# **SIEMENS**

# Data sheet

# 3VA1163-3GE42-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 4-POLE, LINE PROTECTION TM220, ATFM, IN=63A OVERLOAD PROTECTION IR=44,1A ...63A 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	TM220		

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 Protective function of the overcurrent release  Switching capacity Switching capacity class of the circuit breaker  N  Dissipation Active power loss  • maximum  W  17.3  Electricity Continuous current / Rated value / maximum Active power loss • 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  Main circuit  Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 63 °C / Rated value • at 63 °C / Rated value • at 65 °C / Rated value • at 60 °C / Rated value • at 70 °C / Rat	Protection class IP		IP40
Switching capacity Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum  W 17.3  Electricity  Continuous current / Rated value / maximum  • 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 CP (Rated value  • of the CP (Rated value  • of Departing current  • at 40 °C / Rated value  • at 50 °C / Rated value  • at 50 °C / Rated value  • at 63 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker    Dissipation	Protective function of the overcurrent release		Ц
Switching capacity class of the circuit breaker    Dissipation	Switching capacity		
Active power loss  • maximum    M			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  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 65 °C / Rated value  • at 70 °C / Rated value  • at 65 °C / Rated value  • at 67 °C / Rated value  • at 70 °C / Rated value  •	Active power loss		
Continuous current / Rated value / maximum A 160 Continuous current / Pated value A 63  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 current-circuit release / initial value  • of or N-conductor protection / Full-scale value  Adjustable response value current-circuit release / initial value	• maximum	W	17.3
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  of r DC / Rated value  A 63  at 50 °C / Rated value  at 50 °C / Rated value  at 60 °C / Rated value  at 70 °C / Rated value  bat 70 °C / Rated value  at 70 °C / Rated value  at 70 °C / Rated value  at 70 °C / Rated value  bat 70 °C / Rated value  at 70 °C / Rated value  at 70 °C / Rated value  at 70 °C / Rated value  bat 70 °C / Rated value  at	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-dependent overload release / initial value  of the instantaneous short-circuit release / initial value  A 10  10  10  10  10  10  10  10  10  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     v 690     for DC / 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 70 °C / Rated valu	Continuous current / Rated value	Α	63
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  Operating current  • at 40 °C / Rated value  A 63  • at 50 °C / Rated value  A 63  • at 55 °C / Rated value  A 61  • at 60 °C / Rated value  A 61  • at 65 °C / Rated value  A 60  • at 70 °C / Rated value  A 58  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  • for N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	Adjustable response value current		
Main circuit  Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  • to 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  •		Α	1
Operating voltage  • with AC / at 50/60 Hz / Rated value  • for DC / Rated value  Operating current  • at 40 °C / Rated value  • at 50 °C / Rated value  A 63  • at 50 °C / Rated value  A 63  • at 55 °C / Rated value  A 62  • at 60 °C / Rated value  A 61  • at 65 °C / Rated value  A 60  • at 70 °C / Rated value  A 58  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 / initial value  Adjustable response value current/ of the current-dependent overload release / initial value  A 0.7		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 65 °C / Rated value     at 70 °C / Rated value  A 58  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 100  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	Main circuit		
for DC / Rated value     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 60 °C / Rated value  • at 65 °C / Rated value  • at 60 °C / Rated value  • at 70 °C / Rated value  A 60  • at 70 °C / Rated value  A 58  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  A 100  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 63  at 55 °C / Rated value A 62  at 60 °C / Rated value A 61  at 65 °C / Rated value A 60  at 60 °C / Rated value A 60  at 70 °C / Rated value A 58   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 A 10  for N-conductor protection / initial value of ror N-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	• for DC / Rated value	V	600
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 58  Auxiliary circuit  Number of CO contacts / for auxiliary contacts   Suitability  Suitability  Suitability or use  system protection  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 0.7	Operating current		
at 55 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 65 °C / Rated value at 70 °C / Rated value A 58  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 for N-conductor protection / initial value of or 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  A 0.7	• at 40 °C / Rated value	Α	63
at 60 °C / Rated value at 65 °C / Rated value A 60 at 70 °C / Rated value A 58  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 rN-conductor protection / Full-scale value Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	• at 50 °C / Rated value	Α	63
at 65 °C / Rated value     at 70 °C / Rated value     A 58  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  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	• at 55 °C / Rated value	Α	62
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  A 10  For N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value  A 0.7	• at 60 °C / Rated value	Α	61
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	60
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	• at 70 °C / Rated value	Α	58
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	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  A 100  of Intrip / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value			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  A 100  of N-conductor protection / Full-scale value  A 100  Adjustable response value current / of the current-dependent overload release / initial value	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 100  of Initial value A 100  Adjustable response value current / of the current-dependent overload release / initial value	· · · · · · · · · · · · · · · · · · ·		system protection
Adjustable response value current  of I-trip / Full-scale value for N-conductor protection / initial value for N-conductor protection / Full-scale value  A 100  of Initial value A 100  Adjustable response value current / of the current-dependent overload release / initial value	Adjustable parameters		
<ul> <li>for N-conductor protection / initial value</li> <li>for N-conductor protection / Full-scale value</li> <li>Adjustable response value current / of the current-dependent overload release / initial value</li> </ul> A 100 A 0.7			
● for N-conductor protection / Full-scale value A 100  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- dependent overload release / initial value	• for N-conductor protection / initial value	Α	100
dependent overload release / initial value	• for N-conductor protection / Full-scale value	Α	100
Product details	•	Α	0.7
	Product details		
Product component			

		NI
Trip indicator		No
<ul><li>display</li></ul>		No
Voltage trigger		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		Yes
Product function		
Product function		
<ul> <li>Intrinsic device protection</li> </ul>		Yes
<ul> <li>communication function</li> </ul>		No
Phase failure detection		No
<ul> <li>other measurement function</li> </ul>		No
Accessories		
Manufacturer article number / of the supplied basic switch		3VA1163-3GE42-0AA0
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 (Icm)		
• 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		
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	
<ul><li>during storage / maximum</li></ul>	°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	





other







GL

### 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/3VA11633GE420AA0

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

http://support.automation.siemens.com/WW/view/en/3VA11633GE420AA0/all

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

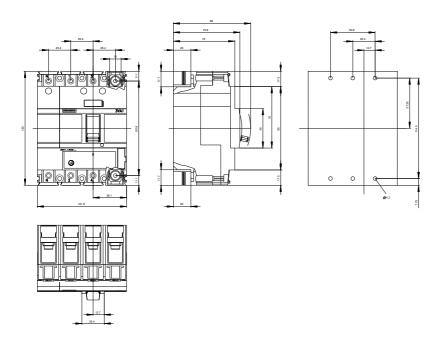
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11633GE420AA0}}$ 

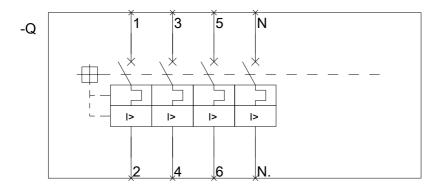
**CAx-Online-Generator** 

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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