale value or for G-tripping / with 12t characteristic / Full-scale value A 100 A 10	Main circuit				
Operating current • at 40 °C / Rated value • at 50 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current • for G-tripping / with 12t characteristic / initial value • for G-tripping / with 12t characteristic / Full-scale value	Operating voltage				
at 40 °C / Rated value at 50 °C / Rated value at 60 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current for G-tripping / with 12t characteristic / initial value for G-tripping / with 12t characteristic / Full-scale value for G-tripping / with 12t characteristic / Full-scale value at 100 A 100 A 100 A 100 A 100 Auxiliary circuit 0 Suitability Suitability Suitability A 0.2 Value for G-tripping / with 12t characteristic / Full-scale value	• with AC / at 50/60 Hz / Rated value	V	690		
at 50 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value at 70 °C / Rated value At 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current of or G-tripping / with 12t characteristic / initial value of or G-tripping / with 12t characteristic / Full-scale value A 100 Auxiliary circuit O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Operating current				
at 60 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts O Suitability Suitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current of or G-tripping / with 12t characteristic / initial value for G-tripping / with 12t characteristic / Full-scale value A 100 A	● at 40 °C / Rated value	Α	100		
at 65 °C / Rated value at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current after of G-tripping / with 12t characteristic / initial value for G-tripping / with 12t characteristic / Full-scale value after of NO contacts / for auxiliary contacts 0 0 0 100 Auxiliary circuit 0 0 0 0 0 100 100 100 100 1	● at 50 °C / Rated value	Α	100		
at 70 °C / Rated value A 100 Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts 0 Suitability Suitability for use Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value	• at 60 °C / Rated value	Α	100		
Auxiliary circuit Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Suitability Suitability for use Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value	• at 65 °C / Rated value	Α	100		
Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Suitability Suitability for use Suitabile parameters Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value	• at 70 °C / Rated value	Α	100		
Number of NC contacts / for auxiliary contacts Number of NO contacts / for auxiliary contacts Suitability Suitability for use Suitabile parameters Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale value • for G-tripping / with I2t characteristic / Full-scale value	Auxiliary circuit				
Suitability for use system protection Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial A value • for G-tripping / with I2t characteristic / Full-scale A 1			0		
Suitability for use Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale A 1	Number of NO contacts / for auxiliary contacts		0		
Suitability for use Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial value • for G-tripping / with I2t characteristic / Full-scale A 1	Cuitability				
Adjustable parameters Adjustable response value current • for G-tripping / with I2t characteristic / initial A 0.2 value • for G-tripping / with I2t characteristic / Full-scale A 1 value			system protection		
Adjustable response value current • for G-tripping / with I2t characteristic / initial A 0.2 value • for G-tripping / with I2t characteristic / Full-scale A 1 value	·		,		
 for G-tripping / with I2t characteristic / initial value for G-tripping / with I2t characteristic / Full-scale value 					
value ● for G-tripping / with I2t characteristic / Full-scale A 1 value		۸	0.2		
value		A	U.Z		
• for G-tripping / with standard characteristic / A 0.2		Α	1		
initial value	 for G-tripping / with standard characteristic / initial value 	А	0.2		
• for G-tripping / with standard characteristic / A 1 Full-scale value	• for G-tripping / with standard characteristic /	А	1		

● of I-trip / Full-scale value	Α	12
 of the short-time delayed short-circuit release / initial value 	Α	0.6
 of the short-time delayed short-circuit release / Full-scale value 	Α	10
 of S-trip / with standard characteristic / initial value 	Α	0.6
 of S-trip / with standard characteristic / Full- scale value 	Α	10
Adjustable delay time		
 for G-tripping / with I2t characteristic / initial value 	S	0.05
 for G-tripping / with I2t characteristic / Full-scale value 	S	0.8
• of S-trip / with I2t characteristic / initial value	s	0.05
 of S-trip / with I2t characteristic / Full-scale value 	S	0.5
 of S-trip / with standard characteristic / initial value 	S	0.05
 of S-trip / with standard characteristic / Full- scale value 	S	0.5
Adjustable response value current / of the current- dependent overload release / initial value	Α	0.4
Product details		
Product component		
Trip indicator		No
• display		Yes
undervoltage release		No
Product property		
 of the circuit breaker with tripping unit / Tripping characteristic adjustable 		Yes
 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 		Yes

Accessories

• Phase failure detection

• other measurement function

No Yes

Manufacturer article number / of the supplied basic switch		3VA2110-7KQ42-0AA0
Short circuit		
Operational short-circuit current breaking capacity (Ics)		
at 240 V / Rated value	kA	150
at 415 V / Rated value	kA	110
at 440 V / Rated value	kA	110
at 500 V / Rated value	kA	85
at 690 V / Rated value	kA	2.5
Maximum short-circuit current breaking capacity (Icu)		
• at 240 V / Rated value	kA	150
● at 415 V / Rated value	kA	110
• at 440 V / Rated value	kA	110
• at 500 V / Rated value	kA	85
• at 690 V / Rated value	kA	2.5
Short-circuit current making capacity (Icm)		
• at 240 V / Rated value	kA	330
• at 415 V / Rated value	kA	242
• at 440 V / Rated value	kA	242
• at 500 V / Rated value	kA	187
• at 690 V / Rated value	kA	3.75
Connections		
Arrangement of electrical connectors / for main		Front terminal
current circuit		
Type of connectable conductor cross-section		42 4
• for flat-bar terminal connection / minimum		13 x 1 mm
• for flat-bar terminal connection / maximum		25 x 8.5
Type of electrical connection / for main current circuit		Lug terminal
Mechanical Design		
Height	mm	181
Width	mm	140
Depth Mounting type	mm	107 fixed mounting
		inco mounting
Environmental conditions		
Ambient temperature	°C	25
during operation / minimum	°C	-25 70
during operation / maximum	°C	
during storage / minimum	°C	-40 80
during storage / maximum	U	80

Certificates **Equipment marking** • acc. to DIN EN 61346-2 Q Q • acc. to DIN EN 81346-2 **General Product Approval EMC Declaration of Shipping** Conformity **Approval** other

Shipping other **Approval**



other

GL

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/3VA21107KQ420AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA21107KQ420AA0/all

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

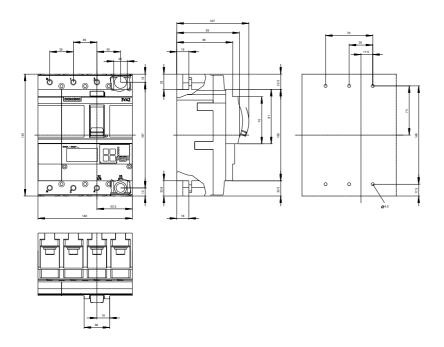
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA21107KQ420AA0

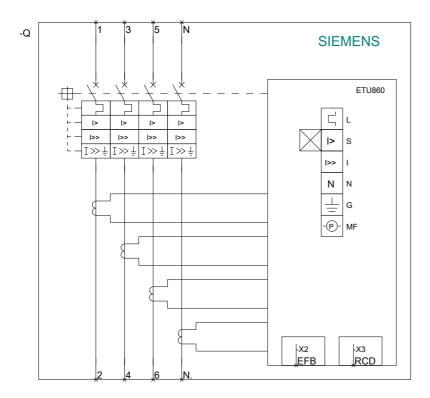
CAx-Online-Generator

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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