

SIEMENS

SENTRON

3WA Air Circuit Breakers

Catalog

Edition
12/2020

www.siemens.com/3WA

Making sure power makes its way

Consistent, safe and intelligent low-voltage power distribution and electrical installation technology

Whether industries, infrastructures or buildings: Each environment depends on a reliable power supply.

Which is why products and systems featuring maximum safety and optimum efficiency are in demand. This comprehensive portfolio for low-voltage power distribution and electrical installation technology covers every requirement – from the switchboard to the socket outlet.

We are there when you need us

Your personal contact can be found at
www.siemens.com/lowvoltage/contact

Catalog · 12/2020

You will find the latest edition and all future editions in the Siemens Industry Online Support at
www.siemens.com/lowvoltage/catalogs

Refer to the Industry Mall for current prices
www.siemens.com/industrymall

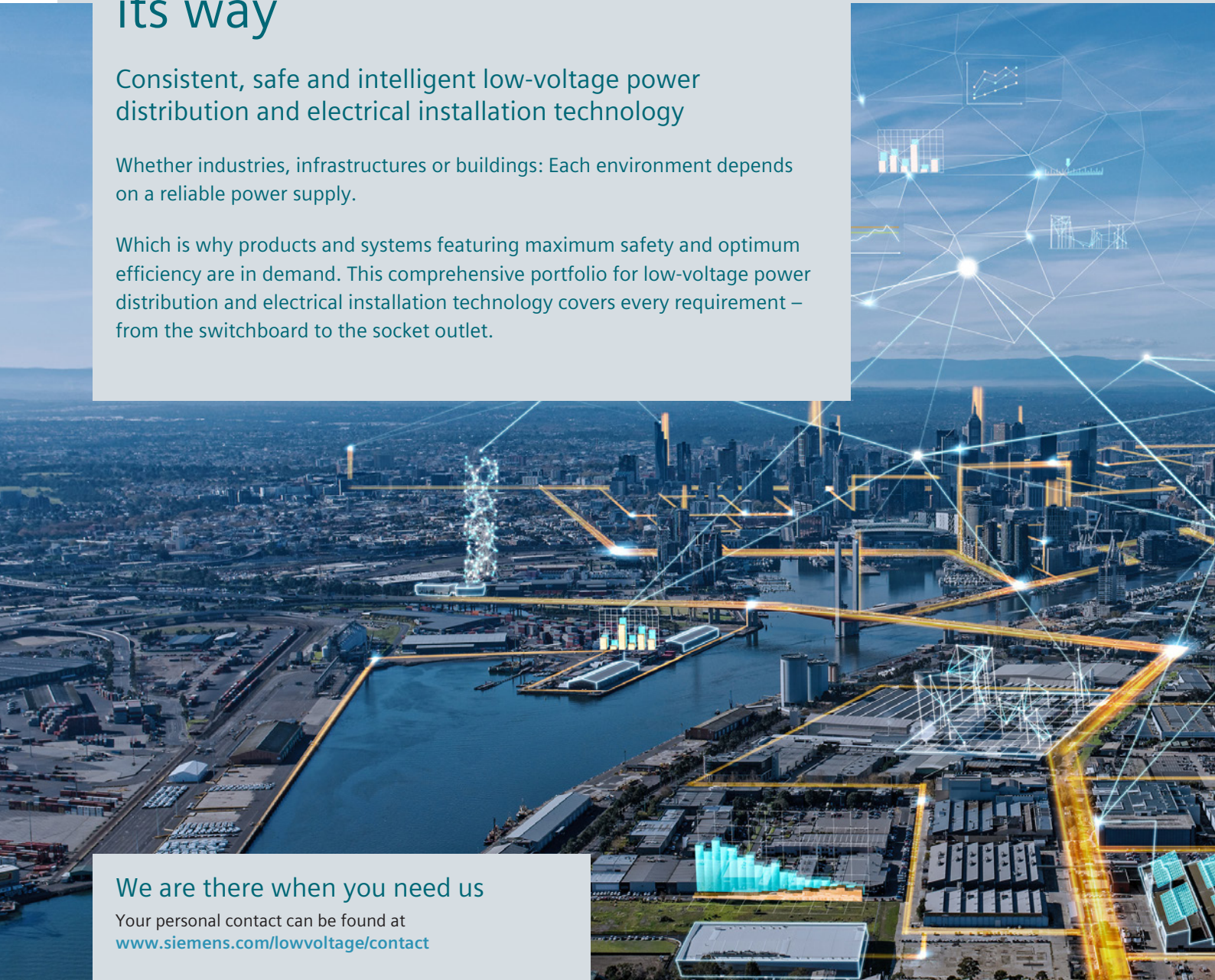
The products and systems listed in this catalog are developed and manufactured using a certified quality management system in accordance with EN ISO 9001:2008.

Technical data

The technical specifications are for general information purposes only. Always heed the operating instructions and notices on individual products during assembly, operation and maintenance.

All illustrations are not binding.

© Siemens 2020



3WA Air Circuit Breakers

Protecting

Introduction	II/2
Air Circuit Breakers	1/1
Appendix	A/1



The fast route to the product

Overview of configurable products for better orientation

Air Circuit Breakers | 3BA11 - 3BA13 3BA11 - 3BA13 | Air Circuit Breakers

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers up to 690 V

The structure shown below is intended as an overview of each position and its meaning. For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage3ba-configurator

3WA1

	5	6	7	8	9	10	11	12	13	14	15	16

Operating mechanism, auxiliary switch and auxiliary release

Operating mechanism, auxiliary switch and auxiliary release		
Manual recharging of the stored energy mechanism	2 NO contacts, 2 NC contacts	A
Recharging of the stored energy mechanism by spring charging motor (S)	4 NO contacts, 4 NC contacts	B
48...60 V DC	2 NO contacts, 2 NC contacts	C
110...127 V AC I	4 NO contacts, 4 NC contacts	D
110...127 V AC II	2 NO contacts, 2 NC contacts	E
208...240 V AC I	4 NO contacts, 4 NC contacts	F
208...240 V AC II	2 NO contacts, 2 NC contacts	G
208...240 V AC	4 NO contacts, 4 NC contacts	H

Closing coil and remote trip alarm reset coil¹⁾

Closing coil and remote trip alarm reset coil¹⁾		
Without closing coil	Without remote trip alarm reset coil	A
With closing coil (CC) for continuous duty, 100% CP	24...30 V DC	B
	48...60 V DC	C
	110...127 V AC I 110...125 V DC	D
	208...240 V AC I 220...250 V DC	E
With remote trip alarm reset coil (RR)	24...30 V DC	F
	48...60 V DC	G
	110...127 V AC I 110...125 V DC	H
	208...240 V AC I 220...250 V DC	I
With closing coil (CC) for non-remotely duty, 5% CP	24...30 V DC	J
	48...60 V DC	K
	110...127 V AC I 110...125 V DC	L
	208...240 V AC I 220...250 V DC	M
With remote trip alarm reset coil (RR)	24...30 V DC	N
	48...60 V DC	O
	110...127 V AC I 110...125 V DC	P
	208...240 V AC I 220...250 V DC	Q

2nd auxiliary release

2nd auxiliary release		
Without 2nd auxiliary release		A
With shunt trip (ST), continuous duty 100% CP	24...30 V DC	B
	48...60 V DC	C
	110...127 V AC I 110...125 V DC	D
	208...240 V AC I 220...250 V DC	E
With shunt trip (ST), non-remotely duty 5% CP	24...30 V DC	F
	48...60 V DC	G
	110...127 V AC I 110...125 V DC	H
	208...240 V AC I 220...250 V DC	I
With under-voltage release (UVR), instantaneous (d) (S) and short-time delayed (d) (2)	24...30 V DC	J
	48...60 V DC	K
	110...127 V AC I 110...125 V DC	L
	208...240 V AC I 220...250 V DC	M
With under-voltage release (UVR), adjustable delay (2...3 s)	48 V DC	N
	240 V DC	O
	110...127 V AC I 110...125 V DC	P
	208...240 V AC I 220...250 V DC	Q
	380...415 V AC	R

3WA1

	5	6	7	8	9	10	11	12	13	14	15	16

Auxiliary releases

1st auxiliary release		
Without 1st auxiliary release		A
With shunt trip (ST), continuous duty 100% CP	24...30 V DC	B
	48...60 V DC	C
	110...127 V AC I 110...125 V DC	D
	208...240 V AC I 220...250 V DC	E
With shunt trip (ST), non-remotely duty 5% CP	24...30 V DC	F
	48...60 V DC	G
	110...127 V AC I 110...125 V DC	H
	208...240 V AC I 220...250 V DC	I

¹⁾ Remote trip alarm reset coil is not available for non-automatic circuit breakers.

²⁾ When using the remote trip alarm reset coil, the under-voltage lockout is permanently deactivated. The circuit breaker can be closed again immediately if the conditions for closing are fulfilled.

1090 Siemens - 12/2020 Delivery Q1 2021 (CY)
Quick selection guide, pages 116 and 118
Quick selection guide, pages 116 and 118
Delivery Q1 2021 (CY) Siemens - 12/2020 1091

Configurable products

For products which are conveniently configurable online, the structure of the article numbers is clearly displayed. A link takes you directly to the configurator which permits complete and valid configuration.

1/2

Siemens · 12/2020

Delivery Q1 2021 (CY)



Catalog LV 10 · 10/2020

You will find the entire range of products for low-voltage power distribution and electrical installation technology in Catalog LV 10 · 10/2020 at www.siemens.com/lowvoltage/catalogs (109482234)

Clickable article numbers

Direct forwarding to the individual products in the Industry Mall by clicking on the Article No. in the catalog

3WA9111-0EE62



or by entering this web address incl. Article No.
www.siemens.com/product?Article No.

3WA air circuit breaker. Made for makers. Simply reliable.



In an age of climate change, cost pressure and digitalization, the new 3WA air circuit breaker makes the electrical infrastructure more reliable, efficient and intelligent – for the benefit of everyone who plans, implements or uses it.

Whether a solid, traditional system is required or a communication-capable installation connected to the cloud, the air circuit breaker provides an individual solution for every case. It is a tried and tested quality product that provides reliable protection as a central component of the switchboard. It meets the highest standards in applications and for usability. It is a complete system consisting of integrated low-voltage components of the SENTRON portfolio to achieve perfect interaction in the switchboard.

The 3WA air circuit breaker is therefore the heart of future-proof, high-performance and long-life power distribution.

The 3WA air circuit breaker continues the globally acknowledged tradition at Siemens for circuit breakers with a high standard of quality and reliability. As the next evolutionary step, decisive aspects of its mechanical and electronic design have been improved. This adds new, sophisticated features that meet current market trends and set new standards.



3WA air circuit breaker continues the Siemens tradition

Choose the 3WA air circuit breaker now. Thanks to web-based upgrades, you will be able to cover all future technological requirements at any time. The combination of a robust mechanism, resilient electronics and automated diagnostics increases the real service life of the circuit breakers, if they are properly maintained, potentially to up to 30 years – and the life cycle costs of installations are greatly reduced.

Highlights:

- The 3WA air circuit breaker puts power distribution into the Internet of Things (IoT) and literally carries its intelligence inside it. All data about power, power quality and circuit breaker status can be measured and included in automation, cloud-based energy management and medium-voltage systems. Based on transparent energy data, the energy efficiency can be improved by up to 30%.
- Protection and metering functionality in one device reduces the space requirement and wiring complexity in the installation.
- Protection algorithms are automatically adapted to the direction of power flow. Distributed power networks such as buildings, infrastructure and industrial plants that produce electricity themselves, store it and feed it into the power system are optimally protected in this way.
- Several million circuit breaker variants can already be generated virtually in 3D and 2D as part of planning. The wiring is planned at the press of a button. This saves several hours of work.
- Features and upgrades can then simply be downloaded from the Internet and imported.
- The robust circuit breaker withstands voltage fluctuations and thus minimizes the risk of faults in the installation. Penalties imposed on system operators for power outages are reduced.

3WA air circuit breaker. Made for makers. Simply reliable.



Trust the tried-and-tested.

Equipped with the rock-solid 3WA air circuit breaker, you can deliver the reliable protection that is generally expected in power distribution.



- Integrated, clearly structured portfolio that covers all requirements and makes the circuit breakers versatile.
- Extensive, modular accessories that make functional expansions easy.
- Proof of breaking capacity with voltage tolerance 690 V +10%. (The circuit breaker standard IEC 60947-2 only requires +5%).
- Long service life with low maintenance – for long-lasting reliability.
- Additional test functionality of the electronic trip unit (ETU) for continuous self-monitoring, simple full-range verification of the trip characteristic curves via USB and automatic creation of test reports for documentation purposes.



Benefit from efficiency.

Equipped with the sophisticated 3WA air circuit breaker, you can efficiently meet the highest demands.



- Enhanced protective functions and high selectivity that ensure high availability of the installation.
- Robust mechanics and unbeatable product quality that proves its value even in challenging applications. Highest load capability of the circuit breaker on disconnecting prolonged short-time currents ICW with a duration of up to 3 s. Top performance for operating voltages up to 1150 V AC and ambient temperatures of $-40 \dots +70 \text{ }^{\circ}\text{C}$.
- Replacement as part of installation planning is simple: The 3WL air circuit breaker can be replaced by the 3WA air circuit breaker according to IEC 61439 without any additional testing if it is operated subject to the same technical requirements.
- Simple, easy, time-saving and cost-saving replacement of 3WL air circuit breakers with the 3WA air circuit breaker in the switchboard.



Create solutions with potential.

Equipped with the pioneering 3WA air circuit breaker, you can easily implement digitalization and automation.



- Individually selectable and subsequently upgradable functionality that provides long-term flexibility. The electronic trip unit ETU600 can be simply upgraded over its entire product life cycle with digital function packages.
- Powerful communication options that transfer data securely. The main focus here is on cyber security. Simultaneous use of two communication protocols in one communication module with switched Ethernet functionality (PROFINET for demanding industrial communication and Modbus TCP for e.g. power monitoring).
- Simple integration into energy management systems in accordance with ISO 50001.
- Selection of the metering functionality according to the energy efficiency standard IEC 60364-8-1.



Enjoy seamless consistency.

Equipped with the 3WA air circuit breaker and the SENTRON portfolio, you can create synergies for your switchgear panels.



- Seamless communication between all low-voltage components enables use of standardized tools and consistency in the data.
- The extensive tool landscape and provision of all necessary engineering data simplifies selection, planning, ordering, configuration and commissioning.
- Less work thanks to data-based engineering.
- Simple and quick planning with SIMARIS software tools, e.g. for verifying the selectivity of the entire power distribution.

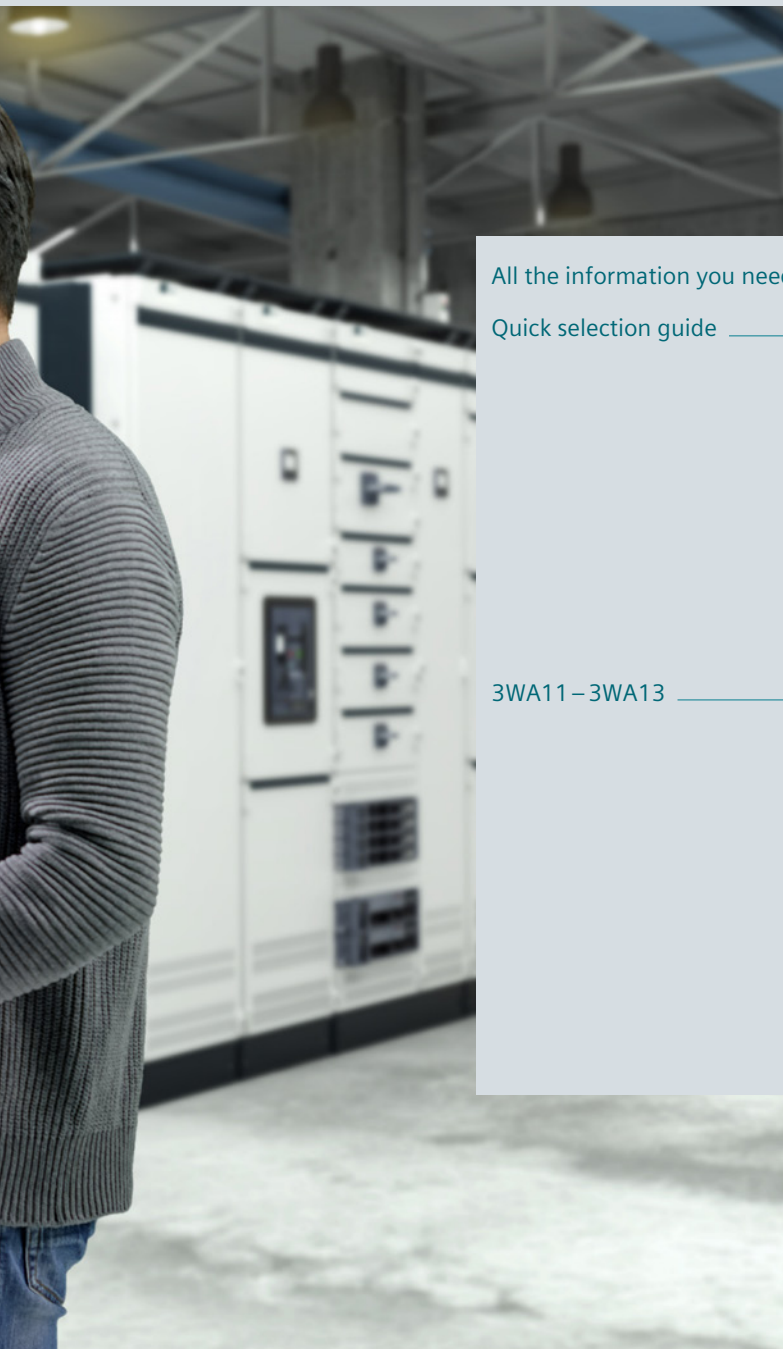


Made for makers. Simply reliable.

All power distribution systems rely on a secure infeed of electrical energy. The 3WA air circuit breaker combines all of the functions which are required of power distribution equipment in the digital companies of today: from reliably protecting people and equipment from electrical accidents and damage, to flexible application and retrofit options, a long service life and low maintenance, to innovative features for integrated e-engineering, reliable energy data recording and seamless integration into digital environments.

As the central component of the electrical power distribution, the 3WA air circuit breaker provides the basis for a holistic energy system in the digital age.

3WA Air Circuit Breakers



1

All the information you need	1/2
Quick selection guide	1/4
Switching devices for AC and DC	1/4
Switching devices for AC	1/8
Switching devices for DC	1/14
Electronic trip unit ETU600	1/17
Connection	1/22
Communication	1/23
3WA11 – 3WA13	1/24
System overview	1/24
Online configurator highlights	1/26
Structure of the article numbers	1/28
Accessory options	1/38
Guide frames for AC	1/41
Guide frames for DC	1/43
Accessories and spare parts	1/44

Delivery Q1 2021 (CY)

A multitude of additional information ...

Information + ordering

All the important things at a glance

Information to get you started

For information about 3WA air circuit breakers, please visit our website

www.siemens.com/3WA

Contact persons in your region

We are there when you need us

You can find your local contacts at

www.siemens.com/lowvoltage/contact

Your product in detail

The Siemens Industry Online Support portal provides comprehensive information

www.siemens.com/lowvoltage/product-support

- Quick selection guide – 3WA air circuit breakers (109781967)
- Brochure – 3WA air circuit breakers (109781968)

The relevant tender specifications can be found at www.siemens.com/lowvoltage/tenderspecifications

Use our conversion tool for quick and easy conversion to Siemens products www.siemens.com/conversion-tool

Our video range

Siemens YouTube channel

- Power Distribution Low Voltage (EN) bit.ly/3iuhXS

Everything you need for your order

Refer to the Industry Mall for an overview of your products

- 3WA air circuit breakers sie.ag/3heeyYv

Direct forwarding to the individual products in the Industry Mall by clicking on the Article No. in the catalog or by entering this web address incl. Article No.

www.siemens.com/product?Article No.

Configurators

Exactly the right circuit breaker for your application

The configurator reduces the time and effort required in the planning and ordering process, and allows for individual adaptations. Configure your 3WL air circuit breaker at www.siemens.com/lowvoltage/3wa-configurator

For your configured 3WL air circuit breaker, you can additionally find

- 3D views
- CAD data
- Unit wiring diagrams
- Dimension drawings

... can be found in our online services

Commissioning + operation

Configuration software

SENTRON powerconfig

The combined commissioning and service tool for communication-capable measuring devices and circuit breakers from the SENTRON portfolio.

www.siemens.com/powerconfig

Free download SENTRON powerconfig mobile via:
[App Store](#) and [Play Store](#)

Your product in detail

The Siemens Industry Online Support portal provides detailed technical information

www.siemens.com/lowvoltage/product-support

- Operating instructions
- Characteristic curves
- Certificates

Engineering data for CAD or CAE systems are available in the CAx Download Manager at
www.siemens.com/lowvoltage/cax

Training and tutorials

Our training courses can be found at
www.siemens.com/sitrain-lowvoltage

Manuals

Manuals are available for downloading in Siemens Industry Online Support at

www.siemens.com/lowvoltage/manuals

- Equipment manual – 3WA air circuit breakers (109763061)

The fast track to the experts

Competent expert advice on technical questions with a wide range of demand-optimized services for all our products and systems.

Assistance with technical queries is provided at
www.siemens.com/lowvoltage/support-request

We offer a comprehensive portfolio of services. You can find your local contacts at
www.siemens.com/lowvoltage/contact

You can find further information on services at
www.siemens.com/service-catalog

Technical overview – Air circuit breakers



The fast way to get you to our online services

This page provides you with comprehensive information and links on air circuit breakers

www.siemens.com/lowvoltage/product-support (109781188)

Switching devices for AC and DC

IEC 60947-2

AC



3WA11

3WA12

Basic data											
Rated operational voltage U_e	V	≤1000					≤1150				
Rated current I_n	A	630 ... 2500					2000 ... 4000				
Size		1					2				
Type of mounting		Withdrawable		Fixed-mounted			Withdrawable		Fixed-mounted		
Number of poles		3/4-pole		3/4-pole			3/4-pole		3/4-pole		
Dimensions											
Width (3-pole 4-pole)	mm	320 410		320 410			460 590		460 590		
Height (for breaking capacity N, S, M, H and D C and E)	mm	468 518		437 462			468 518		437 462		
Depth	mm	471		357			471		357		
Approvals											
General product approvals		VDE, EAC, CCC, CE, C-Tick					VDE, EAC, CCC, CE, C-Tick				
Marine / shipbuilding		ABS, DNV, GL, LRS, BV, PRS, CCS, RMRS					ABS, DNV, GL, LRS, BV, PRS, CCS, RMRS				
Breaking capacity											
Rated short-circuit breaking capacity											
I_{cu} I_{cs} at U_e up to 415/440 V AC	kA	55 55	66 66	85 85	– –	66 66	85 85	100 100	130 130	– –	
I_{cu} I_{cs} at U_e up to 500 V AC	kA	55 55	66 66	85 85	– –	66 66	85 85	100 100	130 130	– –	
I_{cu} I_{cs} at U_e up to 690 V AC	kA	42 42	50 50	66 66	85 85	50 50	66 66	85 85	100 100	85 85	
I_{cu} I_{cs} at U_e up to 1000 V AC	kA	– –	– –	– –	50 50	– –	– –	– –	– –	85 85	
I_{cu} I_{cs} at U_e up to 1150 V AC	kA	– –	– –	– –	– –	– –	– –	– –	– –	50 50	
Rated short-circuit making capacity U_e											
I_{cm} at U_e up to 415 V AC	kA	121	145	187	–	145	187	220	286	–	
I_{cm} at U_e up to 500 V AC	kA	121	145	187	–	145	187	220	286	–	
I_{cm} at U_e up to 690 V AC	kA	88	105	145	187	105	145	187	220	187	
I_{cm} at U_e up to 1000 V AC	kA	–	–	–	105	–	–	–	–	187	
I_{cm} at U_e up to 1150 V AC	kA	–	–	–	–	–	–	–	–	105	
Rated short-time withstand current I_{cw} ¹⁾											
I_{cw} at U_e up to 500 V AC	0.5 s	kA	55	66	85	–	66	85	100	100	–
	1 s	kA	50	66	85	–	66	85	85	100	–
	2 s	kA	35 ²⁾ /45 ³⁾	45	70	–	66	66 ⁴⁾ /85 ⁵⁾	66 ⁴⁾ /85 ⁵⁾	85	–
	3 s	kA	30 ²⁾ /35 ³⁾	35	60	–	55 ⁴⁾ /66 ⁵⁾	55 ⁴⁾ /75 ⁵⁾	55 ⁴⁾ /75 ⁵⁾	75	–
I_{cw} at U_e up to 690 V AC	0.5 s	kA	42	50	66	85	50	66	85	100	85
	1 s	kA	42	50	66	85	50	66	85	100	85
	2 s	kA	35 ²⁾ /42 ³⁾	45	66	70	50	66	66 ⁴⁾ /85 ⁵⁾	85	66 ⁴⁾ /85 ⁵⁾
	3 s	kA	30 ²⁾ /35 ³⁾	35	60	60	50	55 ⁴⁾ /66 ⁵⁾	55 ⁴⁾ /75 ⁵⁾	75	55 ⁴⁾ /75 ⁵⁾
I_{cw} at U_e up to 1000 V AC	0.5 s	kA	–	–	–	50	–	–	–	–	85
	1 s	kA	–	–	–	50	–	–	–	–	85
	2 s	kA	–	–	–	50	–	–	–	–	66 ⁴⁾ /85 ⁵⁾
	3 s	kA	–	–	–	50	–	–	–	–	55 ⁴⁾ /75 ⁵⁾
I_{cw} at U_e up to 1150 V AC	0.5 s	kA	–	–	–	–	–	–	–	–	50
	1 s	kA	–	–	–	–	–	–	–	–	50
	2 s	kA	–	–	–	–	–	–	–	–	50
	3 s	kA	–	–	–	–	–	–	–	–	50
I_{cw} at U_e up to 220 V DC	1 s	kA	–	–	–	–	–	–	–	–	
I_{cw} at U_e up to 300 V DC	1 s	kA	–	–	–	–	–	–	–	–	
I_{cw} at U_e up to 600 V DC	1 s	kA	–	–	–	–	–	–	–	–	
I_{cw} at U_e up to 1000 V DC	1 s	kA	–	–	–	–	–	–	–	–	

¹⁾ At rated operational voltage $U_e \geq 690$ V, the I_{cw} value of the circuit breaker corresponds to the I_{cu} or I_{cs} value

²⁾ Size 1 with $I_{n \max} \leq 1250$ A
³⁾ Size 1 with $I_{n \max} \geq 1600$ A

⁴⁾ $I_{n \max} \leq 2500$ A
⁵⁾ $I_{n \max} \geq 3200$ A

AC



3WA13

DC



3WA12

3WA13			3WA12			
≤1150			≤600 / 1000			
4000 ... 6300			1000 ... 4000			
3			2			
Withdrawable		Fixed-mounted	Withdrawable		Fixed-mounted	
3/4-pole		3/4-pole	3/4-pole		3/4-pole	
704 914		704 914	460 590		460 590	
468 518		437 462	468 518		437 462	
471		357	471		357	
VDE, EAC, CCC, CE, C-Tick ABS, DNV, GL, LRS, BV, PRS, CCS, RMRS			VDE, EAC, CCC, CE, C-Tick ABS, DNV, GL, LRS, BV, PRS, CCS, RMRS			
H	C	E	D	E	D	E
- -	- -	- -	- -	- -	- -	- -
100 100	150 150 (3-pole); 130 130 (4-pole)	- -	- -	- -	- -	- -
85 85	150 150 (3-pole); 130 130 (4-pole)	150 150 (3-pole); 130 130 (4-pole)	- -	- -	- -	- -
- -	- -	125 125	- -	- -	- -	- -
- -	- -	70 70	- -	- -	- -	- -
220	330 (3-pole); 286 (4-pole)	-	-	-	-	-
220	330 (3-pole); 286 (4-pole)	-	-	-	-	-
187	330 (3-pole); 286 (4-pole)	330 (3-pole); 286 (4-pole)	-	-	-	-
-	-	275	-	-	-	-
-	-	154	-	-	-	-
100	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
100	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
100	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
100	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
85	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
85	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
85	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
85	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	-	-	-	-
-	-	125 (3-pole); 120 (4-pole)	-	-	-	-
-	-	125 (3-pole); 120 (4-pole)	-	-	-	-
-	-	125 (3-pole); 120 (4-pole)	-	-	-	-
-	-	125 (3-pole); 120 (4-pole)	-	-	-	-
-	-	70 70	-	-	-	-
-	-	70 70	-	-	-	-
-	-	70 70	-	-	-	-
-	-	70 70	-	-	-	-
-	-	-	35	-	35	-
-	-	-	30	-	30	-
-	-	-	25	-	25	-
-	-	-	-	20	-	20

Switching devices for AC and DC

IEC 60947-2 (continued)

AC



3WA11

3WA12

Breaking capacity		N	S	M	E	S	M	H	C	E	
Rated conditional short-circuit current I_{cc} of the non-automatic air circuit breakers											
Up to 500 V AC	kA	55	66	85	–	66	85	100	100	–	
Up to 690 V AC	kA	42	50	66	85	50	66	85	100	85	
Up to 1000 V AC	kA	–	–	–	50	–	–	–	–	85	
Up to 1150 V AC	kA	–	–	–	–	–	–	–	–	50	
Up to 220 V/300 V DC	kA	–	–	–	–	–	–	–	–	–	
Up to 600 V/1000 V DC	kA	–	–	–	–	–	–	–	–	–	
IT system capability											
1-pole short-circuit breaking capacity I_{IT} acc to.	≤500 V	kA	50	50	50	–	50	50	50	50	–
IEC 60947-2 Annex H	≤690 V	kA	–	–	–	50	–	–	–	–	50
	1000 V	kA	–	–	–	–	–	–	–	–	–

AC



3WA13

DC



3WA12

3WA13			3WA12			
H	C	E	D	E	D	E
100	130 (3-pole); 120 (4-pole)	–	–	–	–	–
85	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	–	–	–	–
–	–	125 (3-pole); 120 (4-pole)	–	–	–	–
–	–	70	–	–	–	–
–	–	–	35/30	–/–	35/30	–/–
–	–	–	25/–	–/20	25/–	–/20
50	50	–	–	–	–	–
–	–	50	–	–	–	–
–	–	–	–	–	–	–

1

Switching devices for AC

IEC 60947-2

3WA11



Rated current I_n	630 A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A
---------------------	-------	-------	--------	--------	--------	--------	--------

General data

Isolating function acc. to EN 60947-2	Yes							
Utilization category	B							
Permissible ambient temperature	Operation	°C					-40 ... +70	
	Storage	°C					-40 ... +80	
Mounting position								

Degree of protection

IP20 without control cabinet door, IP41 with door sealing frame, IP55 with cover

Voltage

Rated operational voltage U_e at 50/60 Hz	1000 V version	V AC	≤1000						
Rated insulation voltage U_i		V AC	1000						
Rated impulse withstand voltage U_{imp}	Main conducting paths	kV	12						
	Auxiliary circuits	kV	4						
	Control circuits	kV	2.5						

Permissible load

Permissible load for withdrawable versions

For all connection types (except rear vertical main connections)	Up to 55 °C (Cu bare)	A	630	800	1000	1250	1600	2000	–
	Up to 60 °C (Cu bare)	A	630	800	1000	1250	1600	1930	–
	Up to 70 °C (Cu bare)	A	630	800	1000	1210	1490	1780	–
With rear vertical connections	Up to 55 °C (Cu bare)	A	630	800	1000	1250	1600	2000	2500
	Up to 60 °C (Cu bare)	A	630	800	1000	1250	1600	2000	2500
	Up to 70 °C (Cu bare)	A	630	800	1000	1250	1545	1855	2215

Permissible load for fixed-mounted versions

For all connection types (except rear vertical main connections)	Up to 55 °C (Cu bare)	A	630	800	1000	1250	1600	2000	–
	Up to 60 °C (Cu bare)	A	630	800	1000	1250	1600	2000	–
	Up to 70 °C (Cu bare)	A	630	800	1000	1250	1600	2000	–
With rear vertical connections	Up to 55 °C (Cu bare)	A	630	800	1000	1250	1600	2000	2500
	Up to 60 °C (Cu bare)	A	630	800	1000	1250	1600	2000	2500
	Up to 70 °C (Cu bare)	A	630	800	1000	1250	1600	2000	2500

Power loss at I_n

With three-phase symmetrical load with maximum rated current, complete device (3/4p)	Fixed-mounted circuit breaker	W	30	45	70	105	135	240	360
	Withdrawable circuit breaker	W	55	85	130	205	310	440	600

1

3WA12



3WA13



3WA12				3WA13		
2000 A	2500 A	3200 A	4000 A	4000 A	5000 A	6300 A
Yes				Yes		
B				B		
-40 ... +70				-40 ... +70		
-40 ... +80				-40 ... +80		
IP20 without control cabinet door, IP41 with door sealing frame, IP55 with cover				IP20 without control cabinet door, IP41 with door sealing frame, IP55 with cover		
≤1150				≤1150		
≤1150				≤1150		
12				12		
4				4		
2.5				2.5		
2000	2500	3200	–	4000	5000	–
2000	2500	3020	–	4000	5000	–
2000	2280	2870	–	4000	5000	–
2000	2500	3200	4000	4000	5000	5920
2000	2500	3200	3910	4000	5000	5810
2000	2390	2945	3645	4000	5000	5500
2000	2500	3200	–	4000	5000	–
2000	2500	3200	–	4000	5000	–
2000	2500	3200	–	4000	5000	–
2000	2500	3200	4000	4000	5000	6300
2000	2500	3200	4000	4000	5000	6300
2000	2500	3200	4000	4000	5000	5920
180	270	410	750	520	630	900
320	520	710	1040	810	1050	1600

Switching devices for AC

IEC 60947-2 (continued)

3WA11



Rated current I_n			630 A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A
Switching times									
Closing time		ms				35			
Opening time		ms				38			
Electrical closing time (through closing coil)		ms				80 / 50 ¹⁾			
Electrical opening time (through shunt trip)		ms				73			
Electrical opening time (instantaneous undervoltage release)		ms				73			
Opening time due to ETU, instantaneous short-circuit release		ms				50			
Service life/endurance									
Breaking capacity N, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				15000			
	With maintenance ²⁾	Operating cycles				30000			
Electrical	Without maintenance 690 V	Operating cycles				10000			
	With maintenance ²⁾	Operating cycles				30000			
Breaking capacity S, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				15000			
	With maintenance ²⁾	Operating cycles				30000			
Electrical	Without maintenance 690 V	Operating cycles				15000			
	With maintenance ²⁾	Operating cycles				30000			
Breaking capacity M, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				10000			
	With maintenance ²⁾	Operating cycles				15000			
Electrical	Without maintenance 690 V	Operating cycles				7500			
	With maintenance ²⁾	Operating cycles				15000			
Breaking capacity E, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				10000			
	With maintenance ²⁾	Operating cycles				15000			
Electrical	Without maintenance 690 V	Operating cycles				7500			
	Without maintenance 1000 V	Operating cycles				1000			
	Without maintenance 1150 V	Operating cycles				–			
	With maintenance ²⁾	Operating cycles				15000			
	With maintenance ²⁾	Operating cycles				–			
Breaking capacity H, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				–			
	With maintenance ²⁾	Operating cycles				–			
Electrical	Without maintenance 690 V	Operating cycles				–			
	With maintenance ²⁾	Operating cycles				–			
Breaking capacity C, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				–			
	With maintenance ²⁾	Operating cycles				–			
Electrical	Without maintenance 690 V	Operating cycles				–			
	With maintenance 690 V ²⁾	Operating cycles				–			
Operating frequency									
Breaking capacity N and S									
Electrical	3-pole	1/h				45			
	4-pole	1/h				60			
Breaking capacity M, H and C									
Electrical	3/4-pole	1/h				60 / 60			
Breaking capacity E									
Electrical	3/4-pole	1/h				20 / 20			

¹⁾ Closing time through closing coil for momentary duty for synchronization purposes = 50 ms

²⁾ Maintenance means: Replacing main contact elements and arc chutes (see Operating Manual: www.siemens.com/lowvoltage/manuals).

3WA12



3WA13



1

2000 A		2500 A		3200 A		4000 A		4000 A		5000 A		6300 A	
			35								35		
			34								34		
			100								100		
			73								73		
			73								73		
			50								50		
			-								-		
			-								-		
			-								-		
			-								-		
			10000								-		
			20000								-		
7500		7500			4000		2000				-		
			20000								-		
			10000								-		
			20000								-		
7500		7500			4000		2000				-		
			20000								-		
			10000								5000		
			20000								10000		
7500		7500			4000		2000				2000		
			1000								1000		
			500								500		
			20000								10000		
			10000								7500		
			20000								15000		
7500		7500			4000		2000				2000		
20000		20000			20000		20000				15000		
			5000								5000		
			10000								10000		
5000		5000			4000		1000				1000		
10000		10000			10000		10000				10000		
			45								-		
			60								-		
			60 / 60								60 / 60		
			20 / 20								20 / 20		

Switching devices for AC

IEC 60947-2 (continued)

3WA11



Rated current I_n		630 A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A
Connection								
Main conductor minimum cross-sections								
Copper bars, bare	Unit, mm ²	1 × 40 × 10	1 × 50 × 10	1 × 60 × 10	2 × 40 × 10	2 × 50 × 10	3 × 50 × 10	4 × 50 × 10
Copper bars, painted black	Unit, mm ²	1 × 40 × 10	1 × 50 × 10	1 × 60 × 10	2 × 40 × 10	2 × 50 × 10	3 × 50 × 10	4 × 50 × 10
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)								
Standard connection = push-in	Without end sleeve				2 × 0.5 ... 2.5 mm ² (AWG 20 ... 14)			
	With end sleeve acc. to DIN 46228 Part 2				2 × 0.5 ... 2.5 mm ² (AWG 20 ... 14)			
	With twin end sleeve				2 × 0.5 ... 1.5 mm ² (AWG 20 ... 16)			
	Stripped length				10 ... 12 mm (0.39 ... 0.47 inch)			
Optional connection with screw connection	Without end sleeve				2 × 0.5 ... 2.5 mm ² (AWG 20 ... 14)			
	With end sleeve acc. to DIN 46228 Part 2				1 × 0.5 ... 1.5 mm ² (AWG 20 ... 16)			
	With twin end sleeve				1 × 0.5 ... 1.5 mm ² (AWG 20 ... 16)			
	Stripped length				7 ... 8 mm (0.28 ... 0.31 inch)			
Position signaling switch								
Spring-loaded terminals for standard signaling contacts	Without end sleeve				0.08 ... 2.5 mm ² (AWG 20 ... 12)			
	With end sleeve acc. to DIN 46228 Part 2				0.25 ... 1.5 mm ²			
	Stripped length				5 ... 6 mm (0.2 ... 0.24 inch)			
Push-in connection for communication signaling contacts	Without end sleeve				0.14 ... 1.5 mm ² (AWG 20 ... 16)			
	With end sleeve acc. to DIN 46228 Part 2				0.25 ... 1.5 mm ² (AWG 20 ... 16)			
	Stripped length				9 mm (0.35 inch)			
Weights								
3-pole	Fixed-mounted circuit breaker	kg	43	43	43	43	43	43
	Withdrawable circuit breaker	kg	45	45	45	45	45	45
	Guide frames	kg	25	25	25	25	25	25
4-pole	Fixed-mounted circuit breaker	kg	50	50	50	50	50	50
	Withdrawable circuit breaker	kg	54	54	54	54	54	54
	Guide frames	kg	30	30	30	30	30	30

3WA12



3WA13



2000 A	2500 A	3200 A	4000 A	4000 A	5000 A	6300 A
3× 50×10	2× 100×10	3× 100×10	4× 120×10	4× 100×10	6× 100×10	6× 120×10
3× 50×10	2× 100×10	3× 100×10	4× 120×10	4× 100×10	6× 100×10	6× 120×10
	2× 0.5 ... 2.5 mm ² (AWG 20 ... 14)				2× 0.5 ... 2.5 mm ² (AWG 20 ... 14)	
	2× 0.5 ... 2.5 mm ² (AWG 20 ... 14)				2× 0.5 ... 2.5 mm ² (AWG 20 ... 14)	
	2× 0.5 ... 1.5 mm ² (AWG 20 ... 16)				2× 0.5 ... 1.5 mm ² (AWG 20 ... 16)	
	10 ... 12 mm (0.39 ... 0.47 inch)				10 ... 12 mm (0.39 ... 0.47 inch)	
	2× 0.5 ... 2.5 mm ² (AWG 20 ... 14)				2× 0.5 ... 2.5 mm ² (AWG 20 ... 14)	
	1× 0.5 ... 1.5 mm ² (AWG 20 ... 16)				1× 0.5 ... 1.5 mm ² (AWG 20 ... 16)	
	1× 0.5 ... 1.5 mm ² (AWG 20 ... 16)				1× 0.5 ... 1.5 mm ² (AWG 20 ... 16)	
	7 ... 8 mm (0.28 ... 0.31 inch)				7 ... 8 mm (0.28 ... 0.31 inch)	
	0.08 ... 2.5 mm ² (AWG 20 ... 12)				0.08 ... 2.5 mm ² (AWG 20 ... 12)	
	0.25 ... 1.5 mm ²				0.25 ... 1.5 mm ²	
	5 ... 6 mm (0.2 ... 0.24 inch)				5 ... 6 mm (0.2 ... 0.24 inch)	
	0.14 ... 1.5 mm ² (AWG 20 ... 16)				0.14 ... 1.5 mm ² (AWG 20 ... 16)	
	0.25 ... 1.5 mm ² (AWG 20 ... 16)				0.25 ... 1.5 mm ² (AWG 20 ... 16)	
	9 mm (0.35 inch)				9 mm (0.35 inch)	
56	59	64	85	82	82	90
60	63	68	121	88	88	96
31	39	45	52	60	60	70
67	71	77	103	99	99	108
72	76	82	146	106	106	108
37	47	54	62	84	84	119

Switching devices for DC

IEC 60947-2

3WA12



Rated current I_n			1000 A	2000 A	4000 A
General data					
Isolating function acc. to EN 60947-2				Yes	
Utilization category				B	
Permissible ambient temperature	During operation (in operation with LCD max. 55 °C)	°C		-40 ... +70	
	Storage	°C		-40 ... +80	
Mounting position					
Degree of protection			IP20 without control cabinet door, IP41 with door sealing frame, IP55 with cover		
Voltage					
Rated operational voltage U_e	1000 V version	V DC		1000	
Rated insulation voltage U_i		V DC		1000	
Rated impulse withstand voltage U_{imp}	Main conducting paths	kV		12	
	Auxiliary circuits	kV		4	
	Control circuits	kV		2.5	
Permissible load					
Permissible load for withdrawable versions					
For all connection types (except rear vertical main connections)	Up to 40 °C (Cu bare)	A	1000	2000	4000
	Up to 55 °C (Cu bare)	A	1000	2000	3640
	Up to 60 °C (Cu bare)	A	1000	2000	3500
	Up to 70 °C (Cu bare)	A	1000	1950	3250
With rear vertical connections	Up to 40 °C (Cu bare)	A	1000	2000	4000
	Up to 55 °C (Cu bare)	A	1000	2000	4000
	Up to 60 °C (Cu bare)	A	1000	2000	3640
	Up to 70 °C (Cu bare)	A	1000	2000	3400
Permissible load for fixed-mounted versions					
For all connection types (except rear vertical main connections)	Up to 40 °C (Cu bare)	A	1000	2000	4000
	Up to 55 °C (Cu bare)	A	1000	2000	4000
	Up to 60 °C (Cu bare)	A	1000	2000	4000
	Up to 70 °C (Cu bare)	A	1000	2000	3900
With rear vertical connections	Up to 40 °C (Cu bare)	A	1000	2000	4000
	Up to 55 °C (Cu bare)	A	1000	2000	4000
	Up to 60 °C (Cu bare)	A	1000	2000	4000
	Up to 70 °C (Cu bare)	A	1000	2000	4000
Power loss at I_n					
With three-phase symmetrical load, complete device (3/4p)	Withdrawable circuit breaker	W	280	770	1640
	Fixed-mounted circuit breaker	W	140	390	820
Switching times					
Closing time		ms	35	35	35
Opening time		ms	34	34	34
Electrical closing time (through closing coil)		ms	100	100	100
Electrical opening time (through shunt trip)		ms	73	73	73
Electrical opening time (instantaneous undervoltage release)		ms	73	73	73

3WA12



1

Rated current I _n			1000 A	2000 A	4000 A
Service life/endurance					
Breaking capacity D, 3/4-pole					
Mechanical	Without maintenance	Operating cycles	10000	10000	10000
	With maintenance ¹⁾	Operating cycles	20000	20000	20000
Electrical	Without maintenance 600 V	Operating cycles	6000	6000	4000
	With maintenance ¹⁾	Operating cycles	20000	20000	20000
Breaking capacity E, 3/4-pole					
Mechanical	Without maintenance	Operating cycles	10000	10000	10000
	With maintenance ¹⁾	Operating cycles	20000	20000	20000
Electrical	Without maintenance 1000 V	Operating cycles	1000	1000	1000
	With maintenance ¹⁾	Operating cycles	20000	20000	20000
Operating frequency					
Breaking capacity D					
Electrical	3/4-pole	1/h	60 / 60	60 / 60	60 / 60
Breaking capacity E					
Electrical	3/4-pole	1/h	20 / 20	20 / 20	20 / 20
Connection					
Main conductor minimum cross-sections					
Copper bars, bare		Unit, mm ²	1 × 50 × 10	2 × 50 × 10	3 × 100 × 10 on the infeed and outgoing side; 6 × 250 × 500 × 5 for jumpers
Copper bars, painted black		Unit, mm ²	1 × 50 × 10	2 × 50 × 10	3 × 100 × 10 on the infeed and outgoing side; 6 × 250 × 500 × 5 for jumpers
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)					
Standard connection = push-in	Without end sleeve		2 × 0.5 ... 2.5 mm ² (AWG 20 ... 14)		
	With end sleeve acc. to DIN 46228 Part 2		2 × 0.5 ... 2.5 mm ² (AWG 20 ... 14)		
	With twin end sleeve		2 × 0.5 ... 1.5 mm ² (AWG 20 ... 16)		
	Stripped length		10 ... 12 mm (0.39 ... 0.47 inch)		
Optional connection with screw connection	Without end sleeve		2 × 0.5 ... 2.5 mm ² (AWG 20 ... 14)		
	With end sleeve acc. to DIN 46228 Part 2		1 × 0.5 ... 1.5 mm ² (AWG 20 ... 16)		
	With twin end sleeve		1 × 0.5 ... 1.5 mm ² (AWG 20 ... 16)		
	Stripped length		7 ... 8 mm (0.28 ... 0.31 inch)		
Position signaling switch					
Spring-loaded terminals for standard signaling contacts	Without end sleeve		0.08 ... 2.5 mm ² (AWG 20 ... 12)		
	With end sleeve acc. to DIN 46228 Part 2		0.25 ... 1.5 mm ²		
	Stripped length		5 ... 6 mm (0.2 ... 0.24 inch)		
Push-in connection for communication signaling contacts	Without end sleeve		0.14 ... 1.5 mm ² (AWG 20 ... 16)		
	With end sleeve acc. to DIN 46228 Part 2		0.25 ... 1.5 mm ² (AWG 20 ... 16)		
	Stripped length		9 mm (0.35 inch)		
Weights					
3-pole	Fixed-mounted circuit breaker	kg	56	56	64
	Withdrawable circuit breaker	kg	60	60	68
	Guide frames	kg	31	31	45
4-pole	Fixed-mounted circuit breaker	kg	67	67	77
	Withdrawable circuit breaker	kg	72	72	82
	Guide frames	kg	37	37	54

¹⁾ Maintenance means: Replacing main contact elements and arc chutes (see Operating Manual: www.siemens.com/lowvoltage/manuals).

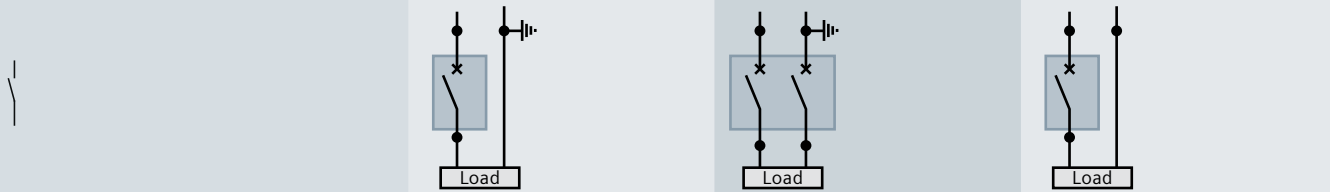
Switching devices for DC

Application examples

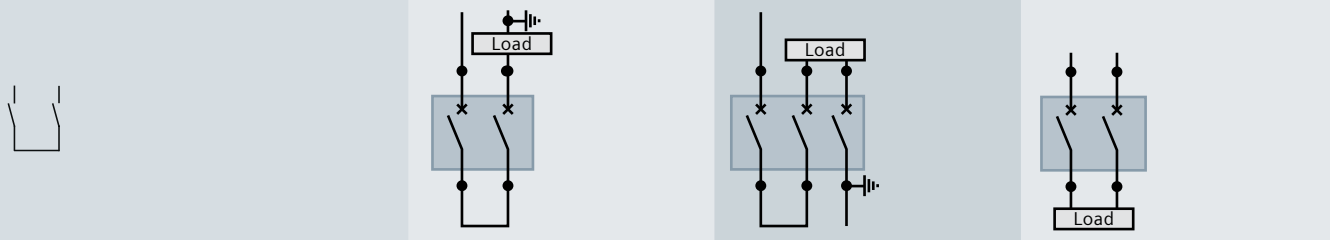
The connection to the circuit breakers is not dependent on direction and polarity; the circuit diagrams can be adapted accordingly. If the parallel or series connections are made directly to the connecting bars, for thermal reasons the continuous load on the circuit breakers must only be 80% of the permissible operational current. If the parallel or series connection is made at a distance of 1 m from the connecting bars, the circuit breaker can be used at full operational current load.

Required contact gaps at rated voltage DC 1-pole disconnection
Grounded system DC 2-pole (all-pole) disconnection
Grounded system Non-grounded system

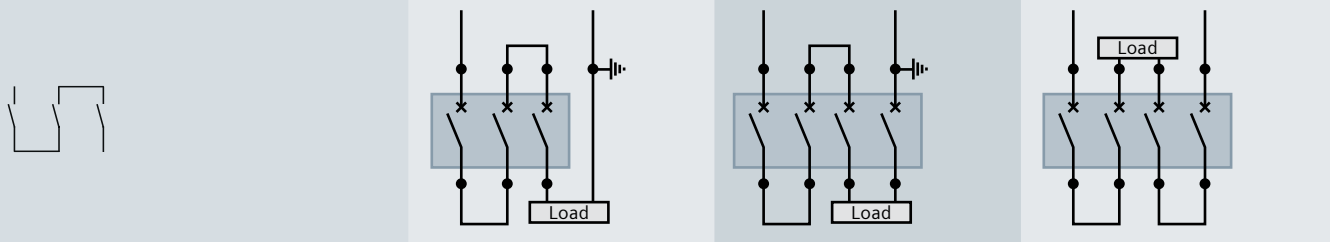
Rated operational voltage <300 V



Rated operational voltage >300 V ... 600 V



Rated operational voltage >600 V ... 1000 V



Note:

DC 2-pole (all-pole) disconnection; grounded system

The grounded pole is always assigned to the individual conducting path, so that, in the event of a ground fault, there are always 2 conducting paths in series in a circuit with 3-pole circuit breakers and 3 conducting paths in series in a circuit with 4-pole circuit breakers.

Electronic trip unit ETU600

Protective functions

ETU600 LSI, ETU600 LSIG, ETU600 LSIG HI-Z			Current metering	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	Setting range	Setting values with rotary switch				
L: Overload protection LT						
Tripping operation	Can be switched on/off		■	■	■	■
Current setting I_r	0.4 ... 1.0 × I_n	0.5 / 0.6 / 0.7 / 0.75 / 0.8 / 0.85 / 0.9 / 0.95 / 1.0 × I_n	■	■	■	■
Tripping time t_r at $6 \times I_r$	For I^2t : 0.5 ... 30 s and at I^4t : 0.5 ... 5 s	1 / 2 / 5 / 8 / 10 / 14 / 17 / 21 / 25 s	■	■	■	■
Characteristic LT curve	I^2t and I^4t		■	■	■	■
Thermal memory	Can be switched on/off		■	■	■	■
Cooling time constant	10 and 18 × t_r		■	■	■	■
Phase failure detection	Can be switched on/off		■	■	■	■
Overload pre-alarm PAL	Can be switched on/off		■	■	■	■
Current setting $I_{r,PAL}$	0.7 ... 1.0 × I_r		■	■	■	■
Delay time $t_{r,PAL}$	0.5 ... 1.0 × t_r		■	■	■	■
L: Overload protection LT, neutral conductor						
Tripping	Can be switched on/off		■	■	■	■
Current setting I_N	0.2 ... 2.0 × I_n for 4-pole circuit breakers max. I_{nmax}		■	■	■	■
Current setting $I_{N,PAL}$	0.7 ... 1.0 × I_N		■	■	■	■
S: Delayed short-circuit protection ST						
Tripping	Can be switched on/off		■	■	■	■
Current setting I_{sd}	0.6 × I_n ... 0.8 × I_{cw}	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10 × I_r	■	■	■	■
Tripping time t_{sd}	0.02 ... 0.4 s	For Fix: 0.08 / 0.15 / 0.22 / 0.3 / 0.4 s For I^2t : 0.1 / 0.2 / 0.3 / 0.4 s	■	■	■	■
Characteristic ST curve	I^0t and I^2t		■	■	■	■
Reference point $I_{ST,ref}$	6-12 × I_r		■	■	■	■
Intermittent acquisition	Can be switched on/off		■	■	■	■
S: Directed delayed short-circuit protection dST						
Tripping	Can be switched on/off		□	□	■	■
Current setting $I_{sd,FW}$	0.6 × I_n ... 0.8 × I_{cw}		□	□	■	■
Current setting $I_{sd,REV}$	0.6 × I_n ... 0.8 × I_{cw}		□	□	■	■
Tripping time $t_{sd,FW}$	0.05 ... 0.4 s		□	□	■	■
Tripping time $t_{sd,REV}$	0.05 ... 0.4 s		□	□	■	■
I: instantaneous short-circuit protection INST						
Tripping	Can be switched on/off		■	■	■	■
Current setting I_i	1.5 × I_n ... 0.8 × I_{cs}	1.5 / 2 / 3 / 4 / 6 / 8 / 10 / 12 / 15 × I_n	■	■	■	■
Reverse power protection RP						
Tripping	Can be switched on/off		□	□	■	■
Setting value P_{RP}	0.05 ... 0.5 × P_n		□	□	■	■
Tripping time t_{RP}	0.01 ... 25 s		□	□	■	■
Enhanced protective functions EPF						
Unbalance (voltage, current)			□	□	■	■
Harmonic distortion			□	□	■	■
Voltage			□	□	■	■
Active power			□	□	■	■
Frequency			□	□	■	■
Phase rotation			□	□	■	■
DAS+ dynamic arc sentry						
Current setting $I_{i,DAS+}$	1.5 ... 10 × I_n		■	■	■	■
Current setting $I_{g,DAS+}$	With LSIG GFx option plug Residual: - Sizes 1 and 2: 100 ... 2000 A and - Size 3: 400 ... 2000 A Direct: 15 ... 2000 A		■	■	■	■
Tripping time $t_{g,DAS+}$	0 ... 5 s		■	■	■	■
Second parameter set						
Parameter set changeover	Switchable between parameter set A and B		□	□	■	■

- Available, feature of the application package
- Can be retrofitted

Electronic trip unit ETU600

Protective functions

ETU600 LSIG			Current metering	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	Setting range					
G: Ground fault GF						
Tripping	Can be switched on/off		■	■	■	■
Method of ground fault detection	Residual	Detection of ground-fault current via summation current formation in all phases and the N-conductor	■	■	■	■
	Direct	Direct metering of the ground-fault current with a current transformer	■	■	■	■
	Dual	Protection zone UREF: Detection of the ground-fault current by means of summation current formation, Protection zone REF: Measurement of the ground-fault current with an external current transformer	■	■	■	■
Characteristic GF curve	With LSIG GFx option plug	For Fix (I^0t) / I^2t / I^4t / I^6t	■	■	■	■
Current setting I_g with LSIG GFx option plug	Detection method Residual	Sizes 1 and 2: 100 ... 2000 A Size 3: 400 ... 2000 A	■	■	■	■
	Detection method Direct	15 ... 2000 A	■	■	■	■
Tripping time t_g	For Fix (I^0t)	0 ... 5 s	■	■	■	■
	For I^0t at $3 \times I_g$	0 ... 30 s	■	■	■	■
Intermittent acquisition	Can be switched on/off		■	■	■	■
G: ground fault GF alarm						
Alarm	Can be switched on/off		■	■	■	■
Current setting $I_{g,alarm}$ with LSIG GFx option plug	Detection method Residual	Sizes 1 and 2: 100 ... 5000 A Size 3: 400 ... 5000 A	■	■	■	■
	Detection method Direct	15 ... 5000 A	■	■	■	■
Alarm time $t_{g,alarm}$	0 ... 0.5 s		■	■	■	■

■ Available, feature of the application package

ETU600 LSIG Hi-Z			Current metering	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	Setting range					
G: Ground fault GF Hi-Z						
Tripping	Can be switched on/off		■	■	■	■
Method of ground fault detection	Residual	Detection of ground-fault current via summation current formation in all phases and the N-conductor	■	■	■	■
	Dual Hi-Z, For high-impedance connection of the external current transformers	Protection zone UREF: Detection of the ground-fault current by means of summation current formation, Protection zone REF: Measurement of the ground-fault current with an external current transformer combination	■	■	■	■
Characteristic GF curve	With LSIG GFx option plug	For Fix (I^{9t}) / I^{2t} / I^{4t} / I^{6t}	■	■	■	■
Current setting I_g with LSIG GFx option plug	Protection zone UREF	Size 2: 100 ... 2000 A and Size 3: 400 ... 2000 A	■	■	■	■
	Protection zone REF	15 ... 2000 A	■	■	■	■
Tripping time t_g	For Fix (I^{9t})	0 ... 5 s	■	■	■	■
	For $I^{9t} \geq 3 \times I_g$ in protection zone UREF	0 ... 30 s	■	■	■	■
Intermittent acquisition	Can be switched on/off		■	■	■	■
G: ground fault GF alarm						
Alarm	Can be switched on/off		■	■	■	■
Current setting $I_{g\text{ alarm}}$ with LSIG GFx option plug	Protection zone UREF	Size 2: 100 ... 5000 A and Size 3: 400 ... 5000 A	■	■	■	■
Alarm time $t_{g\text{ alarm}}$			■	■	■	■

■ Available, feature of the application package

Electronic trip unit ETU600

Operation, interfaces and metering function

ETU600		Current metering	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring	Non-automatic circuit breakers
Operation and interfaces						
Rotary switch		■	■	■	■	–
Display and operating keys		■	■	■	■	–
SETRON powerconfig configuration software		■	■	■	■	–
Fieldbus communication		■	■	■	■	–
Color display		■	■	■	■	–
Bluetooth ¹⁾ and USB interface		■	■	■	■	–
Communication						
Prepared for connection of a communication module (ready4COM feature)	Status messages of the circuit breaker	□	■	■	■	□
	Status messages of the electronic trip unit ETU600	□	■	■	■	–
	Remote operation, requires a communication module, closing coil, shunt trip	□	■	■	■	□
Communication module COM190 PROFINET-IO/Modbus-TCP		□	□	□	□	□
Digital input and output on the electronic trip unit ETU600						
Parameterizable input	For activating DAS+ dynamic arc sentry or can be used for parameter set changeover	■	■	■	■	–
Parameterizable output	Can be used as a "life contact" and for display of "Parameter set B active" or "DAS+ dynamic arc sentry active".	■	■	■	■	–
IOM230 digital input and output module						
Two parameterizable inputs	For controlling the circuit breaker and transmitting information from the switchboard via communication.	□	□	□	□	□
Three parameterizable outputs	For signaling events, states, tripping operations or alarms of the switching device	□	□	□	□	□

¹⁾ A country-specific radio license is required for operating the Bluetooth interface. Prior to activating the Bluetooth function, make sure that the license is available: www.siemens.com/lowvoltage/certificates

– Not available
 ■ Available, feature of the application package
 □ Can be retrofitted

ETU600		Current metering	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Metering function					
Integrated voltage tap at top/bottom		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Voltage tap module VTM		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Type acc. to IEC 61557-12	PMF-I	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PMF-II	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	PMF-III	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Metering values acc. to IEC61557-12					
Phase current I_{L1}, I_{L2}, I_{L3}	Class 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Neutral conductor current I_N	Class 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Voltage U_{LN}	Class 0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Voltage U_{LL}	Class 0.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Active energy E_a	Class 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reactive energy E_r		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Apparent energy E_{ap}		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Active power P	Class 2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reactive power Q		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Apparent power S		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Power totals S, P, Q		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Power factor PF		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
cos ϕ		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Frequency f		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Current unbalance		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Voltage unbalance		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Total harmonic distortion THD-I		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Total harmonic distortion THD-U		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- Available, feature of the application package
- Can be retrofitted

Connection

Main circuit connection

3WA11 – 3WA13

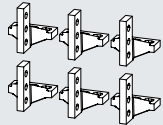
Fixed-mounted

Withdrawable

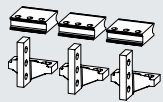
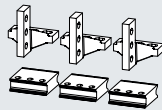
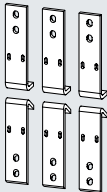
1



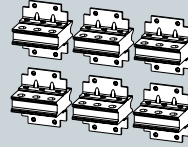
Rear horizontal



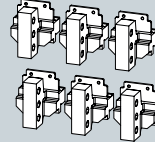
Rear vertical

Horizontal on top,
vertical at the bottomVertical on top,
horizontal at the bottom

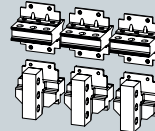
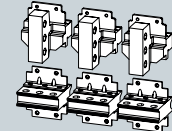
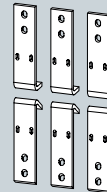
Front connection with double hole



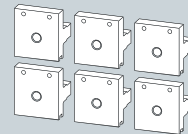
Rear horizontal



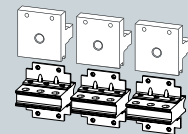
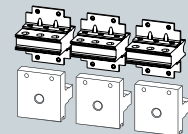
Rear vertical

Horizontal on top,
vertical at the bottomVertical on top,
horizontal at the bottom

Front connection with double hole



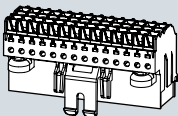
Flange

Flange on top and
horizontal at bottomFlange on bottom and
horizontal at top

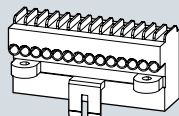
Secondary disconnect terminal

The auxiliary and control cables are connected at the manual connectors using the push-in technology of the auxiliary conductor connections of the circuit breaker.

Coding pins on the manual connectors prevent them being inserted in the wrong slots.

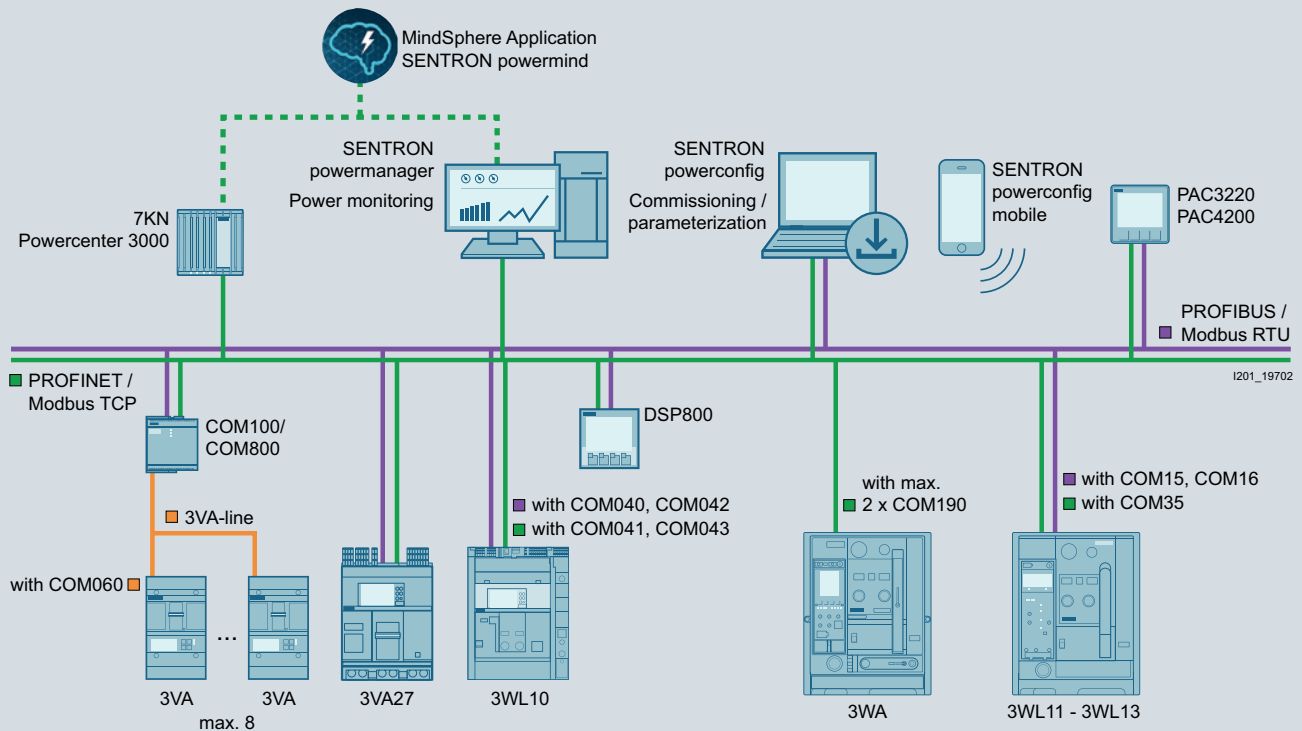


Screwless connection (push-in)



Screw connection (optional)

Communication



The 3WA can be equipped with up to two PROFINET IO / Modbus TCP COM190 communication modules and up to five IOM230 digital input/output modules.

For the optional communications interface with COM190 communication module, a "ready4COM" must be selected as the switching device. The first COM190 communication module must be selected via a Z option. If you want to use a further COM190 communication module, this must be ordered separately as an accessory. Both COM190 communication modules can be run in parallel.

The first IOM230 digital input/output module can be selected via a Z option.

The up to four further digital input/output modules must be ordered separately as accessories.

You will find further information on the COM190 in the equipment manual – 3WA air circuit breakers ([109763061](#))

Technical specifications	COM190
Operating values	
U_s	24 V DC $\pm 20\%$
Rated power dissipation	1 W
Switched Ethernet Ports	2
Protocol	PROFINET IO (CC-C) and Modbus TCP
Security functions	Yes
Number	Up to 2

Technical specifications	IOM230
Operating values	
U_s	24 V DC $\pm 20\%$
Rated power dissipation	1 W
Inputs	2
Outputs	3
Maximum switching current	24 V DC, 4 A 250 V AC, 5 A
Maximum continuous current	24 V DC, 0.2 A 250 V AC, 0.2 A
Number	Up to 5

System overview 3WA11 – 3WA13

Switching devices for AC and DC

For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

1

Switching devices



Sizes 1 to 3

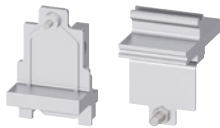
Main circuit connection



Front double hole



Flange



Main connection
vertical, horizontal

Electronic trip unit and metering function



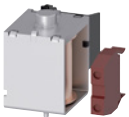
ETU600

Operating mechanisms and auxiliary switches



Spring charging motor

Closing coil and remote trip alarm reset coil



Closing coil (CC)



Remote trip alarm reset coil

Note:

You will find a detailed range of accessories in the Accessories and spare parts section.

Auxiliary releases



Closing coil (CC)



Shunt trip (ST)



Undervoltage release (UVR)

Accessories for electronics



Communication module



Digital input/output module



Sealable and lockable cover



Internal current sensors

Accessories for auxiliary circuit



Trip alarm switch



Motor disconnect switch



Local electric close



Emergency OPEN button

Interlocks and locking provisions



Locking provision for charging handle



Locking provision against unauthorized closing



Mutual mechanical interlockings

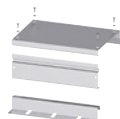


Locking mechanisms

Other accessories



Door sealing frame



Arc chute cover



Automatic reset of the reclosing lockout

Note:

You will find a detailed range of accessories in the Accessories section.

Online configurator highlights

www.siemens.com/lowvoltage/3wa-configurator

Graphical display

- Integration of the legend as a color system
 - Orange: still to be selected
 - Petrol: already selected
 - Gray: preselected (default)
- Graphical highlighting of the individual configuration steps: "What you see is what you get"

The screenshot shows the Siemens 3WA Configurator interface. On the left, there is a configuration menu with various options, some highlighted in orange (indicating they are still to be selected) and others in petrol (already selected). The main area displays a 3D CAD model of the circuit breaker. At the bottom right, the price is listed as 7900,00 €. The interface includes navigation buttons like 'Cancel', 'Reset', 'Load / Save', 'CAx Files', 'Documents', and 'Add to Cart'.

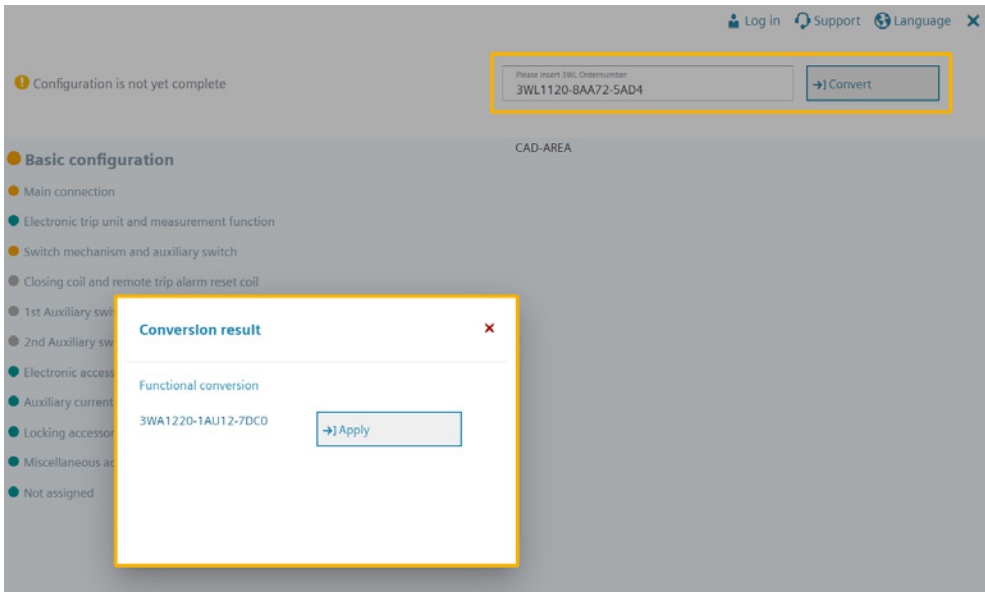
Splitting function (Frame and circuit breaker can be ordered separately)

The screenshot shows the configuration result for splitting the frame and circuit breaker. The 'Configuration result' section is highlighted in petrol. It includes a 'Print' button and an 'Excel export' button. Below these, there is a toggle switch for 'Split the configuration' which is currently turned on. The resulting configuration is:

- 3WA Circuit breaker: **3WA1225-5AE60-0AA0**
- 3WA frame: **3WA8225-5AA32-1BC1**

 A 'Show additional information' link is also present. The right side of the interface shows a legend with various configuration options, some highlighted in petrol. At the bottom, there are navigation buttons: 'Cancel', 'Reset', 'Load / Save', and 'CAx Files'.

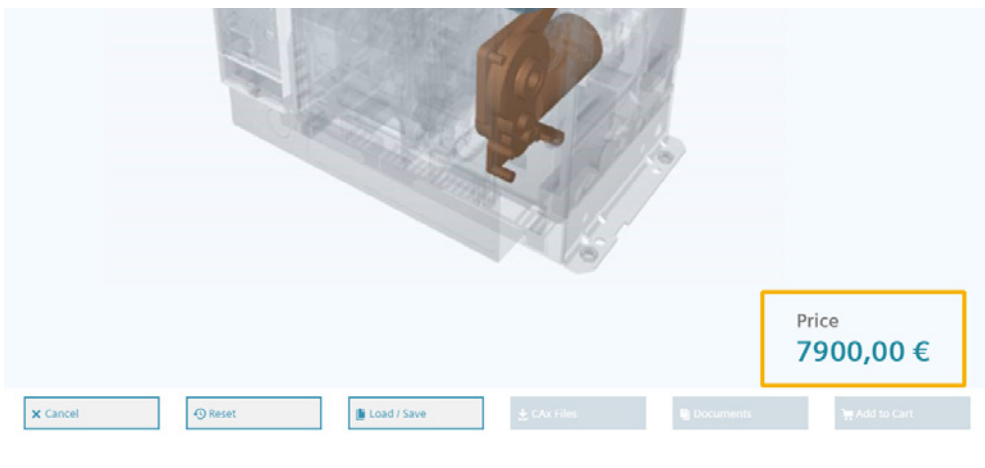
Direct conversion of a 3WL article number to a 3WA article number in the configurator



Responsive design (adapted to the differing requirements of the displaying devices)



Dynamic customer price during configuration



3WA1



Connection

		SZ 1	SZ 2	SZ 3		
Type of mounting	Fixed-mounted	■	■ ¹⁾	■	Vertical	1
		■ ²⁾	■ ³⁾	■ ⁴⁾	Horizontal	2
		■ ²⁾	■ ⁵⁾	■ ⁶⁾	Front	3
		■ ²⁾	■ ³⁾	■ ⁴⁾	Vertical / horizontal	5
		■ ²⁾	■ ³⁾	■ ⁴⁾	Horizontal / vertical	6
		■	■	■	Without guide frame	0
	Withdrawable	■	■ ¹⁾	■	Vertical	1
		■ ²⁾	■ ³⁾	■ ⁴⁾	Horizontal	2
		■ ²⁾	■ ⁵⁾	■ ⁶⁾	Front	3
		■ ²⁾	■ ⁵⁾	■ ⁶⁾	Flange	4
		■ ²⁾	■ ³⁾	■ ⁴⁾	Vertical / horizontal	5
		■ ²⁾	■ ³⁾	■ ⁴⁾	Horizontal / vertical	6
	■ ²⁾	■ ⁵⁾	■ ⁶⁾	Flange / horizontal	7	
	■ ²⁾	■ ⁵⁾	■ ⁶⁾	Horizontal / flange	8	

¹⁾ The 4000 A vertical connections for the 3WA1 have different dimensions from the 3WL1. Dimensionally compatible connections can be ordered with the additional Z option D01.

²⁾ Not available for 2500 A

³⁾ Not available for 4000 A

⁴⁾ Not available for 6300 A

⁵⁾ Not available for 4000 A and for breaking capacity C

⁶⁾ Not available for 5000 A and 6300 A and for breaking capacity C

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers up to 690 V

The structure shown below is intended as an overview of each position and its meaning. For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

1

3WA1 5 6 7 8 – 9 10 11 12 – 13 14 15 16

Operating mechanism, auxiliary switch and auxiliary release

Operating mechanism and auxiliary switch	Manual recharging of the stored energy mechanism	Without spring charging motor	2 NO contacts, 2 NC contacts	0	
			4 NO contacts, 4 NC contacts	1	
	Recharging of the stored energy mechanism by spring charging motor (M)	24 ... 30 V DC		2 NO contacts, 2 NC contacts	2
				4 NO contacts, 4 NC contacts	5
		48 ... 60 V DC		4 NO contacts, 4 NC contacts	6
		110 ... 127 V AC / 110 ... 125 V DC		2 NO contacts, 2 NC contacts	3
				4 NO contacts, 4 NC contacts	7
208 ... 240 V AC / 220 ... 250 V DC		2 NO contacts, 2 NC contacts	4		
		4 NO contacts, 4 NC contacts	8		

Closing coil and remote trip alarm reset coil¹⁾²⁾	Without closing coil	Without remote trip alarm reset coil		A		
			With closing coil (CC) for continuous duty, 100% OP	Without remote trip alarm reset coil	24 ... 30 V DC	B
					48 ... 60 V DC	C
	110 ... 127 V AC / 110 ... 125 V DC	D				
	208 ... 240 V AC / 220 ... 250 V DC			E		
		With remote trip alarm reset coil (RR) for momentary duty 1% OP		24 ... 30 V DC	F	
	48 ... 60 V DC		G			
	110 ... 127 V AC / 110 ... 125 V DC		H			
	With closing coil (CC) for momentary duty, 5% OP	Without remote trip alarm reset coil	24 ... 30 V DC	K		
			48 ... 60 V DC	L		
			110 ... 127 V AC / 110 ... 125 V DC	M		
		With remote trip alarm reset coil (RR) for momentary duty 1% OP	208 ... 240 V AC / 220 ... 250 V DC		N	
					P	
			24 ... 30 V DC	48 ... 60 V DC	Q	
				110 ... 127 V AC / 110 ... 125 V DC	R	
208 ... 240 V AC / 220 ... 250 V DC	S					

2nd auxiliary release	Without 2nd auxiliary release		A	
		With shunt trip (ST), continuous duty 100% OP	24 ... 30 V DC	B
			48 ... 60 V DC	C
			110 ... 127 V AC / 110 ... 125 V DC	D
			208 ... 240 V AC / 220 ... 250 V DC	E
	With shunt trip (ST), momentary duty 5% OP	24 ... 30 V DC	F	
		48 ... 60 V DC	G	
		110 ... 127 V AC / 110 ... 125 V DC	H	
		208 ... 240 V AC / 220 ... 250 V DC	J	
	With undervoltage release (UVR), instantaneous (≤ 0.08 s) and short-time delayed (≤ 0.2 s)	24 ... 30 V DC	L	
		48 ... 60 V DC	N	
		110 ... 127 V AC / 110 ... 125 V DC	P	
		208 ... 240 V AC / 220 ... 250 V DC	Q	
		380 ... 415 V AC	R	
	With undervoltage release (UVR-t), adjustable delay 0.2 ... 3.2 s	48 V DC	S	
		60 V DC	T	
		110 ... 127 V AC / 110 ... 125 V DC	U	
208 ... 240 V AC / 220 ... 250 V DC		V		
380 ... 415 V AC		W		

¹⁾ Remote trip alarm reset coil is not available for non-automatic circuit breakers

²⁾ When using the remote trip alarm reset coil, the reclosing lockout is generally deactivated. The circuit breaker can be closed again immediately if the conditions for closing are fulfilled.

3WA1

5	6	7	8	–	9	10	11	12	–	13	14	15	16
---	---	---	---	---	---	----	----	----	---	----	----	----	----

Auxiliary releases

1st auxiliary release	Without 1st auxiliary release		0
	With shunt trip (ST), continuous duty 100% OP	24 ... 30 V DC	1
		48 ... 60 V DC	2
		110 ... 127 V AC / 110 ... 125 V DC	3
		208 ... 240 V AC / 220 ... 250 V DC	4
	With shunt trip (ST), momentary duty 5% OP	24 ... 30 V DC	5
		48 ... 60 V DC	6
		110 ... 127 V AC / 110 ... 125 V DC	7
208 ... 240 V AC / 220 ... 250 V DC		8	

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers in a 690 V IT system and for higher voltages

The structure shown below is intended as an overview of each position and its meaning. For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

1

3WA1			5	6	7	8	9	10	11	12	13	14	15	16
Switching device														
Size (SZ)	1		1											
	2		2											
	3		3											
		SZ 1	SZ 2	SZ 3										
Max. rated current $I_{n \max}$	630 A	■	-	-	0	6								
	800 A	■	-	-	0	8								
	1000 A	■	-	-	1	0								
	1250 A	■	-	-	1	2								
	1600 A	■	-	-	1	6								
	2000 A	■	■	-	2	0								
	2500 A	■	■	-	2	5								
	3200 A	-	■	-	3	2								
	4000 A	-	■	■	4	0								
	5000 A	-	-	■	5	0								
	6300 A	-	-	■	6	3								
Short-circuit breaking capacity I_{cu} at 690 V / 1000 V / 1150 V	Breaking capacity E	■	-	-	85 / 50 kA / -		8							
		-	■	-	85 / 85 / 50 kA		8							
		-	-	■	3-pole: 150 / 125 / 70 kA 4-pole: 130 / 125 / 70 kA		8							
Non-automatic circuit breakers										A	A			
Non-automatic circuit breaker, ready4COM feature										C	A			
Application packages with protective and metering functions for circuit breakers	Electronic trip unit ETU600	Current metering		A										
		Current metering, ready4COM feature		C										
	Electronic ETU600 trip unit with metering function, internal voltage tap in the circuit breaker, VTM640 voltage tap module and ready4COM	PMF-I	Voltage tap on top	U										
		Energy Efficiency	Voltage tap on bottom	Q										
	PMF-II Basic Power Monitoring	Voltage tap on top	Voltage tap on top	V										
			Voltage tap on bottom	R										
		Voltage tap on top	W											
PMF-III Advanced Power Monitoring	Voltage tap on top	S												
	Voltage tap on bottom													
Application packages with protective and metering functions for circuit breakers	Protective functions	■ ■ ■ LSI	E											
		■ ■ ■ LSIG	F											
		- ■ ■ LSIG Hi-Z	G											
Number of poles	Fixed-mounted	3-pole	0											
		4-pole, Neutral left	1											
	Withdrawable	Without position signaling	3-pole	3										
		4-pole, Neutral left	4-pole, Neutral left	4										
			3-pole	6										
		4-pole, Neutral left	7											

3WA1



Connection

		SZ 1	SZ 2	SZ 3		
Type of mounting	Fixed-mounted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vertical	1
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horizontal	2
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Front double hole	3
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vertical on top / horizontal at the bottom	5
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horizontal on top / vertical at the bottom	6
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Without guide frame	0
	Withdrawable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vertical	1
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horizontal	2
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Front double hole	3
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flange	4
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vertical on top / horizontal at the bottom	5
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horizontal on top / vertical at the bottom	6
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flange on top / horizontal at the bottom	7
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Horizontal on top / flange at the bottom	8

¹⁾ Only ≤2000 A is available for size 1

²⁾ Only ≤3200 A is available for size 2

³⁾ Vertical connection for 3WA size 2 for 4000 A has different dimensions than for the 3WL.

With Z option D01, vertical connection can be changed to the connection compatible with 3WL.

⁴⁾ Only ≤5000 A is available for size 3

⁵⁾ Only for 4000 A is available for size 3

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers in a 690 V IT system and for higher voltages

The structure shown below is intended as an overview of each position and its meaning.

For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

1

3WA1 5 6 7 8 – 9 10 11 12 – 13 14 15 16

Operating mechanism, auxiliary switch and auxiliary release

Operating mechanism and auxiliary switch	Manual recharging of the stored energy mechanism	Without spring charging motor	2 NO contacts, 2 NC contacts	0		
			4 NO contacts, 4 NC contacts	1		
			4 NO contacts, 4 NC contacts	2		
	Recharging of the stored energy mechanism by spring charging motor (M)	24 ... 30 V DC		2 NO contacts, 2 NC contacts	5	
				4 NO contacts, 4 NC contacts	6	
		48 ... 60 V DC		2 NO contacts, 2 NC contacts	3	
				4 NO contacts, 4 NC contacts	7	
		110 ... 127 V AC / 110 ... 125 V DC		2 NO contacts, 2 NC contacts	4	
				4 NO contacts, 4 NC contacts	8	
Closing coil and remote trip alarm reset coil¹⁾	Without closing coil	Without remote trip alarm reset coil		A		
			With closing coil (CC) for continuous duty, 100% OP	24 ... 30 V DC	B	
				48 ... 60 V DC	C	
				110 ... 127 V AC / 110 ... 125 V DC	D	
			With closing coil (CC) for momentary duty, 5% OP	Without remote trip alarm reset coil	208 ... 240 V AC / 220 ... 250 V DC	E
						F
		G				
	With remote trip alarm reset coil (RR) for momentary duty 1% OP	24 ... 30 V DC		H		
		48 ... 60 V DC		J		
		110 ... 127 V AC / 110 ... 125 V DC		K		
	With closing coil (CC) for momentary duty, 5% OP	Without remote trip alarm reset coil	208 ... 240 V AC / 220 ... 250 V DC	L		
				M		
				N		
		With remote trip alarm reset coil (RR) for momentary duty 1% OP	24 ... 30 V DC	P		
			48 ... 60 V DC	Q		
			110 ... 127 V AC / 110 ... 125 V DC	R		
	2nd auxiliary release	Without 2nd auxiliary release			A	
				With shunt trip (ST), continuous duty 100% OP	24 ... 30 V DC	B
					48 ... 60 V DC	C
					110 ... 127 V AC / 110 ... 125 V DC	D
				With shunt trip (ST), momentary duty 5% OP	208 ... 240 V AC / 220 ... 250 V DC	E
					24 ... 30 V DC	F
		48 ... 60 V DC	G			
		With undervoltage release (UVR), instantaneous (≤ 0.08 s) and short-time delayed (≤ 0.2 s)	24 ... 30 V DC		H	
				J		
				L		
48 ... 60 V DC				N		
				P		
				Q		
With undervoltage release (UVR-t), adjustable delay 0.2 ... 3.2 s		110 ... 127 V AC / 110 ... 125 V DC		R		
				S		
				T		
		208 ... 240 V AC / 220 ... 250 V DC		U		
				V		
			W			

¹⁾ Remote trip alarm reset coil is not available for non-automatic circuit breakers

3WA1 5 6 7 8 – 9 10 11 12 – 13 14 15 16

Auxiliary releases

1st auxiliary release	Without 1st auxiliary release		0
	With shunt trip (ST), continuous duty 100% OP	24 ... 30 V DC	1
		48 ... 60 V DC	2
		110 ... 127 V AC / 110 ... 125 V DC	3
		208 ... 240 V AC / 220 ... 250 V DC	4
	With shunt trip (ST), momentary duty 5% OP	24 ... 30 V DC	5
		48 ... 60 V DC	6
		110 ... 127 V AC / 110 ... 125 V DC	7
208 ... 240 V AC / 220 ... 250 V DC		8	

Structure of the article numbers

Basic configuration for DC non-automatic circuit breakers

The structure shown below is intended as an overview of each position and its meaning. For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

1

		5		6		7		8		9		10		11		12		13		14		15		16			
		3WA1						-										-									
Switching device																											
Size (SZ)	2	2																									
				SZ 2																							
Max. rated current $I_{n \max}$	1000 A			1		0																					
	2000 A			2		0																					
	4000 A			4		0																					
Short-circuit breaking capacity I_{cc}	D	■		25 kA, 600 V DC		1																					
	E	■		20 kA, 1000 V DC		8																					
Non-automatic circuit breakers										A		U															
Non-automatic circuit breaker, ready4COM feature										C		U															
Number of poles ¹⁾	Fixed-mounted							3-pole																0			
								4-pole																1			
	Withdrawable			Without position signaling switch				3-pole																		3	
								4-pole																		4	
				With position signaling switch				3-pole																		6	
								4-pole																		7	
Connection				SZ 2																							
Type of mounting	Fixed-mounted	■		Vertical																				1			
		■		Horizontal																				2			
		■		Front double hole																						3	
		■		Vertical on top / horizontal at the bottom																						5	
		■		Horizontal on top / vertical at the bottom																						6	
		■		Without guide frame																						0	
	Withdrawable	■		Vertical																						1	
		■		Horizontal																						2	
		■		Front double hole																						3	
		■		Flange																						4	
		■		Vertical on top / horizontal at the bottom																						5	
		■		Horizontal on top / vertical at the bottom																						6	
		■		Flange on top / horizontal at the bottom																						7	
		■		Horizontal on top / flange at the bottom																						8	

3WA1

5	6	7	8	9	10	11	12	13	14	15	16
---	---	---	---	---	----	----	----	----	----	----	----

Operating mechanism, auxiliary switch and auxiliary release

Operating mechanism and auxiliary switch	Manual recharging of the stored energy mechanism	Without spring charging motor	2 NO contacts, 2 NC contacts	0
			4 NO contacts, 4 NC contacts	1
	Recharging of the stored energy mechanism by spring charging motor (M)	24 ... 30 V DC	2 NO contacts, 2 NC contacts	2
		48 ... 60 V DC	4 NO contacts, 4 NC contacts	5
		110 ... 127 V AC / 110 ... 125 V DC	4 NO contacts, 4 NC contacts	6
		208 ... 240 V AC / 220 ... 250 V DC	2 NO contacts, 2 NC contacts	3
			4 NO contacts, 4 NC contacts	7
				4
			8	
Closing coil	Without closing coil			A
	With closing coil (CC) for continuous duty, 100% OP	24 ... 30 V DC		B
		48 ... 60 V DC		C
		110 ... 127 V AC / 110 ... 125 V DC		D
		208 ... 240 V AC / 220 ... 250 V DC		E
	With closing coil (CC) for momentary duty, 5% OP	24 ... 30 V DC		K
		48 ... 60 V DC		L
		110 ... 127 V AC / 110 ... 125 V DC		M
		208 ... 240 V AC / 220 ... 250 V DC		N
	2nd auxiliary release	Without 2nd auxiliary release		
With shunt trip (ST), continuous duty 100% OP		24 ... 30 V DC		B
		48 ... 60 V DC		C
		110 ... 127 V AC / 110 ... 125 V DC		D
		208 ... 240 V AC / 220 ... 250 V DC		E
With shunt trip (ST), momentary duty 5% OP		24 ... 30 V DC		F
		48 ... 60 V DC		G
		110 ... 127 V AC / 110 ... 125 V DC		H
		208 ... 240 V AC / 220 ... 250 V DC		J
With undervoltage release (UVR), instantaneous (≤ 0.08 s) and short-time delayed (≤ 0.2 s)		24 ... 30 V DC		L
		48 ... 60 V DC		N
		110 ... 127 V AC / 110 ... 125 V DC		P
		208 ... 240 V AC / 220 ... 250 V DC		Q
		380 ... 415 V AC		R
With undervoltage release (UVR-t), adjustable delay 0.2 ... 3.2 s		48 V DC		S
		60 V DC		T
	110 ... 127 V AC / 110 ... 125 V DC		U	
	208 ... 240 V AC / 220 ... 250 V DC		V	
	380 ... 415 V AC		W	
1st auxiliary release	Without 1st auxiliary release			0
	With shunt trip (ST), continuous duty 100% OP	24 ... 30 V DC		1
		48 ... 60 V DC		2
		110 ... 127 V AC / 110 ... 125 V DC		3
		208 ... 240 V AC / 220 ... 250 V DC		4
	With shunt trip (ST), momentary duty 5% OP	24 ... 30 V DC		5
		48 ... 60 V DC		6
		110 ... 127 V AC / 110 ... 125 V DC		7
	208 ... 240 V AC / 220 ... 250 V DC		8	

Accessory options

For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

To specify the options, add "-Z" to the complete Article No. and indicate the appropriate order code(s).

3WA.....-.....-..... -Z

Order code

Option plug for electronic trip unit

- To reduce the rated current of the circuit breaker
- Only one module is possible per circuit breaker. As standard, the electronic trip unit is equipped with an option plug which is equal to the maximum rated breaker current ($I_{n \max}$). The rated current of the selected option plug must be less than $I_{n \max}$.

Option plug		SZ1	SZ2	SZ3	
250 A		■	■	-	B02
315 A		■	■	-	B03
400 A		■	■	-	B04
500 A		■	■	-	B05
630 A		■	■	-	B06
800 A		■	■	-	B08
1000 A		■	■	-	B10
1250 A		■	■	-	B12
1600 A		■	■	■	B16
2000 A		■	■	■	B20
2500 A		-	■	■	B25
3200 A		-	■	■	B32
4000 A		-	-	■	B40
5000 A		-	-	■	B50

IOM230 digital input/output module

Module with 2 inputs and 3 outputs	A module including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, connecting cables and CubicleBUS² terminating resistor; five modules can be operated at the same time. Further modules must be ordered separately as 3WA9111-0EC11, which includes the adapter for mounting on the secondary disconnect terminal system of the circuit breaker and the adapter for external mounting on a standard mounting rail.	F23
---	---	-----

COM190 communication module

- The precondition for connection is a circuit breaker or non-automatic circuit breaker with the "ready4COM" feature

PROFINET IO / Modbus TCP	A module including 2 Switched Ethernet ports, circuit breaker internal. A module including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, connecting cables and CubicleBUS² terminating resistor; two communication modules can be run at the same time. The second communication module must be ordered separately as 3WA9111-0EC13.	F19
---------------------------------	---	-----

Automatic reset

- Only possible for circuit breakers with an electronic trip unit

Automatic reset	Automatic reset of the reclosing lockout after ETU tripping; this option is not required when ordering a circuit breaker with a remote trip alarm reset coil RR.	K01
------------------------	--	-----

Tinned version of the main connections on the guide frame

- Only for switching devices in withdrawable version with horizontal connection or flange connection.
- Cannot be ordered for circuit breakers without a guide frame
- The normal delivery time increases to 15 work days

Tinned connections	Sizes 1, 2, 3	D08
---------------------------	---------------	-----

To specify the options, add "-Z" to the complete Article No. and indicate the appropriate order code(s).

3WA.....-.....-..... -Z

Order code

Broadened vertical main connection

- Only possible on complete order for a withdrawable switching device or when ordering the guide frame separately

Main circuit connection	For 3WA1, 4000 A, size 2	Compatible with 3WL1240 for retrofit	D01
-------------------------	--------------------------	--------------------------------------	-----

Secondary disconnect terminal system

- Cannot be ordered for circuit breakers without a guide frame

Secondary disconnect terminal system	With screw connection instead of push-in connection (standard)		N03
--------------------------------------	--	--	-----

Mechanical operating cycles counter

Mechanical operating cycles counter, 5-digit	Can be used with all circuit breakers and non-automatic circuit breakers including those without a spring charging motor		C01
--	--	--	-----

Signaling switch

Tripped signaling switch	2nd tripped signaling switch (S25) Trip alarm switch is installed in circuit breakers as standard. Can only be used with circuit breakers with an electronic trip unit	1 NO contact	K06
--------------------------	--	--------------	-----

Pushbuttons / shutdown switches / closing lockouts / special packaging / Arc chute cover

Emergency OPEN button	Mushroom pushbutton instead of the mechanical OFF pushbutton		C25
-----------------------	--	--	-----

Local electrical close on the operator panel (S10)	This prevents unauthorized electrical closing from the operator panel. Mechanical closing and remote closing remain possible. Only possible in combination with a closing coil (CC)	With sealing cap	C11
		With CES lock	C12

Motor disconnect switch on operator panel (S12)	This prevents automatic charging of the stored energy mechanism by the spring charging motor		C24
---	--	--	-----

Cardboard packaging with water-repellent coating on corrugated cardboard (moisture protection)			P61
--	--	--	-----

Arc chute cover mounted on the guide frame	Not available for: <ul style="list-style-type: none"> – Fixed-mounted – Breaking capacity C, E and D – 4000 A size 2 		R10
--	---	--	-----

Sealable and lockable cover	For electronic trip unit		F40
-----------------------------	--------------------------	--	-----

Internal current sensors (without energy core) for applications with frequency converters

- Used in converter applications with high harmonic components; can only be used for circuit breakers with an electronic trip unit
 - External 24 V DC supply required
 - Undervoltage release required
 - Additionally contains a relay for monitoring the 24 V DC and warning labels

Internal current sensors	Sizes 2, 3		K60
--------------------------	------------	--	-----

Mutual mechanical interlockings

- Interlocking module with Bowden cable 2 m

Mutual mechanical interlockings	For fixed-mounted breakers		S55
	For withdrawable circuit breakers with guide frame		R55
	For guide frames (ordered separately)		R56
	For withdrawable circuit breakers (ordered separately)		R57

Accessory options

For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

To specify the options, add "-Z" to the complete Article No. and indicate the appropriate order code(s).

3WA.....-.....-..... -Z

Order code

Locking provisions (for fixed-mounted and withdrawable circuit breakers)

Locking provision	To prevent unauthorized activation in the operator panel of the circuit breaker. The disconnecter unit fulfills the requirements for main circuit breakers according to EN 60204-1	Made by CES	S01
		Made by IKON	S03
		Assembly kit FORTRESS or CASTELL ¹⁾	S05
		Assembly kit for padlocks ²⁾	S07
		Made by RONIS	S08
		Made by PROFALUX	S09
Locking provision	For charging handle with padlock ²⁾		S33

Locking provisions (for withdrawable circuit breakers)

Locking provision to prevent movement of the withdrawable circuit breakers	Safety lock for mounting onto the circuit breaker	Made by CES	S71
		Made by PROFALUX	S75
		Made by RONIS	S76

Locking provisions against unauthorized closing, for withdrawable circuit breakers

- The disconnecter unit fulfills the requirements for main circuit breakers acc. to EN 60204-1, consisting of a lock in the guide frame, active in the connected position, function is retained when circuit breaker is replaced.
- Not available in combination with order code "R81", "R85" or "R86".
- Only possible on complete order for a withdrawable switching device or when ordering the guide frame separately

Made by CES	R61
Made by RONIS	R68
Made by PROFALUX	R60

Locking mechanisms

- Not available in combination with order code "R81", "R85" or "R86".
- R30 and R50 only possible on complete order for a circuit breaker with a guide frame or when ordering the guide frame separately
- R40 can only be ordered with the circuit breaker

For fixed-mounted circuit breakers	To prevent opening of the control cabinet door in ON position	S30
For withdrawable circuit breakers	To prevent opening of the control cabinet door in connected position	R30
	To prevent activation when the control cabinet door is open ³⁾	R40
	To prevent movement when the control cabinet door is open ⁴⁾	R50

Locking provisions to prevent movement of the withdrawable circuit breaker in disconnected position

- Consisting of Bowden cable and lock in the control cabinet door
- Not available in combination with order code "R30", "R40", "R50", "R61", "R68" or "R60"
- Only possible for a complete order for a circuit breaker with a guide frame or when ordering the guide frame separately

Made by CES	R81
Made by PROFALUX	R85
Made by RONIS	R86

Increased degree of protection for installation in a control cabinet

Door sealing frame for degree of protection IP41	T40
--	-----

¹⁾ Locks must be ordered from the manufacturer.

²⁾ Padlock not included in the scope of supply

³⁾ Not available in combination with R50

⁴⁾ Not available in combination with R40

Guide frames for AC

The structure shown below is intended as an overview of each position and its meaning.
For a complete and valid configuration of your guide frame, please use our online configurator at
www.siemens.com/lowvoltage/3wa-configurator

		3WA8		5	6	7	8	9	10	11	12	13	14	15	16	
Guide frames								A	A							
Size	1			1												
	2			2												
	3			3												
			SZ 1	SZ 2	SZ 3											
Max. rated current $I_{n \max}$	630 ... 1000 A		■	-	-		1	0								
	1250 ... 1600 A		■	-	-		1	6								
(Generate the selection of positions 6, 7 and 8 according to the list below)	630 ... 2000 A		■	■	-		2	0								
	2500 A		■	■	-		2	5								
	2000 ... 3200 A		-	■	-		3	2								
	4000 A		-	■	■		4	0								
	4000 ... 5000 A		-	-	■		5	0								
	6300 A		-	-	■		6	3								
Short-circuit breaking capacity I_{cu} (Generate the selection of positions 6, 7 and 8 according to the list below)	At 500 / 690 V	N	■	-	-		55 / 42 kA		2							
		S	■	■	-		66 / 50 kA		3							
		M	■	■	-		85 / 66 kA		4							
		H	-	■	■		100 / 85 kA		5							
		C	-	-	■		130 / 100 kA		6							
			-	-	■		3-pole: 150 / 150 kA 4-pole: 130 / 130 kA		6							
	At 690 / 1000 / 1150 V	E	■	-	-		80 / 50 kA / -		8							
			-	■	-		85 / 85 / 50 kA		8							
			-	-	■		3-pole: 150 / 125 / 70 kA 4-pole: 130 / 125 / 70 kA		8							
Number of poles	3-pole													3		
	4-pole, Neutral left													4		
Main connection	■ ■ ⁵⁾ ■															1
	■ ¹⁾ ■ ²⁾ ■ ³⁾															2
	■ ¹⁾ ■ ²⁾ ■ ⁴⁾															3
	■ ¹⁾ ■ ²⁾ ■ ⁴⁾															4
	■ ¹⁾ ■ ²⁾ ■ ³⁾															5
	■ ¹⁾ ■ ²⁾ ■ ³⁾															6
	■ ¹⁾ ■ ²⁾ ■ ⁴⁾															7
	■ ¹⁾ ■ ²⁾ ■ ⁴⁾															8

¹⁾ Only ≤2000 A is available for size 1

²⁾ Only ≤3200 A is available for size 2

³⁾ Only ≤5000 A is available for size 3

⁴⁾ Only for 4000 A is available for size 3

⁵⁾ Vertical connection for 3WA size 2 for 4000 A has different dimensions than for the 3WL.
With Z option D01, vertical connection can be changed to the connection compatible with 3WL.

The following combinations of positions 6, 7 and 8 are technically possible

BG	Breaking capacity at $I_{n \max}$	630 A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A	5000 A	6300 A
Representation 67-8												
1	N	10-2	10-2	10-2	16-2	16-2	20-3	25-3	-	-	-	-
	S	10-3	10-3	10-3	16-3	16-3	20-3	25-3	-	-	-	-
	M	20-4	20-4	20-4	20-4	20-4	20-4	25-4	-	-	-	-
	E	20-8	20-8	20-8	20-8	20-8	20-8	25-8	-	-	-	-
2	S	-	-	-	-	-	20-5	25-5	32-5	40-5	-	-
	M	-	-	-	-	-	20-5	25-5	32-5	40-5	-	-
	H	-	-	-	-	-	20-5	25-5	32-5	40-5	-	-
	E	-	-	-	-	-	20-8	25-8	32-8	40-8	-	-
	C	-	-	-	-	-	32-6	32-6	32-6	-	-	-
3	H	-	-	-	-	-	-	-	-	40-5	50-5	63-5
	E	-	-	-	-	-	-	-	-	50-8	50-8	63-8
	C	-	-	-	-	-	-	-	-	50-8	50-8	63-8

Guide frames for AC

The structure shown below is intended as an overview of each position and its meaning. For a complete and valid configuration of your guide frame, please use our online configurator at www.siemens.com/lowvoltage/3wa-configurator

3WA8

5	6	7	8	9	10	11	12	13	14	15	16
				-				1			1

Push-in connection ¹⁾	SZ 1, SZ 2, SZ 3	X7, X6, X5	Non-automatic circuit breakers without ready4COM feature	A
		X8, X7, X6, X5	Circuit breakers/non-automatic circuit breakers with ready4COM feature	B
	SZ 2 / SZ 3	X9, X8, X7, X6, X5	Including external trip controller ETC600 for circuit breakers with ETU600 LSIG Hi-Z	K
Position signaling switch	Without position signaling switch			A
	Position signaling switch PSS (3x connected position, 2x test position, 1x disconnected position)			C
	Position signaling switch PSS-COM (1x connected position, 1x test position, 1x disconnected position) for connection to a communication module			G

¹⁾ Conversion to screw-type connection is possible with Z option N03.

Guide frames for DC

The structure shown below is intended as an overview of each position and its meaning.
For a complete and valid configuration of your guide frame, please use our online configurator at
www.siemens.com/lowvoltage/3wa-configurator

		5	6	7	8	9	10	11	12	13	14	15	16
3WA8					–	A	U			–	1		1
Guide frames													
Size (SZ)	2	2											
Max. rated current $I_{n\max}$	2000 A 4000 A		2 4	0 0									
Short-circuit breaking capacity	D ≤ 600 V DC E ≤ 1000 V DC				25 kA at 600 V DC 20 kA at 1000 V DC								1 8
Number of poles	3-pole 4-pole							3 4					
Connection	Withdrawable	Vertical							1				
		Horizontal							2				
		Front double hole							3				
		Flange							4				
		Vertical on top / horizontal at the bottom							5				
		Horizontal on top / vertical at the bottom							6				
		Flange on top / horizontal at the bottom							7				
		Horizontal on top / flange at the bottom							8				
Secondary disconnect terminal	Push-in connection	X7, X6, X5				Non-automatic circuit breakers						A	
		X8, X7, X6, X5				Non-automatic circuit breakers with ready4COM						B	
Position signaling switch	Without position signaling switch												A
	Position signaling switch PSS (3x connected position, 2x test position, 1x disconnected position)												C
	Position signaling switch PSS-COM (1x connected position, 1x test position, 1x disconnected position) for connection to a communication module												G

1

Accessories and spare parts

Accessories for electronic trip unit

Electronic trip unit ETU600



Basic protective functions	Article No.
LSI / LSIG	3WA9111-0EE62
LSIG Hi-Z	3WA9111-0EE63

Replacement battery for ETU600



Article No.
3WA9111-0EE81

Option plug



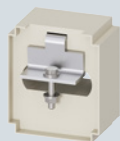
Basic configuration	Size	Rated current I _n	Article No.
Protective function LSI, LT, ST, INST			3WA9111-0EB ..
Protective function LSIG, LT, ST, INST, GF (ground-fault protection with extended setting range)			3WA9111-0EX ..
	1, 2	250 A	02
		315 A	03
		400 A	04
		500 A	05
		630 A	06
		800 A	08
		1000 A	10
	1, 2, 3	1250 A	12
		1600 A	16
		2000 A	20
		2500 A	25
	2, 3	3200 A	32
		4000 A	40
	3	5000 A	50
		6300 A	63

Function packages for ETU600



Protective and alarm functions	Article No.
Ground fault alarm (GF alarm)	3WA9111-0ES01
Directed short-time-delayed short-circuit protection (dST) and reverse power protection (RP) (requires an optional voltage tap module)	3WA9111-0ES05
Enhanced protective functions (EPF)	Article No.
Full package with unbalance, voltage, active power, frequency, THD and phase sequence detection	3WA9111-0ES11
Phase unbalance current and phase unbalance voltage	3WA9111-0ES12
Undervoltage and overvoltage	3WA9111-0ES13
Active power import and active power export	3WA9111-0ES14
Under-frequency and over-frequency	3WA9111-0ES15
Total harmonic distortion for current and voltage	3WA9111-0ES16
Phase sequence detection	3WA9111-0ES17
Functional expansions	Article No.
Second protection parameter set	3WA9111-0ES21
Extended metering function	Article No.
Upgrade to metering function PMF-II Basic Power Monitoring (metering values, see catalog page 1/21)	3WA9111-0ES52
Upgrade to metering function PMF-III Advanced Power Monitoring (metering values, see catalog page 1/21)	3WA9111-0ES53

External current sensors for the N-conductor



Version	Size	Article No.
For mounting on busbar	1	3WA9111-0AA21
	2	3WA9111-0AA22
	3	3WA9111-0AA23
For busbar connection	1	3WA9111-0AA31
	2	3WA9111-0AA32
	3	3WA9111-0AA33

Accessories for electronic trip unit

Internal current sensors (without energy core) for applications with frequency converters

Note: Used in converter applications with high harmonic components

- External 24 V DC supply required
- Undervoltage release required

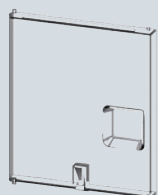


Scope of supply	Size	Article No.
All parts for 3-pole breaker	2	3WA9111-0AA43
	3	3WA9111-0AA44
All parts for 4-pole breaker	2	3WA9111-0AA46
	3	3WA9111-0AA47

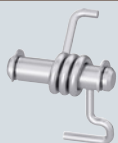
Sealable and lockable cover



Accessory for	Article No.
ETU600	3WA9111-0EM22



Automatic reset of the reclosing lockout



Version	Article No.
Spare part for option K01 or for retrofitting	3WA9111-0EM31

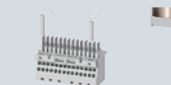
Remote trip alarm reset coil



- For mechanical tripped indicator
- Including automatic reset of the reclosing lockout 3WA9111-0EM31

Voltage	Article No.
24 ... 30 V DC	3WA9111-0EM42
48 ... 60 V DC	3WA9111-0EM44
110 ... 127 V AC / 110 ... 125 V DC	3WA9111-0EM45
208 ... 240 V AC / 220 ... 250 V DC	3WA9111-0EM46

Second tripping solenoid (F6) with reclose lockout



Version	Article No.
For external control via the external trip controller ETC600, including the necessary parts for the secondary disconnect terminal	3WA9111-0EM61

External trip controller ETC600



Version	Article No.
Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on standard mounting rail	3WA9111-0EM62

Accessories and spare parts

Locking provisions and interlocks

Interlocking sets for mechanical Close/Open



- Consisting of two transparent covers each for sealing or for attaching padlocks (padlocks not included in scope of supply)
- Cover with 6.35 mm hole (for tool actuation)
- Lock mount for safety lock for key operation



Version	Article No.
Without safety lock	3WA9111-0BA21
Made by CES	3WA9111-0BA22
Made by IKON	3WA9111-0BA23

Locking provision against unauthorized closing, in the operator panels



- The disconnecter unit fulfills the requirements for main circuit breakers acc. to EN 60204-1
- Spare part for options S01 to S09

Variant	Scope of supply	Article No.
Assembly kit FORTRESS or CASTELL ¹⁾	Without locks, cylinders or keys	3WA9111-0BA31
Made by RONIS	Locks, cylinders and keys included	3WA9111-0BA32
Made by KIRK-Key ¹⁾	Without locks, cylinders or keys	3WA9111-0BA33
Made by PROFALUX	Locks, cylinders and keys included	3WA9111-0BA34
Made by CES	Locks, cylinders and keys included	3WA9111-0BA35
Made by IKON	Locks, cylinders and keys included	3WA9111-0BA36
Assembly kit for padlocks	Without padlock	3WA9111-0BA37

Locking provision against unauthorized closing of the withdrawable circuit breaker



- The disconnecter unit fulfills the requirements for main circuit breakers acc. to EN 60204-1
- Consisting of lock in the guide frame, active in connected position, function is retained when circuit breaker is replaced
- Spare part for option R60, R61, R68

Variant	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included	3WA9111-0BA51
Made by IKON	Locks, cylinders and keys included	3WA9111-0BA53
Made by KIRK-Key ¹⁾	Without locks, cylinders or keys	3WA9111-0BA57
Made by RONIS	Locks, cylinders and keys included	3WA9111-0BA58
Made by PROFALUX	Locks, cylinders and keys included	3WA9111-0BA50

Locking provision for charging handle with padlock



Version	Scope of supply	Article No.
Spare part for S33	Without padlock	3WA9111-0BA71

Locking provision to prevent movement of the withdrawable circuit breaker


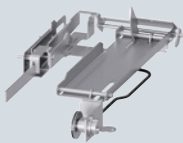

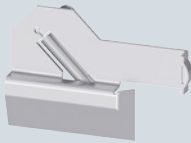





- Safety lock for mounting onto the circuit breaker
- Spare part for option S71, S75, S76

Variant	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included	3WA9111-0BA73
Made by IKON	Locks, cylinders and keys included	3WA9111-0BA75
Made by PROFALUX	Locks, cylinders and keys included	3WA9111-0BA76
Made by RONIS	Locks, cylinders and keys included	3WA9111-0BA77
Made by KIRK-Key ¹⁾	Without locks, cylinders or keys	3WA9111-0BA80

¹⁾ Locks, cylinders and keys must be ordered from the manufacturer.
 Suitable cylinder lock KIRK Key C 900-301.
 Suitable lock FORTRESS CLIS X005.
 Suitable lock CASTELL FS2.

Locking provisions and interlocks

Interlock systems				
	<ul style="list-style-type: none"> • 2 of the same keys for 3 circuit breakers • Locking provision in OFF position • Lock in the operator panel • A maximum of 2 circuit breakers can be switched on 			
	Variant		Article No.	
	Made by CES		3WA9111-0BA43	
Locking mechanisms to prevent movement of the withdrawable circuit breakers in disconnected position				
	<ul style="list-style-type: none"> • Consisting of Bowden cable and breaker mechanism in the control cabinet door • Spare part for option R81, R85, R86 • Note: Not possible in combination with "Locking mechanism to prevent opening of the control cabinet door" (order code "R30") or "Locking mechanism to prevent movement with the control cabinet door open" (order code "R50") 			
	Variant		Article No.	
	Made by CES		3WA9111-0BA81	
	Made by IKON		3WA9111-0BA82	
	Made by PROFALUX		3WA9111-0BA83	
Made by RONIS		3WA9111-0BA84		
Locking mechanisms to prevent opening of the control cabinet door when the circuit breaker is closed				
	<ul style="list-style-type: none"> • Defeatable • Note: Not possible in combination with "Locking mechanism to prevent movement of the withdrawable circuit breakers in disconnected position" (order codes "R81", "R85" or "R86"). 			
	Version		Article No.	
	Spare part for option S30	Fixed-mounted circuit breaker	3WA9111-0BB12	
	Spare part for option R30	Guide frames	3WA9111-0BB13	
Locking mechanisms to prevent movement when the control cabinet door is open				
	<ul style="list-style-type: none"> • Mounted on guide frame • Note: Not possible in combination with "Locking mechanism to prevent movement of the withdrawable circuit breakers in disconnected position" (order codes "R81", "R85" or "R86"). 			
	Version		Article No.	
	Spare part for option R50		3WA9111-0BB15	
Mutual mechanical interlockings				
	<ul style="list-style-type: none"> • With Bowden cable 2000 mm (one required for each circuit breaker) 			
	Type	Circuit breaker and guide frame when ordered separately	Spare part for	Article No.
	Fixed-mounted circuit breaker	–	Option S55	3WA9111-0BB21
	Module for withdrawable circuit breakers with guide frame	–	Option R55	3WA9111-0BB22
	Module for guide frame	✓	Option R56	3WA9111-0BB23
	Module for withdrawable circuit breaker	✓	Option R57	3WA9111-0BB24
Adapter for size 3 withdrawable circuit breaker	✓	–	3WA9111-0BB25	
Coupling on the circuit breaker for mutual interlocking with Bowden cable				
	<ul style="list-style-type: none"> • Can be used in all circuit breakers 			
			Article No.	
			3WA9111-0BB31	
Bowden cable for mutual mechanical interlocking				
	Length		Article No.	
	2000 mm		3WA9111-0BB41	
	3000 mm		3WA9111-0BB42	
	4500 mm		3WA9111-0BB43	

¹⁾ Locks, cylinders and keys must be ordered from the manufacturer.

Accessories and spare parts

Indicators and control elements

2nd trip alarm switch (S25)



- Can only be used with a circuit breaker with an electronic trip unit
- The 1st trip alarm switch (1 changeover contact) is installed in every circuit breaker with a trip unit as standard

Version	Contacts	Article No.
Spare part for option K06	1 NO contact	3WA9111-0AH03

Mechanical operating cycles counter (5-digit)



Version	For circuit breakers / non-automatic circuit breakers	Article No.
Spare part for option C01	With manual operating mechanism	3WA9111-0AH04
	With spring charging motor	3WA9111-0AH05

Spring charged signaling switch (S21)



- Standard when a spring charging motor is installed to charge the stored energy mechanism
- When a spring charging motor is retrofitted, the spring charged signaling switch can also be retrofitted

Contacts	Article No.
1 NO contact	3WA9111-0AH06

Position signaling switch for withdrawable circuit breakers



Contacts	Article No.
PSS: 6 changeover contacts; 3× connected position, 2× test position, 1× disconnected position	3WA9111-0AH11
PSS-COM: 3 changeover contacts; 1× connected position, 1× test position, 1× disconnected position and option for connection to a communication module	3WA9111-0AH12

Local electric close (S10) for operator panel



- Scope of supply: Button + wiring
- Not available with motor disconnect switch
- **Note:** Possible only for circuit breakers with closing coil

Version	Variant	Article No.
Spare part for option C11	With sealing cap	3WA9111-0AH21
	With CES assembly kit	3WA9111-0AH22
Spare part for option C12	With IKON assembly kit	3WA9111-0AH23

Motor disconnect switch (S12)



- Mounting onto operator panel
- Only in combination with the spring charging motor for charging the stored energy mechanism
- Not available in combination with local electric close

Version	Article No.
Spare part for option S25	3WA9111-0AH24

Emergency OPEN button



- Mushroom pushbutton instead of local mechanical open

Variant	Article No.
Spare part for option S24	3WA9111-0AH25

Secondary disconnect terminals for circuit breakers and guide frames

- For size 1, up to 4 secondary disconnect terminal blocks are possible; for sizes 2 and 3, up to 5 secondary disconnect terminal blocks are possible
- Circuit breakers and non-automatic circuit breakers with secondary disconnect terminal blocks are supplied from the factory:
 - Non-automatic circuit breakers with 3 blocks
 - Non-automatic circuit breakers with ready4COM feature with 4 blocks
 - Non-automatic circuit breakers with ETU600 LSI or LSI with 4 blocks
 - Non-automatic circuit breaker with ETU600 LSI-HiZ with 5 blocks

Secondary disconnect terminal			
	Version	Variant	Article No.
	Base part ¹		3WA9111-0AB01
	1000 V extension ¹⁾		3WA9111-0AB02
	Manual connector ²	Screw connection	3WA9111-0AB03
		Push-in connection	3WA9111-0AB04
	Coding kit ³	For fixed-mounted X5 to X8	3WA9111-0AB07
	Sliding contact module ⁴	For guide frames	3WA9111-0AB08
	Blanking block		3WA9111-0AB12


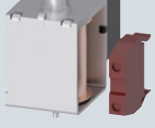
For a complete secondary disconnect terminal block, you must order:

Fixed-mounted version: **1 + 2 + 3**

Withdrawable version: **1 + 4 + 2**

¹⁾ Secondary disconnect terminal for circuit breakers with breaking capacity C and E must be ordered separately

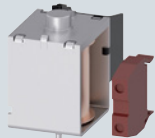
Auxiliary releases

Closing coil (CC) / shunt trip (ST)			
	• Suitable for continuous duty		
	Version	Voltage	Article No.
	100% OP	24 ... 30 V DC	3WA9111-0AD02
	Switching time ≤ 80 ms	48 ... 60 V DC	3WA9111-0AD04
		110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AD05
		220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AD06
Closing coil (CC)			
	• For momentary duty, with cut-off switch S15		
	Version	Voltage	Article No.
	5% OP	24 ... 30 V DC	3WA9111-0AD12
	Switching time 50 ms	48 ... 60 V DC	3WA9111-0AD14
		110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AD15
		220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AD16

Accessories and spare parts

Auxiliary releases

Shunt trip (ST)



- For momentary duty, with cut-off switch S14

Version	Voltage	Article No.
5% OP	24 ... 30 V DC	3WA9111-0AD22
Switching time 50 ms	48 ... 60 V DC	3WA9111-0AD24
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AD25
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AD26

Capacitor trip device



- For shunt trips
- Storage time 5 min
- Also suitable for 3VL, 3VA, 3WL and 3WN circuit breakers
- Note:** Rated control supply voltage must match the rated control supply voltage of the shunt trip

Rated control supply voltage/rated operational voltage		Article No.
AC 50/60 Hz	DC	
220 ... 240 V	220 ... 250 V	3WA9111-0AD81

Undervoltage release (UVR)



Version	Voltage	Article No.
Instantaneous ≤ 0.08 s (UVR) and short-time delayed ≤ 0.2 s	24 ... 30 V DC	3WA9111-0AE02
	48 ... 60 V DC	3WA9111-0AE04
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AE05
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AE06
	380 ... 415 V AC	3WA9111-0AE07
Delayed (UVR-t), adjustable delay 0.2 ... 3.2 s	48 V DC	3WA9111-0AE13
	60 V DC	3WA9111-0AE14
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AE15
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AE16
	380 ... 415 V AC	3WA9111-0AE17

Operating mechanism

Spring charging motor to charge the stored energy mechanism



Voltage	Article No.
24 ... 30 V DC	3WA9111-0AF02
48 ... 60 V DC	3WA9111-0AF04
110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AF05
220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AF06





Auxiliary contacts

Auxiliary switches (AUX)




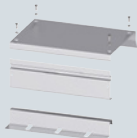
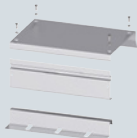
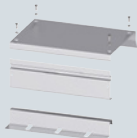
Contacts	Article No.
2 NO contacts + 2 NC contacts	3WA9111-0AG01
2 NO contacts	3WA9111-0AG02
1 NO contact + 1 NC contact	3WA9111-0AG03

Door sealing frame, protective cover


Door sealing frame								
	<table border="1"> <thead> <tr> <th>Version</th> <th>Article No.</th> </tr> </thead> <tbody> <tr> <td>Spare part for option T40</td> <td>3WA9111-0AP01</td> </tr> </tbody> </table>	Version	Article No.	Spare part for option T40	3WA9111-0AP01			
	Version	Article No.						
Spare part for option T40	3WA9111-0AP01							
<table border="1"> <thead> <tr> <th colspan="2">Protective cover IP55</th> </tr> </thead> <tbody> <tr> <td rowspan="2"></td> <td> <ul style="list-style-type: none"> Cannot be used in conjunction with door sealing frames Hood removable and can be opened on both sides </td> </tr> <tr> <td> <table border="1"> <thead> <tr> <th>Article No.</th> </tr> </thead> <tbody> <tr> <td>3WA9111-0AP03</td> </tr> </tbody> </table> </td> </tr> </tbody> </table>		Protective cover IP55			<ul style="list-style-type: none"> Cannot be used in conjunction with door sealing frames Hood removable and can be opened on both sides 	<table border="1"> <thead> <tr> <th>Article No.</th> </tr> </thead> <tbody> <tr> <td>3WA9111-0AP03</td> </tr> </tbody> </table>	Article No.	3WA9111-0AP03
Protective cover IP55								
	<ul style="list-style-type: none"> Cannot be used in conjunction with door sealing frames Hood removable and can be opened on both sides 							
	<table border="1"> <thead> <tr> <th>Article No.</th> </tr> </thead> <tbody> <tr> <td>3WA9111-0AP03</td> </tr> </tbody> </table>	Article No.	3WA9111-0AP03					
Article No.								
3WA9111-0AP03								

1

Arc chute, arc chute cover

Arc chute																																						
	Voltage	Size	Breaking capacity	Article No.																																		
	690 V AC	1	N, S	3WA9111-0AS01																																		
			M	3WA9111-0AS02																																		
		2	S, M, H	3WA9111-0AS10																																		
			C	3WA9111-0AS11																																		
		3	H	3WA9111-0AS17																																		
			C	3WA9111-0AS18																																		
	1000 V AC	1	E	3WA9111-0AS04																																		
				3WA9111-0AS05																																		
		2	E	3WA9111-0AS12																																		
				3WA9111-0AS18																																		
		3	E	3WA9111-0AS13																																		
			3WA9111-0AS06																																			
600 V DC	2	D	3WA9111-0AS13																																			
	1000 V DC	1	E	3WA9111-0AS06																																		
		2	E	3WA9111-0AS14																																		
<table border="1"> <thead> <tr> <th colspan="5">Arc chute cover</th> </tr> </thead> <tbody> <tr> <td rowspan="10"></td> <td colspan="4"> <ul style="list-style-type: none"> Parts kit for guide frame Spare part for option R10 Not available for: <ul style="list-style-type: none"> Breaking capacity C, D and E 4000 A size 2 </td> </tr> <tr> <td>Number of poles</td> <td>Size</td> <td colspan="2">Article No.</td> </tr> <tr> <td rowspan="3">3-pole</td> <td>1</td> <td colspan="2">3WA9111-0AS31</td> </tr> <tr> <td>2</td> <td colspan="2">3WA9111-0AS32</td> </tr> <tr> <td>3</td> <td colspan="2">3WA9111-0AS33</td> </tr> <tr> <td rowspan="3">4-pole</td> <td>1</td> <td colspan="2">3WA9111-0AS41</td> </tr> <tr> <td>2</td> <td colspan="2">3WA9111-0AS42</td> </tr> <tr> <td>3</td> <td colspan="2">3WA9111-0AS43</td> </tr> </tbody> </table>					Arc chute cover						<ul style="list-style-type: none"> Parts kit for guide frame Spare part for option R10 Not available for: <ul style="list-style-type: none"> Breaking capacity C, D and E 4000 A size 2 				Number of poles	Size	Article No.		3-pole	1	3WA9111-0AS31		2	3WA9111-0AS32		3	3WA9111-0AS33		4-pole	1	3WA9111-0AS41		2	3WA9111-0AS42		3	3WA9111-0AS43	
Arc chute cover																																						
	<ul style="list-style-type: none"> Parts kit for guide frame Spare part for option R10 Not available for: <ul style="list-style-type: none"> Breaking capacity C, D and E 4000 A size 2 																																					
	Number of poles	Size	Article No.																																			
	3-pole	1	3WA9111-0AS31																																			
		2	3WA9111-0AS32																																			
		3	3WA9111-0AS33																																			
	4-pole	1	3WA9111-0AS41																																			
		2	3WA9111-0AS42																																			
		3	3WA9111-0AS43																																			

Coding for withdrawable version

Coding for withdrawable version							
	<ul style="list-style-type: none"> Variant coding by the customer with 36 coding options 						
	<table border="1"> <thead> <tr> <th>Size</th> <th>Article No.</th> </tr> </thead> <tbody> <tr> <td>1, 2</td> <td>3WA9111-0AR11</td> </tr> <tr> <td>3</td> <td>3WA9111-0AR12</td> </tr> </tbody> </table>	Size	Article No.	1, 2	3WA9111-0AR11	3	3WA9111-0AR12
	Size	Article No.					
1, 2	3WA9111-0AR11						
3	3WA9111-0AR12						

Accessories and spare parts

Grounding connections

Grounding connection between the guide frame and the circuit breaker



- For 30 kA and 60 kA ground short-circuit current
- For 60 kA ground short-circuit current, order 2x contact modules for guide frame

Contact module	Size	Number of poles	Article No.
For guide frames	1, 2 ¹⁾		3WA9111-0BG01
	3		3WA9111-0BG02
For withdrawable circuit breakers	1	3-pole	3WA9111-0BG11
		4-pole	3WA9111-0BG21
	2	3-pole ¹⁾	3WA9111-0BG12
		3-pole ²⁾	3WA9111-0BG13
		4-pole ¹⁾	3WA9111-0BG22
		4-pole ²⁾	3WA9111-0BG23

¹⁾ Cannot be used for size 2 with breaking capacity C and size 2, 4000 A.

²⁾ Not for breaking capacity E

Support brackets

Support brackets



- For mounting fixed-mounted circuit breakers on vertical plane
- Only for sizes 1 and 2 (1 set = 2 units)

Article No.

3WA9111-0BB50

Modules of the CubicleBUS²

COM190 Modbus TCP PROFINET IO communication module



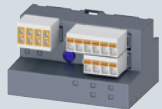
Version

Circuit breaker internal or on standard mounting rail, including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on standard mounting rail, connecting cables and **CubicleBUS²** terminating resistor

Article No.

3WA9111-0EC13

IOM230 digital input/output module (2 inputs and 3 outputs)



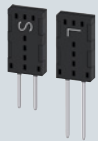
Version

Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on standard mounting rail, connecting cables and terminating resistor for **CubicleBUS²**

Article No.

3WA9111-0EC11

Terminating resistor for CubicleBUS²



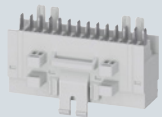
Version

For **CubicleBUS²** on the last module

Article No.

3WA9111-0EC50

Adapters



Version

For mounting the modules of the **CubicleBUS²** on the secondary disconnect terminal system of the circuit breaker

Article No.


3WA9111-0EC60

For mounting the modules of the **CubicleBUS²** on standard mounting rail

3WA9111-0EC61


Internal voltage tap

Set of components for conversion of an existing internal voltage tap




Conversion of internal voltage tap on main contact	Circuit breaker	Size	Article No.
From bottom to top	3-pole	1	3WA9111-0EK11
		2	3WA9111-0EK12
		3	3WA9111-0EK13
	4-pole	1	3WA9111-0EK21
		2	3WA9111-0EK22
		3	3WA9111-0EK23
From top to bottom	3-pole	1	3WA9111-0EK31
		2	3WA9111-0EK32
		3	3WA9111-0EK33
	4-pole	1	3WA9111-0EK41
		2	3WA9111-0EK42
		3	3WA9111-0EK43

Retrofit of the internal voltage tap on the lower main conducting paths



For breaking capacity	All parts for circuit breaker	Size	Article No.
N, S, M, H, C with VTM680 voltage tap module	3-pole	1	3WA9111-0EK51
		2	3WA9111-0EK52
		3	3WA9111-0EK53
	4-pole	1	3WA9111-0EK61
		2	3WA9111-0EK62
		3	3WA9111-0EK63
E with VTM640 voltage tap module	3-pole	1	3WA9111-0EK55
		2	3WA9111-0EK56
		3	3WA9111-0EK57
	4-pole	1	3WA9111-0EK65
		2	3WA9111-0EK66
		3	3WA9111-0EK67


Retrofit kit to connect an external voltage transformer



Size	Article No.
2, 3 including VTM640 voltage tap module and the necessary connection components	3WA9111-0EK81


Main conductor connections, fixed-mounted versions

Front-accessible main connections according to DIN 43673, double hole for main connection at top



Size	Breaking capacity Rated current I_n	Article No.
1	N, S ≤ 1000 A AC	3WA9111-0AL11
	N, S 1250 ... 2000 A AC; M, E ≤ 2000 A AC	3WA9111-0AL12
2	S, M, H, E 2000 A AC; D, E ≤ 2000 A DC	3WA9111-0AL21
	S, M, H, E 2500 A AC	3WA9111-0AL22
	S, M, H, E 3200 A AC; D, E 4000 A DC	3WA9111-0AL23
	H 4000 A AC	3WA9111-0AL31

Front-accessible main connections according to DIN 43673, double hole for main connection at bottom

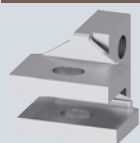


Size	Breaking capacity Rated current I_n	Article No.
1	N, S ≤ 1000 A AC	3WA9111-0AL13
	N, S 1250 ... 2000 A AC; M, E ≤ 2000 A AC	3WA9111-0AL14
2	S, M, H, E 2000 A AC; D, E ≤ 2000 A DC	3WA9111-0AL24
	S, M, H, E 2500 A AC	3WA9111-0AL25
	S, M, H, E 3200 A AC; D, E 4000 A DC	3WA9111-0AL26
	H 4000 A AC	3WA9111-0AL32

Accessories and spare parts

Main conductor connections, fixed-mounted versions

Rear vertical main connections



Size	Breaking capacity Rated current I_n	Article No.
1	N, S, M, E ≤ 2000 A AC ¹⁾	3WA9111-0AM11
	N, S, M, E 2500 A AC	3WA9111-0AM12
2	S, M, H, C, E ≤ 3200 A AC ²⁾	3WA9111-0AM21
3	H, C, E ≤ 6300 A AC	3WA9111-0AM33

¹⁾ In the case of vertical connection size 1 with breaking capacity N and S, up to 1000 A one 3WA9111-0AM11 vertical connection is required for each connection, from 1250 A to 2000 A or with breaking capacity M or E two 3WA9111-0AM11 vertical connections are required for each connection.

²⁾ In the case of vertical connection size 2, up to 2500 A one 3WA9111-0AM21 vertical connection is required for each connection for breaking capacity S, M, H, E, D, for 3200 A and always for breaking capacity C, two 3WA9111-0AM21 vertical connections are required for each connection

Main conductor connections for withdrawable units

Front-accessible main connections, according to DIN 43673, double hole at top or at bottom ¹⁾



Size	Breaking capacity Rated current I_n	Article No.
1	N, S ≤ 1000 A AC	3WA9111-0AN11
	N, S 1250 ... 2000 A AC; M, E ≤ 2000 A AC	3WA9111-0AN12
2	N, S 1250 ... 2000 A AC; M, E ≤ 2000 A AC	3WA9111-0AN21
	S, M, H, E 2500 A AC	3WA9111-0AN22
	S, M, H, E 3200 A AC; D, E 4000 A DC	3WA9111-0AN23
3	H 4000 A AC	3WA9111-0AN31

Supports for front-accessible main connections according to DIN 43673



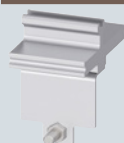
Number of poles	Size	Article No.
3-pole, set for 3 bars, top or bottom	1	3WA9111-0AN81
	2	3WA9111-0AN82
	3	3WA9111-0AN83
4-pole, set for 4 bars, top or bottom	1	3WA9111-0AN84
	2	3WA9111-0AN85
	3	3WA9111-0AN86

Rear vertical main connections



Size	Breaking capacity Rated current I_n	Article No.
1	N, S ≤ 1000 A AC	3WA9111-0AV11
	N, S 1250 ... 2000 A AC; M, E ≤ 2000 A AC	3WA9111-0AV12
2	S, M, H, E 2000 A AC; D, E ≤ 2000 A DC ²⁾	3WA9111-0AV21
	S, M, H, E 2500 A AC ²⁾	3WA9111-0AV22
	S, M, H, E 3200 A AC; D, E 4000 A DC ²⁾	3WA9111-0AV23
	C 2000 ... 3200 A AC	3WA9111-0AV24
3	H, C, E ≤ 5000 A AC	3WA9111-0AV31

Rear horizontal main connections



Size	Breaking capacity Rated current I_n	Article No.
1	N, S ≤ 1000 A AC	3WA9111-0AX11
	N, S 1250 ... 2000 A AC; M, E ≤ 2000 A AC	3WA9111-0AX12
2	S, M, H, E 2000 A AC; D, E ≤ 2000 A DC ²⁾	3WA9111-0AX21
	S, M, H, E 2500 A AC ²⁾	3WA9111-0AX22
	S, M, H, E 3200 A AC; D, E 4000 A DC ²⁾	3WA9111-0AX23
	C 2000 ... 3200 A AC	3WA9111-0AX24
3	H, C, E ≤ 5000 A AC	3WA9111-0AX31

¹⁾ When using front-accessible main connections (withdrawable circuit breakers) supports are required.

²⁾ Not for circuit breakers with very high breaking capacity C.

Connecting flange



Size	Breaking capacity Rated current I_n	Article No.
1	N, S ≤ 1000 A AC	3WA9111-0AW11
	N, S 1250 ... 2000 A AC; M, E ≤ 2000 A AC	3WA9111-0AW12
2	S, M, H, E 2000 A AC; D, E ≤ 2000 A DC	3WA9111-0AW21
	S, M, H, E 2500 A AC	3WA9111-0AW22
	S, M, H, E 3200 A AC; D, E 4000 A DC	3WA9111-0AW23
3	H 4000 A AC	3WA9111-0AW31

Conversion kit

Conversion kit for converting fixed-mounted circuit breakers into withdrawable circuit breakers

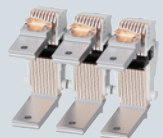


- Guide frames and sliding contact modules must be ordered separately.
- Conversion from fixed-mounted to withdrawable circuit breakers is not possible for 3WA circuit breakers with breaking capacity C and breaking capacity E

Number of poles	Size	Article No.
3-pole	1	3WA9111-OBC11
	2	3WA9111-OBC12
	3	3WA9111-OBC13
4-pole	1	3WA9111-OBC14
	2	3WA9111-OBC15
	3	3WA9111-OBC16

Main contact elements

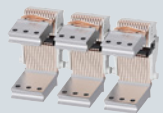
Main contact elements for AC circuit breakers



- **Notes:**
 - To be ordered only once for each circuit breaker
 - On the following circuit breakers, the main contact elements can only be replaced in the factory:
3WA1 size 1 breaking capacity M and E
3WA1 size 2 breaking capacity C
3WA1 size 3 breaking capacity C and E

Number of poles	Size	Breaking capacity	Rated current I_n	Article No.		
3	1	N	≤ 1000 A	3WA9111-0AQ01		
			1250 A	3WA9111-0AQ02		
			1600 A	3WA9111-0AQ04		
		S	≤ 1000 A	3WA9111-0AQ03		
			1250 ... 1600 A	3WA9111-0AQ04		
			2000 ... 2500 A	3WA9111-0AQ05		
	2	S, M, H, E	2000 A	3WA9111-0AQ08		
			2500 A	3WA9111-0AQ11		
			3200 A	3WA9111-0AQ13		
		S, M, H, E	4000 A	3WA9111-0AQ15		
			3	H	4000 A	3WA9111-0AQ20
				5000 ... 6300 A	3WA9111-0AQ22	
4	1	N	≤ 1000 A	3WA9111-0AQ51		
			1250 A	3WA9111-0AQ52		
			1600 A	3WA9111-0AQ54		
		S	≤ 1000 A	3WA9111-0AQ53		
			1250 ... 1600 A	3WA9111-0AQ54		
			2000 ... 2500 A	3WA9111-0AQ55		
	2	S, M, H, E	2000 A	3WA9111-0AQ58		
			2500 A	3WA9111-0AQ61		
			3200 A	3WA9111-0AQ63		
		S, M, H, E	4000 A	3WA9111-0AQ65		
			3	H	4000 A	3WA9111-0AQ70
				5000 ... 6300 A	3WA9111-0AQ72	

Main contact elements for DC non-automatic circuit breakers



- **Note:** To be ordered only once for each circuit breaker

Number of poles	Size	Breaking capacity	Rated current I_n	Article No.
3	2	D, E	1000 / 2000 A	3WA9111-0AQ17
			4000 A	3WA9111-0AQ18
4	2	D, E	1000 / 2000 A	3WA9111-0AQ67
			4000 A	3WA9111-0AQ68



Appendix

A

Link directory	A/2
Conditions of sale and delivery	A/4
Index	A/6
Notes	A/7



Link directory

Catalog

General information

Information on low-voltage power distribution and electrical installation technology	www.siemens.com/lowvoltage
Tender specifications	www.siemens.com/lowvoltage/tenderspecifications
Conversion tool	www.siemens.com/conversion-tool
Image database	www.siemens.com/lowvoltage/picturedb
CAX download manager	www.siemens.com/lowvoltage/cax
Newsletter system	www.siemens.com/lowvoltage/newsletter
Siemens YouTube channel	www.youtube.com/Siemens
Brochures / catalogs	www.siemens.com/lowvoltage/catalogs
Operating instructions / manuals	www.siemens.com/lowvoltage/manuals
Siemens Industry Online Support	www.siemens.com/lowvoltage/product-support
Siemens Industry Online Support app	www.siemens.com/support-app
My Documentation Manager (MDM)	www.siemens.com/lowvoltage/mdm
Configurators	www.siemens.com/lowvoltage/configurators
Siemens Industry Mall – product catalog and online ordering system	www.siemens.com/industrymall
Direct forwarding to the Industry Mall	www.siemens.com/product?Article No.
Training	www.siemens.com/sitrain-lowvoltage
Local contacts	www.siemens.com/lowvoltage/contact
Technical Support	www.siemens.com/lowvoltage/support-request
Information on services	www.siemens.com/service-catalog
Control panels for the North American market	www.siemens.com/northamerican-standards
Control panel building	www.siemens.com/controlpanel
Energy savings and amortization	www.automation.siemens.com/sinasave
Energy Suite	www.siemens.com/energysuite
SITOP power supplies	www.siemens.com/sitop
Power distribution with Totally Integrated Power	www.siemens.com/tip
SIMARIS planning tools	sie.ag/2m3oFbS

Information + ordering

Technical overviews

Air circuit breakers www.siemens.com/lowvoltage/product-support (109781188)

All the important things at a glance

Air circuit breakers www.siemens.com/3WA

Your product in detail

Quick selection guide – 3WA air circuit breakers www.siemens.com/lowvoltage/product-support (109781967)

Brochure – 3WA air circuit breakers www.siemens.com/lowvoltage/product-support (109781968)

Our video range

Power Distribution Low Voltage (EN) bit.ly/3iiuhXS

Everything you need for your order

3WA air circuit breakers sie.ag/3heeyYv

Configurators

3WA air circuit breakers www.siemens.com/lowvoltage/3wa-configurator

Commissioning + operation

Tools / software

SENTRON powerconfig configuration software www.siemens.com/powerconfig

Manuals

Equipment manual – 3WA air circuit breakers www.siemens.com/lowvoltage/manuals (109763061)

A

Conditions of sale and delivery

1. General Provisions

By using this catalog you can purchase products (hardware, software and services) described therein from Siemens Aktiengesellschaft subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as „T&C“). Please note that the scope, the quality and the conditions for supplies and services, including software products, by any Siemens entity having a registered office outside Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. The following T&C apply exclusively for orders placed with Siemens Aktiengesellschaft, Germany.

1.1 For customers with a seat or registered office in Germany

For customers with a seat or registered office in Germany, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for installation work the „General Conditions for Erection Works – Germany“¹⁾ („Allgemeine Montagebedingungen – Deutschland“ (currently only available in German)) and/or
- for stand-alone software products and software products forming a part of a product or project, the „General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany“¹⁾ and/or
- for consulting services the „General Terms and Conditions for Consulting Services of the Division DF – Germany“¹⁾ and/or
- for other supplies and/or services the „General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry“¹⁾. In case such supplies and/or services should contain Open Source Software, the conditions of which shall prevail over the „General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry“¹⁾, a notice will be contained in the scope of delivery in which the applicable conditions for Open Source Software are specified. This shall apply mutatis mutandis for notices referring to other third party software components.

1.2 For customers with a seat or registered office outside Germany

For customers with a seat or registered office outside Germany, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for services the „International Terms & Conditions for Services“¹⁾ supplemented by „Software Licensing Conditions“¹⁾ and/or
- for consulting services the „General Terms and Conditions for Consulting Services of the Division DF – Germany“¹⁾ and/or
- for other supplies of hard- and software the „International Terms & Conditions for Products“¹⁾ supplemented by „Software Licensing Conditions“¹⁾

1.3 For customers with master or framework agreement

To the extent our supplies and/or services offered are covered by an existing master or framework agreement, the terms and conditions of that agreement shall apply instead of T&C.

2. Additional Terms and Conditions

The dimensions are in mm. In Germany, according to the German law on units in measuring technology, data in inches apply only to devices for export.

Illustrations are not binding.

Insofar as there are no remarks on the individual pages of this catalog – especially with regard to data, dimensions and weights given – these are subject to change without prior notice.

3. Export Regulations

We shall not be obligated to fulfill any agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes and/or other sanctions.

Export may be subject to license. We shall indicate in the delivery details whether licenses are required under German, European and US export lists.

Our products are controlled by the U.S. Government (when labeled with „ECCN“ unequal „N“) and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

The export indications can be viewed in advance in the description of the respective goods on the Industry Mall, our online catalog system. Only the export labels „AL“ and „ECCN“ indicated on order confirmations, delivery notes and invoices are authoritative.

Products labeled with „AL“ unequal „N“ are subject to European / national export authorization. Products without label, with label „AL:N“ / „ECCN:N“, or label „AL:9X9999“ / „ECCN: 9X9999“ may require authorization from responsible authorities depending on the final end-use, or the destination.

¹⁾ The text of the Terms and Conditions of Siemens AG can be downloaded at https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

If you transfer goods (hardware and/or software and/or technology as well as corresponding documentation, regardless of the mode of provision) delivered by us or works and services (including all kinds of technical support) performed by us to a third party worldwide, you must comply with all applicable national and international (re-)export control regulations.

If required for the purpose of conducting export control checks, you (upon request by us) shall promptly provide us with all information pertaining to the particular end customer, final disposition and intended use of goods delivered by us respectively works and services provided by us, as well as to any export control restrictions existing in this relation.

The products listed in this catalog may be subject to European/German and/or US export regulations. Any export requiring approval is therefore subject to authorization by the relevant authorities.

Errors excepted and subject to change without prior notice.

A

Index

Keyword	Page
0–9	
3WA air circuit breakers	1/1
3WA air circuit breakers. Made for makers. Simply reliable.	1/4–1/6
A	
Accessories and spare parts	1/44–1/54
Accessory options	1/38–1/40
C	
Communication	1/23
Connection	1/22
E	
Electronic trip unit ETU600	1/17–1/20
G	
Guide frames for AC	1/41–1/42
Guide frames for DC	1/43
O	
Online configurator highlights	1/26
S	
Structure of the article numbers	1/28–1/36
Switching devices for AC	1/8–1/12
Switching devices for AC and DC	1/4–1/6
Switching devices for DC	1/14–1/16
System overview 3WA11 – 3WA13	1/24
T	
The fast route to the product	1/2

Catalogs and further information



LV 10 Low-Voltage Power Distribution and Electrical Installation Technology SENTRON • SIVACON • ALPHA

Protection, Switching, Measuring and
Monitoring Devices, Switchboards and
Distribution Systems

PDF (E86060-K8280-A101-B2-7600)



LV 14 Power Monitoring Made Simple SENTRON

E86060-K1814-A101-A7-7600



LV 18 Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification SENTRON

PDF (E86060-K8280-E347-A5-7600)



ET D1 Switches and Socket Outlets DELTA

PDF



IC 10 Industrial Controls SIRIUS

E86060-K1010-A101-B1-7600



Industry Mall

Information and Ordering Platform
on the Internet:

www.siemens.com/industrymall



Siemens TIA Selection Tool
for the selection, configuration and ordering
of TIA products and devices

www.siemens.com/tst



Training for Industry SITRAIN

www.siemens.com/sitrain

The catalogs listed above and additional catalogs are available in PDF format at Siemens Industry Online Support www.siemens.com/lowvoltage/catalogs

Further information on low-voltage power distribution and electrical installation technology is available on the Internet at www.siemens.com/lowvoltage

Get more information

www.siemens.com/lowvoltage

Published by
Siemens AG

For the U.S. published by
Siemens Industry Inc.

Smart Infrastructure
Electrical Products
Siemensstraße 10
93055 Regensburg, Germany

100 Technology Drive
Alpharetta, GA 30005
United States

Article No. E86060-K8280-E401-A1-7600
Dispo 18301
KG 1220 2. AUM 72 En
Printed in Germany
© Siemens 2020

Subject to changes and errors. The information given in this catalog only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

All product designations may be trademarks or other rights of Siemens AG, its affiliated companies or other companies whose use by third parties for their own purposes could violate the rights of the respective owner.

Token fee: 2.00 €

Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the Internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit
<https://www.siemens.com/industrialsecurity>

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under
<https://www.siemens.com/industrialsecurity>