# **SIEMENS**

## Data sheet

# 3VA1180-3EE32-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 160 BREAKING CAPACITY CLASS N ICU=25KA @ 415 V 3-POLE, LINE PROTECTION TM220, ATFM, IN=80A OVERLOAD PROTECTION IR=56A ...80A SHORT CIRCUIT PROTECTION II=10 X IN 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
Company to a barical data	

General technical data			
Number of poles		3	
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  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  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 50 °C / Rated value  • at 50 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 65 °C / Rated value  • at 77  • at 65 °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 19.2  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  • of the instantaneous short-circuit release / initial value  • of the instantaneous short-circuit release / initial value  • of the C / Rated value  • of DC / Rated value  • at 40 °C / Rated value  • at 40 °C / Rated value  • at 55 °C / Rated value  • at 65 °C / Rated value  • at 60 °C / Rated value  • at 75  • at 60 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 77  • at 65 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 76  • at 70 °C / Rated value  • at 70 °C / R	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum    M   19.2     Electricity	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker  Dissipation  Active power loss  • maximum    M   19.2     Electricity	Switching capacity		
Active power loss  • maximum  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 C / Rated value • at 40 °C / Rated value • at 50 °C / Rated value • at 50 °C / Rated value • at 65 °C / Rated value • at 70 °C / Fated value • at 70 °C / F			N
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  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 65 °C / Rated value  • at 65 °C / Rated value  • at 70 °C / Rated value  A 75  • at 65 °C / Rated value  A 74  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  Adjustable response value current / of the current-			
Continuous current / Rated value / maximum 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 500 Operating current at 40 °C / Rated value A 80 at 55 °C / Rated value A 76 at 60 °C / Rated value A 77 at 60 °C / Rated value A 77 at 70 °C / Rated value A 75 at 70 °C / Rated value A 75  Suitability Suitability Suitabile parameters Adjustable parameters Adjustable response value current of the rourent of the current- Adjustable response value current / of the current- Adjustable response value current / of the current-	• 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  • 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 / Full-scale value  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 instantaneous short-ci	Continuous current / Rated value / maximum	Α	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     vocation of Departing current     at 40 °C / Rated value     vocation of Companies of	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  Suitable parameters  Adjustable parameters  Adjustable response value current  • for N-conductor protection / initial value  • for N-conductor protection / Full-scale value  A 0  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 500  Operating current     at 40 °C / Rated value     at 50 °C / Rated value     at 55 °C / Rated value     at 55 °C / Rated value     at 60 °C / Rated value     at 65 °C / Rated value     at 670 °C / Rated value     at 77     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-  Adjustable response value current / of the current-	Main circuit		
for DC / Rated value  Operating current      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 65 °C / Rated value     A 75     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  O  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-  A 0.7	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 65 °C / Rated value  • at 65 °C / Rated value  • at 77  • at 65 °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  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-  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 55 °C / Rated value  at 60 °C / Rated value  at 65 °C / Rated value  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  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-	• for DC / Rated value	V	500
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 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 of N-conductor protection / Full-scale value Adjustable response value current / of the current-  Adjustable response value current / of the current-  A 0.7	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 of or 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-  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-  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  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-  A 0.7	• at 55 °C / Rated value	Α	78
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  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 0.7			system protection
<ul> <li>of I-trip / Full-scale value</li> <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-</li> <li>A 0.7</li> </ul>	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-</li> <li>A 0.7</li> </ul>			
• for N-conductor protection / Full-scale value  Adjustable response value current / of the current-  A 0.7	• of I-trip / Full-scale value	Α	10
Adjustable response value current / of the current- A 0.7	• for N-conductor protection / initial value	Α	0
	• for N-conductor protection / Full-scale value	Α	0
	•	Α	0.7
Product details	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
• communication function		No
Phase failure detection		No
<ul> <li>other measurement function</li> </ul>		No
Accessories		
Manufacturer article number / of the supplied basic		3VA1180-3EE32-0AA0
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		
Arrangement of electrical connectors / for main		Front terminal
		Front terminal

• 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	76.2	
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	Ī

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

General Product Approval	EMC	Declaration of	Shipping Approval
		Conformity	











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/3VA11803EE320AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA11803EE320AA0/all

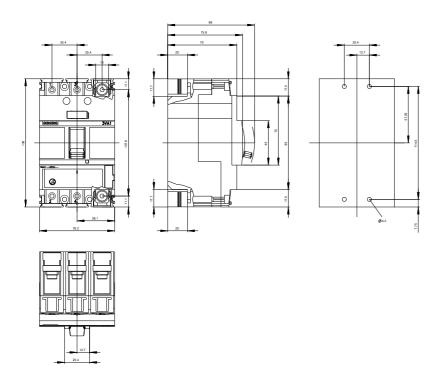
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...) http://www.automation.siemens.com/bilddb/cax\_en.aspx?mlfb=3VA11803EE320AA0

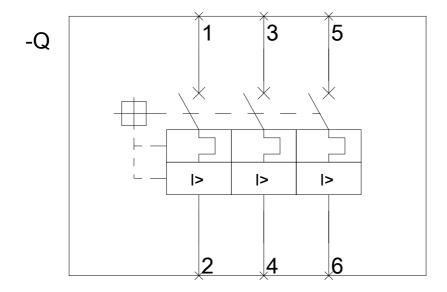
**CAx-Online-Generator** 

http://www.siemens.com/cax

Tender specifications

http://ausschreibungstexte.siemens.com/tiplv





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