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. The 3WA air circuit breaker is also part of the Siemens Xcelerator portfolio and therefore provides support with achieving digital and sustainable transformation – faster, simpler, and scalable.

Reliable, versatile and perfectly integrated

The 3WL air circuit breakers reliably protect electrical equipment from damage or fire resulting from short circuit, ground fault or overload failures.

Note:
Products bearing our Siemens EcoTech label are identified by this clickable symbol in the catalog:

Siemens EcoTech

www.siemens.com/lowvoltage/SiemensEcoTech

Air Circuit Breakers

Siemens Xcelerator

A multitude of additional information ...

Information + ordering

All the important things at a glance

For information about air circuit breakers, please visit our website **www.siemens.com/sentron-3wa**

Your product in detail

The SiePortal platform (knowledge base) provides comprehensive information
www.siemens.com/lowvoltage/product-support

- Quick Selection Guide
  - 3WA air circuit breakers **(109781967)**
  - 3WL air circuit breakers **(109751638)**
- Brochure
  - 3WA air circuit breakers **(109800077)**

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

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

Siemens YouTube channel

- 3WA air circuit breaker – Teaserfilm
  sie.ag/2Myvit
- 3WA air circuit breaker – Highlightfilm
  sie.ag/3dy65A

Everything you need for your order

Refer to SiePortal to find an overview of your products (product catalog)

- Air circuit breakers **sie.ag/2IXiZjB**

Direct forwarding to the individual products in SiePortal by clicking on the article number in the catalog or entering this web address incl. article number
www.siemens.com/product_catalog_SIEP?Article No.

Order supports can be found in SiePortal at
www.siemens.com/lowvoltage/product-support

- Order Support
  - 3WA air circuit breakers – Made for makers. Simply reliable. **(109800074)**

Configurators

The configurator reduces the time and effort required in the planning and ordering process, and allows for individual adaptations. Configure your air circuit breaker at
www.siemens.com/lowvoltage/3wa-configurator
www.siemens.com/lowvoltage/3wl-configurator
www.siemens.com/lowvoltage/3wl10-configurator

The following are additionally available for your configured air circuit breaker:

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

The fast track to the experts

Contact persons in your region

We offer a comprehensive portfolio of services.
You can find your local contacts at
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You will find further information on services at
www.siemens.com/service-offers

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

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… can be found in our online services

Commissioning + operation

SENTRON Powerconfig

The combined commissioning and service tool SENTRON Powerconfig for communication-capable measuring devices, circuit protection devices and circuit breakers.

Free download **SENTRON Powerconfig**

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Your product in detail

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- Operating instructions
- Characteristic curves
- Certificates

Online Support app available for download from the **App Store** and **Play Store**
You will find further information at
www.siemens.com/support-app

Provision of 3D data (step and u3d data formats)

- SiePortal (product catalog)
  www.siemens.com/lowvoltage/product-catalog
- Image database
  www.siemens.com/lowvoltage/picturedb

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

Manuals

Manuals can be found in SiePortal at
www.siemens.com/lowvoltage/manuals

- Equipment Manual
  - 3WA1 air circuit breakers **(109763061)**
  - 3VA27 molded case circuit breakers & 3WL10 air circuit breakers **(109753821)**
- System Manual
  - 3WA air circuit breaker communication **(109792368)**
  - 3WL/3VL circuit breakers with communications capability – Modbus **(39850157)**
  - 3WL/3VL PROFIBUS circuit breakers with communications capability – PROFIBUS **(12560390)**
- Configuration Manual
  - Low-voltage protection devices selectivity tables **(109748621)**
- Communication Manual
  - 3WL air circuit breakers via COM35 – PROFINET IO, Modbus TCP **(109757987)**
  - 3WL10 air circuit breakers & 3VA27 molded case circuit breakers **(109760220)**

Face-to-face or online training

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

- 3WA air circuit breakers (WT-LV3WA)
- 3WL10 air circuit breaker, size 0 (WT-LVA3WL0)
- 3WL air circuit breakers, sizes 1-3 (WT-LVA3WL)
- Protection systems in low-voltage power distribution (WT-LVAPS)
- Maintenance and operation of 3WL and 3WA circuit breakers (LV-CBMAIN)
- Certification: Maintenance and operation of 3WL and 3WA circuit breakers (LV-CBCERT)

Video tutorial on the 3WL air circuit breaker
www.lowvoltage.siemens.com/wcms/3wl-tutorial

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)

3WA1 circuit breakers and non-automatic circuit breakers 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	466 | 516		437 | 462			466 | 516			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, LRS, BV, PRS, CCS					ABS, DNV, LRS, BV, PRS, CCS				
Breaking capacity		**N**	**S**	**M**	**H**	**E**	**S**	**M**	**H**	**C**	**E**
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	100 | 100	– | –	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	100 | 100	– | –	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	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	– | –	– | –	– | –	– | –	– | –	– | –	– | –	– | –	– | –	70 | 70
Rated short-circuit making capacity I_{cm}											
I_{cm} at U_e up to 415 V AC	kA	121	145	187	220	–	145	187	220	286	–
I_{cm} at U_e up to 500 V AC	kA	121	145	187	220	–	145	187	220	286	–
I_{cm} at U_e up to 690 V AC	kA	88	105	145	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	–	–	–	–	–	–	–	–	–	154

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AC		DC	
			
3WA13		**3WA12**	
≤ 1150		≤ 1000 (≤ 1500 for 4-pole, Breaking capacity E)	
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
466 | 516	437 | 462	466 | 516	437 | 462
471	357	471	357
VDE, EAC, CCC, CE, C-Tick		VDE, EAC, CCC, CE, C-Tick	
ABS, DNV, LRS, BV, PRS, CCS		ABS, DNV, LRS, BV, PRS, CCS	

H	C	E	D	E
100 | 100	150 | 150 (3-pole); 130 | 130 (4-pole)	– | –	– | –	– | –
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	–	–

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3WA1 circuit breakers and non-automatic circuit breakers for AC and DC

IEC 60947-2 (continued)

AC

			3WA11					3WA12				
Breaking capacity			**N**	**S**	**M**	**H**	**E**	**S**	**M**	**H**	**C**	**E**
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	85	–	66	85	100	100	–
	1 s	kA	50	66	85	85	–	66	85	85	100	–
	2 s	kA	35 [2]/45 [3]	45	70	70	–	66	66 [4]/85 [5]	66 [4]/85 [5]	85	–
	3 s	kA	30 [2]/35 [3]	35	60	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	66	85	50	66	85	100	85
	1 s	kA	42	50	66	66	85	50	66	85	100	85
	2 s	kA	35 [2]/42 [3]	45	66	66	70	50	66	66 [4]/85 [5]	85	66 [4]/85 [5]
	3 s	kA	30 [2]/35 [3]	35	60	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	–	–	–	–	–	–	–	–	–	70
	1 s	kA	–	–	–	–	–	–	–	–	–	70
	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	–	–	–	–	–	–	–	–	–	–
I_{cw} at U_e up to 1500 V DC	1 s	kA	–	–	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	–	70
Up to 220 V DC		kA	–	–	–	–	–	–	–	–	–	–
Up to 300 V DC		kA	–	–	–	–	–	–	–	–	–	–
Up to 600 V DC		kA	–	–	–	–	–	–	–	–	–	–
Up to 1000 V DC		kA	–	–	–	–	–	–	–	–	–	–
Up to 1500 V DC		kA	–	–	–	–	–	–	–	–	–	–
IT network capability												
1-pole short-circuit breaking capacity I_{IT} acc. to IEC 60947-2 Annex H	≤ 500 V	kA	50	50	50	50	–	50	50	50	50	–
	≤ 690 V	kA	–	–	–	–	50	–	–	–	–	50
	1000 V	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

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AC

DC

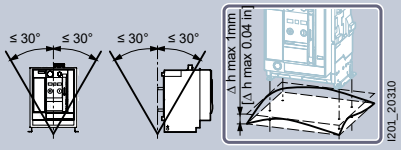
3WA13			3WA12	
H	C	E	D	E
100	130 (3-pole); 120 (4-pole)	–	–	–
100	130 (3-pole); 120 (4-pole)	–	–	–
100	130 (3-pole); 120 (4-pole)	–	–	–
100	130 (3-pole); 120 (4-pole)	–	–	–
85	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	–	–
85	130 (3-pole); 120 (4-pole)	130 (3-pole); 120 (4-pole)	–	–
85	130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

System overview, page 1/28

3WA1 circuit breakers and non-automatic circuit breakers 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 [1]									
Permissible load for withdrawable versions									
For all connection types (except rear vertical main connections)	Up to 40 °C (Cu bare)	A	630	800	1000	1250	1600	2000	–
	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	2370
	Up to 70 °C (Cu bare)	A	630	800	1000	1250	1545	1855	2060
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 [2]
	Up to 60 °C (Cu bare)	A	630	800	1000	1250	1600	2000	2500 [2]
	Up to 70 °C (Cu bare)	A	630	800	1000	1250	1600	2000	2500 [2]
Power loss at I_n									
With 3-phase symmetrical load with maximum rated current, complete device (3/4p), with rear horizontal connections	Fixed-mounted	W	30	45	70	105	135	240	360
	Withdrawable versions	W	55	85	130	205	310	440	600

[1] The stated temperatures are the ambient temperatures of the circuit breaker
[2] Copper bars painted black
[3] Only flange connections are available
[4] 4000 A up to 65 °C
[5] For 4000 A circuit breakers with horizontal connection, 5 × 100 × 10 mm bars are required

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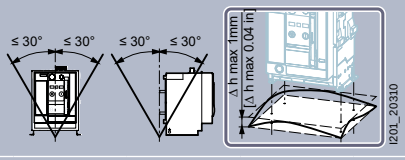
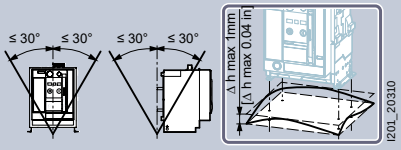
3WA12

3WA13

2000 A	2500 A	3200 A	3600 A	4000 A [5] 3-pole	4000 A [5] 4-pole	4000 A [5] 4-pole N pole left with option D04	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	3600 [3]	4000	4000	4000	4000	5000	–
2000	2500	3020	3490 [3]	3750	3750	3750	4000	5000	–
2000	2500	3020	3380 [3]	3620	3620	3620	4000	5000	–
2000	2280	2870	3150 [3]	3360	3360	3360	4000	5000	–
2000	2500	3200	–	4000	4000	4000	4000	5000	5920
2000	2500	3200	–	3910	3910	3910	4000	5000	5810
2000	2390	2945	–	3645	3645	3645	4000	5000	5500
2000	2500	3200	–	4000	4000	4000	4000	5000	–
2000	2500	3200	–	4000	4000 [4]	4000	4000	5000	–
2000	2500	3200	–	4000	3860	4000	4000	5000	–
2000	2500	3200	–	4000	4000	4000	4000	5000	6300
2000	2500	3200	–	4000	4000	4000	4000	5000	6300
2000	2500	3200	–	4000	4000	4000	4000	5000	5920
180	270	410	–	805	830	805	520	630	900
320	520	710	800	1170	1200	1170	810	1050	1600

System overview, page 1/28

3WA1 circuit breakers and non-automatic circuit breakers 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									
Make time (mechanical)		ms				35			
Electrical make time (through closing coil 100% OP)		ms				80			
Electrical make time (through closing coil 5% OP)		ms				50			
Opening time (mechanical)		ms				38			
Electrical opening time (through shunt trip 100% OP)		ms				80			
Electrical opening time (through shunt trip 5% OP)		ms				50			
Electrical opening time (through undervoltage release)		ms				80 [2]			
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 [1]	Operating cycles				30000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	With maintenance [1]	Operating cycles				30000			
Breaking capacity S, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				15000			
	With maintenance [1]	Operating cycles				30000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	With maintenance [1]	Operating cycles				30000			
Breaking capacity M, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				10000			
	With maintenance [1]	Operating cycles				20000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	With maintenance [1]	Operating cycles				20000			
Breaking capacity E, 3/4-pole [3]									
Mechanical	Without maintenance	Operating cycles				10000			
	With maintenance [1]	Operating cycles				20000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	Without maintenance 1000 V	Operating cycles				1000			
	Without maintenance 1150 V	Operating cycles				–			
	With maintenance [1]	Operating cycles				20000			
Breaking capacity H, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				10000			
	With maintenance [1]	Operating cycles				20000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	With maintenance [1]	Operating cycles				20000			
Breaking capacity C, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				–			
	With maintenance [1]	Operating cycles				–			
Electrical	Without maintenance 690 V	Operating cycles				–			
	With maintenance 690 V [1]	Operating cycles				–			
Switching frequency (electrical operating cycles)									
Breaking capacity N and S									
	3-pole	1/h				45			
	4-pole	1/h				45			
Breaking capacity M and H									
	3- pole	1/h				45			
	4-pole	1/h				60			
Breaking capacity C									
	3-pole	1/h				–			
	4-pole	1/h				–			
Breaking capacity E [3]									
≤ 690 V	3-pole	1/h				45			
	4-pole	1/h				60			
1000 V/1150 V	3-pole	1/h				20			
	4-pole	1/h				20			

[1] Maintenance means: Replacing main contacts and arc chutes (see operating instructions: www.siemens.com/lowvoltage/manuals).
[2] Opening time with short-time delay of the undervoltage release can be set up to 200 ms
[3] On E class circuit breakers, the main contacts can only be replaced in the factory

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3WA12					3WA13		
							
2000 A	**2500 A**	**3200 A**	**3600 A**	**4000 A**	**4000 A**	**5000 A**	**6300 A**
		35				35	
		80				100	
		50				50	
		34				34	
		80				73	
		50				50	
		80 [2]				80 [2]	
		50				50	
		–				–	
		–				–	
		–				–	
		–				–	
		10000				–	
		20000				–	
7500	7500	4000	2000	2000		–	
		20000				–	
		10000				–	
		20000				–	
7500	7500	4000	2000	2000		–	
		20000				–	
		10000				5000	
		20000				10000	
7500	7500	4000	2000	2000		1000	
		1000				1000	
		500				500	
		20000				10000	
		10000				7500	
		20000				15000	
7500	7500	4000	2000	2000		2000	
20000	20000	20000	20000	20000		15000	
5000	5000	5000	–	–		5000	
10000	10000	10000	–	–		10000	
5000	5000	4000	–	–		1000	
10000	10000	10000	–	–		10000	
		45 [4]				–	
		60 [4]				–	
		45				60 [5]	
		60				60 [5]	
	60		–			60	
	60		–			60	
		45				60	
		60				60	
		20				20	
		20				20	

[4] Breaking capacity N not available in size 2
[5] Breaking capacity M not available in size 3

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3WA1 circuit breakers and non-automatic circuit breakers 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									
Minimum main conductor cross-sections (horizontal, front and flange connection)									
Copper bars, Cu, bare	Unit × mm × mm		1 × 40 × 10	1 × 50 × 10	1 × 60 × 10	2 × 40 × 10	2 × 50 × 10	3 × 50 × 10	4 × 50 × 10
Copper bars, Cu, painted black	Unit × mm × mm		1 × 40 × 10	1 × 50 × 10	1 × 60 × 10	2 × 40 × 10	2 × 50 × 10	3 × 50 × 10	4 × 50 × 10
Minimum main conductor cross-sections (vertical connection)									
Copper bars, Cu, bare	Unit × mm × mm		1 × 40 × 10	1 × 50 × 10	1 × 60 × 10	2 × 40 × 10	2 × 50 × 10	3 × 50 × 10	4 × 100 × 5 2 × 100 × 10
Copper bars, Cu, painted black	Unit × mm × mm		1 × 40 × 10	1 × 50 × 10	1 × 60 × 10	2 × 40 × 10	2 × 50 × 10	3 × 50 × 10	4 × 100 × 5 2 × 100 × 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 mm² (AWG 20 ... 14)						
	With end sleeve acc. to DIN 46228 Part 1		2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)						
	With end sleeve acc. to DIN 46228 Part 4		2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)						
	With twin end sleeve		2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)						
	Stripped length		10 ... 11 mm (0.39 ... 0.43 inch)						
Optional connection with screw connection	Without end sleeve		2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)						
	With end sleeve acc. to DIN 46228 Part 1		2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)						
	With end sleeve acc. to DIN 46228 Part 4		1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)						
	With twin end sleeve		1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)						
	Stripped length		7 ... 8 mm (0.28 ... 0.31 inch)						
Position signaling switch modul									
Spring-loaded terminals for standard signaling contacts	Without end sleeve		0.2 ... 2.5 mm² (AWG 28 ... 12)						
	With end sleeve acc. to DIN 46228 Part 4		0.25 ... 1.5 mm² (AWG 20 ... 16)						
	Stripped length		5 ... 6 mm (0.2 ... 0.24 inch)						
Push-in connection for standard signaling contacts	Solid		0.5 ... 2.5 mm² (AWG 20 ... 12)						
	With end sleeve		0.5 ... 1.5 mm² (AWG 20 ... 16)						
	Stripped length		10 ... 12 mm (0.39 ... 0.47 inch)						
Push-in connection for COM signaling contacts	Solid		0.5 ... 2.5 mm² (AWG 20 ... 12)						
	With end sleeve		0.5 ... 1.5 mm² (AWG 20 ... 16)						
	Stripped length		10 ... 12 mm (0.39 ... 0.47 inch)						
Weights [1]									
3-pole	Fixed-mounted circuit breaker	kg	38.5	38.5	38.5	42.5	42.5	43.5	43.5
	Withdrawable circuit breaker without guide frame	kg	39	39	39	40	40	41	41
	Guide frames	kg	26	26	26	27	27	29	29
4-pole	Fixed-mounted circuit breaker	kg	47	47	47	52	52	53	53
	Withdrawable circuit breaker without guide frame	kg	45	45	45	46	46	47	47
	Guide frames	kg	30	30	30	32	32	34	34

[1] Weights refer to:
- Breakers with the lowest breaking capacity in each case (size 1: breaking capacity N, size 2: breaking capacity S, size 3: breaking capacity H)
- Breakers with ETU600 (LSI)
- Fixed-mounted circuit breakers/guide frames with vertical connections
- Guide frame with position signaling switch
- Without any other accessories
- Size 2, 3600 A with flange connections

[2] Only available as a flange connection

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3WA12					3WA13		
							
2000 A	**2500 A**	**3200 A**	**3600 A** [2]	**4000 A**	**4000 A**	**5000 A**	**6300 A**
3 × 100 × 5 (3 × 50 × 10) 2 × 80 × 10	2 × 100 × 10	3 × 100 × 10	5 × 100 × 10	5 × 100 × 10	4 × 100 × 10	6 × 100 × 10	–
3 × 100 × 5 (3 × 50 × 10) 2 × 80 × 10	2 × 100 × 10	3 × 100 × 10	5 × 100 × 10	5 × 100 × 10	4 × 100 × 10	6 × 100 × 10	–
3 × 100 × 5 (3 × 50 × 10) 2 × 80 × 10	2 × 100 × 10	3 × 100 × 10	–	4 × 120 × 10	4 × 100 × 10	6 × 100 × 10	6 × 120 × 10
3 × 100 × 5 (3 × 50 × 10) 2 × 80 × 10	2 × 100 × 10	3 × 100 × 10	–	4 × 120 × 10	4 × 100 × 10	6 × 100 × 10	6 × 120 × 10
2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)					2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)					2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)					2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)					2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
10 ... 11 mm (0.39 ... 0.43 inch)					10 ... 11 mm (0.39 ... 0.43 inch)		
2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)					2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)		
2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)					2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)		
1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)					1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)					1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
7 ... 8 mm (0.28 ... 0.31 inch)					7 ... 8 mm (0.28 ... 0.31 inch)		
0.2 ... 2.5 mm² (AWG 28 ... 12)					0.2 ... 2.5 mm² (AWG 28 ... 12)		
0.25 ... 1.5 mm² (AWG 20 ... 16)					0.25 ... 1.5 mm² (AWG 20 ... 16)		
5 ... 6 mm (0.2 ... 0.24 inch)					5 ... 6 mm (0.2 ... 0.24 inch)		
0.5 ... 2.5 mm² (AWG 20 ... 12)					0.5 ... 2.5 mm² (AWG 20 ... 12)		
0.5 ... 1.5 mm² (AWG 20 ... 16)					0.5 ... 1.5 mm² (AWG 20 ... 16)		
10 ... 12 mm (0.39 ... 0.47 inch)					10 ... 12 mm (0.39 ... 0.47 inch)		
0.5 ... 2.5 mm² (AWG 20 ... 12)					0.5 ... 2.5 mm² (AWG 20 ... 12)		
0.5 ... 1.5 mm² (AWG 20 ... 16)					0.5 ... 1.5 mm² (AWG 20 ... 16)		
10 ... 12 mm (0.39 ... 0.47 inch)					10 ... 12 mm (0.39 ... 0.47 inch)		
55	57	69	–	77	113	115	115
52	54	59	59	59	91	92	92
33.5	35.5	36.5	27.5	40	85.5	87	87
68.5	71.5	86.5	–	97.5	147.5	149.5	149.5
63.5	66	73	73	73	115.5	116.5	116.5
40	42.5	51.5	36	53	103.5	105.5	105.5

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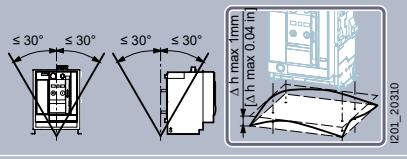
3WA1 non-automatic circuit breakers for DC

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	Breaking capacity D | E	V DC	600 | 1000 (3-pole); 1500 (4-pole)		
Rated insulation voltage U_i	Breaking capacity D | E	V DC	600 | 1000 (3-pole); 1500 (4-pole)		
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 3-phase symmetrical load, complete device (3/4p)	Withdrawable versions 3/4-pole	W	170 | 220	320 | 420	750 | 1000
	Fixed-mounted 3/4-pole	W	130 | 190	240 | 360	500 | 660
Switching times					
Make time (mechanical)		ms	35	35	35
Electrical make time (through closing coil 100% OP)		ms	80	80	80
Electrical make time (through closing coil 5% OP)		ms	50	50	50
Opening time (mechanical)		ms	34	34	34
Electrical opening time (through shunt trip 100% OP)		ms	80	80	80
Electrical opening time (through shunt trip 5% OP)		ms	50	50	50
Electrical opening time (through undervoltage release)		ms	80 [1)]	80 [1)]	80 [1)]
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

[1)] Opening time with short-time delay of the undervoltage release can be set up to 200 ms

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3WA12

Rated current I_n			1000 A	2000 A	4000 A
Service life/endurance					
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
Breaking capacity E, 4-pole					
Electrical	Without maintenance 1500 V [2]	Operating cycles	1000	1000	1000
	With maintenance [1]	Operating cycles	20000	20000	20000
Switching frequency (electrical operating cycles)					
Breaking capacity D					
	3- and 4-pole	1/h	45/60	45/60	45/60
Breaking capacity E					
	3- and 4-pole [3]	1/h	20/20	20/20	20/20
Connection					
Minimum cross-sections of main conductor bars (infeed and load connections)					
Copper bars, bare or painted black		Unit × mm × mm	1 × 60 × 10	3 × 100 × 5; 2 × 80 × 10	4 × 100 × 10
Minimum cross-sections of main conductor bars (pole straps) [4]					
Copper bars, bare or painted black		Unit × mm × mm	1 × 100 × 10; (2 × 100 × 5)	2 × 100 × 5; (2 × 100 × 10)	3 × 100 × 10; vertical
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)					
Standard connection = push-in	Without end sleeve		2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
	With end sleeve acc. to DIN 46228 Part 1		2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
	With end sleeve acc. to DIN 46228 Part 4		2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
	With twin end sleeve		2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
	Stripped length		10 ... 11 mm (0.39 ... 0.43 inch)		
Optional connection with screw connection	Without end sleeve		2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/ 1 × 0.5 ... 2.5 mm² (AWG 20 ....14)		
	With end sleeve acc. to DIN 46228 Part 1		2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/ 1 × 0.5 ... 2.5 mm² (AWG 20 ....14)		
	With end sleeve acc. to DIN 46228 Part 4		1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
	With twin end sleeve		1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
	Stripped length		7 ... 8 mm (0.28 ... 0.31 inch)		
Position signaling switch module					
Spring-loaded terminals for standard signaling contacts	Without end sleeve		0.2 ... 2.5 mm² (AWG 28 ... 12)		
	With end sleeve acc. to DIN 46228 Part 4		0.25 ... 1.5 mm² (AWG 20 ... 16)		
	Stripped length		5 ... 6 mm (0.2 ... 0.24 inch)		
Push-in connection for standard signaling contacts	Solid		0.5 ... 2.5 mm² (AWG 20 ... 12)		
	With end sleeve		0.5 ... 1.5 mm² (AWG 20 ... 16)		
	Stripped length		10 ... 12 mm (0.39 ... 0.47 inch)		
Push-in connection for COM signaling contacts	Solid		0.5 ... 2.5 mm² (AWG 20 ... 12)		
	With end sleeve		0.5 ... 1.5 mm² (AWG 20 ... 16)		
	Stripped length		10 ... 12 mm (0.39 ... 0.47 inch)		
Weights [3]					
3-pole	Fixed-mounted circuit breaker	kg	55	55	68
	Withdrawable circuit breaker without guide frame	kg	52	52	59
	Guide frames	kg	34	34	50
4-pole	Fixed-mounted circuit breaker	kg	68.5	68.5	86.5
	Withdrawable circuit breaker without guide frame	kg	63.5	63.5	74
	Guide frames	kg	40.5	40.5	61.5

[1] Maintenance means: Replacing main contacts and arc chutes (see operating instructions: www.siemens.com/lowvoltage/manuals).
[2] 1500 V DC applications only possible with 4-pole circuit breakers and breaking capacity E.
[3] Weights refer to:
- Breakers with breaking capacity E
- Fixed-mounted circuit breakers/guide frames with vertical connections
- Guide frame with position signaling switch
- Without any other accessories

[4] For more information on the DC pole straps, see the Equipment Manual for 3WA1

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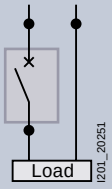
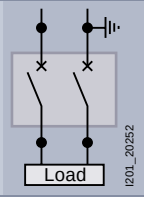
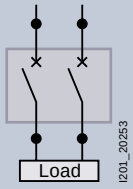
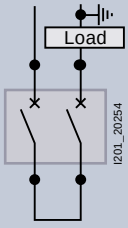
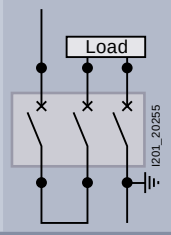
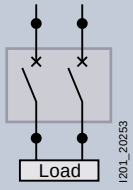
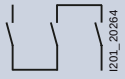
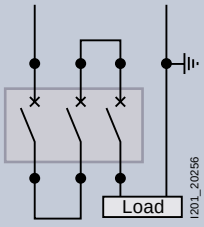
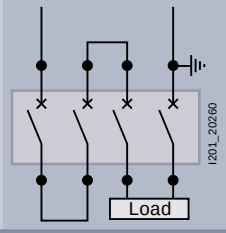
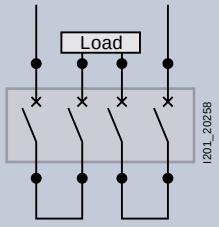
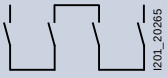
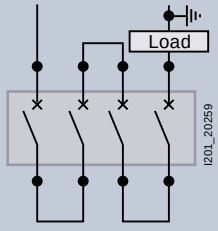
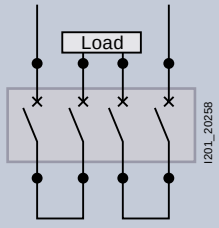
3WA1 non-automatic circuit breakers for DC

Application examples

The connection to the non-automatic 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 connection bars, for thermal reasons the continuous load on the non-automatic 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 connection bars, the non-automatic circuit breaker can be used at full operational current load.

Minimum required contact gaps at rated voltage	DC 1-pole disconnection Grounded system	DC 2-pole (all-pole) disconnection Grounded system	DC 2-pole (all-pole) disconnection Non-grounded system
Rated operational voltage up to 300 V			
			
Rated operational voltage up to 600 V			
			
Rated operational voltage up to 1000 V			
			
Rated operational voltage up to 1500 V			
			

Note:
DC 2-pole (all-pole) disconnection; grounded system
The grounded conductor must always be assigned to the individual switching pole of the non-automatic air circuit breaker, 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. The jumpers between the switching poles must be short-circuit and ground-fault proof.

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Electronic trip unit

Differentiation

	ETU300 electronic trip unit	ETU600 electronic trip unit
Function		
Protective function LSI	■	■
Protective function LSIG	■	■
Protective function LSIG Hi-Z	–	■
Neutral conductor protection (N)	■	■
Metering function	–	■
Enhanced Protective functions	–	■
CubicleBUS[2]	–	■
Display	–	■
DAS+ input/output	■	■
LED display of reason for tripping	■	■
Bluetooth and USB	–	■
FW Updates	–	■
Internal self-test with and without tripping	■	■
Extended test option (tripping characteristic)	–	■
Activation of the ETU via powerbank	–	■
Activation of the ETU for self-test via TD400	■	–

Note:
By replacing the electronic trip unit, it is possible to upgrade from ETU300 to ETU600.

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ETU300 electronic trip unit

Protective functions

ETU300 LSI, ETU300 LSIG

Protective function	Setting range and invariable parameters	Values
L: Overload protection LT		
Tripping	Switched on	
Current setting I_r	0.4 ... 1.0 × I_n	0.4/0.5/0.6/0.7/0.75/0.8/0.85/0.9/0.95/1.0 × I_n
Tripping time t_r at 6 × I_r	0.75 ... 25 s	0.75/1/2/5/8/10/14/17/21/25 s
Characteristic LT curve	I^2t	
Thermal memory	Switched on	
Cooling time constant	18 × t_r	
Phase failure detection	Switched on	
L: Overload protection LT, neutral conductor		
Tripping	Switched on	
Current setting I_N	1.0 × I_n	
S: Short-time-delayed short-circuit protection ST		
Tripping	Can be switched on/off	
Current setting I_{sd}	1.5 ... 10 × I_n max. 0.8 × I_{cw} [1]	OFF/1.5/2/2.5/3/4/5/6/8/10 × I_r max. 0.8 × I_{cw} [1]
Tripping time t_{sd}	0.08 ... 0.4 s	0.08/0.15/0.22/0.3/0.4 s
Characteristic ST curve	I^0t and I^2t	
Reference point $I_{ST\ ref}$	8 × I_r	
I: Instantaneous short-circuit protection INST		
Tripping	Switched on	
Current setting I_i	1.5 ... 15 × I_n max. 0.8 × I_{cs} [1]	1.5/2/3/4/5/6/8/10/12/15 × I_n max. 0.8 × I_{cs} [1]
Maintenance mode DAS+		
Current setting $I_{i\ DAS+}$	1.5 × I_n	Activation via ETU input

ETU300 LSIG

Protective function	Setting range	
G: Ground-fault protection GF		
Tripping	Switched on	
Method of ground fault detection	Residual	Detection of ground-fault current via summation current formation in all phases and the N conductor
Characteristic GF curve		I^0t
Current setting I_g		0.2 × I_n (min. 100 A, max. 1200 A)
Tripping time t_g	0.2 s	

[1] The setting value is limited as a function of the breaking capacity at rated operational voltage U_e.

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ETU600 electronic trip unit

Protective functions

ETU600 LSI, ETU600 LSIG, ETU600 LSIG Hi-Z			Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	**Variable setting range**	**Setting values with rotary switch**					
L: Overload protection LT							
Tripping	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 × I_r	At 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_{rN}	3-pole: 0.2 ... 2.0 × I_n		■	■	■	■	■
	4-pole: 0.2 × I_n ... $I_{n\ max}$		■	■	■	■	■
Current setting $I_{rN\ PAL}$	0.7 ... 1.0 × I_N		■	■	■	■	■
S: Short-time-delayed short-circuit protection ST							
Tripping	Can be switched on/off		■	■	■	■	■
Current setting I_{sd}	0.6 × I_n ... 0.8 × I_{cw} max. 0.8 × I_{cw} [1]	1.5/2/2.5/3/4/5/6/8/10 × I_r max. 0.8 × I_{cw} [1]	■	■	■	■	■
Tripping time t_{sd}	0.02 ... 0.4 s	At Fix: 0.08/0.15/0.22/0.3/0.4 s At 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 detection	Can be switched on/off		■	■	■	■	■
S: Directional short-time-delayed short-circuit protection dST							
Tripping	Can be switched on/off		□	□	□	■	■
Direction setting	Forward: ↓ or ↑		□	□	□	■	■
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		□	□	□	■	■
Characteristic dST-curve FW	I^0t and I^2t		□	□	□	■	■
Characteristic dST-curve REV	I^0t and I^2t		□	□	□	■	■
Reference point $I_{dST\ ref}$ FW	6-12 × I_r		□	□	□	■	■
Reference point $I_{dST\ ref}$ REV	6-12 × I_r		□	□	□	■	■
Intermittent detection FW	Can be switched on/off		□	□	□	■	■
Intermittent detection REV	Can be switched on/off		□	□	□	■	■
I: Instantaneous short-circuit protection INST							
Tripping	Can be switched on/off [2]		■	■	■	■	■
Current setting I_i	1.5 × I_n ... 0.8 × I_{cs} max. 0.8 × I_{cs} [1]	1.5/2/3/4/6/8/10/12/15 × I_n max. 0.8 × I_{cs} [1]	■	■	■	■	■

[1] The setting value is limited as a function of the breaking capacity at the set rated voltage.
[2] Cannot be switched off if rated short-time withstand current I_{cw} is less than rated short-circuit breaking capacity I_{cs}

■ Available, feature of the application package
□ Can be retrofitted

System overview, page 1/28

ETU600 LSI, ETU600 LSIG, ETU600 LSIG Hi-Z			Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	**Variable setting range**	**Setting values with rotary switch**					
I: Making-current release MCR							
Tripping	Can be switched on/off		□	□	□	■	■
Current setting I_{MCR}	1.5 ... 15 × I_n		□	□	□	■	■
Monitoring time t_{MCR}	0.04 ... 0.5 × s		□	□	□	■	■
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							
Phase unbalance current and phase unbalance voltage			□	□	□	■	■
Undervoltage and overvoltage			□	□	□	■	■
Active power import and active power export			□	□	□	■	■
Underfrequency and overfrequency			□	□	□	■	■
Total harmonic distortion for current and voltage			□	□	□	■	■
Phase sequence detection			□	□	□	■	■
Network and system protection			–	–	□	□	□
Decoupling protection			–	–	□	□	□
Maintenance mode DAS+							
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		■	■	■	■	■
Options							
Parameter set changeover	Switchable between parameter set A and B		□	□	□	■	■
Limit values	Undershooting, overshooting		■	■	■	■	■
Zone-selective interlocking ZSI	Requires ZSI200 module		□	□	□	□	□
Waveform memory			□	□	□	□	■
Condition monitoring	Health indicator and remaining life time		–	□	■	■	■

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

System overview, page 1/28

ETU600 electronic trip unit

Protective functions

ETU600 LSI			Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	**Variable setting range**						
G: Ground fault GF alarm							
Alarm	Can be switched on/off		□	□	□	■	■
Current setting $I_{g\ alarm}$	Detection method Residual	Sizes 1 and 2: 100 ... 5000 A Size 3: 400 ... 5000 A	□	□	□	■	■
Alarm time $t_{g\ alarm}$		0 ... 0.5 s	□	□	□	■	■

■ Available, feature of the application package
□ Can be retrofitted

ETU600 LSIG with LSIG GFx option plug (GF extended)			Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	**Variable 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: Metering of the ground-fault current with an external current transformer	■	■	■	■	■
Characteristic GF curve		For Fix (I^0t)/I^2t/I^4t/I^6t	■	■	■	■	■
Current setting I_g	Detection method Residual	Sizes 1 and 2: 100 ... 2000 A Size 3: 300 ... 2000 A	■	■	■	■	■
	Detection method Direct	15 ... 2000 A	■	■	■	■	■
Tripping time t_g	For Fix (I^0t)	0 ... 5 s	■	■	■	■	■
	For I^xt at 3 × I_g	0 ... 30 s	■	■	■	■	■
	$t_{g\ def}$ at I^xt	0.05 ... 0.5 s	■	■	■	■	■
Intermittent detection	Can be switched on/off		■	■	■	■	■
G: Ground fault GF alarm							
Alarm	Can be switched on/off		■	■	■	■	■
Current setting $I_{g\ alarm}$	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

System overview, page 1/28

ETU600 LSIG Hi-Z with LSIG GFx option plug (GF extended)			Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	**Variable 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: Metering of the ground-fault current with an external current transformer combination	■	■	■	■	■
Characteristic GF curve		For Fix (I^0t)/I^2t/I^4t/I^6t	■	■	■	■	■
Current setting I_g	Protection zone UREF	Size 2: 100 ... 2000 A and Size 3: 300 ... 2000 A	■	■	■	■	■
	Protection zone REF	15 ... 2000 A	■	■	■	■	■
Tripping time t_g	For Fix (I^0t)	0 ... 5 s	■	■	■	■	■
	For I^xt 3 × I_g in protection zone UREF	0 ... 30 s	■	■	■	■	■
	$t_{g\ def}$ at I^xt	0.05 ... 0.5 s	■	■	■	■	■
Intermittent detection	Can be switched on/off		■	■	■	■	■
G: Ground fault GF alarm							
Alarm	Can be switched on/off		■	■	■	■	■
Current setting $I_{g\ alarm}$	Protection zone UREF	Size 2: 100 ... 5000 A and Size 3: 400 ... 5000 A	■	■	■	■	■
Alarm time $t_{g\ alarm}$		0 ... 0.5 s	■	■	■	■	■

■ Available, feature of the application package

System overview, page 1/28

ETU600 electronic trip unit

Operation, interfaces and metering function

ETU600		Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring	Non-automatic air circuit breakers
Operation and interfaces							
Rotary switch		■	■	■	■	■	–
Display and operating keys		■	■	■	■	■	–
SENTRON Powerconfig configuration software		■	■	■	■	■	–
Fieldbus communication		■	■	■	■	■	–
Color display		■	■	■	■	■	–
Bluetooth [1] and USB interface		■	■	■	■	■	–
Communication							
Prepared for connection of a communications module (ready4COM feature)	Status messages of the circuit breaker	□	■	■	■	■	□
	Status messages of the ETU600 electronic trip unit	□	■	■	■	■	–
	Remote operation, requires a communications module, closing coil, shunt trip	□	■	■	■	■	□
Communications module		□	□	□	□	□	□
Digital input and output on the ETU600 electronic trip unit							
Parameterizable input	For activating Maintenance mode DAS+ or can be used for parameter set changeover	■	■	■	■	■	–
Parameterizable output	Usable as "life contact", early trip contact, and for displaying "Parameter set B active" or "Maintenance mode DAS+ active"	■	■	■	■	■	–

[1] A country-specific radio license is required to operate the Bluetooth interface. Before activating the Bluetooth function, ensure that the license is available: www.siemens.com/lowvoltage/certificates

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

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ETU600		Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Metering function						
Integrated voltage tap at top/bottom		–	–	■	■	■
Voltage tap module VTM		–	–	■	■	■
Type acc. to IEC 61557-12	PMF-I	–	–	■	■	■
	PMF-II	–	–	–	■	■
	PMF-III	–	–	–	–	■
Metering values						
Temperature in/at circuit breaker		–	■	■	■	■
Accuracy class to IEC 61557-12	**Accuracy class**					
Phase current I_{L1}, I_{L2}, I_{L3}	1	–	–	■	■	■
Neutral conductor current I_N [1]	1	–	–	■	■	■
Voltage U_{LI}	0.5	–	–	■	■	■
Voltage U_{LN}	0.5	–	–	■	■	■
Active energy E_a	1	–	–	■	■	■
Reactive energy E_r	3	–	–	□	■	■
Apparent energy E_{ap}	1	–	–	□	■	■
Active power P	1	–	–	□	■	■
Reactive power Q	3	–	–	□	■	■
Apparent power S	1	–	–	□	■	■
Power factor PF	1	–	–	□	■	■
Frequency f	0.5	–	–	□	■	■
Accuracy class to manufacturer's specifications	**Accuracy class**					
Phase current I_{L1}, I_{L2}, I_{L3}	1	■	■	–	–	–
Neutral conductor current I_N [1]	1	■	■	–	–	–
Neutral conductor current I_N [2]	2	■	■	■	■	■
Ground-fault current I_g with ETU600 LSI	2	–	–	□	■	■
Ground-fault current I_g with ETU600 LSIG, ETU600 LSIG Hi-Z [3]	2	■	■	■	■	■
cos φ	6	–	–	□	■	■
Current unbalance I_{nba}	2.5	–	–	□	■	■
Voltage unbalance U_{nba}	1.5	–	–	□	■	■
Total harmonic distortion *THD-I* [4]	2	–	–	□	□	■
Total harmonic distortion *THD-U* [4]	2	–	–	□	□	■
Harmonic *I, U* [4]	2	–	–	□	□	■

[1] For 4-pole with internal current sensor for the N conductor
[2] For 3-pole with external current sensor for the N conductor
[3] Excluding external transformers/load
[4] For 2nd to 15th harmonic ±2% and for 16th to 31st harmonic ±5%

– Not available
■ Available, feature of the application package
□ Retrofittable using "Metering function extension" function packages

Licenses for activating the test function in SENTRON Powerconfig software

License (ALM)	Test scope	Test values can be set	Documentation	Article No.
Basic (unlimited)	LSIG	No	No	Free available
Standard (365 days)	LSIG	Yes	Yes	7KN2720-0CE00-1YC1
Extended (365 days)	• LSIG • dST • Phase unbalance current • Phase unbalance voltage • Total harmonic distortion (THD) for current and voltage (from Powerconfig V3.28) • Undervoltage, overvoltage • Forward power • Reverse power • Underfrequency • Overfrequency • Phase sequence detection	Yes	Yes	7KN2720-0CE00-2YC1

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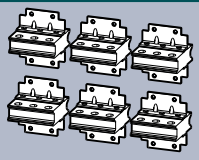
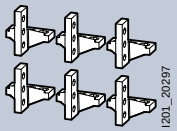
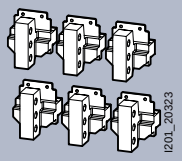
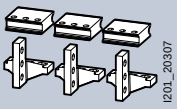
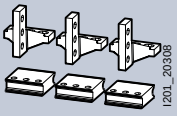
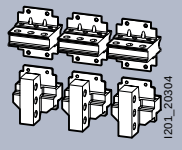
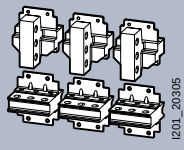
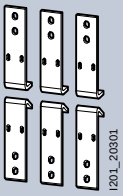
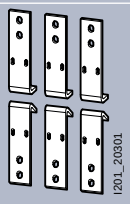
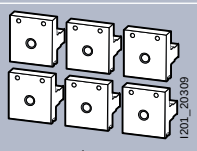
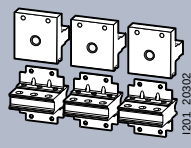
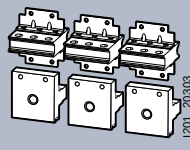
Connection

Main circuit connection

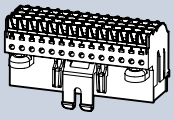
3WA11 – 3WA13

Fixed-mounted		Withdrawable	
 Rear horizontal		 Rear horizontal	
 Rear vertical		 Rear vertical	
 Horizontal on top, vertical at the bottom	 Vertical on top, horizontal at the bottom	 Horizontal on top, vertical at the bottom	 Vertical on top, horizontal at the bottom
 Front connection with double hole		 Front connection with double hole	
		 Flange	
		 Flange on top and horizontal at bottom	 Flange on bottom and horizontal at top

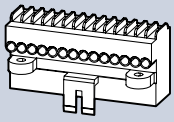
Secondary disconnect terminal

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)

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
  - Circuit breakers with ETU600 LSI or LSIG with 4 blocks
  - Circuit breakers with ETU600 LSIG-HiZ with 5 blocks
  - Circuit breakers with ETU300 LSI/LSIG with 4 blocks

For dimension drawings, see Equipment Manual – 3WA1 air circuit breakers **www.siemens.com/lowvoltage/manuals (109763061)**

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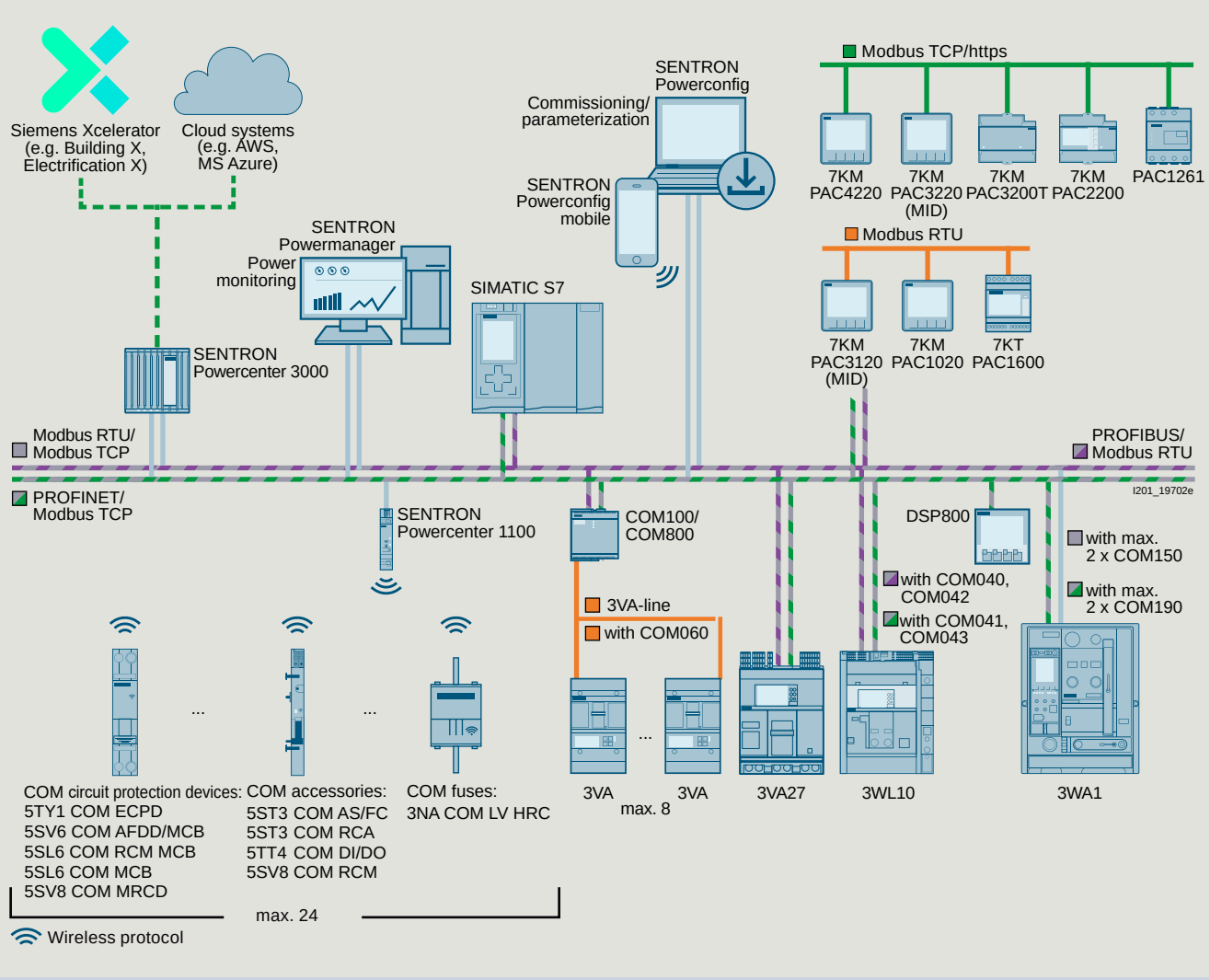
Communication



The 3WA can be equipped with up to two PROFINET IO/Modbus TCP COM190 communications modules or Modbus RTU COM150 and up to five IOM230 digital input/output modules.

For the optional communications interface with the COM190 or COM150 communications module, a circuit breaker with the ready4COM feature must be selected as the circuit breaker/non-automatic air circuit breaker. The first COM190 or COM150 communications module must be selected via a Z option. If you want to use a further COM190 or COM150 communications module, this must be ordered separately as an accessory. Both COM190 or COM150 communications 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 – 3WA1 air circuit breakers
www.siemens.com/lowvoltage/manuals (109763061)

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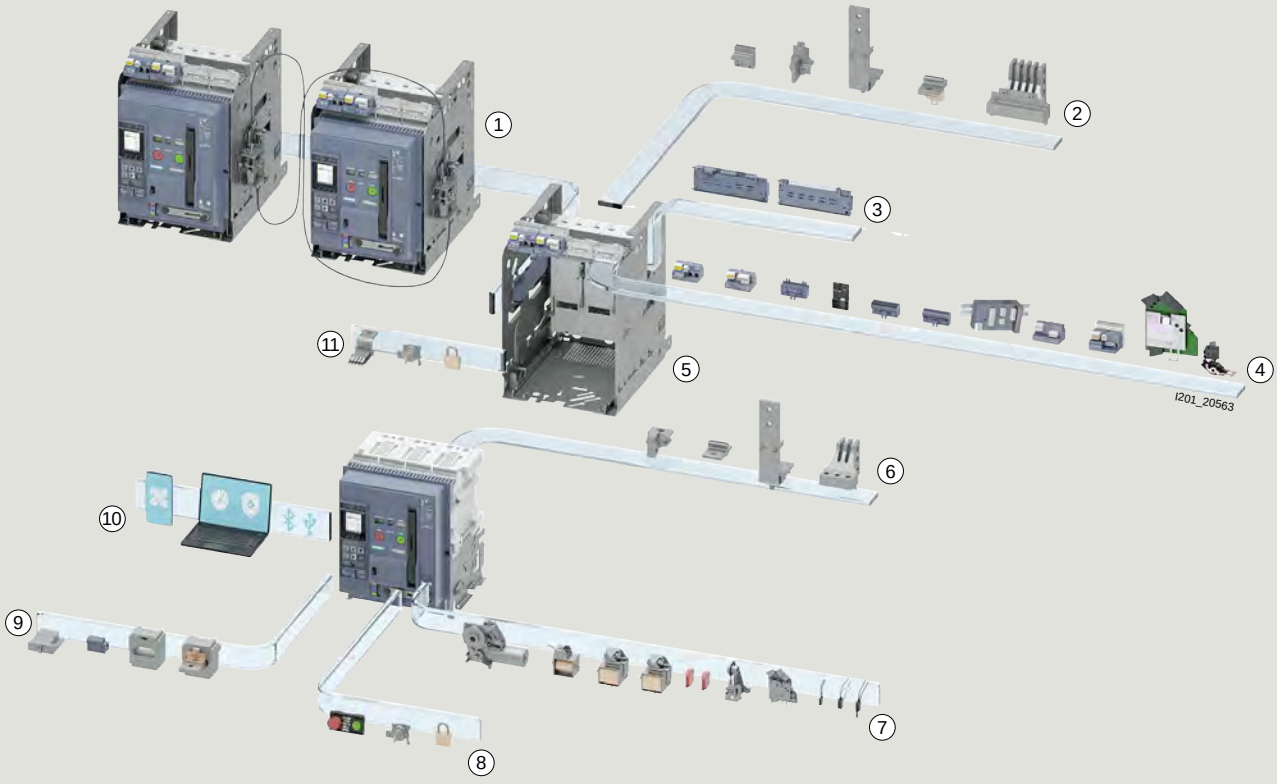
3WA11 – 3WA13 system overview

Circuit breakers and non-automatic circuit breakers 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



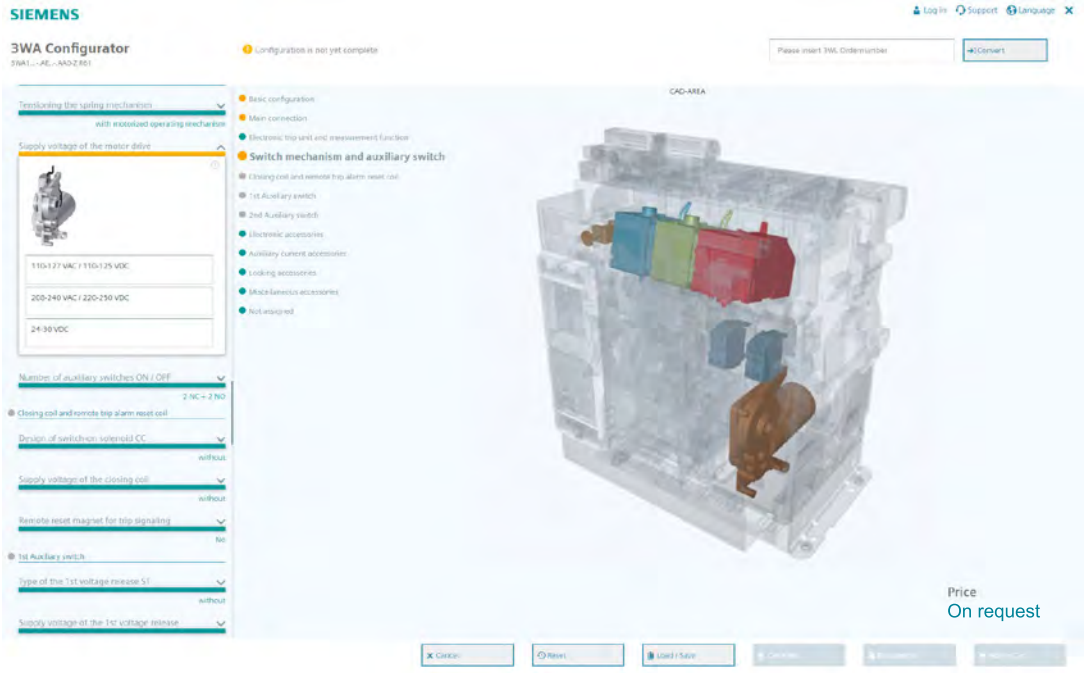
1. Interlocking solutions with Bowden cable
2. Main connection variants for guide frame
3. Position signaling switch (PSS) for the guide frame
4. Interfaces/COM-modules/Aux. terminals
5. Guide frame with shutter
6. Main connection variants for fixed-mounted version
7. Internal accessories: aux. release, spring charging motor, aux. contacts
8. Locking solutions for fixed-mounted version
9. Electronic trip units (ETU)
10. Digital function packages can be activated for the ETU
11. Interlocking solutions for withdrawable version

Online configurator highlights

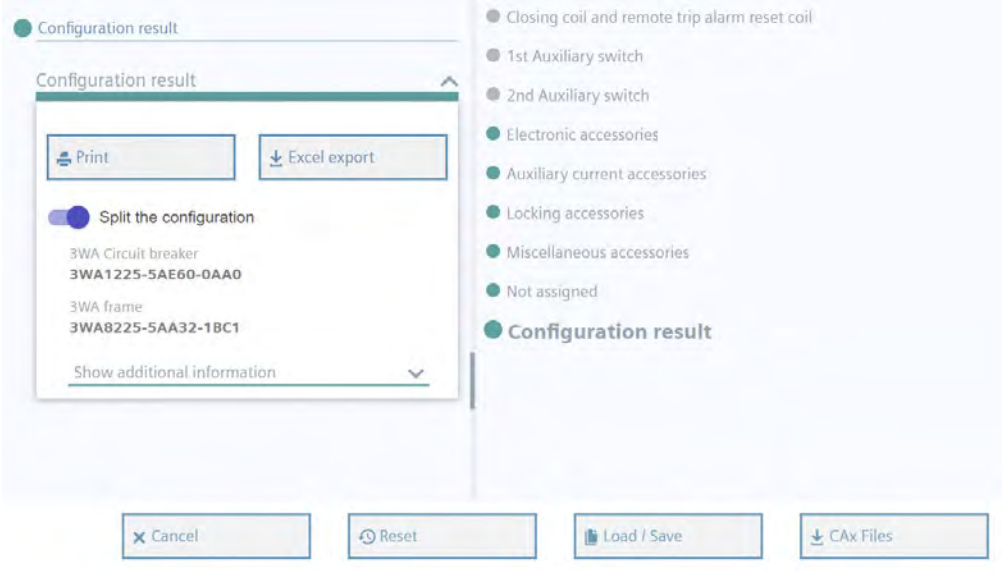
www.siemens.com/lowvoltage/3wa-configurator

Graphical display

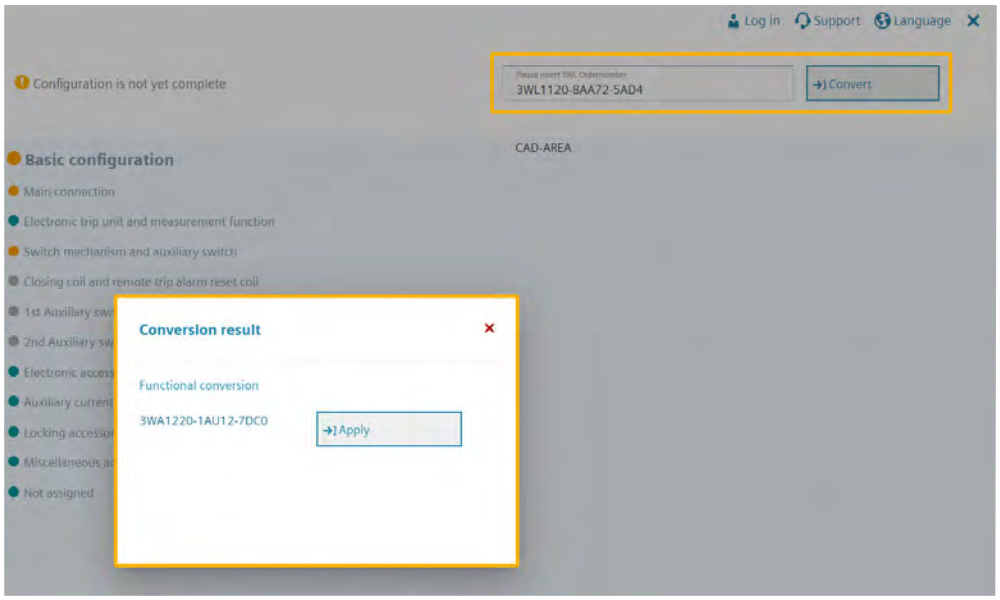
- Integration of the legend as a color system
  - Orange: still to be selected
  - Petrol: already selected
  - Gray: preselected (default)
- Graphical highlighting of the individual configuration steps: "What you see is what you get"



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

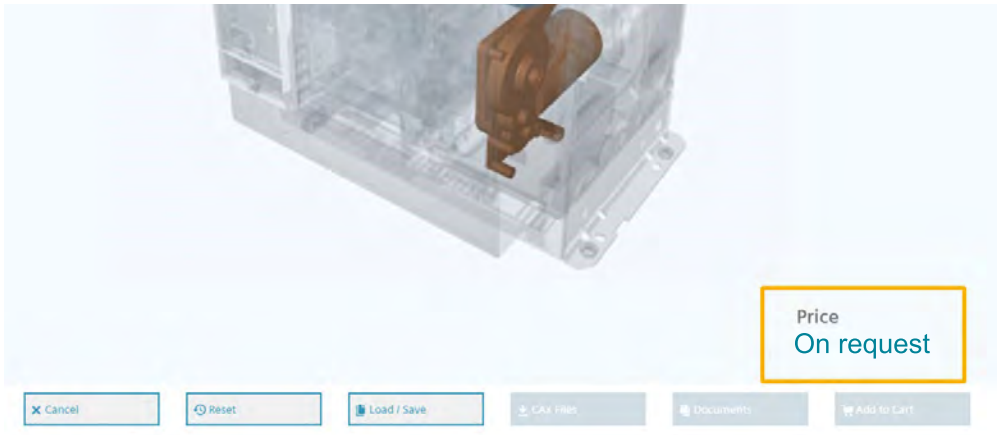


Direct conversion of a 3WL article number to a 3WA article number in the configurator



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

Dynamic customer price during configuration



1

Structure of the article numbers

Siemens EcoTech

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

Circuit breakers and non-automatic circuit breakers

		Position 5
Size (SZ)	1	1
	2	2
	3	3

		SZ 1	SZ 2	SZ 3	Position 6	Position 7
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
	3600 A	–	■ [1)]	–	3	6
	4000 A	–	■ [1)]	■	4	0
	5000 A	–	–	■	5	0
	6300 A	–	–	■	6	3

		SZ 1	SZ 2	SZ 3		Position 8
Short-circuit breaking capacity I_{cu} **at 500/690 V**	N	■	–	–	55/42 kA	2
	S	■	■	–	66/50 kA	3
	M	■	■	–	85/66 kA	4
	H	■ [2)]	–	–	100/66 kA	5
		–	■	■	100/85 kA	5
	C	–	■	–	130/100 kA	6
		–	–	■	3-pole: 150/150 kA 4-pole: 130/130 kA	6

				SZ 1	SZ 2	SZ 3	Position 9	Position 10
Non-automatic circuit breakers [2)]							A	A
Non-automatic circuit breakers, ready4COM feature [3)]							C	A
Application packages with protective and metering functions for circuit breakers	ETU300 electronic trip unit	Protective function	LSI				A	B
			LSIG				A	C
	ETU600 electronic trip unit	Current metering					A	
		Current metering, ready4COM feature [3)]					C	
	ETU600 electronic trip unit with metering function, internal voltage tap in the circuit breaker, power supply of the ETU600 via the VTM680 voltage tap module and ready4COM	PMF-I Energy efficiency	Voltage tap on top				L	
			Voltage tap on bottom				E	
		PMF-II Basic Power Monitoring	Voltage tap on top				M	
			Voltage tap on bottom				F	
		PMF-III Advanced Power Monitoring	Voltage tap on top				N	
			Voltage tap on bottom				G	
	Protective functions		LSI	■	■	■		E
			LSIG	■	■	■		F
			LSIG Hi-Z	–	■	■		G

				Position 11
Number of poles	Fixed-mounted		3-pole	0
			4-pole, Neutral left	1
			4-pole, Neutral right	2
	Withdrawable	Without position signaling switch	3-pole	3
			4-pole, Neutral left	4
			4-pole, Neutral right	5
		With position signaling switch [4)]	3-pole	6
			4-pole, Neutral left	7
			4-pole, Neutral right	8

1) Not available for breaking capacity C
2) Available as a circuit breaker, not available as a non-automatic circuit breaker
3) If ready4COM circuit breakers are ordered with closing coils/shunt trips, these are installed in the factory as communication-capable versions (CC-COM/ST-COM). Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71. The circuit breakers are then supplied with standard CC/ST.
4) Position signaling switch for circuit breakers/non-automatic circuit breakers without ready4COM: 3 × connected position, 2 × test position, 1 × disconnected position; Position signaling switch for circuit breakers/non-automatic circuit breakers with ready4COM: 1 × connected position, 1 × test position, 1 × disconnected position + message through communications interface for disconnected position and for "not available"

Quick selection guide, pages 1/4 and 1/8

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

Connection

			Fixed-mounted					Withdrawable								
			Vertical	Horizontal	Front connection with double hole	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Without guide frame	Vertical	Horizontal	Front connection with double hole	Flange	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Flange on top/horizontal at the bottom	Horizontal on top/flange at the bottom
Size 1																
Short-circuit Breaking capacity	N, S, M	630 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		800 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		1000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		1250 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		1600 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2500 A	1	2	–	5	6	0	1	–	–	–	–	–	–	–
	H	630 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		800 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		1000 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		1250 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		1600 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		2000 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		2500 A	1	2	–	5	6	0	1	–	–	–	–	–	–	–
Size 2																
Short-circuit Breaking capacity	S, M, H	2000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2500 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		3200 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		3600 A	–	–	–	–	–	–	–	–	–	4	–	–	–	–
		4000 A	1 [1) 2)]	2 [2)]	–	5	6	0	1 [1)]	2 [2)]	–	–	5	6	–	–
	C	2000 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		2500 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
		3200 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
Size 3																
Short-circuit Breaking capacity	H	4000 A	1	2	3	5	6	0	1	2	3	4	5	6	–	–
		5000 A	1	2	–	5	6	0	1	2	–	–	5	6	–	–
		6300 A	1	–	–	–	–	0	1	–	–	–	–	–	–	–
	C	4000 A	1	2	–	5	6	0	1	2	–	4	5	6	–	–
		5000 A	1	2	–	5	6	0	1	2	–	–	5	6	–	–
		6300 A	1	–	–	–	–	0	1	–	–	–	–	–	–	–

[1)] The dimensions of the 4000 A vertical connections for the 3WA1 differ from those of 3WL1. Dimensionally compatible connections can be ordered with the additional Z option D01.

[2)] Also available for 4-pole circuit breakers with Z option D04: rear main connections (top and bottom) with same pole spacing of phases (only for N pole, left).

Quick selection guide, pages 1/4 and 1/8

Structure of the article numbers

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1

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

Operating mechanisms, auxiliary switches and auxiliary releases

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

Closing coil and remote trip alarm reset coil [1]	Without closing coil	Without remote trip alarm reset coil		A
	With closing coil (CC/CC-COM) [2] for uninterrupted 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
			208 ... 240 V AC/220 ... 250 V DC	J
	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
			208 ... 240 V AC/220 ... 250 V DC	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
			208 ... 240 V AC/220 ... 250 V DC	S

Note:
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.

2nd auxiliary release	Without 2nd auxiliary release		A
	With shunt trip (ST), uninterrupted 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) [3], 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] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.
[3] The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

Quick selection guide, pages 1/4 and 1/8

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/ST-COM) [1], uninterrupted 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**

[1] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.

Quick selection guide, pages 1/4 and 1/8

Structure of the article numbers

Siemens EcoTech

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers in a 690 V IT system and for 1000 V

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

Circuit breakers and non-automatic circuit breakers

		Position 5
Size (SZ)	1	1
	2	2
	3	3

		SZ 1	SZ 2	SZ 3	Position 6	Position 7
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
	3600 A	–	■	–	3	6
	4000 A	–	■	■	4	0
	5000 A	–	–	■	5	0
	6300 A	–	–	■	6	3

		SZ 1	SZ 2	SZ 3		Position 8
Short-circuit breaking capacity I_{cu} at 690 V/ 690 V IT network/ 1000 V	E	■	–	–	85/50/50 kA	8
		–	■	–	85/50/50 kA	8
		–	–	■	3-pole: 150/50/125 kA 4-pole: 130/50/125 kA	8

				Position 9	Position 10
Non-automatic circuit breakers				A	A
Non-automatic circuit breakers, ready4COM feature [1]				C	A
Application packages with protective and metering functions for circuit breakers	ETU300 electronic trip unit	Protective function	LSI	A	B
			LSIG	A	C
	ETU600 electronic trip unit	Current metering		A	
		Current metering, ready4COM feature [1]		C	
	ETU600 electronic trip unit with metering function, internal voltage tap in the circuit breaker, VTM640 voltage tap module and ready4COM	PMF-I Energy efficiency	Voltage tap on top	U	
			Voltage tap on bottom	Q	
		PMF-II Basic Power Monitoring	Voltage tap on top	V	
			Voltage tap on bottom	R	
		PMF-III Advanced Power Monitoring	Voltage tap on top	W	
			Voltage tap on bottom	S	

		SZ 1	SZ 2	SZ 3		Position 10
	Protective functions	■	■	■	LSI	E
		■	■	■	LSIG	F
		–	■	■	LSIG Hi-Z	G

				Position 11
Number of poles	Fixed-mounted		3-pole	0
			4-pole, Neutral left	1
			4-pole, Neutral right	2
	Withdrawable	Without position signaling switch	3-pole	3
			4-pole, Neutral left	4
			4-pole, Neutral right	5
		With position signaling switch [2]	3-pole	6
			4-pole, Neutral left	7
			4-pole, Neutral right	8

[1] If ready4COM circuit breakers are ordered with closing coils/shunt trips, these are installed in the factory as communication-capable versions (CC-COM/ST-COM). Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71. The circuit breakers are then supplied with standard CC/ST.

[2] Position signaling switch for circuit breakers/non-automatic circuit breakers without ready4COM: 3 × connected position, 2 × test position, 1 × disconnected position;
Position signaling switch for circuit breakers/non-automatic circuit breakers with ready4COM: 1 × connected position, 1 × test position, 1 × disconnected position + message through communications interface for disconnected position and for "not available"

Quick selection guide, pages 1/4 and 1/8

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

Connection

			Fixed-mounted					Withdrawable								
			Vertical	Horizontal	Front connection with double hole	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Without guide frame	Vertical	Horizontal	Front connection with double hole	Flange	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Flange on top/horizontal at the bottom	Horizontal on top/flange at the bottom
Size 1																
Short-circuit Breaking capacity	E	630 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		800 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		1000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		1250 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		1600 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2500 A	1	2	–	5	6	0	1	–	–	–	–	–	–	–
Size 2																
Short-circuit Breaking capacity	E	2000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2500 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		3200 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		3600 A	–	–	–	–	–	–	–	–	–	4	–	–	–	–
		4000 A	1 [1)]	2 [2)]	–	5	6	0	1 [1)]	2 [2)]	–	–	5	6	–	–
Size 3																
Short-circuit Breaking capacity	E	4000 A	1	2	–	5	6	0	1	2	–	4	5	6	–	–
		5000 A	1	2	–	5	6	0	1	2	–	–	5	6	–	–
		6300 A	1	–	–	–	–	0	1	–	–	–	–	–	–	–

[1)] The dimensions of the 4000 A vertical connections for the 3WA1 differ from those of 3WL1. Dimensionally compatible connections can be ordered with the additional Z option D01.

[2)] Also available for 4-pole circuit breakers with Z option D04: rear main connections (top and bottom) with same pole spacing of phases (only for N pole, left).

Quick selection guide, pages 1/4 and 1/8

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1

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

Operating mechanisms, auxiliary switches and auxiliary releases

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

Closing coil and remote trip alarm reset coil [1]	Without closing coil	Without remote trip alarm reset coil		A
	With closing coil (CC/CC-COM) [2] for uninterrupted 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
			208 … 240 V AC/220 … 250 V DC	J
	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
			208 … 240 V AC/220 … 250 V DC	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
			208 … 240 V AC/220 … 250 V DC	S

Note:
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.

2nd auxiliary release	Without 2nd auxiliary release		A
	With shunt trip (ST), uninterrupted 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) [3], 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] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.
[3] The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

Quick selection guide, pages 1/4 and 1/8

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

Auxiliary releases

1st auxiliary release	Without 1st auxiliary release		**0**
	With shunt trip (ST/ST-COM) [1], uninterrupted 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**

[1] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.

Quick selection guide, pages 1/4 and 1/8

Structure of the article numbers

Siemens EcoTech

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers for 1150 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 |

Circuit breakers and non-automatic circuit breakers

Size (SZ)	2						**2**								
	3						**3**								
		SZ 2	SZ 3												
Max. rated current $I_{n\,max}$	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	E	■	–	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 breakers, ready4COM feature [1]											**C**	**A**			
Application packages with protective and metering functions for circuit breakers	ETU300 electronic trip unit			Protective function	LSI						**A**	**B**			
					LSIG						**A**	**C**			
	ETU600 electronic trip unit			Current metering							**A**				
				Current metering, ready4COM feature [1]							**C**				
	Protective functions	■	■	LSI								**E**			
		■	■	LSIG								**F**			
		■	■	LSIG Hi-Z								**G**			
Number of poles	Fixed-mounted					3-pole							**0**		
						4-pole, Neutral left							**1**		
						4-pole, Neutral right							**2**		
	Withdrawable			Without position signaling switch		3-pole							**3**		
						4-pole, Neutral left							**4**		
						4-pole, Neutral right							**5**		
				With position signaling switch [2]		3-pole							**6**		
						4-pole, Neutral left							**7**		
						4-pole, Neutral right							**8**		

[1] If ready4COM circuit breakers are ordered with closing coils/shunt trips, these are installed in the factory as communication-capable versions (CC-COM/ST-COM). Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71. The circuit breakers are then supplied with standard CC/ST.

[2] Position signaling switch for circuit breakers/non-automatic circuit breakers without ready4COM:
3 × connected position, 2 × test position, 1 × disconnected position;
Position signaling switch for circuit breakers/non-automatic circuit breakers with ready4COM:
1 × connected position, 1 × test position, 1 × disconnected position + message through communications interface for disconnected position and for "not available".

Quick selection guide, pages 1/4 and 1/8

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

Connection

			Fixed-mounted					Withdrawable								
			Vertical	Horizontal	Front connection with double hole	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Without guide frame	Vertical	Horizontal	Front connection with double hole	Flange	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Flange on top/horizontal at the bottom	Horizontal on top/flange at the bottom
Size 2																
Short-circuit Breaking capacity	E	2000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2500 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		3200 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		3600 A	–	–	–	–	–	–	–	–	–	4	–	–	–	–
		4000 A	1 [1]	2 [2]	–	5	6	0	1 [1]	2 [2]	–	–	5	6	–	–
Size 3																
Short-circuit Breaking capacity	E	4000 A	1	2	–	5	6	0	1	2	–	4	5	6	–	–
		5000 A	1	2	–	5	6	0	1	2	–	–	5	6	–	–
		6300 A	1	–	–	–	–	0	1	–	–	–	–	–	–	–

[1] 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.

[2] Also available for 4-pole circuit breakers with Z option D04: rear main connections (top and bottom) with same pole spacing of phases (only for N pole, left).

Quick selection guide, pages 1/4 and 1/8

Structure of the article numbers

Siemens EcoTech

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers for 1150 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

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

Operating mechanisms, auxiliary switches and auxiliary releases

				13	14	15
Operating mechanism and auxiliary switch	Manual recharging of the stored energy mechanism	Without spring charging motor	2 NO, 2 NC	0		
			4 NO, 4 NC	1		
	Recharging of the stored energy mechanism by spring charging motor (M)	24 ... 30 V DC	2 NO, 2 NC	2		
			4 NO, 4 NC	5		
		48 ... 60 V DC	4 NO, 4 NC	6		
		110 ... 127 V AC/ 110 ... 125 V DC	2 NO, 2 NC	3		
			4 NO, 4 NC	7		
		208 ... 240 V AC/ 220 ... 250 V DC	2 NO, 2 NC	4		
			4 NO, 4 NC	8		
Closing coil and remote trip alarm reset coil [1]	Without closing coil	Without remote trip alarm reset coil			A	
	With closing coil (CC/CC-COM) [2] for uninterrupted 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	
			208 ... 240 V AC/220 ... 250 V DC		J	
	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	
			208 ... 240 V AC/220 ... 250 V DC		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	
			208 ... 240 V AC/220 ... 250 V DC		S	

Note:
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.

			15
2nd auxiliary release	Without 2nd auxiliary release		A
	With shunt trip (ST), uninterrupted 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) [3], 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] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.
[3] The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

Quick selection guide, pages 1/4 and 1/8

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/ST-COM) [1], uninterrupted 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**

[1] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.

Quick selection guide, pages 1/4 and 1/8

Structure of the article numbers

Siemens EcoTech

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							–						–				
Non-automatic circuit breakers																	
Size (SZ)	2			2													
		BG 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 20 kA, 1500 V DC [1]					8									
Non-automatic circuit breakers									A	U							
Non-automatic circuit breakers, ready4COM feature [2]									C	U							
Number of poles	Fixed-mounted		3-pole								0						
			4-pole								1						
	Withdrawable	Without position signaling switch	3-pole								3						
			4-pole								4						
		With position signaling switch [3]	3-pole								6						
			4-pole								7						

Connection

Size 2			Fixed-mounted					Withdrawable								
			Vertical	Horizontal	Front connection with double hole	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Without guide frame	Vertical	Horizontal	Front connection with double hole	Flange	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Flange on top/horizontal at the bottom	Horizontal on top/flange at the bottom
Short-circuit Breaking capacity	D	1000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		4000 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8
	E	1000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		2000 A	1	2	3	5	6	0	1	2	3	4	5	6	7	8
		4000 A	1	2	–	5	6	0	1	2	–	4	5	6	7	8

[1] 1500 V DC only for 4-pole circuit breakers and for breaking capacity E

[2] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71. The circuit breakers are then supplied with standard CC/ST.

[3] Position signaling switch for circuit breakers/non-automatic circuit breakers without ready4COM:
3 × connected position, 2 × test position, 1 × disconnected position;
Position signaling switch for circuit breakers/non-automatic circuit breakers with ready4COM:
1 × connected position, 1 × test position, 1 × disconnected position + message through communications interface for disconnected position and for "not available"

Quick selection guide, pages 1/4 and 1/14

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

Operating mechanisms, auxiliary switches and auxiliary releases

				13	14	15	16
Operating mechanism and auxiliary switch	Manual recharging of the stored energy mechanism	Without spring charging motor	2 NO, 2 NC	0			
			4 NO, 4 NC	1			
	Recharging of the stored energy mechanism by spring charging motor (M)	24 ... 30 V DC	2 NO, 2 NC	2			
			4 NO, 4 NC	5			
		48 ... 60 V DC	4 NO, 4 NC	6			
		110 ... 127 V AC/ 110 ... 125 V DC	2 NO, 2 NC	3			
			4 NO, 4 NC	7			
		208 ... 240 V AC/ 220 ... 250 V DC	2 NO, 2 NC	4			
			4 NO, 4 NC	8			
Closing coil	Without closing coil				A		
	With closing coil (CC/CC-COM) [1] for uninterrupted 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					A	
	With shunt trip (ST), uninterrupted duty 100% OP [1]		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) [2], 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/ST-COM) [1], uninterrupted 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

[1] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.

[2] The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

Quick selection guide, pages 1/4 and 1/14

Accessory options

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1

To specify the options, add "-Z" to the complete article number and indicate the appropriate order code(s).

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

						Order code
Test report						
Test report of routine test						P81
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 $I_{n\,max}$.						
	Rated current I_n	SZ 1	SZ 2	SZ 3		
Option plug	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
	3600 A new	–	■	■		B36
	4000 A	–	–	■		B40
	5000 A	–	–	■		B50
IOM230 digital input/output module [1]						
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 **Cubicle**BUS[2] 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 DIN rail.					F23
ZSI200 Zone-selective interlocking module [1]						
Zone-selective interlocking with ETU600	A module, circuit breaker internal. A module including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, connecting cables and **Cubicle**BUS[2] terminating resistor					F20
COM190 communications module [1] [2]						
• The precondition for connection is a circuit breaker or non-automatic circuit breaker with the ready4COM feature						
PROFINET IO/Modbus TCP [2]	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 **Cubicle**BUS[2] terminating resistor; two communications modules can be run at the same time. The second communications module must be ordered separately as 3WA9111-0EC13.					F19
COM150 communications module [1]						
• The precondition for connection is a circuit breaker or non-automatic circuit breaker with the ready4COM feature						
Modbus RTU	A module with terminal connection and optional internal terminating resistor, circuit breaker internal. A module including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, connecting cables and **Cubicle**BUS[2] terminating resistor; two communications modules can be run at the same time. The second communications module must be ordered separately as 3WA9111-0EC15.					F15

[1] When ordering this option for a circuit breaker or a non-automatic air circuit breaker of the installation type "withdrawable version without guide frame", this must be used as the order option for the guide frame.

[2] For connecting the Ethernet cable, connectors angled 90° to the right are recommended, e.g. PROFINET connector 6GK1901-1BB20-2AA0.

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To specify the options, add "-Z" to the complete article number and indicate the appropriate order code(s).

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

			Order code
ready4COM circuit breakers without communication-capable closing coils/shunt trips			
Note	If this option is used, remote switching directly via communication is no longer possible.		M71
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
Circuit breakers with a metering function for connection of an external voltage transformer			
• The circuit breaker is equipped with a metering function. The scope of measured values is the same as for the PMF metering function. Unlike the metering function with internal voltage tap, this version is not certified according to IEC 61557-12. • External voltage transformers are required for the function. • Only possible for circuit breakers of sizes 2 and 3 with ETU600 and A or C in position 9 of the article number.	Scope of measured values Metering function	PMF-I	V61
		PMF-II	V62
		PMF-III	V63
Special approval according to UL 489b in addition to IEC 60947			
DC non-automatic circuit breakers up to 1500 V	Sizes 2, 4-pole, 2000 A with I_{cc} = 20 kA		U09
	Available for:	3WA1220-8AU12-_ _ _ _	
		3WA1220-8AU42-_ _ _ _	
		3WA1220-8AU72-_ _ _ _	
		3WA1220-8CU12-_ _ _ _	
		3WA1220-8CU42-_ _ _ _	
		3WA1220-8CU72-_ _ _ _	

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Accessory options

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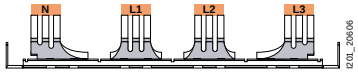
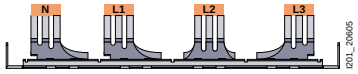
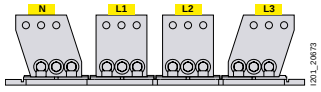
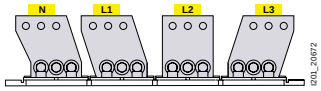
1

To specify the options, add "-Z" to the complete article number and indicate the appropriate order code(s).

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

					Order code
Rear main connections (top and bottom) with same pole spacing of phases (only possible for 4-pole circuit breakers with N pole, left)					
AC circuit breakers/ AC non-automatic circuit breakers and AC guide frames	Sizes 2, 4-pole, 4000 A breaking capacity S/M/H/E				**D04**
	Rear vertical		Standard	N – L1 160 mm L1 – L2 130 mm L2 – L3 160 mm	
			Option	N – L1 130 mm L1 – L2 160 mm L2 – L3 160 mm	
	Rear horizontal		Standard	N – L1 160 mm L1 – L2 130 mm L2 – L3 160 mm	
			Option	N – L1 130 mm L1 – L2 160 mm L2 – L3 160 mm	
Tinned version of the main circuit connections on the guide frame • Only for withdrawable circuit breakers 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 [1]				**D08**
Broadened vertical main circuit connection • Only possible on complete order for a withdrawable circuit breaker or when ordering the guide frame separately					
Main circuit connection	For 3WA1, 4000 A, size 2		Compatible with 3WL1240 for retrofit		**D01**
Circuit breakers without Bluetooth function					
Circuit breakers without Bluetooth function	In this version of the circuit breaker, Bluetooth is not provided. Neither can Bluetooth be retrofitted by replacing the electronic trip unit.				**D80**
Secondary disconnect terminal system • Can be ordered for circuit breakers with guide frames and for guide frames					
Manual connector with screw terminal	With screw connection instead of push-in connection (standard)				**N03**
Manual connector for ring lugs	With screw connection for ring lugs instead of push-in connection (standard)				**N05**
Mechanical operating cycles counters					
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 switches					
Trip alarm switch	2nd trip alarm switch (S25) 1st trip alarm switch included as standard for circuit breakers. Can only be used with circuit breakers with an electronic trip unit without ready4COM.		1 NO		**K06**

[1] Not available for size 2, breaking capacity C

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To specify the options, add "-Z" to the complete article number and indicate the appropriate order code(s).

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

			Order code
Pushbuttons/disconnect switches/closing lockouts/special packaging/arc chute cover			
Emergency OPEN button	Mushroom pushbutton instead of the mechanical OFF pushbutton		C25
Local electric close on 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: – Fixed-mounted – Breaking capacity C, E and D – 3600/4000 A size 2		R10
Cover for electronic trip unit	Top cover with safety lock (The lower sealable cover of the rotary coding switch is included in the scope of supply of the circuit breaker)		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 ETU600 electronic trip unit – External 24 V DC supply required – Instantaneous undervoltage release UVR required (15th position in article number: L, N, P, Q) – Not possible with instantaneous undervoltage release UVR 380 ... 415 V AC – Not possible with delayed undervoltage release UVR-t (15th position in article number: S, T, U, V, W) – Additionally contains a relay for monitoring the 24 V DC and warning labels – If Z option = K60 is provided, an optional PMF-I to PMF-III metering function is feasible. The accuracy of this metering function is in accordance with the manufacturer's specifications. A certificate according to IEC 61557-12 cannot be provided for this version.			
Internal current sensors	Sizes 1, 2, 3		K60
Mechanical interlocks • Interlocking module with Bowden cable 2 m			
Mechanical interlocks	For fixed-mounted breakers		S55
	For withdrawable circuit breakers with guide frame [1]		R55
	For guide frames (ordered separately)		R56
	For withdrawable circuit breakers (ordered separately)		R57
Locking provisions (for fixed-mounted and withdrawable circuit breakers)			
Locking provisions	Against unauthorized closing from the operator panel of the circuit breaker. The disconnector 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 [2]	S05
		Assembly kit for padlocks [3]	S07
		Made by RONIS	S08
		Made by PROFALUX	S09
Locking provisions	For charging handle with padlock [3]		S33
Locking provisions (for withdrawable circuit breaker)			
Locking provision to prevent movement of the withdrawable circuit breaker	Safety lock for mounting onto the circuit breaker	Made by CES	S71
		Made by PROFALUX	S75
		Made by RONIS	S76

[1] Not available in combination with R40
[2] Locks must be ordered from the manufacturer.
[3] Padlock not included in the scope of supply.

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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

1

To specify the options, add "-Z" to the complete article number and indicate the appropriate order code(s).

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

		Order code
Locking provisions against unauthorized closing, for withdrawable circuit breakers • The disconnector 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 possible in combination with order code "R81", "R85" or "R86". • Only possible on complete order for a withdrawable circuit breaker or when ordering the guide frame separately		
Made by CES		**R61**
Made by RONIS		**R68**
Made by PROFALUX		**R60**
Locking mechanisms • R30 and R50 not possible 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 [1]	**R40**
	To prevent movement when the control cabinet door is open [2]	**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 possible in combination with order code "R30", "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] Not available in combination with R50 and R55
[2] Not available in combination with R40

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Accessory options

Further technical specifications

Manual operating mechanism	3WA11 – 3WA13
Switching on/charging energy store	
Maximum force required to operate the hand lever	≤ 230 N
Required number of strokes on the hand lever	9

Closing coils (CC/CC-COM) [1]		3WA11 – 3WA13	
Rated operational voltage			
Rated control supply voltage U_s		24 … 30 V DC	
		48 … 60 V DC	
		110 … 127 V AC/110 … 125 V DC	
		208 … 240 V AC/220 … 250 V DC	
Primary operating range			
Primary operating range (acc. to IEC 60947-2)		75 … 110% U_s	
Extended operating range for battery operation		75 … 126% U_s	
Integrated freewheeling diode		Yes	No
Operation			
Version		100% OP	5% OP
Closing power	AC/DC	60 VA/60 W	300 VA/300 W
Continuous power	AC/DC	8 VA/8 W	–
Minimum command time at 100% U_s		60 ms	60 ms
Maximum command time at 100% U_s		–	2000 ms
Opening time of the circuit breaker at 100% U_s		80 ms	50 ms
Fuse protection of the control circuit at U_s for closing coil			
Fuse gG	24 … 30 V DC	2 A	10 A
	48 … 60 V DC	2 A	10 A
	110 … 127 V AC/110 … 125 V DC	2 A	4 A
	208 … 240 V AC/220 … 250 V DC	2 A	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	2 A	10 A
	48 … 60 V DC	2 A	10 A
	110 … 127 V AC/110 … 125 V DC	2 A	4 A
	208 … 240 V AC/220 … 250 V DC	2 A	2 A
Fuse protection of the control circuit at U_s for spring charging motor + closing coil [2]			
Fuse gG	24 … 30 V DC	8 A	10 A
	48 … 60 V DC	8 A	10 A
	110 … 127 V AC/110 … 125 V DC	4 A	4 A
	208 … 240 V AC/220 … 250 V DC	4 A	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	8 A	10 A
	48 … 60 V DC	8 A	10 A
	110 … 127 V AC/110 … 125 V DC	4 A	4 A
	208 … 240 V AC/220 … 250 V DC	4 A	2 A

[1] Technical specifications also apply to 3WL see page 1/104
[2] With the same control circuit for the closing coil and spring charging motor

Spring charging motor [1]		3WA11 – 3WA13
Rated operational voltage		
Rated control supply voltage U_s		24 … 30 V DC
		48 … 60 V DC
		110 … 127 V AC/110 … 125 V DC
		208 … 240 V AC/220 … 250 V DC
Primary operating range		
Primary operating range (acc. to IEC 60947-2)		85 … 110% U_s
Extended operating range for battery operation		85 … 126% U_s
Operation		
Closing power	AC/DC	135 VA/135 W
Continuous power	AC/DC	135 VA/135 W
Charging time at 100% U_s		≤ 10 s

[1] Technical specifications also apply to 3WL see page 1/104

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Spring charging motor [1]

		3WA11 – 3WA13
Fuse protection of the control circuit at U_s for spring charging motor		
Fuse gG	24 … 30 V DC	6 A
	48 … 60 V DC	6 A
	110 … 127 V AC/110 … 125 V DC	2 A
	208 … 240 V AC/220 … 250 V DC	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	6 A
	48 … 60 V DC	6 A
	110 … 127 V AC/110 … 125 V DC	2 A
	208 … 240 V AC/220 … 250 V DC	2 A

[1] Technical specifications also apply to 3WL see page 1/104

Undervoltage releases UVR and UVR-t [1]

		3WA11 – 3WA13
Rated operational voltage		
Rated control supply voltage U_s: UVR		24 … 30 V DC
		48 … 60 V DC
		110 … 127 V AC/110 … 125 V DC
		208 … 240 V AC/220 … 250 V DC
		380 … 415 V AC
Rated control supply voltage U_s: UVR-t [2]		48 V DC
		60 V DC
		110 … 127 V AC/110 … 125 V DC
		208 … 240 V AC/220 … 250 V DC
		380 … 415 V AC
Operating limits	Operate voltage	< 7% U_s
	Pick-up voltage	85 … 126% U_s
Integrated freewheeling diode		Yes
Closing power	AC/DC	60 VA/50 W
Continuous power	AC/DC	5 VA/5 W
Break time		
U_s = 0 with UVR instantaneous		≤ 80 ms
U_s = 0 with UVR short-time delayed		≤ 200 ms
U_s = 0 with UVR-t delayed		0.2 … 3.2 s
With UVR-t by disconnection at terminals X5.13 and X5.14 (EMERGENCY-STOP circuit) (quick shutdown) [2]		≤ 100 ms (maximum allowable cable length between the terminals)/cable length ≤ 50 m
Fuse protection of the control circuit		
Fuse gG	24 … 30 V DC (UVR)	2 A
	48 … 60 V DC (UVR)	2 A
	48 V DC (UVR-t)	2 A
	60 V DC (UVR-t)	2 A
	110 … 127 V AC/110 … 125 V DC	2 A
	208 … 240 V AC/220 … 250 V DC	2 A
	380 … 415 V AC	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC (UVR)	4 A
	48 … 60 V DC (UVR)	4 A
	48 V DC (UVR-t)	4 A
	60 V DC (UVR-t)	4 A
	110 … 127 V AC/110 … 125 V DC	4 A
	208 … 240 V AC/220 … 250 V DC	6 A
	380 … 415 V AC	6 A
Automatic circuit breaker with D characteristic	24 … 30 V DC (UVR)	2 A
	48 … 60 V DC (UVR)	2 A
	48 V DC (UVR-t)	2 A
	60 V DC (UVR-t)	2 A
	110 … 127 V AC/110 … 125 V DC	2 A
	208 … 240 V AC/220 … 250 V DC	4 A
	380 … 415 V AC	4 A

[1] Technical specifications also apply to 3WL see page 1/104
[2] The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

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Accessory options

Further technical specifications

Shunt trip (ST/ST-COM/ST2) [1]		3WA11 – 3WA13	
Rated operational voltage			
Rated control supply voltage U_s		24 ... 30 V DC	
		48 ... 60 V DC	
		110 ... 127 V AC/110 ... 125 V DC	
		208 ... 240 V AC/220 ... 250 V DC	
Primary operating range			
Primary operating range (acc. to IEC 60947-2)		75 ... 110% U_s	
Extended operating range for battery operation		75 ... 126% U_s	
Integrated freewheeling diode		Yes	No
Operation			
Version		100% OP	5% OP
Closing power AC/DC	24 ... 30 V DC, 48 ... 60 V DC	60 VA/60 W	300 VA/300 W
	110 ... 127 V AC/110 ... 125 V DC		
	208 ... 240 V AC/220 ... 250 V DC		
Continuous power AC/DC		8 VA/8 W	–
Minimum command time at 100% U_s		60 ms	60 ms
Maximum command time at 100% U_s		–	2000 ms
Make time of the circuit breaker at 100% U_s		80 ms	50 ms
Fuse protection of the control circuit			
Fuse gG	24 ... 30 V DC	2 A	10 A
	48 ... 60 V DC	2 A	10 A
	110 ... 127 V AC/110 ... 125 V DC	2 A	4 A
	208 ... 240 V AC/220 ... 250 V DC	2 A	2 A
Automatic circuit breaker with C characteristic	24 ... 30 V DC	2 A	10 A
	48 ... 60 V DC	2 A	10 A
	110 ... 127 V AC/110 ... 125 V DC	2 A	4 A
	208 ... 240 V AC/220 ... 250 V DC	2 A	2 A

[1] Technical specifications also apply to 3WL see page 1/104

Remote trip alarm reset coil for mechanical tripped indicator (F7) [1]		3WA11 – 3WA13
Rated operational voltage		
Rated control supply voltage U_s		24 ... 30 V DC
		48 ... 60 V DC
		110 ... 127 V AC/110 ... 125 V DC
		208 ... 240 V AC/220 ... 250 V DC
Primary operating range		
Primary operating range (acc. to IEC 60947-2)		85 ... 110% U_s
Operation		
Power consumption	AC/DC	60 VA/60 W
Minimum command time at 1 × U_s		60 ms
Fuse protection of the control circuit		
Fuse gG	24 ... 30 V DC	2 A
	48 ... 60 V DC	
	110 ... 127 V AC/110 ... 125 V DC	1 A
	208 ... 240 V AC/220 ... 250 V DC	
Automatic circuit breaker with C characteristic	24 ... 30 V DC	2 A
	48 ... 60 V DC	
	110 ... 127 V AC/110 ... 125 V DC	1 A
	208 ... 240 V AC/220 ... 250 V DC	

[1] Technical specifications also apply to 3WL see page 1/104

Contact position-driven auxiliary switches (S1 bis S8) [1]	3WA11 – 3WA13
Type	NO or NC
Contact reliability	From 1 mA at 5 V DC
Rated insulation voltage U_i	660 V AC 50/60 Hz 660 V DC
Rated impulse withstand voltage U_{imp}	6 kV

[1] Technical specifications also apply to 3WL see page 1/104

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Contact position-driven auxiliary switches (S1 bis S8) [1)]

		3WA11 – 3WA13	
Breaking capacity			
Rated operational current I_e	DC12	24 V	10 A
		48 V	8 A
		110 V	3.5 A
		220/240 V	1 A
	DC13	24 V	6 A
		48 V	4 A
		110 V	1.2 A
		220/240 V	0.4 A
		440 V	0.2 A
	AC12	≤ 660 V	10 A
	AC15	≤ 230 V	6 A
		400 V	4 A
		500 V	3 A
		690 V	2 A

[1)] Technical specifications also apply to 3WL see page 1/104

Ready-to-close signaling switches (S20) (acc. to DIN VDE 0630)

		3WA11 – 3WA13	
Type		NO contact	
Contact reliability		From 1 mA at 5 V DC [1)]	
Rated insulation voltage U_i		250 V DC/250 V AC	
Breaking capacity			
Rated operational current I_e	DC12	24 V	5 A
		60 V	0.4 A
		110/127 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	2.5 A
		60 V	0.22 A
		110/127 V	0.22 A
		220/240 V	0.1 A
	AC12	≤ 240 V	6 A
	A300 AC	≤ 250 V	6 A
	R300 DC	110 ... 125 V	0.22 A
		220 ... 240 V	0.11 A
	AC15	220 V	5 A
		240 V	4 A

[1)] To ensure contact reliability at 1 mA, the contacts are gold-plated. If 1 mA is exceeded, the gold-plating is eroded. As a consequence, contact reliability at 1 mA can no longer be ensured.

Trip alarm switches (S24, S25)

		3WA11 – 3WA12	
1st trip alarm switch S24		CO contact	
2nd trip alarm switch S25		NO contact	
Contact reliability		From 1 mA at 5 V DC [1)]	
Rated insulation voltage U_i		250 V AC 50/60 Hz 250 V DC	
Breaking capacity			
Rated operational current I_e	DC12	24 V	5 A
		60 V	0.4 A
		110/127 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	2.5 A
		60 V	0.2 A
		110/127 V	0.2 A
		220/240 V	0.1 A
	AC12	≤ 240 V	6 A
	A300 AC	≤ 250 V	6 A
	R300 DC	110 ... 125 V	0.22 A
		220 ... 240 V	0.11 A
	AC15	220 V	5 A
		240 V	4 A

[1)] To ensure contact reliability at 1 mA, the contacts are gold-plated. If 1 mA is exceeded, the gold-plating is eroded. As a consequence, contact reliability at 1 mA can no longer be ensured.

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Accessory options

Further technical specifications

Position signaling switches on guide frame [1]			3WA11 – 3WA13	
Type			Changeover contact (not COM)	
Contact reliability from [1]			1 mA at 5 V DC	
Rated insulation voltage U_i			250 V, 50/60 Hz	
Rated impulse withstand voltage U_{imp}			4 kV	
Connection type				
PSS321			Spring-loaded terminal or push-in (depending on version)	
PSS600			Push-in	
PSS111 COM			• COM contacts: Push-in • Other contacts: Spring-loaded terminal or push-in	
PSS400 COM			Push-in	
Conductor cross-section that can be connected by customer				
Spring-type terminals			1 × 0.2 mm² (AWG 28) ... 1 × 2.5 mm² (AWG 14)	
Push-in solid			1 × 0.5 mm² (AWG 20) ... 1 × 2.5 mm² (AWG 14)	
Push-in finely stranded with end sleeve			1 × 0.5 mm² (AWG 20) ... 1 × 1.5 mm² (AWG 16)	
Breaking capacity				
Rated operational current I_e	Utilization category according to IEC 60947-5	DC12	24 V	5 A
			60 V	0.4 A
			127 V	0.4 A
			220/240 V	0.2 A
		DC13	24 V	2.5 A
			60 V	0.22 A
			127 V	0.22 A
			250 V	0.2 A
		AC12	≤ 240 V AC	6 A
		AC15	250 V	4 A
			220 V	5 A

The COM (X89) contacts may only be connected to the communications module.

[1] To ensure contact reliability at 1 mA, the contacts are gold-plated. If 1 mA is exceeded, the gold-plating is eroded. As a consequence, contact reliability at 1 mA can no longer be ensured.

ETU600		3WA11 – 3WA13
Power supply		
Required power supply design		DC power supply unit with safety requirements according to IEC 61558-1/IEC 62368-1/ANSI/UL 62368-1
Rated control supply voltage U_s	DC	24 V
Primary operating range		U_s ±20%
Power consumption		2.9 W
Max. current consumption		0.12 A
Max. starting current		0.35 A
Overvoltage category		CAT I
Integrated short-circuit protection		Yes
Protected against polarity reversal		Yes

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Summary of power consumption data

Composants	Voltage	Power consumption
ETU600	24 V DC	2.9 W
Closing coil CC/CC-COM 100% OP	24 ... 30 V DC 48 ... 60 V DC 110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC	60 W 60 W 60 VA/60 W 60 VA/60 W
Closing coil CC/CC-COM 5% OP	24 ... 30 V DC 48 ... 60 V DC 110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC	300 W 300 W 300 VA/300 W 300 VA/300 W
Shunt trip ST/ST-COM 100% OP	24 ... 30 V DC 48 ... 60 V DC 110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC	60 W 60 W 60 VA/60 W 60 VA/60 W
Shunt trip ST/ST-COM 5% OP	24 ... 30 V DC 48 ... 60 V DC 110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC	300 W 300 W 300 VA/300 W 300 VA/300 W
Spring charging motors	24 ... 30 V DC 48 ... 60 V DC 110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC	135 W 135 W 135 VA/135 W 135 VA/135 W
Remote trip alarm reset coils	24 ... 30 V DC 48 ... 60 V DC 110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC	60 W 60 W 60 VA/60 W 60 VA/60 W
Undervoltage releases (UVR/UVR-t)	24 V DC 30 V DC 48 V DC 60 V DC 110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC 380 ... 415 V AC	50 W 50 W 50 W 50 W 60 VA/50 W 60 VA/50 W 60 VA
IOM230	24 V DC	1.25 W
IOM350	24 V DC	1.25 W
COM190/COM150	24 V DC	1.7 W

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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

1

		5	6	7		8	9	10	11	12		13	14	15	16
3WA8					–		A	A			–				

Guide frames

Size	1						1	
	2						2	
	3						3	

			SZ 1	SZ 2	SZ 3			
Max. rated current $I_{n\,max}$ **Note:** Generate the selection of positions 6, 7 and 8 according to the list below	630 ... 1000 A		■	–	–		1	0
	1250 ... 1600 A		■	–	–		1	6
	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} **Note:** 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	■	–	–	100/66 kA	5
			–	■	■	100/85 kA	5
		C	–	■	–	130/100 kA	6
			–	–	■	3-pole: 150/150 kA 4-pole: 130/130 kA	8
	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

The following combinations of positions 6, 7 and 8 of the article number are technically feasible

Size	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 6, 7, 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	–	–	–	–
	H	20-5	20-5	20-5	20-5	20-5	20-5	25-5	–	–	–	–
	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

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3WA8 5 6 7 8 – 9 10 A A 11 12 – 13 14 15 16

Connection

			Withdrawable							
			Vertical	Horizontal	Front connection with double hole	Flange	Vertical on top/horizontal at the bottom	Horizontal on top/vertical at the bottom	Flange on top/horizontal at the bottom	Horizontal on top/flange at the bottom
Size 1										
Short-circuit Breaking capacity	N, S, M, E	630 A	1	2	3	4	5	6	7	8
		800 A	1	2	3	4	5	6	7	8
		1000 A	1	2	3	4	5	6	7	8
		1250 A	1	2	3	4	5	6	7	8
		1600 A	1	2	3	4	5	6	7	8
		2000 A	1	2	3	4	5	6	7	8
		2500 A	1	–	–	–	–	–	–	–
	H	630 A	1	2	–	4	5	6	7	8
		800 A	1	2	–	4	5	6	7	8
		1000 A	1	2	–	4	5	6	7	8
		1250 A	1	2	–	4	5	6	7	8
		1600 A	1	2	–	4	5	6	7	8
		2000 A	1	2	–	4	5	6	7	8
		2500 A	1	–	–	–	–	–	–	–
Size 2										
Short-circuit Breaking capacity	S, M, H, E	2000 A	1	2	3	4	5	6	7	8
		2500 A	1	2	3	4	5	6	7	8
		3200 A	1	2	3	4	5	6	7	8
		3600 A	–	–	–	4	–	–	–	–
		4000 A	1 [1)]	2 [2)]	–	–	5	6	–	–
	C	2000 A	1	2	–	4	5	6	7	8
		2500 A	1	2	–	4	5	6	7	7
		3200 A	1	2	–	4	5	6	7	7
Size 3										
Short-circuit Breaking capacity	H	4000 A	1	2	3	4	5	6	–	–
		5000 A	1	2	–	–	5	6	–	–
		6300 A	1	–	–	–	–	–	–	–
	E, C [3)]	4000 A	1	2	–	4	5	6	–	–
		5000 A	1	2	–	–	5	6	–	–
		6300 A	1	–	–	–	–	–	–	–

[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)] Also available for 4-pole circuit breakers with Z option D04: rear main connections (top and bottom) with same pole spacing of phases (only for N pole, left).
[3)] 130 kA for 4-pole circuit breakers

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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**

	5	6	7	8		9	10	11	12		13	14	15	16
3WA8					–	A	A			–	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 (3 × connected position, 2 × test position, 1 × disconnected position)	C
	Position signaling switch PSS-COM (1 × connected position, 1 × test position, 1 × disconnected position) plus connection to a communications module	G

[1] Conversion to screw connection is possible with Z option N03.

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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				2 0
	4000 A				4 0
Short-circuit breaking capacity	D	≤ 600 V DC	25 kA at 600 V DC		1
	E	≤ 1000 V DC	20 kA at 1000 V DC		8
		≤ 1500 V DC	20 kA at 1500 V DC [1]		8
Number of poles	3-pole				3
	4-pole				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 (3 × connected position, 2 × test position, 1 × disconnected position)				C
	Position signaling switch PSS-COM (1 × connected position, 1 × test position, 1 × disconnected position) plus connection to a communications module				G

[1] 1500 V DC applications only possible with 4-pole circuit breakers and breaking capacity E.

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Accessories and spare parts

Accessories for electronic trip unit

Electronic trip unit

- **Note:** The electronic trip unit is supplied without an option plug.
  The option plug must be ordered separately. The range of functions of the ETU600 corresponds to the "Current metering" application package.

Basic protective functions	Article No.
ETU300 LSI/LSIG	3WA9111-0EE32
ETU600 LSI/LSIG with Bluetooth and USB interface	3WA9111-0EE62
ETU600 LSIG Hi-Z with Bluetooth and USB interface	3WA9111-0EE63

Retrofit kit for ETU600 LSI/LSIG new	Artikel-Nr.
Retrofit kit for ETU600 LSI/LSIG for replacing an existing ETU300 in the circuit breaker. **Note:** The ETU600 LSI/LSIG and the option plug must be ordered separately.	3WA9111-0EE83

Spare part battery for ETU600

Article No.
3WA9111-0EE81

Option plug

Basic configuration	Rated current I_n	SZ 1	SZ 2	SZ 3	Article No.	
Protective function LSI: LT, ST, INST					3WA9111-0EB	..
Protective function LSIG: LT, ST, INST, GF (ground-fault protection GFx with extended setting range)					3WA9111-0EX	..
	250 A	■	■	–		02
	315 A	■	■	–		03
	400 A	■	■	–		04
	500 A	■	■	–		05
	630 A	■	■	–		06
	800 A	■	■	■		08
	1000 A	■	■	■		10
	1250 A	■	■	■		12
	1600 A	■	■	■		16
	2000 A	■	■	■		20
	2500 A	■	■	■		25
	3200 A	–	■	■		32
	3600 A new	–	■	■		36
	4000 A	–	■	■		40
	5000 A	–	–	■		50
	6300 A	–	–	■		63

Function packages for ETU600

Protective and alarm functions	Article No.
Ground fault alarm (GF alarm)	3WA9111-0ES01
Directional short-time-delayed short-circuit protection (dST) and reverse power protection (RP) [1]	3WA9111-0ES05

Enhanced protective functions (EPF) [1]	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
Underfrequency and overfrequency	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
Waveform memory	3WA9111-0ES24
Condition monitoring (retrofitting only possible for ETU600 with ready4COM application package) new	3WA9111-0ES25

Extended metering function	Article No.
Upgrade to metering values of the metering function PMF-II Basic Power Monitoring (metering values, see catalog page 1/25)	3WA9111-0ES52
Upgrade to metering values of the metering function PMF-III Advanced Power Monitoring (metering values, see catalog page 1/25)	3WA9111-0ES53

Upgrade of properties following replacement of ETU600 [2] new	Article No.
The functionality of the ETU600 corresponds to the PMF-II application package on the day the circuit breaker is delivered	3WA9111-0ES82
The functionality of the ETU600 corresponds to the PMF-III application package on the day the circuit breaker is delivered	3WA9111-0ES83

[1] Requires an internal voltage tap and a voltage tap module
[2] All metering values from the metering function comply with the manufacturer's accuracy specifications

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Accessories for electronic trip unit

Licenses to activate test function in SENTRON Powerconfig software

Version	Article No.
Standard test license for testing the protective functions of SENTRON circuit breakers. The license is time-limited to 365 days.	7KN2720-0CE00-1YC1
Advanced test license for testing the protective functions and the enhanced protective functions (EPF) of the SENTRON circuit breakers. The license is time-limited to 365 days.	7KN2720-0CE00-2YC1

Upgrading to ready4COM feature through BSS200 breaker status sensor for ETU600

Version	Article No.
• Gathers information about the statuses of the circuit breaker via signaling switches and transmits it to the **Cubicle**BUS[2] • Controls the communication-capable CC-COM closing coil and the ST-COM shunt trip in a circuit breaker with the ready4COM feature • The BSS200 breaker status sensor is fitted in every circuit breaker with ETU600 of the ready4COM application package and with the PMF-I to PMF-III metering function	3WA9111-0EC40

External current sensors for the N conductor

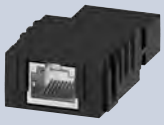
Version	Size	Article No.
For mounting on busbar	1	3WA9111-0AA21
	2	3WA9111-0AA22
	3	3WA9111-0AA23
For busbar connection DIN connection	1	3WA9111-0AA31
	2	3WA9111-0AA32
	3	3WA9111-0AA33

Sealable and lockable covers

- The scope of supply includes both the top cover with safety lock and the sealable bottom cover of the rotary coding switches.

Accessory for	Article No.
ETU300	3WA9111-0EM21
ETU600	3WA9111-0EM22

Adapter for connecting the ETU300 to the TD400



Version	Article No.
Via the adapter, the ETU300 can be connected to the TD400 to supply it with an external voltage. There is no parameterization or documentation option via SENTRON Powerconfig. **Note:** The TD400 test device, including description and article number, can be found in the chapter Molded case circuit breakers, see page 2/69	3VW9011-0AT46

Automatic reset of the reclosing lockout

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

Remote trip alarm reset coils [1)]

- 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 reclosing lockout

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

[1)] Article numbers also apply to 3WL see page 1/109

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Accessories and spare parts

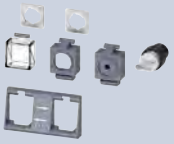
Accessories for electronic trip unit

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 DIN rail	3WA9111-0EM62

Locking provisions and interlocks

Interlocking sets for mechanical Open/Close



- 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 from the operator panel

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

Type	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included (S01)	3WA9111-0BA35
Made by IKON	Locks, cylinders and keys included (S03)	3WA9111-0BA36
Assembly kit FORTRESS [1] or CASTELL [2]	Without locks, cylinders or keys (S05)	3WA9111-0BA31
Made by KIRK-Key [3]	Without locks, cylinders or keys (S06)	3WA9111-0BA33
Assembly kit for padlocks	Without padlock (S07)	3WA9111-0BA37
Made by RONIS	Locks, cylinders and keys included (S08)	3WA9111-0BA32
Made by PROFALUX	Locks, cylinders and keys included (S09)	3WA9111-0BA34

Locking provision against unauthorized closing of the withdrawable circuit breaker

- The disconnector 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

Type	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 [3]	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 provisions 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

Type	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 [3]	Without locks, cylinders or keys	3WA9111-0BA80

Locks, cylinders and keys must be ordered from the manufacturer:

[1] Suitable lock FORTRESS CLIS X005.
[2] Suitable lock CASTELL FS2.
[3] Suitable cylinder lock KIRK Key C 900-301.

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Locking provisions and interlocks

Interlocking systems

- 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

Type	Article No.
Made by CES	3WA9111-0BA43

Locking mechanisms to prevent movement of the withdrawable circuit breakers in the disconnected position

- Consisting of Bowden cable and the 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")

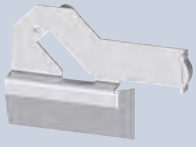
Type	Article No.
Made by CES	3WA9111-0BA81
Made by IKON	3WA9111-0BA82
Made by PROFALUX	3WA9111-0BA83
Made by RONIS	3WA9111-0BA84

Locking mechanisms to prevent opening of the control cabinet door when the circuit breaker is closed

- Defeatable
- **Note:** Not possible in combination with "Locking mechanisms to prevent movement of the withdrawable circuit breakers in the 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



- Mounted on guide frame
- **Note:** Not possible in combination with "Locking mechanisms to prevent movement of the withdrawable circuit breakers in the disconnected position" (order codes "R81", "R85" or "R86").

Version	Article No.
Spare part for option R50	3WA9111-0BB15

Mechanical interlocks

- 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 [1]	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

- 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] Not available in combination with R40

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Accessories and spare parts

Indicators and control elements

Ready-to-close signaling switches (S20)

Version	Article No.
Spare part for signaling switch installed as standard	3WA9111-0AH01

1st trip alarm switch (S24)

Version	Article No.
Spare part for signaling switch installed as standard	3WA9111-0AH02

2nd trip alarm switch (S25)

- Can only be used with a circuit breaker with an electronic trip unit without ready4COM
- 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	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 charge 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 charge signaling switch can also be retrofitted

Contacts	Article No.
1 NO	3WA9111-0AH06

Position signaling switch for withdrawable circuit breakers

- All conventional contacts are implemented as changeover contacts.

Contacts	Version	Article No.
PSS321	3 × connected position, 2 × test position, 1 × disconnected position	3WA9111-0AH11
PSS111-COM	1 × connected position, 1 × test position, 1 × disconnected position and option for connection to a communications module COM (Signal: “disconnected position” and “absent”)	3WA9111-0AH12
PSS400-COM	4 × connected position and option for connection to a communications module COM (Signal: “disconnected position” and “absent”)	3WA9111-0AH13
PSS600	6 × connected position	3WA9111-0AH14
PSS111	1 × connected position, 1 × test position, 1 × disconnected position	3WA9111-0AH15

Local electric close (S10) for operator panel

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

Version	Article No.
With sealing cap, spare part for option C11	3WA9111-0AH21
With CES assembly kit, spare part for option C12	3WA9111-0AH22
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 C24	3WA9111-0AH24

Emergency OPEN button

- Mushroom pushbutton instead of local mechanical open

Version	Article No.
Spare part for option C25	3WA9111-0AH25

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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
  - Circuit breakers with ETU600 LSI or LSIG with 4 blocks
  - Circuit breakers with ETU600 LSIG-HiZ with 5 blocks

Secondary disconnect terminal

	Version	Type	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
		Ring lug connection	3WA9111-0AB05
	Coding kits (3)	For secondary disconnect terminal blocks X5 to X9 for fixed-mounted circuit breakers	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) [1]

- Suitable for uninterrupted duty

Version	Voltage	Article No.
100% OP Switching time ≤ 80 ms	24 ... 30 V DC	3WA9111-0AD02
	48 ... 60 V DC	3WA9111-0AD04
	110 ... 127 V AC/110 ... 125 V DC	3WA9111-0AD05
	208 ... 240 V AC/220 ... 250 V DC	3WA9111-0AD06

Closing coil (CC-COM)/shunt trip (ST-COM)

- Suitable for uninterrupted duty

Version	Voltage	Article No.
For circuit breakers and non-automatic circuit breakers with the ready4com feature 100% OP Switching time ≤ 80 ms Switching time via COM ≤ 120 ms	24 ... 30 V DC	3WA9111-0AD32
	48 ... 60 V DC	3WA9111-0AD34
	110 ... 127 V AC/110 ... 125 V DC	3WA9111-0AD35
	208 ... 240 V AC/220 ... 250 V DC	3WA9111-0AD36

[1] Article numbers also apply to 3WL see page 1/114

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Accessories and spare parts

Auxiliary release

Closing coils (CC) [1]

- For momentary duty, with cut-off switch S15 (NC)

Version	Voltage	Article No.
5% OP Switching time 50 ms	24 ... 30 V DC	3WA9111-0AD12
	48 ... 60 V DC	3WA9111-0AD14
	110 ... 127 V AC/110 ... 125 V DC	3WA9111-0AD15
	208 ... 240 V AC/220 ... 250 V DC	3WA9111-0AD16

Shunt trips (ST) [1]

- For momentary duty, with cut-off switch S14 (NO)

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

Rated control supply voltage/rated operational voltage		Article No.
50/60 Hz AC	DC	
208 ... 240 V	220 ... 250 V	3WA9111-0AD81

Undervoltage release (UVR) [1]

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 ... 127 V AC/110 ... 125 V DC	3WA9111-0AE05
	208 ... 240 V AC/220 ... 250 V DC	3WA9111-0AE06
	380 ... 415 V AC	3WA9111-0AE07
Delayed (UVR-t) [2] adjustable delay 0.2 ... 3.2 s	48 V DC	3WA9111-0AE13
	60 V DC	3WA9111-0AE14
	110 ... 127 V AC/110 ... 125 V DC	3WA9111-0AE15
	208 ... 240 V AC/220 ... 250 V DC	3WA9111-0AE16
	380 ... 415 V AC	3WA9111-0AE17

[1] Article numbers also apply to 3WL see page 1/114
[2] The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

Operating mechanism [1]

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 ... 127 V AC/110 ... 125 V DC	3WA9111-0AF05
208 ... 240 V AC/220 ... 250 V DC	3WA9111-0AF06

[1] Article numbers also apply to 3WL see page 1/114

Auxiliary contacts

Auxiliary switches (AUX)

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

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Door sealing frame, protective cover

Door sealing frame

Version	Article No.
Spare part for option T40	3WA9111-0AP01

Protective covers IP55

- Cannot be used in conjunction with door sealing frames
- Hood removable and can be opened on both sides

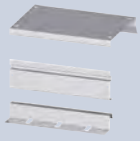
Article No.
3WA9111-0AP03

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	For fixed-mounted breakers	3WA9111-0AS04
			For withdrawable circuit breakers	3WA9111-0AS05
	2	E		3WA9111-0AS12
	3	E		3WA9111-0AS18
600 V DC	2	D		3WA9111-0AS13
1000 V DC	2	E		3WA9111-0AS14

Arc chute cover



- Parts kit for guide frame
- Spare part for option R10
- Not available for:
  - 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

- Variant coding by the customer with 36 coding options

Size	Article No.
1, 2	3WA9111-0AR11
3	3WA9111-0AR12

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Accessories and spare parts

Grounding connection

Grounding connection between the guide frame and the circuit breaker

- Up to 30 kA or 60 kA ground-fault current
- 2 modules must be used for up to 60 kA ground-fault current

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
		4-pole [1]	3WA9111-0BG22
	3	3-pole [2]	3WA9111-0BG13
		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 bracket

Support bracket

- 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 **Cubicle**BUS²

COM190 PROFINET IO/Modbus TCP communications module [1]

Version	Article No.
Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on DIN rail, connecting cables and **Cubicle**BUS² terminating resistor	3WA9111-0EC13

COM150 communications module Modbus RTU

Version	Article No.
Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on DIN rail, connecting cables and **Cubicle**BUS² terminating resistor	3WA9111-0EC15

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

Version	Article No.
Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on DIN rail, connecting cables and terminating resistor for **Cubicle**BUS² • Type of output contact: NO • Maximum uninterrupted current of an output at 110 ... 230 V AC: 0.2 A	3WA9111-0EC11

IOM350 digital input/output module (3 inputs and 5 outputs)

Version	Article No.
For mounting on DIN rail, including connecting cables and terminating resistor for **Cubicle**BUS² • Type of output contact: CO • Maximum uninterrupted current of an output at 110 ... 230 V AC: 10 A	3WA9111-0EC12

Terminating resistor for CubicleBUS²

Version	Article No.
For **Cubicle**BUS² on the last module	3WA9111-0EC50

[1] For connecting the Ethernet cable, connectors angled 90° to the right are recommended, e.g. PROFINET connector 6GK1901-1BB20-2AA0.

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Modules of the **Cubicle**BUS²

Adapters

Version	Article No.
For mounting the modules of the **Cubicle**BUS² on the secondary disconnect terminal system of the circuit breaker	3WA9111-0EC60
For mounting the modules of the **Cubicle**BUS² on DIN rail	3WA9111-0EC61

ZSI200 Zone-selective interlocking module

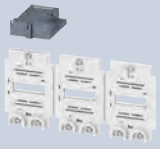
Version	Article No.
Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on DIN rail, connecting cables and terminating resistor for **Cubicle**BUS²	3WA9111-0EC10

Internal voltage tap

Set of components for conversion of an existing internal voltage tap on the main conducting paths

Conversion	Circuit breaker	Size	Article No.
From bottom to top	3-pole	1 [1]	3WA9111-0EK11
		2	3WA9111-0EK12
		3	3WA9111-0EK13
	4-pole	1 [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	Set for circuit breaker	Size	Article No.
N, S, M, H, C with VTM680 voltage tap module, with power supply of ETU600	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

Voltage tap module

Version	For breaking capacity	Article No.
VTM680, with power supply of ETU600 [2]	N, S, M, H, C	3WA9111-0EM12
VTM640	E	3WA9111-0EM11

[1] For 3WA1 circuit breakers (size 1, fixed-mounted) with front connections at the bottom, modification from voltage tap at the bottom to voltage tap at the top is not permissible.
[2] When replacing the VTM680 voltage tap module in an 3WA air circuit breaker with an ID number lower than ID No. OE/230101500000, the internal cable harness of the voltage tap must also be replaced. In this case, the accessory "Retrofit of the internal voltage tap on the lower main conducting paths" is required.

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Accessories and spare parts

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
3	4000 A AC (up to a max. short-circuit current of 100 kA)	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 [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
3	4000 A AC (up to a max. short-circuit current of 100 kA)	3WA9111-0AL32

Rear vertical main connections

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

Rear horizontal connection sets [4]

Size	Breaking capacity | Rated current I_n | Number of poles	Article No.
2	S, M, H, E | 4000 A, 3-pole	3WA9111-0AX28
	S, M, H, E | 4000 A, 4-pole	3WA9111-0AX30
	S, M, H, E | 4000 A, 4-pole (Spare part for Z option D04)	3WA9111-0AX32

[1] For 3WA1 circuit breakers (size 1, fixed-mounted) with front connections at the bottom, modification from voltage tap at the bottom to voltage tap at the top is not permissible.
[2] 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.
[23] 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
[4] A set contains top and bottom terminals and is approved only as a spare part for circuit breakers with the following article numbers: 3WL1240-3xxx2-xxxx, 3WL1240-4xxx2-xxxx, 3WL1240-5xxx2-xxxx 3WL1240-8xxx2-xxxx

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	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
3	H, C, E | ≤ 5000 A AC	3WA9111-0AV31

[1] When using front-accessible main connections (withdrawable circuit breakers) supports are required
[2] Not for circuit breakers with very high breaking capacity C

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Main conductor connections for withdrawable units

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	3WA9111-0AX12
2	S, M, H, E | 2000 A AC; D, E | ≤ 2000 A DC [1]	3WA9111-0AX21
	S, M, H, E | 2500 A AC [1]	3WA9111-0AX22
	S, M, H, E | 3200 A AC; D, E | 4000 A DC [1]	3WA9111-0AX23
3	H, C, E | ≤ 5000 A AC	3WA9111-0AX31

Rear horizontal main connections, set new

Number of poles	Size	Breaking capacity | Rated current I_n	Article No.
3-pole	2	S, M, H, E | 4000 A AC	3WA9111-0AX25

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	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
	C | 2000 ... 3200 A	3WA9111-0AW24
3	H | 4000 A AC	3WA9111-0AW31
	C, E | 4000 A AC	3WA9111-0AW32

[1] Not for circuit breakers with very high breaking capacity C

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	3WA9111-0BC11
	2	3WA9111-0BC12
	3	3WA9111-0BC13
4-pole	1	3WA9111-0BC14
	2	3WA9111-0BC15
	3	3WA9111-0BC16

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Accessories and spare parts

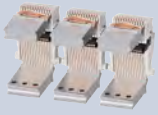
Main contact elements

Main contact elements for AC circuit breakers

- **Notes:**
  - To be ordered only once for each circuit breaker
  - On the following circuit breakers, the main contacts can only be replaced at the factory:
    3WA1 size 1 breaking capacity M, H 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
		N, S	2000 ... 2500 A	3WA9111-0AQ05
	2	S, M, H, E	2000 A	3WA9111-0AQ08
			2500 A	3WA9111-0AQ11
			3200 A	3WA9111-0AQ13
			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
		N, S	2000 ... 2500 A	3WA9111-0AQ55
	2	S, M, H, E	2000 A	3WA9111-0AQ58
			2500 A	3WA9111-0AQ61
			3200 A	3WA9111-0AQ63
			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

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Interfaces

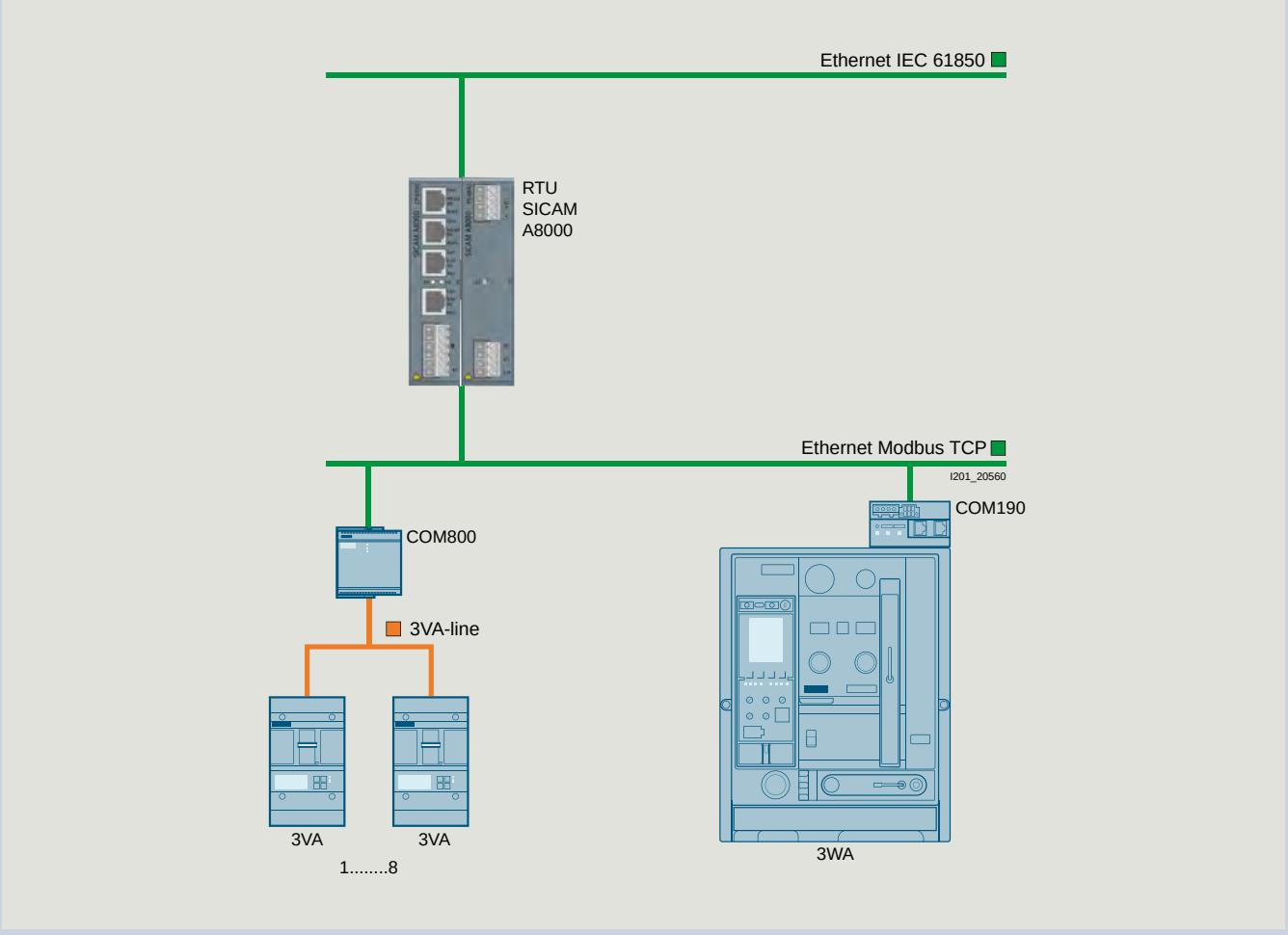
Interface to the IEC 61850

- The SICAM A8000 smart data concentrator connects the circuit breakers from the SENTRON portfolio via the Modbus TCP/IP protocol and transmits data via communication protocols (e.g.: IEC 61850, IEC 60870-5-104, IEC 60870-5-101, Modbus and DNP) to higher-level systems.

Type	Operational voltage	Article No.
SICAM CP-8021 [1]	–	6MF2802-1AA00
SICAM CP-8031 [2]	–	6MF2803-1AA00
SICAM CP-8050 [2]	–	6MF2805-0AA00
SICAM PS-8620	24 ... 60 V DC (12 W)	6MF2862-0AA00
SICAM PS-8622	110 ... 220 V DC (12 W)	6MF2862-2AA00

[1] Dimensioned for device quantities of max. 1 × 3WA and 1 × 3VA
[2] Dimensioned for device quantities of max. 1 × 3WA and 8 × 3VA
[3] Dimensioned for device quantities of max. 3 × 3WA and 8 × 3VA or 2 × 3WA and 8 × 3VA and 1 × PAC4200

You will find further information at:
www.siemens.com/sicam-a8000
For the SICAM CP-8021 and SICAM CP-8050, predefined modules were created to reduce commissioning work to a minimum.
The modules can be obtained free of charge via SiePortal www.siemens.com/lowvoltage/product-support (109816057)



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