SIEMENS

Data sheet

3VA1080-4ED46-0AA0



CIRCUIT BREAKER 3VA1 IEC FRAME 100 BREAKING CAPACITY CLASS S ICU=36KA @ 415 V 4-POLE, LINE PROTECTION TM210, FTFM, IN=80A OVERLOAD PROTECTION IR=80A FIXED SHORT CIRCUIT PROTECTION II=10 X IN NEUTRAL UNPROTECTED CABLE CONNECTION

Figure similar

Model		
product brand name	SI	ENTRON
Product designation	М	lolded case circuit breaker
Design of the product	Li	ine protection
Product variations	G	eneral Applications
Ground fault monitoring version	W	/ithout
Design of the auxiliary release	W	/ithout auxiliary release
Design of the auxiliary switch	W	/ithout
Design of the operating mechanism	to	oggle handle
Type of the driving mechanism / motor drive	N	0
Design of the overcurrent release	TI	M210

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

Protective function of the overcurrent release LI Switching capacity Switching capacity class of the circuit breaker Sisplation Active power loss • maximum W 19.2 Electricity Continuous current / Rated value / maximum A 100 Continuous current / Rated value / maximum A 100 Continuous current / Rated value / maximum A 100 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 value Main circuit Operating voltage • with AC / at 50/60 Hz / Rated value • for DC / Rated value • at 40 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated v	Protection class IP		IP40
Switching capacity (ass of the circuit breaker S Dissipation Active power loss • maximum W 19.2 Electricity Continuous current / Rated value / maximum A 100 Continuous current / Rated value A 80 Adjustable response value current • of the current-dependent overload release / A 1 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 600 Operating current • at 40 °C / Rated value A 80 • at 55 °C / Rated value A 80 • at 55 °C / Rated value A 77 • at 65 °C / Rated value A 77 • at 65 °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 Ocurrent Operating current • at 70 °C / Rated value A 74 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitability Full-scale value C A 10	Protection class IP / on the front		IP40
Switching capacity class of the circuit breaker Active power loss • maximum **Maximum** **Total Continuous current / Rated value / maximum** **Continuous current / Rated value / maximum** **Continuous current / Rated value / maximum** **Adjustable response value current** • of the current-dependent overload release / A 1 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 **Operating voltage** • with AC / at 50/60 Hz / Rated value V 660 **Operating current** • at 40 °C / Rated value A 80 • at 50 °C / Rated value A 80 • at 60 °C / Rated value A 78 • at 60 °C / Rated value A 77 • at 65 °C / Rated value A 75 • at 65 °C / Rated value A 75 • at 65 °C / Rated value A 74 **Auxiliary circuit** Number of CO contacts / for auxiliary contacts **Output Department of CO contacts / for auxiliary contacts **Adjustable parameters** **Adjustable parameters** **Adjustable response value current** • of I-trip / Full-scale value **Of I-trip / Full-scale value **Of I-trip / Full-scale value **Of I-trip / Full-scale value **A 10	Protective function of the overcurrent release		LI
Switching capacity class of the circuit breaker Active power loss • maximum **The continuous current / Rated value / maximum Continuous current / Rated value / maximum A 100 Continuous current / Rated value / maximum A 100 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 • 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 70 °C / Rated value • at 60 °C /	Switching capacity		
Active power loss • maximum Maximum Maxi			S
Active power loss • maximum Electricity Continuous current / Rated value / maximum	Dissipation		
Continuous current / Rated value / maximum			
Continuous current / Rated value / maximum	• 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 Main circuit Operating voltage with AC / at 50/60 Hz / Rated value of to DC / Rated value value Operating current at 40 °C / Rated value A 80 at 55 °C / Rated value A 80 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 Oglitability Suitability for use Adjustable parameters Adjustable parameters Adjustable response value current of the current dependent overload release / A 1 a 10 10 10 10 10 10 10 10 10 10	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 • for DC / Rated value 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 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 A 10	Continuous current / Rated value / maximum	Α	100
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 DC / Rated value vertice of CP Rated value at 40 °C / Rated value at 55 °C / Rated value at 55 °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 at 70 °C / Rated value A 74 Auxiliary circuit Number of CO contacts / for auxiliary contacts O Suitability Suitability Suitable parameters Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10	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 V 600 Operating current • at 40 °C / Rated value A 80 • at 50 °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 O Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value A 10	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 55 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value • at 65 °C / Rated value • at 70 °C / Rated value • at 70 °C / Rated value • 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 A 10		А	1
Operating voltage • 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 55 °C / Rated value • at 60 °C / Rated value • at 60 °C / Rated value • at 65 °C / Rated value A 77 • 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 O Suitability Suitability for use Adjustable parameters Adjustable response value current • of I-trip / Full-scale value A 10		Α	10
with AC / at 50/60 Hz / Rated value v 690 for DC / Rated value V 600 Operating current 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 66 °C / Rated value at 67 °C / Rated value at 67 °C / Rated value at 67 °C / Rated value 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 A 10	Main circuit		
for DC / Rated value V 600 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 65 °C / Rated value • 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 l-trip / Full-scale value A 80 A 78 A 77 A 78 A 77 A 77 A 75 B 76 B 77 B 76 B 77 B 76 B 77 B 78 B 77 B 77 B 78 B 7	• 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 60 °C / Rated value at 60 °C / Rated value at 65 °C / Rated value at 77 at 65 °C / Rated value at 70 °C / Rated value At 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 A 80 A 78 A 78 A 77 A 75 A 74	• for DC / Rated value	V	600
at 50 °C / Rated value at 55 °C / Rated value at 60 °C / Rated value at 60 °C / Rated value A 75 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 80 A 78 A 78 A 77 A 77 A 77 A 75 A 74 A 74	Operating current		
at 55 °C / Rated value 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 for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 78 A 78 A 77 A 77 A 78 A 77 A 75 A 74 A 74	• at 40 °C / Rated value	Α	80
 at 60 °C / Rated value at 65 °C / Rated value at 75 at 70 °C / Rated value A 74 Auxiliary circuit Number of CO contacts / for auxiliary contacts Suitability Suitability for use system protection Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 10 	• 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 Suitability Suitability for use Adjustable parameters Adjustable response value current of I-trip / Full-scale value A 75 A 74	• 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 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 74 A 10	• 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 A 10	• 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 A 10	• 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 0 System protection A 10	Auxiliary circuit		
Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value A 10			0
Suitability for use system protection Adjustable parameters Adjustable response value current • of I-trip / Full-scale value A 10	Suitability		
Adjustable response value current ● of I-trip / Full-scale value A 10			system protection
• of I-trip / Full-scale value A 10	Adjustable parameters		
	Adjustable response value current		
• for N-conductor protection / initial value A 0	• of I-trip / Full-scale value	Α	10
	• for N-conductor protection / initial value	Α	0
• for N-conductor protection / Full-scale value A 0	• for N-conductor protection / Full-scale value	Α	0
Adjustable response value current / of the current- A 1 dependent overload release / initial value	-	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		No
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		3VA1080-4ED46-0AA0
switch		
Short circuit		
Operational short-circuit current breaking capacity		
(Ics)		
● 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	11.9
Connections		
Arrangement of electrical connectors / for main		Front terminal
current circuit		
Type of connectable conductor cross-section		

• of the round conducte	or terminal / stra	anded			1 x (1.5 - 70 mm²)	
Type of electrical connection	on / for main cur	rent circuit			Box terminal	
Mechanical Design						
Height			mm		130	
Width			mm		101.6	
Depth			mm		70	
			111111			
Mounting type	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 / maxi	during storage / maximum		°C		80	
	Certificates					
Equipment marking	Equipment marking					
• acc. to DIN EN 61346-2				Q		
● acc. to DIN EN 81346-2				Q		
General EM	IC	Declaration	n of	Ship	pping Approval	other
Product		Conformity	4			

Further information

Approval

Information- and Downloadcenter (Catalogs, Brochures,...)

other

http://www.siemens.com/lowvoltage/catalogs

Industry Mall (Online ordering system)
https://eb.automation.siemens.com/mall/en/WW/Catalog/Product/3VA10804ED460AA0

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) http://support.automation.siemens.com/WW/view/en/3VA10804ED460AA0/all

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

http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3VA10804ED460AA0

CAx-Online-Generator

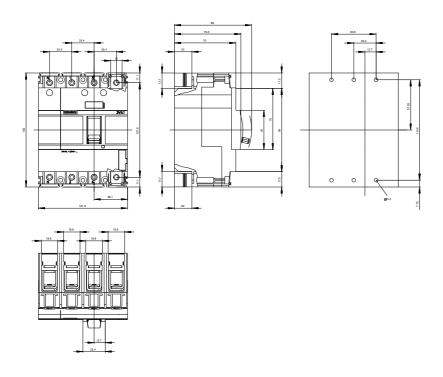
http://www.siemens.com/cax

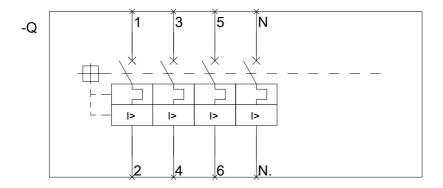
Tender specifications

http://ausschreibungstexte.siemens.com/tiplv

other

GL





last modified: 11.03.2015