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Edition 10/2022

SENTRON • SIVACON • ALPHA

Low-Voltage Power Distribution and Electrical Installation Technology

Air Circuit Breakers

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Refer to the Industry Mall for current prices
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The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with EN ISO 9001 (for the Certified Registration Nos., see **www.siemens.com/system-certificates/ep**).
The certificate is recognized by all IQNet countries.

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

All illustrations are not binding.

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Low-Voltage Power Distribution and Electrical Installation Technology

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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.

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.

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Air Circuit Breakers



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A multitude of additional information ...

Information + ordering

All the important things at a glance

For information about air circuit breakers, please visit our websites
www.siemens.com/3WA
www.siemens.com/3WL

Your product in detail

The Siemens Industry Online Support (SIOS) 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)
- Technical Basic Information
  - 3WL air circuit breakers (109767789)

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

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

Siemens YouTube channel

- 3WA air circuit breaker – Teaserfilm
  bit.ly/3p14AOZ
- 3WA air circuit breaker – Highlightfilm
  bit.ly/2Y0iWD2
- 3WL air circuit breakers (general)
  bit.ly/2ZH1rXH

Everything you need for your order

Refer to the Industry Mall for an overview of your products

- Air circuit breakers sie.ag/2IXiZjB

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

Order supports are available in Siemens Industry Online Support (SIOS) 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
www.siemens.com/lowvoltage/components/contact

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

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

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Your product in detail

The Siemens Industry Online Support (SIOS) provides detailed technical information
www.siemens.com/lowvoltage/product-support

- Operating instructions
- Characteristic curves
- Certificates

Comprehensive mobile support via the Siemens Industry 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)

- Siemens Industry Mall
  www.siemens.com/lowvoltage/mall
- 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 are available for downloading in Siemens Industry Online Support (SIOS) at
www.siemens.com/lowvoltage/manuals

- Equipment Manual
  - 3WA 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
  - 3WL1 air circuit breakers **(35681108)**
  - 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)
- LV-3WA Basic (LV-3WA_BA)
- LV-3WA Advanced (LV-3WA_AD)
- Maintenance and operation of 3WA circuit breakers (LV-3WAMAIN)
- Maintenance and operation of 3WL circuit breakers (LV-3WLMAIN)
- Certification: Maintenance and operation of 3WL and 3WA circuit breakers (LV-CBCERT)
- 3WL and 3WA air circuit breakers protection technology and communication (LV-COPR)
- Project planning and selection of SENTRON circuit breakers (LV-CBPROJ)

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)

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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
	468 | 518	437 | 462	468 | 518	437 | 462
	471	357	471	357
	VDE, EAC, CCC, CE, C-Tick ABS, DNV, GL, LRS, BV, PRS, CCS, RMRS		VDE, EAC, CCC, CE, C-Tick ABS, DNV, GL, LRS, BV, PRS, CCS, RMRS	
	H	**C**	**E**	**D**	**E**
	–|–	–|–	–|–	–|–	–|–
	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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Circuit breakers and non-automatic circuit breakers for AC and DC

IEC 60947-2 (continued)

AC





			3WA11				3WA12				
Breaking capacity			**N**	**S**	**M**	**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	–	66	85	100	100	–
	1 s	kA	50	66	85	–	66	85	85	100	–
	2 s	kA	35 [2]/45 [3]	45	70	–	66	66 [4]/85 [5]	66 [4]/85 [5]	85	–
	3 s	kA	30 [2]/35 [3]	35	60	–	55 [4]/66 [5]	55 [4]/75 [5]	55 [4]/75 [5]	75	–
I_{cw} at U_e up to 690 V AC	0.5 s	kA	42	50	66	85	50	66	85	100	85
	1 s	kA	42	50	66	85	50	66	85	100	85
	2 s	kA	35 [2]/42 [3]	45	66	70	50	66	66 [4]/85 [5]	85	66 [4]/85 [5]
	3 s	kA	30 [2]/35 [3]	35	60	60	50	55 [4]/66 [5]	55 [4]/75 [5]	75	55 [4]/75 [5]
I_{cw} at U_e up to 1000 V AC	0.5 s	kA	–	–	–	50	–	–	–	–	85
	1 s	kA	–	–	–	50	–	–	–	–	85
	2 s	kA	–	–	–	50	–	–	–	–	66 [4]/85 [5]
	3 s	kA	–	–	–	50	–	–	–	–	55 [4]/75 [5]
I_{cw} at U_e up to 1150 V AC	0.5 s	kA	–	–	–	–	–	–	–	–	50
	1 s	kA	–	–	–	–	–	–	–	–	50
	2 s	kA	–	–	–	–	–	–	–	–	50
	3 s	kA	–	–	–	–	–	–	–	–	50
I_{cw} at U_e up to 220 V DC	1 s	kA	–	–	–	–	–	–	–	–	–
I_{cw} at U_e up to 300 V DC	1 s	kA	–	–	–	–	–	–	–	–	–
I_{cw} at U_e up to 600 V DC	1 s	kA	–	–	–	–	–	–	–	–	–
I_{cw} at U_e up to 1000 V DC	1 s	kA	–	–	–	–	–	–	–	–	–
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	–	–	–	–	–	–	–	–	50
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 IEC60947-2 Annex H	≤500 V	kA	50	50	50	–	50	50	50	50	–
	≤690 V	kA	–	–	–	50	–	–	–	–	50
	1000 V	kA	–	–	–	–	–	–	–	–	–

[1] At rated operational voltage U_e ≥690 V, the I_{cw} value of the circuit breaker corresponds to the I_{cu} or I_{cs} value

[2] Size 1 with $I_{n\,max}$ ≤1250 A

[3] Size 1 with $I_{n\,max}$ ≥1600 A

[4] $I_{n\,max}$ ≤ 2500 A

[5] $I_{n\,max}$ ≥3200 A

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AC



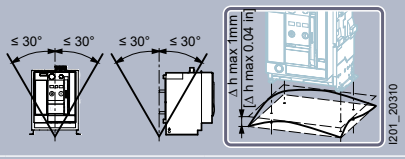
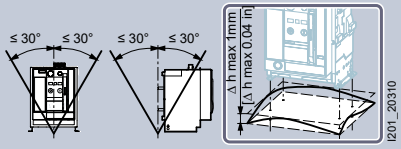
DC



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	–	–
–	–	–	–	–

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

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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		ms				35			
Opening time		ms				38			
Electrical make time (through closing coil) [1]		ms				80			
Electrical opening time (through shunt trip)		ms				73			
Electrical opening time (instantaneous undervoltage release)		ms				≤80			
Opening time due to ETU, instantaneous short-circuit release		ms				50			
Service life/endurance									
Breaking capacity N, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				15000			
	With maintenance [2]	Operating cycles				30000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	With maintenance [2]	Operating cycles				30000			
Breaking capacity S, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				15000			
	With maintenance [2]	Operating cycles				30000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	With maintenance [2]	Operating cycles				30000			
Breaking capacity M, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				10000			
	With maintenance [2]	Operating cycles				15000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	With maintenance [2]	Operating cycles				15000			
Breaking capacity E, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				10000			
	With maintenance [2]	Operating cycles				15000			
Electrical	Without maintenance 690 V	Operating cycles			10000			7500	5000
	Without maintenance 1000 V	Operating cycles				1000			
	Without maintenance 1150 V	Operating cycles				–			
	With maintenance [2]	Operating cycles				15000			
Breaking capacity H, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				–			
	With maintenance [2]	Operating cycles				–			
Electrical	Without maintenance 690 V	Operating cycles				–			
	With maintenance [2]	Operating cycles				–			
Breaking capacity C, 3/4-pole									
Mechanical	Without maintenance	Operating cycles				–			
	With maintenance [2]	Operating cycles				–			
Electrical	Without maintenance 690 V	Operating cycles				–			
	With maintenance 690 V [2]	Operating cycles				–			
Switching frequency									
Breaking capacity N and S									
Electrical	3-pole	1/h				45			
	4-pole	1/h				45			
Breaking capacity M, H and C									
Electrical	3/4-pole	1/h				60/60 ≤ 690 V			
Breaking capacity E									
Electrical	3/4-pole	1/h				20/20 at 1000 V, 60/60 ≤ 690 V			

[1] Make time through closing coil for momentary duty for synchronization purposes 5% OP = 50 ms
[2] Maintenance means: Replacing main contact elements and arc chutes (see operating instructions: www.siemens.com/lowvoltage/manuals).

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	3WA12			3WA13		
						
2000 A	**2500 A**	**3200 A**	**4000 A**	**4000 A**	**5000 A**	**6300 A**
35				35		
34				34		
100				100		
73				73		
≤80				≤80		
50				50		
–				–		
–				–		
–				–		
–				–		
10000				–		
20000				–		
7500	7500	4000	2000	–		
20000				–		
10000				–		
20000				–		
7500	7500	4000	2000	–		
20000				–		
10000				5000		
20000				10000		
7500	7500	4000	2000	1000		
1000				1000		
500				500		
20000				10000		
10000				7500		
20000				15000		
7500	7500	4000	2000	2000		
20000	20000	20000	20000	15000		
5000				5000		
10000				10000		
5000	5000	4000	1000	1000		
10000	10000	10000	10000	10000		
45				–		
60				–		
60/60 ≤ 690 V				60/60 ≤ 690 V		
20/20 at 1000/1150 V, 60/60 ≤ 690 V				20/20 at 1000/1150 V, 60/60 ≤ 690 V		

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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									
Copper bars, bare		Unit, mm²	1× 40 × 10	1× 50 × 10	1× 60 × 10	2× 40 × 10	2× 50 × 10	3× 50 × 10	4× 50 × 10
Copper bars, painted black		Unit, mm²	1× 40 × 10	1× 50 × 10	1× 60 × 10	2× 40 × 10	2× 50 × 10	3× 50 × 10	4× 50 × 10
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)									
Standard connection = push-in	Without end sleeve		2× 0.5 ... 2.5 mm² (AWG 20 ... 14)						
	With end sleeve acc. to DIN 46228 Part 2		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 ... 12 mm (0.39 ... 0.47 inch)						
Optional connection with screw connection	Without end sleeve		2× 0.5 ... 2.5 mm² (AWG 20 ... 14)						
	With end sleeve acc. to DIN 46228 Part 2		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									
Spring-loaded terminals for standard signaling contacts	Without end sleeve		0.08 ... 2.5 mm² (AWG 20 ... 12)						
	With end sleeve acc. to DIN 46228 Part 2		0.25 ... 1.5 mm²						
	Stripped length		5 ... 6 mm (0.2 ... 0.24 inch)						
Push-in connection for communication signaling contacts	Without end sleeve		0.14 ... 1.5 mm² (AWG 20 ... 16)						
	With end sleeve acc. to DIN 46228 Part 2		0.25 ... 1.5 mm² (AWG 20 ... 16)						
	Stripped length		9 mm (0.35 inch)						
Weights									
3-pole	Fixed-mounted circuit breaker	kg	32	32	32	33	33	33	33
	Withdrawable circuit breaker without guide frame	kg	35	35	35	36	36	36	36
	Guide frames	kg	26	26	26	27	27	27	28
4-pole	Fixed-mounted circuit breaker	kg	39	39	39	39	39	40	40
	Withdrawable circuit breaker without guide frame	kg	42	42	42	42	42	43	43
	Guide frames	kg	31	31	31	31	31	31	33

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3WA12				3WA13		
						
2000 A	**2500 A**	**3200 A**	**4000 A**	**4000 A**	**5000 A**	**6300 A**
3× 50×10	2× 100×10	3× 100×10	4× 120×10	4× 100×10	6× 100×10	6× 120×10
3× 50×10	2× 100×10	3× 100×10	4× 120×10	4× 100×10	6× 100×10	6× 120×10
2× 0.5 ... 2.5 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 ... 12 mm (0.39 ... 0.47 inch)				10 ... 12 mm (0.39 ... 0.47 inch)		
2× 0.5 ... 2.5 mm² (AWG 20 ... 14)				2× 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)		
0.08 ... 2.5 mm² (AWG 20 ... 12)				0.08 ... 2.5 mm² (AWG 20 ... 12)		
0.25 ... 1.5 mm²				0.25 ... 1.5 mm²		
5 ... 6 mm (0.2 ... 0.24 inch)				5 ... 6 mm (0.2 ... 0.24 inch)		
0.14 ... 1.5 mm² (AWG 20 ... 16)				0.14 ... 1.5 mm² (AWG 20 ... 16)		
0.25 ... 1.5 mm² (AWG 20 ... 16)				0.25 ... 1.5 mm² (AWG 20 ... 16)		
9 mm (0.35 inch)				9 mm (0.35 inch)		
43	45	50	52	79	80	111
47	48	54	53	84	86	86
33	34	41	40	70	87	86
54	56	63	64	100	102	144
57	60	67	88	107	108	108
40	42	50	71	71	89	110

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3WA12



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

[1] Maintenance means: Replacing main contact elements 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.

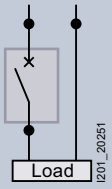
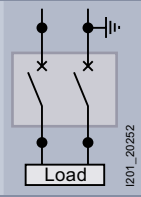
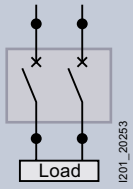
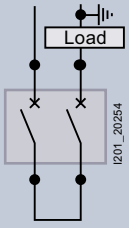
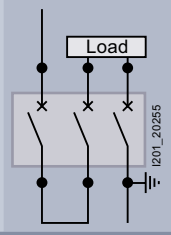
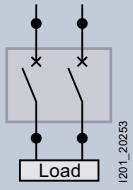
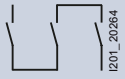
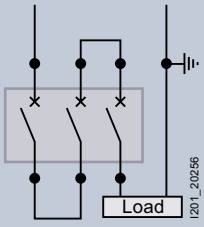
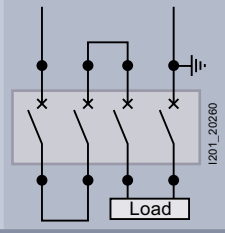
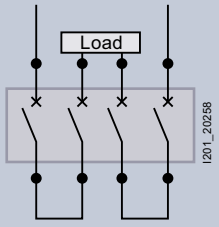
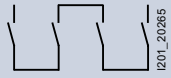
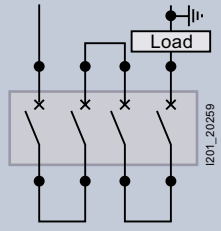
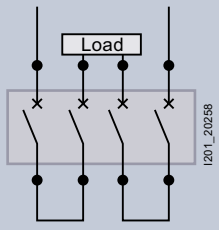
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Non-automatic circuit breakers for DC

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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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**					
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			□	□	□	■	■
Maintenance mode DAS+							
Current setting $I_{i\ DAS+}$	1.5 ... 10 x 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		■	■	■	■	■
Waveform memory			□	□	□	□	■

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

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Electronic trip unit ETU600

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 $I_{g\ alarm}$ with LSIG GFx option plug	Detection method Residual	Sizes 1 and 2: 100 ... 5000 A Size 3: 400 ... 5000 A	□	□	□	■	■
	Detection method Direct	15 ... 5000 A	□	□	□	■	■
Alarm time $t_{g\ alarm}$		0 ... 0.5 s	□	□	□	■	■

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

ETU600 LSIG			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: Measurement of the ground-fault current with an external current transformer	■	■	■	■	■
Characteristic GF curve	With LSIG GFx option plug	For Fix (I^0t)/I^2t/I^4t/I^6t	■	■	■	■	■
Current setting I_g with LSIG GFx option plug	Detection method Residual	Sizes 1 and 2: 100 ... 2000 A Size 3: 400 ... 2000 A	■	■	■	■	■
	Detection method Direct	15 ... 2000 A	■	■	■	■	■
Tripping time t_g	For Fix (I^0t)	0 ... 5 s	■	■	■	■	■
	For I^xt at 3 x 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 $I_{g\ alarm}$ with LSIG GFx option plug	Detection method Residual	Sizes 1 and 2: 100 ... 5000 A Size 3: 400 ... 5000 A	■	■	■	■	■
	Detection method Direct	15 ... 5000 A	■	■	■	■	■
Alarm time $t_{g\ alarm}$		0 ... 0.5 s	■	■	■	■	■

■ Available, feature of the application package

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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**						
G: Ground fault GF Hi-Z							
Tripping	Can be switched on/off		■	■	■	■	■
Method of ground fault detection	Residual	Detection of ground-fault current via summation current formation in all phases and the N conductor	■	■	■	■	■
	Dual Hi-Z, for high-impedance connection of the external current transformers	Protection zone UREF: Detection of the ground-fault current by means of summation current formation Protection zone REF: Measurement of the ground-fault current with an external current transformer combination	■	■	■	■	■
Characteristic GF curve	With LSIG GFx option plug	For Fix (I^0t)/I^2t/I^4t/I^6t	■	■	■	■	■
Current setting I_g with LSIG GFx option plug	Protection zone UREF	Size 2: 100 ... 2000 A and Size 3: 400 ... 2000 A	■	■	■	■	■
	Protection zone REF	15 ... 2000 A	■	■	■	■	■
Tripping time t_g	For Fix (I^0t)	0 ... 5 s	■	■	■	■	■
	For I^xt 3 x 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 $I_{g\ alarm}$ with LSIG GFx option plug	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

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Electronic trip unit ETU600

Operation, interfaces and measurement 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 electronic trip unit ETU600	□	□	■	■	■	–
	Remote operation, requires a communications module, closing coil, shunt trip	□	□	■	■	■	□
Communications module		□	□	□	□	□	□
Digital input and output on the electronic trip unit ETU600							
Parameterizable input	For activating Maintenance mode DAS+ or can be used for parameter set changeover	■	■	■	■	■	–
Parameterizable output	Can be used as a "life contact" and for display of "Parameter set B active" or "Maintenance mode DAS+ active".	■	■	■	■	■	–
IOM230 digital input and output module							
Two parameterizable inputs	For controlling the circuit breaker and transmitting information from the switchboard via communication.	□	□	□	□	□	□
Three parameterizable outputs	For signaling events, states, tripping operations or alarms of the circuit breaker	□	□	□	□	□	□

[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
Measurement 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		–	■	■	■	■
Accuracy according to IEC 61557-12						
Phase current I_{L1}, I_{L2}, I_{L3}	Class 1	■	■	■	■	■
Neutral conductor current I_N	Class 1	■	■	■	■	■
Voltage U_{LN}	Class 0.5	–	–	■	■	■
Voltage U_{LL}	Class 0.5	–	–	■	■	■
Active energy E_a	Class 2	–	–	■	■	■
Active power P	Class 2	–	–	–	■	■
Accuracy according to manufacturer's specifications						
Ground-fault current I_g with ETU600 LSI	2%	–	–	–	■	■
Ground-fault current I_g with ETU600 LSIG, ETU600 LSIG Hi-Z	2%	■	■	■	■	■
Reactive energy E_r	2%	–	–	–	■	■
Apparent energy E_{ap}	2%	–	–	–	■	■
Reactive power Q	2%	–	–	–	■	■
Apparent power S	2%	–	–	–	■	■
Power factor PF	6%	–	–	–	■	■
cos φ	6%	–	–	–	■	■
Frequency f	0.5%	–	–	–	■	■
Current unbalance	2.5%	–	–	–	■	■
Voltage unbalance	1.5%	–	–	–	■	■
Total harmonic distortion $THD\text{-}I$ [1)]	2%	–	–	–	–	■
Total harmonic distortion $THD\text{-}U$ [1)]	2%	–	–	–	–	■
Harmonic I, U [1)]	2%	–	–	–	–	■

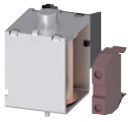
[1)] For 2nd to 15th harmonic ±2% and for 16th to 31st harmonic ±5%

■ Available, feature of the application package
– Not available

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Auxiliary release



Shunt trip (ST)



Undervoltage release (UVR)

Accessories for electronics



Communications module



Digital input/output module



Zone-selective interlocking module



Sealable and lockable cover



Current sensors

Accessories for auxiliary circuit



Trip alarm switch



Motor disconnect switch



Local electric close



Emergency OPEN button

Interlocks and locking provisions



Locking provision for charging handle



Locking provision against unauthorized closing



Mechanical interlock



Locking mechanisms

Other accessories



Door sealing frame



Arc chute cover

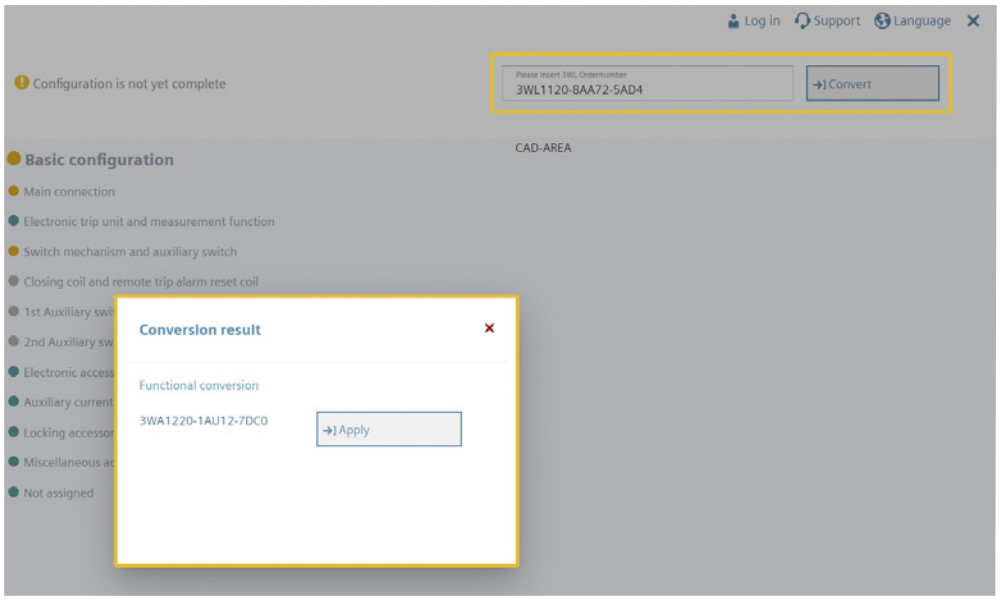


Automatic reset of the reclosing lockout

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

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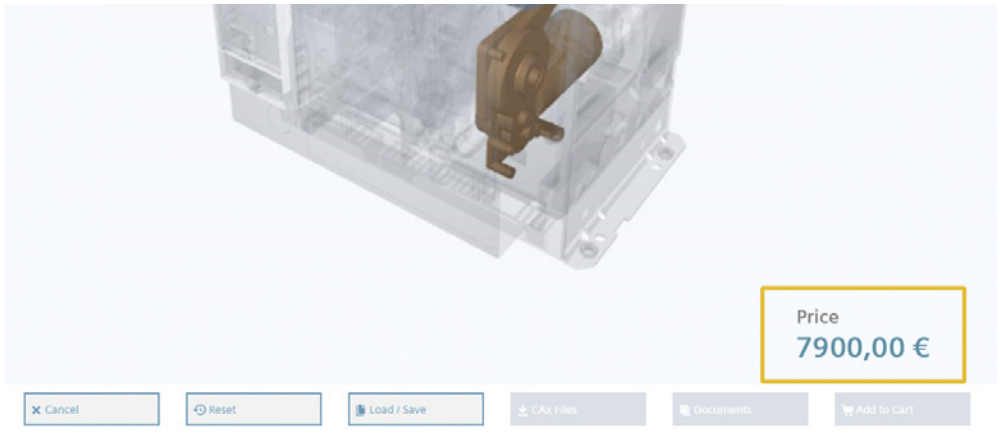
Direct conversion of a 3WL article number to a 3WA article number in the configurator



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



Dynamic customer price during configuration



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

Connection

		SZ 1	SZ 2	SZ 3		
Type of mounting	Fixed-mounted	■	■ [1]	■	Vertical	1
		■	■ [3]	■ [4]	Horizontal	2
		■ [2]	■ [5]	■ [6]	Front	3
		■	■ [3]	■ [4]	Vertical on top/horizontal at the bottom	5
		■	■ [3]	■ [4]	Horizontal on top/vertical at the bottom	6
	Withdrawable	■	■	■	Without guide frame	0
		■	■ [1]	■	Vertical	1
		■ [2]	■ [3]	■ [4]	Horizontal	2
		■ [2]	■ [5]	■ [6]	Front	3
		■ [2]	■ [5]	■ [6]	Flange	4
		■ [2]	■ [3]	■ [4]	Vertical on top/horizontal at the bottom	5
		■ [2]	■ [3]	■ [4]	Horizontal on top/vertical at the bottom	6
		■ [2]	■ [5]	■ [6]	Flange on top/horizontal at the bottom	7
		■ [2]	■ [5]	■ [6]	Horizontal on top/flange at the bottom	8

[1] The 4000 A vertical connections for the 3WA1 have different dimensions from the 3WL1. Dimensionally compatible connections can be ordered with the additional Z option D01.
[2] Not available for 2500 A
[3] Not available for 4000 A
[4] Not available for 6300 A
[5] Not available for 4000 A and for breaking capacity C
[6] Not available for 5000 A and 6300 A and for breaking capacity C

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Structure of the article numbers

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

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

1

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

Operating 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)2)]	Without closing coil	Without remote trip alarm reset coil			A	
	With closing coil (CC/CC-COM) [3)] 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	
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) [4)], instantaneous (≤0.08 s) and short-time delayed (≤0.2 s)		24 V DC			L
			48 V DC			N
			110 ... 127 V AC/110 ... 125 V DC			P
			208 ... 240 V AC/220 ... 250 V DC			Q
			380 ... 415 V AC			R
	With undervoltage release (UVR-t), adjustable delay 0.2 ... 3.2 s		48 V DC			S
			60 V DC			T
			110 ... 127 V AC/110 ... 125 V DC			U
			208 ... 240 V AC/220 ... 250 V DC			V
			380 ... 415 V AC			W

1) Remote trip alarm reset coil is not available for non-automatic circuit breakers
2) When using the remote trip alarm reset coil, the reclosing lockout is generally deactivated. The circuit breaker can be closed again immediately if the conditions for closing are fulfilled.
3) If the ready4COM feature is provided, the communication-capable closing coils (CC-COM) and/or shunt trips (ST-COM) are installed at the factory.
4) UVR instantaneous for 30 V DC and 60 V DC can only be supplied separately.
Please order as follows: for 30 V DC 3WL9111-0AE02-0AA0; for 60 V DC 3WL9111-0AE07-0AA0.

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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 ready4COM feature is provided, the communication-capable closing coils (CC-COM) and/or shunt trips (ST-COM) are installed at the factory.

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Structure of the article numbers

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

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

1

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

Circuit breakers and non-automatic circuit breakers

Size (SZ)	1					1		
	2					2		
	3					3		
		SZ 1	SZ 2	SZ 3				
Max. rated current $I_{n\,max}$	630 A	■	–	–		0	6	
	800 A	■	–	–		0	8	
	1000 A	■	–	–		1	0	
	1250 A	■	–	–		1	2	
	1600 A	■	–	–		1	6	
	2000 A	■	■	–		2	0	
	2500 A	■	■	–		2	5	
	3200 A	–	■	–		3	2	
	4000 A	–	■	■		4	0	
	5000 A	–	–	■		5	0	
	6300 A	–	–	■		6	3	
Short-circuit breaking capacity I_{cu} at 690 V/1000 V/ 1150 V	Breaking capacity E	■	–	–	85/50 kA/–			8
		–	■	–	85/85/50 kA			8
		–	–	■	3-pole: 150/125/70 kA 4-pole: 130/125/70 kA			8
Non-automatic circuit breakers						A	A	
Non-automatic circuit breakers, ready4COM feature						C	A	
Application packages with protective and measurement functions for circuit breakers	Electronic trip unit ETU300 [1]	Protective function			LSI	A	B	
					LSIG	A	C	
	Electronic trip unit ETU600	Current metering				A		
		Current metering, ready4COM feature				C		
	Electronic trip unit ETU600 with measurement function, internal voltage tap in the circuit breaker, VTM640 voltage tap module and ready4COM	PMF-I Energy efficiency PMF-II Basic Power Monitoring PMF-III Advanced Power Monitoring			Voltage tap on top	U		
					Voltage tap on bottom	Q		
					Voltage tap on top	V		
					Voltage tap on bottom	R		
					Voltage tap on top	W		
					Voltage tap on bottom	S		
	Protective functions	■	■	■	LSI		E	
		■	■	■	LSIG		F	
		–	■	■	LSIG Hi-Z		G	

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

[1] Available in Q1/2023

[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".

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

Connection

		Sz 1	Sz 2	Sz 3		
Type of mounting	Fixed-mounted	■	■ 3)	■	Vertical	**1**
		■	■ 2)	■ 4)	Horizontal	**2**
		■ 1)	■ 2)	■ 5)	Front double hole	**3**
		■ 1)	■ 2)	■ 4)	Vertical on top/horizontal at the bottom	**5**
		■ 1)	■ 2)	■ 4)	Horizontal on top/vertical at the bottom	**6**
	Withdrawable	■	■	■	Without guide frame	**0**
		■	■ 3)	■	Vertical	**1**
		■ 1)	■ 2)	■ 4)	Horizontal	**2**
		■ 1)	■ 2)	■ 5)	Front double hole	**3**
		■ 1)	■ 2)	■ 5)	Flange	**4**
		■ 1)	■ 2)	■ 4)	Vertical on top/horizontal at the bottom	**5**
		■ 1)	■ 2)	■ 4)	Horizontal on top/vertical at the bottom	**6**
		■ 1)	■ 2)	■ 5)	Flange on top/horizontal at the bottom	**7**
		■ 1)	■ 2)	■ 5)	Horizontal on top/flange at the bottom	**8**

1) Only ≤2000 A is available for size 1
2) Only ≤3200 A is available for size 2
3) Vertical connection for 3WA size 2 for 4000 A has different dimensions than for the 3WL.
With Z option D01, vertical connection can be changed to the connection compatible with 3WL.
4) Only ≤5000 A is available for size 3
5) Only for 4000 A is available for size 3

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Structure of the article numbers

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

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

1

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

Operating 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	
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) [3], instantaneous (≤0.08 s) and short-time delayed (≤0.2 s)		24 V DC			L
			48 V DC			N
			110 … 127 V AC/110 … 125 V DC			P
			208 … 240 V AC/220 … 250 V DC			Q
			380 … 415 V AC			R
	With undervoltage release (UVR-t), adjustable delay 0.2 … 3.2 s		48 V DC			S
			60 V DC			T
			110 … 127 V AC/110 … 125 V DC			U
			208 … 240 V AC/220 … 250 V DC			V
			380 … 415 V AC			W

[1] Remote trip alarm reset coil is not available for non-automatic circuit breakers
[2] If the ready4COM feature is provided, the communication-capable closing coils (CC-COM) and/or shunt trips (ST-COM) are installed at the factory.
[3] UVR instantaneous for 30 V DC and 60 V DC can only be supplied separately.
Please order as follows: for 30 V DC 3WL9111-0AE02-0AA0; for 60 V DC 3WL9111-0AE07-0AA0.

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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 ready4COM feature is provided, the communication-capable closing coils (CC-COM) and/or shunt trips (ST-COM) are installed at the factory.

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Structure of the article numbers

Basic configuration for DC non-automatic circuit breakers

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

1

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

Non-automatic circuit breakers

Size (SZ)	2		2	

		SZ 2			
Max. rated current $I_{n\,max}$	1000 A	■		1	0
	2000 A	■		2	0
	4000 A	■		4	0
Short-circuit breaking capacity I_{cc}	D	■	25 kA, 600 V DC	1	
	E	■	20 kA, 1000 V DC 20 kA, 1500 V DC [2]	8	

Non-automatic circuit breakers	A	U
Non-automatic circuit breakers, ready4COM feature	C	U

Number of poles [1]	Fixed-mounted		3-pole	0
			4-pole	1
	Withdrawable	Without position signaling switch	3-pole	3
			4-pole	4
		With position signaling switch [1]	3-pole	6
			4-pole	7

Connection

		SZ 2		
Type of mounting	Fixed-mounted	■	Vertical	1
		■	Horizontal	2
		■	Front double hole	3
		■	Vertical on top/horizontal at the bottom	5
		■	Horizontal on top/vertical at the bottom	6
	Withdrawable	■	Without guide frame	0
		■	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

[1] 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".

[2] 1500 V DC applications only possible with 4-pole circuit breakers and breaking capacity E.

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

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	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) [2], instantaneous (≤0.08 s) and short-time delayed (≤0.2 s)	24 V DC	L
		48 V DC	N
		110 ... 127 V AC/110 ... 125 V DC	P
		208 ... 240 V AC/220 ... 250 V DC	Q
		380 ... 415 V AC	R
	With undervoltage release (UVR-t), adjustable delay 0.2 ... 3.2 s	48 V DC	S
		60 V DC	T
		110 ... 127 V AC/110 ... 125 V DC	U
		208 ... 240 V AC/220 ... 250 V DC	V
		380 ... 415 V AC	W

1st auxiliary release	Without 1st auxiliary release		0
	With shunt trip (ST/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 ready4COM feature is provided, the communication-capable closing coils (CC-COM) and/or shunt trips (ST-COM) are installed at the factory.
[2] UVR instantaneous for 30 V DC and 60 V DC can only be supplied separately.
Please order as follows: for 30 V DC 3WL9111-0AE02-0AA0; for 60 V DC 3WL9111-0AE07-0AA0.

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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
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		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 new [1]			
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			
• Cannot be ordered for circuit breakers without a guide frame			
Secondary disconnect terminal system	With screw connection instead of push-in connection (standard)		N03
Mechanical operating cycles 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
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 – 4000 A size 2		R10
Sealable and lockable covers	For electronic trip unit		F40
Internal current sensors (without energy core) for applications with frequency converters			
• Used in converter applications with high harmonic components; can only be used for circuit breakers with an electronic trip unit – External 24 V DC supply required – Undervoltage release required – Additionally contains a relay for monitoring the 24 V DC and warning labels – If option Z=K60 is provided, an optional measurement function PMF-I to PMF-III according to IEC 61557-12 is not technically feasible.			
Internal current sensors	Sizes 2, 3		K60

[1] Available in Q1/2023

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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
Mechanical interlocks			
• Interlocking module with Bowden cable 2 m			
Mechanical interlocks	For fixed-mounted breakers		S55
	For withdrawable circuit breakers with guide frame		R55
	For guide frames (ordered separately)		R56
	For withdrawable circuit breakers (ordered separately)		R57
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 [1]	S05
		Assembly kit for padlocks [2]	S07
		Made by RONIS	S08
		Made by PROFALUX	S09
Locking provisions	For charging handle with padlock [2]		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
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 [3]		R40
	To prevent movement when the control cabinet door is open [4]		R50
Locking provisions to prevent movement of the withdrawable circuit breaker in disconnected position			
• Consisting of Bowden cable and lock in the control cabinet door			
• Not 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 IKON			R82
Made by PROFALUX			R85
Made by RONIS			R86
Increased degree of protection for installation in a control cabinet			
Door sealing frame for degree of protection IP41			T40

[1] Locks must be ordered from the manufacturer.
[2] Padlock not included in the scope of supply.
[3] Not available in combination with R50
[4] Not available in combination with R40

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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)

		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	
Integrated freewheeling diode		Yes	
Operation			
Version		100% OP	5% OP
Closing power	AC/DC	40 VA/40 W	≤60 V: 200 VA/200 W ≥110 V: 250 VA/250 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
Make 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			
Smallest permissible DIAZED fuse, gL, slow-response	24 ... 30 V DC, 48 ... 60 V DC	2 A	10 A
	110 ... 127 V AC/110 ... 125 V DC	1 A	4 A
	208 ... 240 V AC/220 ... 250 V DC	1 A	2 A
Automatic circuit breaker with C characteristic	24 ... 30 V DC, 48 ... 60 V DC	2 A	10 A
	110 ... 127 V AC/110 ... 125 V DC	1 A	4 A
	208 ... 240 V AC/220 ... 250 V DC	1 A	2 A
Fuse protection of the control circuit at U_s for spring charging motor + closing coil [1]			
Smallest permissible DIAZED fuse, gL, slow-response	24 ... 30 V DC, 48 ... 60 V DC	6 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, 48 ... 60 V DC	6 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] With the same control circuit for the closing coil and spring charging motor

Spring charging motor

		3WA11 – 3WA13
Rated operational voltage		
Rated control supply voltage U_s		24 V DC
		30 V DC
		48 V DC
		60 V DC
		110 ... 125 V DC/110 ... 127 V AC
		220 ... 250 V DC/208 ... 240 V AC
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
Fuse protection of the control circuit at U_s for spring charging motor		
Smallest permissible DIAZED fuse, gL, slow-response	24 ... 30 V DC, 48 ... 60 V DC	6 A
	110 ... 125 V DC/110 ... 127 V AC, 220 ... 250 V DC/208 ... 240 V AC	2 A
Automatic circuit breaker with C characteristic	24 ... 30 V DC, 48 ... 60 V DC	6 A
	110 ... 125 V DC/110 ... 127 V AC, 220 ... 250 V DC/208 ... 240 V AC	2 A

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Accessory options

Further technical specifications

Undervoltage releases UVR and UVR-t		3WA11 – 3WA13
Rated operational voltage		
Rated control supply voltage U_s		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
Primary operating range		
Operating limits	Operate voltage	<70% U_s
	Pick-up voltage	85 ... 110% U_s
Integrated freewheeling diode		Yes
Operation		
Closing power	AC/DC	50 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)		≤100 ms
Fuse protection of the control circuit		
Smallest permissible DIAZED fuse, gL, slow-response	24 V, 30 V, 48 V, 60 V DC	2 A
	110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC 380 ... 415 V AC	1 A
Automatic circuit breaker with C characteristic	24 V, 30 V, 48 V, 60 V DC	2 A
	110 ... 127 V AC/110 ... 125 V DC 208 ... 240 V AC/220 ... 250 V DC 380 ... 415 V AC	1 A

Shunt trip (ST/ST-COM/ST2)		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	
Integrated freewheeling diode		Yes	
Operation			
Version		100% OP	5% OP
Closing power	AC/DC	40 VA/40 W	≤60 V: 200 VA/200 W ≥110 V: 250 VA/250 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
Make time of the circuit breaker at 100% U_s		80 ms	50 ms
Fuse protection of the control circuit			
Smallest permissible DIAZED fuse, gL, slow-response	24 ... 30 V DC, 48 ... 60 V DC	2 A	10 A
	110 ... 127 V AC/110 ... 125 V DC	1 A	4 A
	208 ... 240 V AC/220 ... 250 V DC	1 A	2 A
Automatic circuit breaker with C characteristic	24 ... 30 V DC, 48 ... 60 V DC	2 A	10 A
	110 ... 127 V AC/110 ... 125 V DC	1 A	4 A
	208 ... 240 V AC/220 ... 250 V DC	1 A	2 A

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Remote reset magnet for mechanical tripped indicator (F7)

		3WA11 – 3WA13	
Rated operational voltage			
Rated control supply voltage U_s		24 ... 30 V DC	
		48 ... 60 V DC	
		110 ... 125 V DC/110 ... 127 V AC	
		220 ... 250 V DC/208 ... 240 V AC	
Primary operating range			
Primary operating range (acc. to IEC 60947-2)		85 ... 110% U_s	
Extended operating range for battery operation		70 ... 126% U_s	
Integrated freewheeling diode		Yes	
Operation			
Power consumption	AC/DC	60 VA/60 W	
Minimum command time at 1 × U_s		60 ms	
Fuse protection of the control circuit			
Smallest permissible DIAZED fuse, gL	24 ... 60 V DC	2 A TDz (slow)	
	100 V AC/> 100 V DC	1 A TDz (slow)	
Automatic circuit breaker with C characteristic	24 ... 60 V DC	2 A	
	100 V AC/> 100 V DC	1 A	

Contact position-driven auxiliary switches (S1 bis S8)

		3WA11 – 3WA13	
Type		NO or NC	
Contact reliability		From 1 mA at 5 V DC	
Rated insulation voltage U_i		500 V DC/500 V AC 50/60 Hz	
Rated impulse withstand voltage U_{imp}		4 kV	
Fuse protection of the control circuit			
Largest permissible DIAZED fuse (operational class gL)		8 A TDz (slow)	
Automatic circuit breaker with C characteristic		8 A	
Breaking capacity			
Rated operational current I_e	DC12	24 V	10 A
		30 V	4 A
		48 V	2,5 A
		60 V	1 A
		110 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	3 A
		30 V	2.5 A
		48 V	1 A
		60 V	0.4 A
		110 V	0.2 A
		220/240 V	0.1 A
	AC12	≤ 440 V	10 A
	AC13	< 220 V	8 A
		220 ... 240 V	4 A
		320 ... 440 V	3 A

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Accessory options

Further technical specifications

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	
Rated insulation voltage U_i		250 V DC/250 V AC	
Fuse protection of the control circuit			
Smallest permissible DIAZED fuse (operational class gL)		2 A Dz (quick)	
Breaking capacity			
Rated operational current I_e	DC12	24 V	5 A
		30 V	2.5 A
		48 V	2.5 A
		60 V	0.4 A
		110/127 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	2.5 A
		30 V	1 A
		48 V	1 A
		60 V	0.22 A
		110/127 V	0.22 A
		220/240 V	0.1 A
	AC12	≤ 240 V	6 A
	AC13	110 ... 127 V	5 A
		220 ... 240 V	4 A

Trip alarm switches (S24, S25)		3WA11 – 3WA12	
1st trip alarm switch S24		Changeover contact	
2nd trip alarm switch S25		NO contact	
Contact reliability		From 1 mA at 5 V DC	
Rated insulation voltage U_i		250 V DC/250 V AC 50/60 Hz	
Fuse protection of the control circuit			
Smallest permissible DIAZED fuse (operational class gL)		6 A Dz (quick)	
Breaking capacity			
Rated operational current I_e	DC12	24 V	5 A
		30 V	2.5 A
		48 V	2.5 A
		60 V	0.4 A
		110/127 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	2.5 A
		30 V	1 A
		48 V	1 A
		60 V	0.2 A
		110/127 V	0.2 A
		220/240 V	0.1 A
	AC12	≤ 240 V	6 A
	AC13	110 ... 127 V	5 A
		220 ... 240 V	4 A

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Position signaling switches on guide frame

		3WA11 – 3WA13	
Type		Changeover contact (not COM)	
Contact reliability		From 1 mA at 5 V DC	
Rated insulation voltage U_i		250 V DC/250 V AC 50/60 Hz	
Rated impulse withstand voltage U_{imp}		4 kV	
Connection type		Spring-type terminals	
Conductor cross-section that can be connected by customer		1 x 0.5 mm² (AWG 20) ... 1 x 2.5 mm² (AWG 14)	
Fuse protection of the control circuit			
Smallest permissible DIAZED fuse (operational class gL)		6 A Dz (quick)	
Breaking capacity			
Rated operational current I_e	DC12	24 V	5 A
		30 V	2.5 A
		48 V	2.5 A
		60 V	0.4 A
		110/127 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	2.5 A
		30 V	1 A
		48 V	1 A
		60 V	0.22 A
		125 V	0.22 A
		250 V	0.1 A
	R300 DC	24 V	3 A
		30 V	2.5 A
		48 V	1 A
		60 V	0.4 A
		110 V	0.22 A
		220/240 V	0.11 A
	AC12	≤ 440 V	6 A
	AC13	< 220 V	5 A
		220 ... 240 V	4 A
		320 ... 440 V	3 A
	A300 AC	120 V	6 A
		240 V	3 A

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

ETU600

		3WA11 – 3WA13
Power supply		
Method of power supply		Power supply unit DC
DC power supply unit		IEC 61558 SELV/PELV
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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Guide frames for AC

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

	3WA8	5	6	7	8	–	9	10	11	12	–	13	14	15	16
												1			1

Push-in connection [1]	SZ 1, SZ 2, SZ 3	X7, X6, X5	Non-automatic circuit breakers without ready4COM feature	A
		X8, X7, X6, X5	Circuit breakers/non-automatic circuit breakers with ready4COM feature	B
	SZ 2, SZ 3	X9, X8, X7, X6, X5	Including external trip controller ETC600 for circuit breakers with ETU600 LSIG Hi-Z	K

Position signaling switch	Without position signaling switch	A
	Position signaling switch PSS (3x connected position, 2x test position, 1x disconnected position)	C
	Position signaling switch PSS-COM (1x connected position, 1x test position, 1x disconnected position) plus connection to a communications module	G

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

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Accessories for electronic trip unit

External current sensors for the N conductor



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

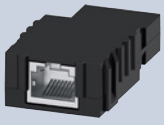
Sealable and lockable covers





Accessory for	Article No.
ETU300 [1]	3WA9111-0EM21 new
ETU600	3WA9111-0EM22

Adapter for connecting the ETU300 to the TD400 new [1]



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	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





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

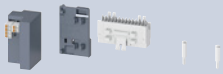
Voltage	Article No.
24 ... 30 V DC	3WA9111-0EM42
48 ... 60 V DC	3WA9111-0EM44
110 ... 127 V AC/110 ... 125 V DC	3WA9111-0EM45
208 ... 240 V AC/220 ... 250 V DC	3WA9111-0EM46

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

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

[1] Available in Q1/2023

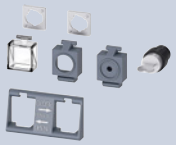
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Accessories and spare parts

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.
Assembly kit FORTRESS or CASTELL [1]	Without locks, cylinders or keys	3WA9111-0BA31
Made by RONIS	Locks, cylinders and keys included	3WA9111-0BA32
Made by KIRK-Key [1]	Without locks, cylinders or keys	3WA9111-0BA33
Made by PROFALUX	Locks, cylinders and keys included	3WA9111-0BA34
Made by CES	Locks, cylinders and keys included	3WA9111-0BA35
Made by IKON	Locks, cylinders and keys included	3WA9111-0BA36
Assembly kit for padlocks	Without padlock	3WA9111-0BA37

Locking provision against unauthorized closing of the withdrawable circuit breaker



- The 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

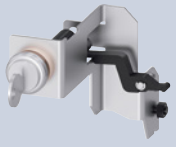
Type	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included	3WA9111-0BA51
Made by IKON	Locks, cylinders and keys included	3WA9111-0BA53
Made by KIRK-Key [1]	Without locks, cylinders or keys	3WA9111-0BA57
Made by RONIS	Locks, cylinders and keys included	3WA9111-0BA58
Made by PROFALUX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

Locking 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 [1]	Without locks, cylinders or keys	3WA9111-0BA80

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

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Locking provisions and interlocks

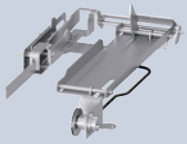
Interlocking systems



- 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, R82, 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

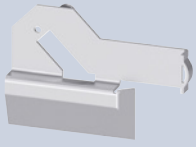
Locking mechanisms to prevent opening of the control cabinet door when the circuit breaker is closed



- Defeatable
- **Note:** Not possible in combination with "Locking mechanisms to prevent movement of the withdrawable circuit breakers in the disconnected position" (order codes "R81", "R82", "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", "R82", "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	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] Locks, cylinders and keys must be ordered from the manufacturer.

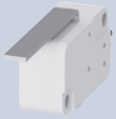
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Accessories and spare parts

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		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 [1]	4× connected position and option for connection to a communications module COM (Signal: "disconnected position" and "absent")	3WA9111-0AH13 new
PSS600 [1]	6× connected position	3WA9111-0AH14 new

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

[1] Available in Q1/2023

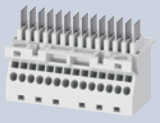
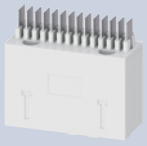
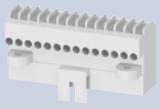
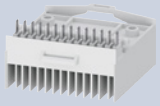
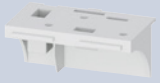
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Secondary disconnect terminals for circuit breakers and guide frames

- 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 new
	Coding kits 3	For fixed-mounted X5 to X8	3WA9111-0AB07
	Sliding contact module 4	For guide frames	3WA9111-0AB08
	Blanking block		3WA9111-0AB12

For a complete secondary disconnect terminal block, you must order:
Fixed-mounted version: 1 + 2 + 3
Withdrawable version: 1 + 4 + 2

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

Auxiliary releases

Closing coil (CC)/shunt trip (ST)



- Suitable for 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 ... 125 V DC/110 ... 127 V AC	3WA9111-0AD05
	220 ... 250 V DC/208 ... 240 V AC	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 ... 125 V DC/110 ... 127 V AC	3WA9111-0AD35
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AD36

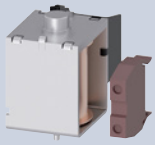
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Accessories and spare parts

Auxiliary release

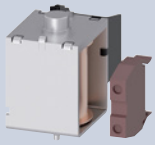
Closing coils (CC)



- 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 ... 125 V DC/110 ... 127 V AC	3WA9111-0AD15
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AD16

Shunt trips (ST)



- 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 ... 125 V DC/110 ... 127 V AC	3WA9111-0AD25
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AD26

Capacitor trip device



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

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

Undervoltage release (UVR)



Version	Voltage	Article No.
Instantaneous ≤0.08 s (UVR) and short-time delayed ≤0.2 s	24 V DC	3WA9111-0AE02
	30 V DC	3WL9111-0AE02-0AA0
	48 V DC	3WA9111-0AE04
	60 V DC	3WL9111-0AE07-0AA0
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AE05
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AE06
	380 ... 415 V AC	3WA9111-0AE07
Delayed (UVR-t), adjustable delay 0.2 ... 3.2 s	48 V DC	3WA9111-0AE13
	60 V DC	3WA9111-0AE14
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AE15
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AE16
	380 ... 415 V AC	3WA9111-0AE17

Operating mechanism

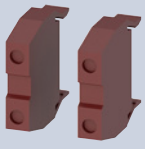
Spring charging motor to charge the stored energy mechanism



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

Auxiliary contacts

Auxiliary switches (AUX)



Contacts	Article No.
2 NO + 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

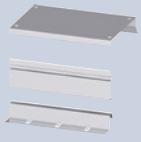
Arc chute, arc chute cover

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	1	E		3WA9111-0AS06
	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.
Circuit breaker internal or on DIN rail, 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 [2] new

Version	Article No.
Circuit breaker internal or on DIN rail, 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	3WA9111-0EC11

ZSI200 zone-selective interlocking module [2] new



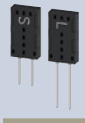
Version	Article No.
Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on DIN rail, connecting cables and terminating resistor for **Cubicle**BUS²	3WA9111-0EC10

IOM350 digital input/output module (3 inputs and 5 outputs) [2] new



Version	Article No.
For mounting on DIN rail, including connecting cables and terminating resistor for **Cubicle**BUS²	3WA9111-0EC12

Terminating resistor for CubicleBUS²



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

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

[1] For connecting the Ethernet cable, connectors angled 90° to the right are recommended, e.g. PROFINET connector 6GK1901-1BB20-2AA0.
[2] Available in Q1/2023

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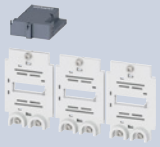
Internal voltage tap

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



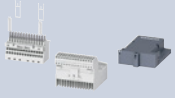
Conversion	Circuit breaker	Size	Article No.
From bottom to top	3-pole	1	3WA9111-0EK11
		2	3WA9111-0EK12
		3	3WA9111-0EK13
	4-pole	1	3WA9111-0EK21
		2	3WA9111-0EK22
		3	3WA9111-0EK23
From top to bottom	3-pole	1	3WA9111-0EK31
		2	3WA9111-0EK32
		3	3WA9111-0EK33
	4-pole	1	3WA9111-0EK41
		2	3WA9111-0EK42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

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



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

Retrofit kit to connect an external voltage transformer



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

Main conductor connections, fixed-mounted versions

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



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

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



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

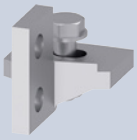
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Accessories and spare parts

Main conductor connections, fixed-mounted versions

Rear vertical main connections



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

[1] In the case of vertical connection size 1 with breaking capacity N and S, up to 1000 A one 3WA9111-0AM11 vertical connection is required for each connection, from 1250 A to 2000 A or with breaking capacity M or E two 3WA9111-0AM11 vertical connections are required for each connection.
[2] In the case of vertical connection size 2, up to 2500 A one 3WA9111-0AM21 vertical connection is required for each connection for breaking capacity S, M, H, E, D, for 3200 A and always for breaking capacity C, two 3WA9111-0AM21 vertical connections are required for each connection

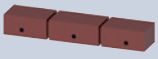
Main conductor connections for withdrawable units

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



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

Supports for front-accessible main connections according to DIN 43673



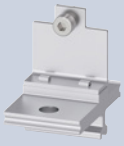
Number of poles	Size	Article No.
3-pole, set for 3 bars, top or bottom	1	3WA9111-0AN81
	2	3WA9111-0AN82
	3	3WA9111-0AN83
4-pole, set for 4 bars, top or bottom	1	3WA9111-0AN84
	2	3WA9111-0AN85
	3	3WA9111-0AN86

Rear vertical main connections



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

Rear horizontal main connections



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

Connecting flange



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

[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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Conversion kit

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

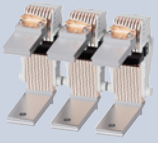


- Guide frames and sliding contact modules must be ordered separately
- Conversion from fixed-mounted to withdrawable circuit breakers is not possible for 3WA circuit breakers with breaking capacity C and breaking capacity E

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

Main contact elements

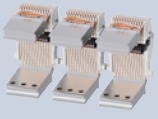
Main contact elements for AC circuit breakers



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

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

Main contact elements for DC non-automatic circuit breakers



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

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

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Circuit breakers and non-automatic circuit breakers for AC and DC

IEC 60947-2

AC





			3WL10		3WL11	
Basic data						
Rated operational voltage U_e		V	≤690		≤1000	
Rated current I_n		A	630 ... 1250		630 ... 2000	
Size			0		1	
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	278|348	210|280	320|410	320|410
Height (standard | A05, A15, A16, DC greater than 600 V)		mm	363.5	296	468|518	462
Depth		mm	271	183	471	357
Approvals						
General product approvals			VDE, EAC, CCC, CE, C-Tick		VDE, EAC, CCC, CE, C-Tick	
Marine/shipbuilding			RMRS		ABS, DNV, LR, BV, GL, PRS, RMRS	
Breaking capacity			**B**	**N**	**S**	**N**	**S**	**H**
Rated short-circuit breaking capacity								
Rated operational voltage U_e up to 415 V AC I_{cu} | I_{cs}		kA	42|42	55|50	66|50	55|55	66|66	85|85
Rated operational voltage U_e up to 500 V AC I_{cu} | I_{cs}		kA	42|42	50|50	50|50	55|55	66|66	85|85
Rated operational voltage U_e up to 690 V AC I_{cu} | I_{cs}		kA	–|–	42|42	50|50	42|42	50|50	66|66
Rated operational voltage U_e up to 690 V AC +20% [6], with Z option: A16 I_{cu} | I_{cs}		kA	–|–	–|–	–|–	–|–	–|–	50|50
Rated operational voltage U_e up to 1000 V AC, with Z option: A05 I_{cu} | I_{cs}		kA	–|–	–|–	–|–	–|–	–|–	50|50
Rated operational voltage U_e up to 1150 V AC, with Z option: A15 I_{cu} | I_{cs}		kA	–|–	–|–	–|–	–|–	–|–	–|–
Rated short-time withstand current I_{cw} [5]								
Rated short-time withstand current I_{cw} at U_e up to 500 V AC	0.5 s	kA	–	–	–	55	66	85
	1 s	kA	42	42	50	50	66	85
	2 s	kA	–	–	–	35 [1]/45 [2]	45	70
	3 s	kA	24	24	36	35 [1]/45 [2]	35	60
Rated short-time withstand current I_{cw} at U_e up to 690 V AC	0.5 s	kA	–	–	–	42	50	66
	1 s	kA	42	42	50	42	50	66
	2 s	kA	–	–	–	35 [1]/42 [2]	45	66
	3 s	kA	24	24	36	30 [1]/45 [2]	35	60
Rated short-time withstand current I_{cw} at DC	1 s	kA	–	–	–	–	–	–
Rated conditional short-circuit current I_{cc} of the non-automatic air circuit breakers								
Up to 500 V AC		kA	–	42	50	55	66	85
Up to 690 V AC		kA	–	42	50	42	50	66
Up to 1000 V/1150 V AC, with Z option: A05		kA	–	–	–	–	–	50 /–
Up to 1000 V/1150 V AC, with Z option: A15		kA	–	–	–	–	–	–
Up to 220 V DC		kA	–	–	–	–	–	–
Up to 300 V DC		kA	–	–	–	–	–	–
Up to 600 V DC		kA	–	–	–	–	–	–
Up to 1000 V DC		kA	–	–	–	–	–	–
Rated short-circuit making capacity I_{cm}								
I_{cm} at 415 V AC		kA	88	121	145	121	145	187
I_{cm} at 500 V AC		kA	88	105	105	121	145	187
I_{cm} at 690 V AC		kA	–	88	105	88	105	145
I_{cm} at 1000 V AC		kA	–	–	–	–	–	105
I_{cm} at 1150 V AC		kA	–	–	–	–	–	–

[1] Size 1 with $I_{n\,max}$ ≤1250 A
[2] Size 1 with $I_{n\,max}$ ≥1600 A
[3] Size 2 with $I_{n\,max}$ ≤ 2500 A
[4] Size 2 with $I_{n\,max}$ ≥3200 A
[5] At rated operational voltage U_e ≥690 V, the I_{cw} value of the circuit breaker corresponds to the I_{cu} or I_{cs} value

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AC



3WL12

≤1150	
800 ... 4000	
2	
Withdrawable	Fixed-mounted
3/4-pole	3/4-pole
460|590	460|590
468|518	462
471	357
VDE, EAC, CCC, CE, C-Tick	
ABS, DNV, LR, BV, GL, PRS, RMRS	
N	**S**
66|66	85|85
66|66	85|85
50|50	75|75
–|–	–|–
–|–	–|–
–|–	–|–
66	85
66	85
66	66 [3)]/85 [4)]
55 [3)]/66 [4)]	55 [3)]/75 [4)]
50	75
50	75
50	66 [3)]/75 [4)]
50	55 [3)]/75 [4)]
–	–
66	85
50	75
–	–
–	–
–	–
–	–
–	–
145	187
145	187
105	165
–	–
–	–

3WL13

≤1150	
4000 ... 6300	
3	
Withdrawable	Fixed-mounted
3/4-pole	3/4-pole
704|914	704|914
468|518	462
471	357
VDE, EAC, CCC, VDE, CE, C-Tick	
ABS, DNV, LR, BV, GL, PRS, RMRS	
H	**C 3p**	**C 4p**
100|100	150|150	130|130
100|100	150|150	130|130
85|85	150|150	130|130
–|–	–|–	–|–
85|85	125|125	125|125
70|70	–|–	–|–
100	130	120
85	130	120
66 [3)]/85 [4)]	130	120
55 [3)]/75 [4)]	130	120
85	130	120
85	130	120
85	130	120
75	130	120
–	–	–
100	130	120
85	130	120
85/85	–	–
70/70	–	–
–	–	–
–	–	–
–	–	–
–	–	–
220	330	286
220	330	286
187	330	286
105	267	267
105	–	–

DC



3WL11

1000 DC	
2000	
1	
Fixed-mounted	
4-pole	
410	
462	
357	
VDE, EAC, CCC, CE, C-Tick	
ABS, DNV, LR, BV, GL, PRS, RMRS	
DC
–
–
–
–
–
–
–
–
–
–
–
–
–
20
–
–
–
–
20
20
20
20
–
–
–
–
–



3WL12

≤600/1000 DC	
1000 ... 4000	
2	
Withdrawable	Fixed-mounted
3/4-pole	3/4-pole
460|590	460|590
468|518	462
471	357
VDE, EAC, CCC, CE, C-Tick	
ABS, DNV, LR, BV, GL, PRS, RMRS	
DC
–
–
–
–
–
–
–
–
–
–
–
–
–
35 [8)]/30 [9)]/25 [10)]/20 [11)]
–
–
–
–
35
30
25
20
–
–
–
–
–

[6)] At 690 V AC +5%, the $I_{cu} = I_{cs} = 85$ kA
[7)] Up to 3200 A
[8)] At $U_e = 220$ V DC
[9)] At $U_e = 300$ V DC
[10)] At $U_e = 600$ V DC
[11)] At $U_e = 1000$ V DC

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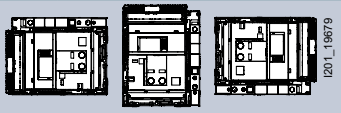
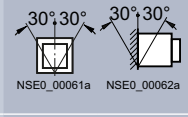
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Circuit breakers and non-automatic circuit breakers for AC

IEC 60947-2



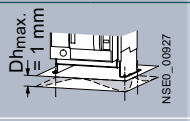
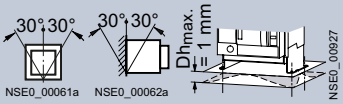
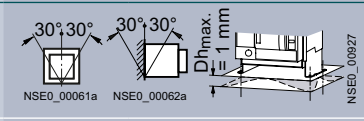


			3WL10				3WL11	
Rated current I_n			**630 A**	**800 A**	**1000 A**	**1250 A**	**1000 A**	**1250 A**
General data								
Isolating function acc. to EN 60947-2			Yes				Yes	
Utilization category			B				B	
Permissible ambient temperature	During operation (in operation with LCD max. 55 °C) [1]	°C	–25 ... +70				–40 ... +70	
	Storage	°C	–40 ... +70				–40 ... +80	
Mounting position								
Degree of protection			IP20 without cabinet door, IP30 with door sealing frame, IP54 with cover				IP20 without 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	≤690				690/1000	
Rated insulation voltage U_i		V AC	1000				1000	
Rated impulse withstand voltage U_{imp}	Main conducting paths	kV	12				12	
	Auxiliary circuits	kV	4				4	
	Control circuits [9]	kV	2.5				2.5	
Rated rotor operational voltage U_{er}		V					2000	
Permissible load for withdrawable versions [2] [4] [10]								
At rear horizontal main connections	Up to 55 °C (Cu bare)	A	630	800	1000	1250	1000	1250
	Up to 60 °C (Cu bare)	A	630	800	1000	1250	1000	1250
	Up to 70 °C	A	630	800	1000	1250	1000 [8]	1210 [8]
Power loss at I_n								
With 3-phase symmetrical load, complete device (3/4p)	Fixed-mounted circuit breaker	W	31	50	78	122	100	105
	Withdrawable circuit breaker	W	62	100	156	244	195	205
Switching times								
Make time		ms	<20	<20	<20	<20	35	
Opening time		ms	<20	<20	<20	<20	38	
Electrical make time (through closing coil) [5]		ms	<50	<50	<50	<50	80	
Electrical opening time (through shunt trip)		ms	<35	<35	<35	<35	73	
Electrical opening time (instantaneous undervoltage release)		ms	<50	<50	<50	<50	≤80	
Opening time due to ETU, instantaneous short-circuit release		ms	25	25	25	25	50	
Service life/endurance								
Breaking capacity N and S, 3/4-pole								
Mechanical	Without maintenance	Operating cycles	20000	20000	20000	20000	15000	15000
	With maintenance [6]	Operating cycles	–	–	–	–	25000	25000
Electrical	Without maintenance 440 V	Operating cycles	8000 [7]	8000 [7]	8000 [7]	8000 [7]	–	–
	Without maintenance 690 V	Operating cycles	8000 [7]	8000 [7]	8000 [7]	6500 [7]	10000	10000
	With maintenance [6]	Operating cycles	– [7]	– [7]	– [7]	– [7]	25000	25000
Breaking capacity H, 3-pole								
Mechanical	Without maintenance	Operating cycles	–	–	–	–	10000	10000
	With maintenance [6]	Operating cycles	–	–	–	–	15000	15000
Electrical	Without maintenance 690 V	Operating cycles	–	–	–	–	7500	7500
	Without maintenance 1000 V, with Z option: A05	Operating cycles	–	–	–	–	1000	1000
	Without maintenance 1150 V, with Z option: A15	Operating cycles	–	–	–	–	–	–
	With maintenance [6]	Operating cycles	–	–	–	–	15000	15000

[1] The LCD on the 3WL10 is always active.
[2] 4000 A, size 2 in fixed-mounted version, 3-pole
[4] ETU76B with graphics display can be used up to max. 55 °C.
[5] Make time through closing coil for synchronization purposes (short-time excited) 50 ms.
[6] Maintenance means: Replacing main contact elements and arc chutes (see Operating Manual). Greasing the breaker mechanism on the 3WL10, no spare part of components.

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	3WL11				3WL12					3WL13		
												
	1600 A	2000 A	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A	4000 A	4000 A	5000 A	6300 A
	Yes					Yes						Yes	
	B					B						B	
	–40 ... +70					–40 ... +70						–40 ... +70	
	–40 ... +80					–40 ... +80						–40 ... +80	
													
	IP20 without cabinet door, IP41 with door sealing frame, IP55 with cover					IP20 without cabinet door, IP41 with door sealing frame, IP55 with cover						IP20 without cabinet door, IP41 with door sealing frame, IP55 with cover	
	690/1000					690/1000/1150						690/1000/1150	
	1000					≤1150						≤1150	
	12					12						12	
	4					4						4	
	2.5					2.5						2.5	
	2000					2000						2000	
	1600	2000	800	1000	1250	1600	2000	2500	3200	3950	4000	5000	5920
	1600	1930	800	1000	1250	1600	2000	2500	3020	3810	4000	5000	5810
	1490 [8]	1780 [8]	800 [8]	1000 [8]	1250 [8]	1600 [8]	2000 [8]	2280 [8]	2870 [8]	3600 [8]	4000 [8]	5000 [8]	5500 [8]
	150	240	40	45	80	85	180	270	410	750	520	630	900
	350	440	85	95	165	175	320	520	710	925	810	1050	1600
	35					35						35	
	38					34						34	
	80					100						100	
	73					73						73	
	≤80					≤80						≤80	
	50					50						50	
	15000	15000	10000	10000	10000	10000	10000	10000	10000	10000	–	–	–
	25000	25000	17500	17500	17500	17500	17500	17500	17500	17500	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–	–
	10000	7500	7500	7500	7500	7500	7500	7500	4000	2000	–	–	–
	25000	25000	17500	17500	17500	17500	17500	17500	17500	17500	–	–	–
	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	5000	5000	5000
	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	10000	10000	10000
	7500	7500	7500	7500	7500	7500	7500	7500	4000	2000	2000	2000	2000
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
	–	–	500	500	500	500	500	500	500	500	500	500	500
	15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	10000	10000	10000

[7] Periodic greasing of breaker mechanism on the 3WL10 (see Manual), no spare part of components

[8] Cu painted black

[9] Motorized operating mechanisms U_{imp}=1.2 kV

[10] For 3WL size 2 4000 A and size 3 6300 A with rear vertical main connections.

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Circuit breakers and non-automatic circuit breakers for AC

IEC 60947-2 (continued)





Rated current I_n			630 A	800 A	1000 A	1250 A	1000 A	1250 A
			3WL10				3WL11	
Service life/endurance								
Breaking capacity H, 4-pole								
Mechanical	Without maintenance	Operating cycles	–	–	–	–	10000	10000
	With maintenance [6]	Operating cycles	–	–	–	–	15000	15000
Electrical	Without maintenance 690 V	Operating cycles	–	–	–	–	7500	7500
	Without maintenance 1000 V	Operating cycles	–	–	–	–	1000	1000
	Without maintenance 1150 V [7]	Operating cycles	–	–	–	–	–	–
	With maintenance [6]	Operating cycles	–	–	–	–	10000	10000
Breaking capacity C								
Mechanical	Without maintenance	Operating cycles	–	–	–	–	–	–
	With maintenance [6]	Operating cycles	–	–	–	–	–	–
Electrical	Without maintenance 690 V	Operating cycles	–	–	–	–	–	–
	With maintenance 690 V [6]	Operating cycles	–	–	–	–	–	–
Switching frequency [8]								
Mechanical / electrical	690 V version	1/h	60/30	60/30	60/30	60/30	–	–
	1000 V /1150 V version	1/h	–	–	–	–	–	–
Connection								
Minimum main conductor cross-sections								
Copper bars, bare		Unit, mm^2	2× 40×5	2× 50×5	2× 50×10 [12] 2× 50×8 [13]	2× 50×10 [12] 2× 50×8 [12]	1× 60×10	2× 40×10
Copper bars, painted black		Unit, mm^2	–	–	–	–	1× 60×10	2× 40×10
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)								
Standard connection = screw	Without end sleeve				–		2× 0.5 … 2× 1.5 mm^2 (AWG 20 … 16); 1× 2.5 mm^2 (AWG 14)	
	With end sleeve acc. to DIN 46228 Part 2				–		1× 0.5 … 1× 1.5 mm^2 (AWG 20 … 16)	
	With twin end sleeve				–		2× 0.5 … 2× 1.5 mm^2 (AWG 20 … 16)	
Screwless connection technology	Without end sleeve				0.5 … 2.5 mm^2 (AWG 20 … 14)		2× 0.5 … 2× 2.5 mm^2 (AWG 20 … 14)	
	With end sleeve acc. to DIN 46228 Part 2				0.5 … 1.5 mm^2 (AWG 20 … 16)		2× 0.5 … 2× 1.5 mm^2 (AWG 20 … 16)	
Position signaling switch								
Screwless connection technology					1× 0.5 … 1× 2.5 mm^2 (AWG 20 … 14)		1× 0.5 … 1× 2.5 mm^2 (AWG 20 … 14)	
Weights								
3-pole	Fixed-mounted circuit breaker	kg			14		43	43
	Withdrawable circuit breaker	kg			17.3		45	45
	Guide frames	kg			21		25	25
4-pole	Fixed-mounted circuit breaker	kg			16		50	50
	Withdrawable circuit breaker	kg			19.3		54	54
	Guide frames	kg			25		30	30

[6] Maintenance means: Replacing main contact elements and arc chutes (see Operating Manual).

[7] Size 2 with order code "A15" and size 3. Data for very high breaking capacity.

[8] Minimum interval time between 2 tripping operations

[9] 3-pole switching with breaking capacity N and S: 45/h.

[12] Horizontal

[13] Vertical

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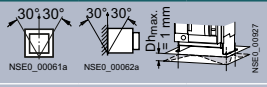
3WL11					3WL12					3WL13		
												
1600 A	**2000 A**	**800 A**	**1000 A**	**1250 A**	**1600 A**	**2000 A**	**2500 A**	**3200 A**	**4000 A**	**4000 A**	**5000 A**	**6300 A**
10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	5000	5000	5000
15000	15000	15000	15000	15000	15000	15000	15000	15000	15000	10000	10000	10000
7500	7500	7500	7500	7500	7500	7500	7500	4000	2000	2000	2000	2000
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
–	–	500	500	500	500	500	500	500	500	500	500	500
10000	10000	15000	15000	15000	15000	15000	15000	15000	15000	10000	10000	10000
–	–	5000	5000	5000	5000	5000	5000	5000	–	5000	5000	5000
–	–	10000	10000	10000	10000	10000	10000	10000	–	10000	10000	10000
–	–	5000	5000	5000	5000	5000	5000	4000	–	1000	1000	1000
–	–	10000	10000	10000	10000	10000	10000	8000	–	–	–	–
–	20/20	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]	60/60 [9)]
–	–	20/20	20/20	20/20	20/20	20/20	20/20	20/20	20/20	20/20	20/20	20/20
2× 50×10	3× 50×10	1× 50×10	1× 60×10	2× 40×10	2× 50×10	3× 50×10	2× 100×10	3× 100×10	4× 120×10	4× 100×10	6× 100×10	6× 120×10
2× 50×10	3× 50×10	1× 50×10	1× 60×10	2× 40×10	2× 50×10	3× 50×10	2× 100×10	3× 100×10	4× 100×10	4× 100×10	6× 100×10	6× 120×10
2× 0.5 … 2× 1.5 mm² (AWG 20 … 16); 1× 2.5 mm² (AWG 14)					2× 0.5 … 2× 1.5 mm² (AWG 20 … 16); 1× 2.5 mm² (AWG 14)					2× 0.5 … 2× 1.5 mm² (AWG 20 … 16); 1× 2.5 mm² (AWG 14)		
1× 0.5 … 1× 1.5 mm² (AWG 20 … 16)					1× 0.5 … 1× 1.5 mm² (AWG 20 … 16)					1× 0.5 … 1× 1.5 mm² (AWG 20 … 16)		
2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)					2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)					2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)		
2× 0.5 … 2× 2.5 mm² (AWG 20 … 14)					2× 0.5 … 2× 2.5 mm² (AWG 20 … 14)					2× 0.5 … 2× 2.5 mm² (AWG 20 … 14)		
2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)					2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)					2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)		
1× 0.5 … 1× 2.5 mm² (AWG 20 … 14)					1× 0.5 … 1× 2.5 mm² (AWG 20 … 14)					1× 0.5 … 1× 2.5 mm² (AWG 20 … 14)		
43	43	56	56	56	56	56	59	64	85	82	82	90
45	45	60	60	60	60	60	63	68	121	88	88	96
25	25	31	31	31	31	31	39	45	52	60	60	70
50	50	67	67	67	67	67	71	77	103	99	99	108
54	54	72	72	72	72	72	76	82	146	106	106	108
30	30	37	37	37	37	37	47	54	62	84	84	119

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Non-automatic circuit breakers for DC

IEC 60947-2

			3WL11	3WL12		
						
Rated current I_n			**2000 A**	**1000 A**	**2000 A**	**4000 A**
General data						
Size			1	2		
Isolating function acc. to EN 60947-2			Yes	Yes		
Utilization category			B	B		
Permissible ambient temperature	Operation	°C	–40 ... +70	–40 ... +70		
	Storage	°C	–40 ... +80	–40 ... +80		
Mounting position						
Degree of protection			IP20 without cabinet door, IP41 with door sealing frame, IP55 with cover	IP20 without cabinet door, IP41 with door sealing frame, IP55 with cover		
Voltage						
Rated operational voltage U_e at 50/60 Hz	1000 V version	V DC	1000	600/1000		
Rated insulation voltage U_i		V DC	1000	1000		
Rated impulse withstand voltage U_{imp}	Main conducting paths	kV	12	12		
	Auxiliary circuits	kV	4	4		
	Control circuits	kV	2.5	2.5		
Permissible load						
At rear horizontal main connections	Up to 40 °C (Cu black painted)	A	2000	1000	2000	4000
	Up to 55 °C (Cu black painted)	A	1910	1000	2000	3640
	Up to 60 °C (Cu black painted)	A	1850	1000	2000	3500
	Up to 70 °C (Cu black painted)	A	1710	1000	1950	3250
Power loss at I_n						
With symmetrical load	Withdrawable circuit breaker	W	150	280	770	1640
Switching times						
Make time		ms	35	35		
Opening time		ms	38	34		
Electrical make time (through activation solenoid) [1]		ms	100	100		
Electrical opening time (through shunt trip)		ms	73	73		
Electrical opening time (instantaneous undervoltage release)		ms	≤80	≤80		
Service life/endurance [3]						
Mechanical	Without maintenance	Operating cycles	10000	10000	10000	10000
	With maintenance [2]	Operating cycles	15000	17500	17500	17500
Electrical	Without maintenance	Operating cycles	1000	6000	6000	4000
	Without maintenance 1000 V	Operating cycles	1000	1000	1000	1000
	With maintenance [2]	Operating cycles	2000	17500	17500	17500

[1] Make time through activation solenoid for synchronization purposes (short-time excited) 50 ms.
[2] Maintenance means: Replace main contact elements and arc chutes (see Operating Manual).
[3] Further technical specifications on request.
[4] At U_e = 220 V DC
[5] At U_e = 300 V DC
[6] At U_e = 600 V DC
[7] At U_e = 1000 V DC

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			3WL11	3WL12		
						
Rated current I_n			**2000 A**	**1000 A**	**2000 A**	**4000 A**
Short-circuit breaking capacity I_{cc}						
Up to 220 V DC		kA	20	35		
Up to 300 V DC		kA	20	30		
Up to 600 V DC		kA	20	25		
Up to 1000 V DC		kA	20	20		
Rated short-time withstand current I_{cw}						
0.5 s		kA	–	–		
1 s		kA	20	35 [4]/30 [5]/25 [6]/20 [7]		
2 s		kA	–	–		
3 s		kA	–	–		
Switching frequency						
690 V version		1/h	–	60	60	60
1000 V version		1/h	20	20	20	20
Connection						
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)						
Standard connection = strain-relief clamp	Without end sleeve		2× 0.5 … 2× 1.5 mm² (AWG 20 … 16); 1× 2.5 mm² (AWG 14)	2× 0.5 … 2× 1.5 mm² (AWG 20 … 16); 1× 2.5 mm² (AWG 14)		
	With end sleeve acc. to DIN 46228 Part 2		1× 0.5 … 1× 1.5 mm² (AWG 20 … 16)	1× 0.5 … 1× 1.5 mm² (AWG 20 … 16)		
	With twin end sleeve		2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)	2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)		
Optional connection = tension spring	Without end sleeve		2× 0.5 … 2× 2.5 mm² (AWG 20 … 14)	2× 0.5 … 2× 2.5 mm² (AWG 20 … 14)		
	With end sleeve acc. to DIN 46228 Part 2		2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)	2× 0.5 … 2× 1.5 mm² (AWG 20 … 16)		
Weights						
3-pole	Fixed-mounted circuit breaker	kg	43	56	56	64
	Withdrawable circuit breaker	kg	–	60	60	68
	Guide frames	kg	–	31	31	45
4-pole	Fixed-mounted circuit breaker	kg	50	67	67	77
	Withdrawable circuit breaker	kg	–	72	72	82
	Guide frames	kg	–	37	37	54

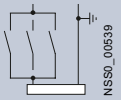
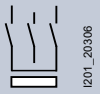
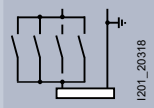
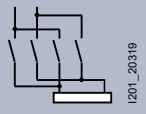
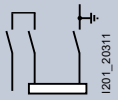
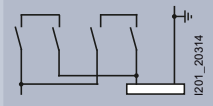
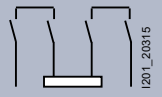
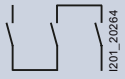
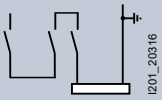
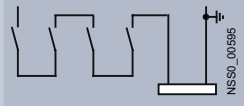
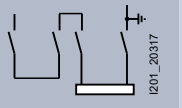
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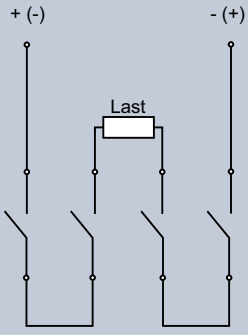
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Non-automatic circuit breakers for DC

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.

Required contact gaps at rated voltage [1]	Size 2 For 3-pole non-automatic circuit breakers 1-pole	Size 2 For 3-pole non-automatic circuit breakers 2-pole	Size 1 and Size 2 For 4-pole non-automatic circuit breakers 1-pole	Size 1 and Size 2 For 4-pole non-automatic circuit breakers 2-pole
Rated operational voltage up to 300 V				
	 Grounded system [2]		 Grounded system [3]	
Rated operational voltage up to 600 V				
		 Grounded system	 Grounded system [2]	
Rated operational voltage up to 1000 V [4]				
	 Grounded system		 Grounded system	 Grounded system

Required contact gaps at rated voltage [1]	Size 1 For 4-pole non-automatic circuit breakers 2-pole
Rated operational voltage up to 1000 V [4]	
	

[1] Contact gaps connected in series
[2] 2 conducting paths in parallel
[3] 3 conducting paths in parallel
[4] Version for 1000 V required, order with "-Z" and order code A05
Grounded system
Load

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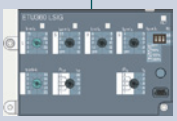
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Electronic trip units ETU

With watchdog monitoring

3WL10



			ETU320 (LI)	ETU350 (LSI)	ETU360 (LSIG)
Basic protective functions					
L	Overload protection (L tripping)	Setting range of operating value $I_r = I_n \times$ ...	0.4 | 0.5 | 0.6 | 0.7 | 0.75 | 0.8 | 0.85 | 0.9 | 0.95 | 1 | Default 0.4	0.4 | 0.5 | 0.6 | 0.7 | 0.75 | 0.8 | 0.85 | 0.9 | 0.95 | 1 | Default 0.4	0.4 | 0.5 | 0.6 | 0.7 | 0.75 | 0.8 | 0.85 | 0.9 | 0.95 | 1 | Default 0.4
		Switchable overload protection (from I^2t- to I^4t-dependent function)	–	–	–
		Setting range of the delay t_r at I^2t (Reference point 6× I_n)	0.75 | 1 | 2 | 5 | 8 | 10 | 14 | 17 | 21 | 25 s | Default 0.75 s	0.75 | 1 | 2 | 5 | 8 | 10 | 14 | 17 | 21 | 25 s | Default 0.75 s	0.75 | 1 | 2 | 5 | 8 | 10 | 14 | 17 | 21 | 25 s | Default 0.75 s
		Setting range of the delay t_r at I^4t (Reference point 6× I_n)	–	–	–
		Thermal memory can be switched on/off	Permanently switched on	Permanently switched on	Permanently switched on
		Phase failure sensitivity/asymmetry	–	–	–
S	Short-time-delayed short-circuit protection (ST tripping)	Setting range of operating value $I_{sd} = I_n \times$ ...	–	1 | 1.5 | 2 | 2.5 | 3 | 4 | 6 | 8 | 10 | Default OFF	1 | 1.5 | 2 | 2.5 | 3 | 4 | 6 | 8 | 10 | Default OFF
		Setting range of the delay time t_{sd} at I^2t	–	0.1 | 0.2 | 0.3 | 0.4 | 0.5 | (Ref. 10× I_n)	0.1 | 0.2 | 0.3 | 0.4 | 0.5 | (Ref. 10× I_n)
		Setting range of the delay time t_{sd} (t = const.)	–	0.08 | 0.15 | 0.22 | 0.3 | 0.4 s	0.08 | 0.15 | 0.22 | 0.3 | 0.4 s
		ZSI function	–	–	–
I	Instantaneous short-circuit protection (INST tripping)	Setting range $I_i = I_n \times$ ...	OFF | 1.5 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 15	OFF | 1.5 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 15	OFF | 1.5 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 15
N	Neutral conductor protection	N conductor setting range $I_N = I_n \times$ ...	OFF | 50% | 100% | 200%	OFF | 50% | 100% | 200%	OFF | 50% | 100% | 200%
G	Ground-fault tripping (GF tripping) Detection of ground-fault current through summation current formation with internal or external neutral conductor transformer	Tripping function can be switched on/off	–	–	■
		Alarm function can be switched on/off	–	–	Permanently switched on
		Detection of ground-fault current through external current transformer	–	–	–
		Setting range of the operating current $I_g = I_n \times$ ...	–	–	0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 1
		Setting range of the operating current I_g for alarm	–	–	–
		Setting range of the delay time t_g	–	–	0.1 | 0.2 | 0.4 | 0.6 | 0.8 s | (fixed delay)
		Switchable ground-fault protection characteristic (I^2t-dependent function)	–	–	t = const./I^2t | Default I^2t
		Setting range of the delay time t_g at I^2t	–	–	0.1 | 0.2 | 0.4 | 0.6 | 0.8 s (Ref. 2× I_n) (I^2t dependent) | Default 0.1 (I^2t)
		ZSI-G function	–	–	–

[1] Sizes 1 and 2/size 3

■ Available – Not available/not present

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3WL10		3WL11 – 3WL13				
						
ETU650 (LSI)	**ETU660 (LSIG)**	**ETU15B (LI)**	**ETU25B (LSI)**	**ETU27B (LSIG)**	**ETU45B (LSIG)**	**ETU76B (LSIG)**
0.4 ... 1 | Default 1 (in steps of 0.001)	0.4 ... 1 | Default 1 (in steps of 0.001)	0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.75 | 0.8 | 0.85 | 0.9 | 1	0.4 | 0.45 | 0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.8 | 0.9 | 1	0.4 | 0.45 | 0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.8 | 0.9 | 1	0.4 | 0.45 | 0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.8 | 0.9 | 1	0.4 ... 1
■	■	–	–	–	■	■
0.75 ... 36 s | (in steps of 0.25 s) | Default 36 s	0.75 ... 36 s | (in steps of 0.25 s) | Default 36 s	10 s fixed	10 s fixed	10 s fixed	2 | 3.5 | 5.5 | 8 | 10 | 14 | 17 | 21 | 25 | 30 s	2 ... 30 s
0.75 ... 5 s | (in steps of 0.25 s) | Default 5 s	0.75 ... 5 s | (in steps of 0.25 s) | Default 5 s	–	–	–	1 | 2 | 3 | 4 | 5 s	1 ... 5 s
■	■	–	–	–	■	■
2% ... 90% (default 50%)	2% ... 90% (default 50%)	–	At t_{sd} = 20 ms (M)	At t_{sd} = 20 ms (M)	At t_{sd} = 20 ms (M)	■ (on/off)
0.6 ... 10 | OFF | (in steps of 0.1)	0.6 ... 10 | OFF | (in steps of 0.1)	–	1.25 | 1.5 | 2 | 2.5 | 3 | 4 | 6 | 8 | 10 | 12	1.25 | 1.5 | 2 | 2.5 | 3 | 4 | 6 | 8 | 10 | 12	1.25 | 1.5 | 2 | 2.5 | 3 | 4 | 6 | 8 | 10 | 12 | OFF	1.25 × I_n ... 0.8 × I_{cw} OFF
0.05 ... 0.5 s (Ref. 10× I_n)	0.05 ... 0.5 s (Ref. 10× I_n)	–	–	–	100 | 200 | 300 | 400 ms	100 ... 400 ms
0.05 ... 0.4 s	0.05 ... 0.4 s	–	M (0.02 ms) | 100 | 200 | 300 | 400 ms	M (0.02 ms) | 100 | 200 | 300 | 400 ms	M (0.02 ms) | 100 | 200 | 300 | 400 ms	M (0.02 ms) | 80 ... 4000 ms
–	–	–	–	–	Via module of the **Cubicle**BUS	Via module of the **Cubicle**BUS
OFF | 1.5 ... 15 | (in steps of 0.1)	OFF | 1.5 ... 15 | (in steps of 0.1)	2 | 3 | 4 | 5 | 6 | 7 | 8	Fixed at $I_i \geq 20 \times I_n$, max. 50 kA	Fixed at $I_i \geq 20 \times I_n$, max. 50 kA	OFF | 1.5 | 2.2 | 3 | 4 | 6 | 8 | 10 | 12 | 0.8 × I_{cs}	OFF | 1.5 × I_n ... 0.8 × I_{cs}
OFF | 50% | 100% | 150% | 200%	OFF | 50% | 100% | 200%	–	–	100 %	OFF | 50% | 100%	OFF | 20% ... 200%
–	■	–	–	■	■	■
–	■	–	–	–	–	■
–	Alternative Rc or G-ret ground-fault monitoring	–	–	–	■	■
–	0.1 ... 1 | (in steps of 0.001) $I_g = I_n \times$ ...	–	–	A [1] (100/400 A) | B [1] (300/600 A); C [1] (600/800 A) | D [1] (900/1000 A); E [1] (1200/1200 A)	A [1] (100/400 A) | B [1] (300/600 A); C [1] (600/800 A) | D [1] (900/1000 A); E [1] (1200/1200 A)	SZ 1, 2: 100 ... 1200 A SZ 3: 400 ... 1200 A
–	50% ... 90% × I_r | (in steps of 1%) PreAlarm	–	–	–	A [1] (100/400 A); B [1] (300/600 A); C [1] (600/800 A); D [1] (900/1000 A); E [1] (1200/1200 A)	SZ 1, 2: 100 ... 1200 A SZ 3: 400 ... 1200 A
–	0.1 ... 1 s | Default 0.1 s | (in steps of 0.05 s)	–	–	100 | 200 | 300 | 400 | 500 ms	100 | 200 | 300 | 400 | 500 ms	100 ... 500 ms
–	t = const./I^2t | Default const.	–	–	–	■	■
–	0.1 ... 1 s | (in steps of 0.05 s) (Ref. 2× I_n)	–	–	–	100 | 200 | 300 | 400 | 500 ms	100 ... 500 ms
–	–	–	–	–	Via module of the **Cubicle**BUS	Via module of the **Cubicle**BUS

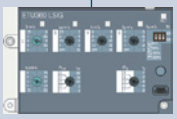
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Electronic trip units ETU

With watchdog monitoring (continued)

3WL10



		ETU320 (LI)	ETU350 (LSI)	ETU360 (LSIG)
Parameter set changeover	Switchable between parameter set A and B	–	–	–
LCD		–	–	–
Voltage tap on top/bottom		–	–	–
Measurement function		–	–	–
Tripping as a result of enhanced protective function: (including: phase asymmetry current/voltage, harmonic distortion current/voltage, under/ overvoltage, phase rotation direction, active power in/opposite to normal direction, under/ over-frequency, protective functions dependent on direction of power flow)		–	–	–
Mode of communication				
Communication PROFIBUS | PROFINET | Modbus RTU | Modbus TCP		–	–	–
Output modules				
Signals via relay: Overload warning, load shedding / load carrying, leading signal, overload tripping 200 ms, temperature alarm, phase asymmetry, instantaneous short-circuit release, short-time-delayed short-circuit release, overload trip, neutral conductor trip, auxiliary relay, ETU faults, ground-fault protection tripping and ground-fault alarm (only with ground-fault protection module)		IOM300	IOM300	IOM300

■ Available – Not available/not present

Increment size when settings are made for the ETU76B using the menu

From ... to	Increment size
0 ... 1	0.1
1 ... 100	1
100 ... 500	5
500 ... 1000	10
1000 ... 1600	50
1600 ... 10000	100
10000 ... max.	1000

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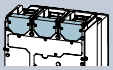
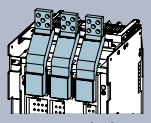
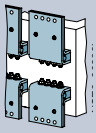
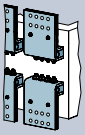
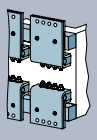
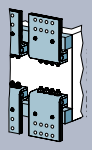
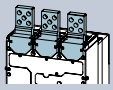
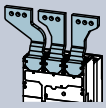
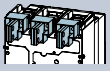
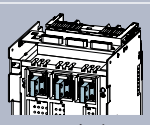
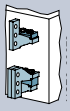
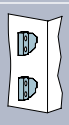
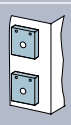
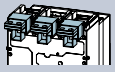
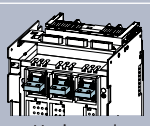
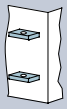
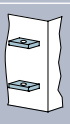
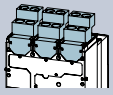
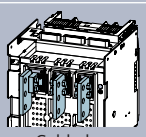
3WL10		3WL11 – 3WL13				
						
ETU650 (LSI)	**ETU660 (LSIG)**	**ETU15B (LI)**	**ETU25B (LSI)**	**ETU27B (LSIG)**	**ETU45B (LSIG)**	**ETU76B (LSIG)**
■	■	–	–	–	–	■
Integrated	Integrated	–	–	–	Optional	Integrated
Optional	Optional	–	–	–	Optional	Optional
Basic/Advanced	Basic/Advanced	–	–	–	Measurement function Plus	Measurement function Plus
■	■	–	–	–	■	■
■	■	–	–	–	■	■
IOM040/IOM300	IOM040/IOM300	–	–	–	■	■

System overview, pages 1/118 and 1/66

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Connection

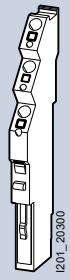
Main circuit connection

	3WL10		3WL11 – 3WL13			
Connection	**Fixed-mounted**	**Withdrawable**	**Fixed-mounted**		**Withdrawable**	
Front-mounted	 Direct	 Extended	 1-hole	 2-hole	 1-hole	 2-hole
	 Extended					
	 Broadened					
Rear-mounted	 Vertical	 Vertical	 Vertical		 Vertical	 Flanges
	 Horizontal	 Horizontal	 Horizontal		 Horizontal	
		 Broadened				
Cable	 Cable terminals	 Cable lug				

Auxiliary circuit connections

3WL10: Withdrawable/fixed-mounted version

- Direct engagement of the auxiliary conductor vertically onto the circuit breaker or horizontally in the guide frame



Screwless connection technology (push in)

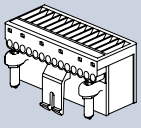
3WL11 – 3WL13: Withdrawable version

- Connection of the internal auxiliary switches to the male connector on the switch side
- When fully inserted, connection with the sliding contact module in the guide frame

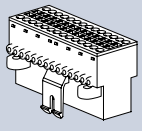
3WL11 – 3WL13: Fixed-mounted version

- Engagement of the auxiliary supply connectors directly onto the circuit breaker

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



Screw connection (standard)



Screwless connection (tension spring) (optional)

System overview, pages 1/118 and 1/66

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Operating mechanism, auxiliary release, auxiliary switch

Operating mechanism

The circuit breakers are available with various optional operating mechanisms:

- Manual operating mechanism with mechanical closing (standard design)
- Manual operating mechanism with mechanical and electrical closing
- Motorized operating mechanism with mechanical and electrical closing

The operating mechanisms with electrical closing are suitable for synchronization tasks.

	Available for air circuit breakers	
	3WL10	3WL11 – 3WL13
Closing coils (CC)	■	■
Undervoltage releases (UVR)/ shunt trips (ST)	■	■
Shunt trips (ST)	■	■
Remote trip alarm reset coils (RR)	■	■
Spring charging motors/ Motorized operating mechanisms (MO)	■	■
Mechanical operating cycles counters	■	■

System overview, pages 1/118 and 1/66

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System overview 3WL11 – 3WL13

IEC AC 630 – 6300 A, IEC DC ..

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

1

Circuit breakers and non-automatic circuit breakers



Sizes 1 to 3

ETU



LI



LSI



LSING



LSIN, LSING



LSIN, LSING

Accessories



Communi-cations modules



Rating plugs



Remote reset magnets

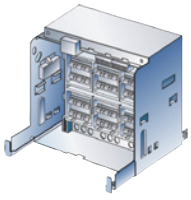


Breaker status sensors (BSS)

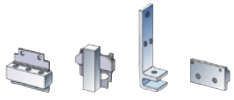


Ground-fault modules

Connection



Fixed-mounted, withdrawable versions



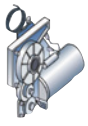
Main connection vertical, horizontal, front, flange

Accessories

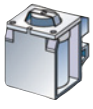


Auxiliary conductor plug-in system

Operating mechanisms and auxiliary releases

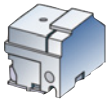


Motorized operating mechanisms



Auxiliary releases

Accessories

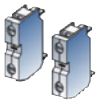


Closing coils

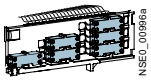
Note: You will find a detailed range of accessories in the Accessories and spare parts section.

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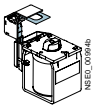
Auxiliary switches



Auxiliary switches

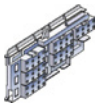


Position signaling switches



Signaling switches

Accessories

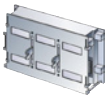


Position signaling switches

Further accessories



Door sealing frames



Shutters



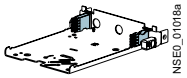
EMERGENCY-OFF pushbuttons



Operating cycles counters



Support brackets



Grounding connections

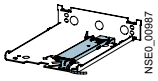
Interlocking



Interlocking sets



Key operation



Locking mechanisms

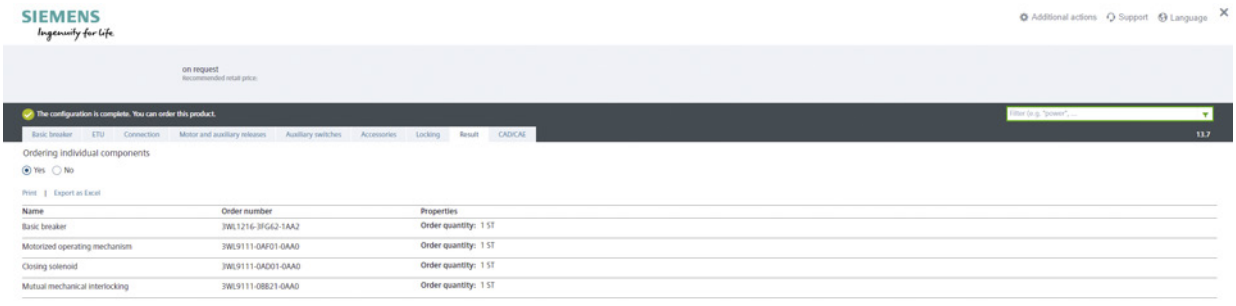
Note: You will find a detailed range of accessories in the Accessories section.

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Online configurator highlights

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

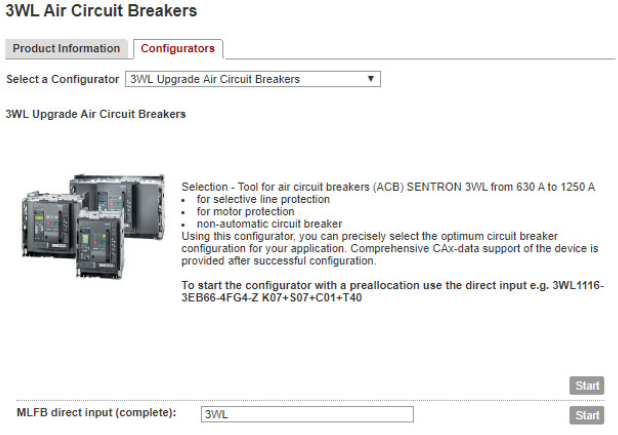
Ungroup into individual components: Divides the finished complete article number into single article numbers



Automatic generation of the 3D model, 2D dimension drawing and the internal circuit diagram according to IEC



Direct entry of an already known article number or parts of an article number



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Structure of the article numbers

Basic configuration for AC 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/3wl-configurator

	5	6	7		8	9	10	11	12		13	14	15	16
3WL1	■	■	■	–	■	■	■	■	■	–	□	□	□	□

Circuit breakers, non-automatic circuit breakers and ETU

		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	■	■ [6)]	–	0	8
	1000 A	■	■ [6)]	–	1	0
	1250 A	■	■ [6)]	–	1	2
	1600 A	■	■	–	1	6
	2000 A	■	■	–	2	0
	2500 A	–	■	–	2	5
	3200 A	–	■	–	3	2
	4000 A	–	■ [6)]	■	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 V**	N	ECO	■	–	–	55 kA	2
			–	■	–	66 kA	2
	S	Standard	■	–	–	66 kA	3
			–	■	–	85 kA	3
	H	High	■	–	–	85 kA	4
			–	■	■	100 kA	4
	C	Very high	–	■	■ [8)]	130 kA	5
			–	–	■ [9)]	150 kA	5

				Position 9	Position 10
Trip units	Without trip unit			A	A
	With trip unit, without ground-fault tripping	ETU15B [7)]	LI	B	B
		ETU25B	LSI	C	B
		ETU45B (without display)	LSIN	E	B
		ETU45B (with display)	LSIN	F	B
		ETU76B	LSIN	N	B
	With trip unit, with ground-fault tripping	ETU27B (without display)	LSING	D	G
		ETU45B (without display)	LSING	E	G
		ETU45B (with display)	LSING	F	G
		ETU76B	LSING	N	G

		Position 11
Number of poles	3-pole (3WL upgrade)	6
	4-pole (3WL upgrade)	7

Connection

		SZ 1	SZ 2	SZ 3		Position 12
Type of mounting	Fixed-mounted	■	■	■	Vertical	1
		■	■ [2)]	■ [3)]	Horizontal	2
		■ [4)]	■ [1)]	■ [5)]	Front single hole	3
		■	■ [1)]	■ [5)]	Front double hole	4
	Withdrawable	■	■	■	Without guide frame	5
		■	■ [2)]	■ [3)]	Horizontal	6
		■	■	■	Vertical	7
		■	■ [1)]	■ [5)]	Flanges	8

1) Not available for 4000 A and for breaking capacity C
2) Not available for 4000 A
3) Not available for 6300 A
4) Not available for 2000 A and for breaking capacity H
5) Not available for 5000 A, 6300 A and for breaking capacity C
6) Not available for breaking capacity C
7) Not available for size 3
8) Not available for 3-pole
9) Not available for 4-pole

Quick selection guide, pages 1/66 and 1/68

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3WL1 5 6 7 8 – 9 10 11 12 – 13 14 15 16

Operating mechanisms and auxiliary releases

Stored energy mechanism	Manual recharging of the stored energy mechanism	With mechanical operation		1
		With mechanical and electrical operation, closing coil suitable for uninterrupted duty, 100% OP	110 V AC 50/60 Hz/110 V DC	2
			230 V AC 50/60 Hz/220 V DC	3
	Motorized recharging	With mechanical and electrical operation, closing coil suitable for uninterrupted duty, 100% OP	208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	4
			110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	5
			24 V DC	6

1st auxiliary release	Without 1st auxiliary release		A
	With shunt trip 100% OP	24 V DC	B
		30 V DC	C
		48 V DC	D
		60 V DC	E
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	F
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	G

2nd auxiliary release	Without 2nd auxiliary release		A
	With shunt trip 100% OP	24 V DC	B
		30 V DC	C
		48 V DC	D
		60 V DC	E
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	F
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	G
	With undervoltage release, instantaneous	24 V DC	J
		30 V DC	K
		48 V DC	L
		60 V DC	U
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	M
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	N
		380 ... 415 V AC 50/60 Hz	P
	With undervoltage release, delay 0.2 ... 3.2 s	48 V DC	Q
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	R
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	S
		380 ... 415 V AC 50/60 Hz	T

Auxiliary switches

1st auxiliary switch block	2 NO + 2 NC	2
1st + 2nd auxiliary switch block	4 NO + 4 NC	4
	6 NO + 2 NC	7
	5 NO + 3 NC	8

Quick selection guide, pages 1/66 and 1/68

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Structure of the article numbers

Basic configuration for DC non-automatic circuit breakers

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

1

	5	6	7		8	9	10	11	12		13	14	15	16
3WL1	■	■	■	–	■	■	■	■	■	–				

Non-automatic circuit breakers and ETU

		SZ 1	SZ 2	5	6	7	8	9	10	11	12
Size (SZ)	1			1							
	2			2							
Max. rated current I_n	1000 A	–	■		1	0					
	2000 A	■	■		2	0					
	4000 A	–	■		4	0					
Short-circuit breaking capacity I_{cc}	1000 V DC 20 kA	■	–				8				
	600 V DC 25 kA	–	■				8				
Non-automatic circuit breakers	Without trip unit							A	A		
Number of poles	3-pole (3WL upgrade)	–	■							6	
	4-pole (3WL upgrade)	■	■							7	

Connection

		SZ 1	SZ 2		12
Type of mounting	Fixed-mounted	■	■	Vertical	1
		■	■	Horizontal	2
		–	■[1)]	Front single hole	3
		–	■[1)]	Front double hole	4
	Withdrawable	–	■	Without guide frame	5
		–	■	Horizontal	6
		–	■	Vertical	7
		–	■	Flanges	8

[1)] Not available for 4000 A

Quick selection guide, pages 1/66 and 1/72

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3WL1 5 6 7 8 – 9 10 11 12 – 13 14 15 16

Operating mechanisms and auxiliary releases

Stored energy mechanism	Manual recharging of the stored energy mechanism	With mechanical operation		1
		With mechanical and electrical operation, closing coil suitable for uninterrupted duty, 100% OP	110 V AC 50/60 Hz/110 V DC	2
			230 V AC 50/60 Hz/220 V DC	3
	Motorized recharging	With mechanical and electrical operation, closing coil suitable for uninterrupted duty, 100% OP	208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	4
			110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	5
			24 V DC	6

1st auxiliary release	Without 1st auxiliary release		A
	With shunt trip 100% OP	24 V DC	B
		30 V DC	C
		48 V DC	D
		60 V DC	E
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	F
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	G

2nd auxiliary release	Without 2nd auxiliary release		A
	With shunt trip 100% OP	24 V DC	B
		30 V DC	C
		48 V DC	D
		60 V DC	E
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	F
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	G
	With undervoltage release, instantaneous	24 V DC	J
		30 V DC	K
		48 V DC	L
		60 V DC	U
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	M
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	N
		380 ... 415 V AC 50/60 Hz	P
	With undervoltage release, delay 0.2 ... 3.2 s	48 V DC	Q
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	R
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	S
		380 ... 415 V AC 50/60 Hz	T

Auxiliary switches

1st auxiliary switch block	2 NO + 2 NC	2
1st + 2nd auxiliary switch block	4 NO + 4 NC	4
	6 NO + 2 NC	7
	5 NO + 3 NC	8

Quick selection guide, pages 1/66 and 1/72

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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/3wl-configurator

1

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

3WL....-.....-.... -Z

Accessories for basic configuration

Rated operational voltage 1000 V AC and 690 V IT networks

- Only for circuit breakers of size 1 - 3 with high breaking capacity H and of size 3 breaking capacity C.
- Cannot be combined with rated operational voltage 1150 V AC, order code "A15".

			Order code
Rated operational voltage	Size 1 [1]	≤2000 A	**A05**
	Size 2 [1] [2]	≤4000 A	**A05**
	Size 3 [1]	≤6300 A	**A05**

Rated operational voltage 1150 V AC

- Only for circuit breakers with high breaking capacity H (8th digit of the article number is a "4").
- Cannot be combined with rated operational voltage 1000 V AC, order code "A05".

			Order code
Rated operational voltage	Size 2 [1] [2]	≤4000 A	**A15**
	Size 3 [1] [3]	≤6300 A	**A15**

Rated operational voltage 690 V AC (+ 20%)

- Only for 3WL11 circuit breakers, size 1, with high breaking capacity H (8th digit of the article number is a "4").

			Order code
Rated operational voltage	Size 1	≤2000 A	**A16**

[1] When ordering withdrawable circuit breaker and guide frame separately, specify order code "A05" only for withdrawable circuit breaker and guide frame.

[2] Not possible for circuit breakers with very high breaking capacity C.

[3] Front connections are tinned as standard.

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

3WL....-.....-.... -Z

Order code

Accessories for electronic trip units ETU

Rating plugs

- Only one module is possible per circuit breaker (not in conjunction with electronic trip unit ETU15B).
- As standard, the electronic trip units are equipped with a rating plug which is equal to the maximum rated circuit breaker current ($I_{n\ max}$). The rated current of the selected rating plug must be less than $I_{n\ max}$.

Module	Sizes 1, 2	250 A	**B02**
		315 A	**B03**
		400 A	**B04**
		500 A	**B05**
		630 A	**B06**
		800 A	**B08**
		1000 A	**B10**
	Sizes 1, 2, 3	1250 A	**B12**
		1600 A	**B16**
		2000 A	**B20**
	Sizes 2, 3	2500 A	**B25**
		3200 A	**B32**
		4000 A	**B40**
	Size 3	5000 A	**B50**
		6300 A	**B63**

Communication [1)]

Breaker status sensor (BSS)	**For determining the statuses ON/OFF/Tripped**	**F01**
PROFIBUS DP communication port [2)]	Including COM15 and breaker status sensor (BSS)	**F02**
Modbus RTU communication port [2)]	Including COM16 and breaker status sensor (BSS)	**F12**
PROFINET IO/Modbus TCP communication port [2)]	Including COM35 and breaker status sensor (BSS)	**F35**

Measurement function (communications modules not included) [1)]

Measurement function Plus	With internal voltage tap on the lower main conducting paths[3)]	**F36**
	With internal voltage tap on the upper main conducting paths[3)]	**F37**
	For combination with external voltage transformer	**F38**

EMC filter

- Common-mode interference suppressor filters (e.g. in converter applications)
- Insertion loss (asymmetric) in the range 40 kHz to 10 MHz >40 dB.

EMC filter		**F31**

Overload and short-circuit protection for neutral conductors

- Only possible with 4-pole circuit breaker with ETU27B to ETU76B

Internal current transformer for N conductor	Size 1	**F23**
	Size 2	**F23**
	Size 3	**F23**

[1)] The precondition is an ETU45B or ETU76B

[2)] When ordering withdrawable circuit breaker and guide frame separately, specify order code "F02", "F12" or "F35" only for withdrawable circuit breaker.

[3)] Can only be used for rated operational voltages up to 690 V AC.

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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).

3WL....-.....-.... -Z

			Order code
Accessories for electronic trip units ETU			
Remote resetting			
Automatic reset of the reclosing lockout			K01
• Remote reset for displays and reset buttons including automatic reset of the reclosing lockout • Includes automatic reset of the reclosing lockout			
Remote trip alarm reset coils	24 V DC		K10
	48 V DC		K11
	110 ... 127 V AC 50/60 Hz/110 ... 125 V DC		K12
	208 ... 240 V AC 50/60 Hz/220 ... 250 V DC		K13
Connection			
Tinned version of the customer's connections on the guide frame			
• Only for withdrawable circuit breakers with horizontal connection or flange connection • The normal delivery time increases to 15 work days			
Customer's connections [1) 2)]	Size 1		A08
	Size 2		A08
	Size 3		A08
Connection technology for main connections (fixed-mounted versions)			
Top: [3)] **horizontal** **Bottom: accessible from front, single hole**	Size 1	≤1600 A	N11
	Size 2	≤3200 A	N11
	Size 3 [4)]	≤4000 A	N11
Top: vertical **Bottom: horizontal**	Size 1	≤2000 A	N20
	Size 2	≤3200 A	N20
	Size 3	≤5000 A	N20
Top: horizontal **Bottom: vertical**	Size 1	≤2000 A	N24
	Size 2	≤3200 A	N24
	Size 3	≤5000 A	N24
Connection technology for main connections (withdrawable versions)			
Top and bottom: [5) 6)] **accessible from front, single hole**	Size 1	≤1600 A	P00
	Size 2	≤3200 A	P00
	Size 3	≤4000 A	P00
Top and bottom: [5)] **accessible from front, double hole**	Size 1	≤1600 A	P01
	Size 2	≤3200 A	P01
	Size 3	≤4000 A	P01
Top: [5) 6)] **horizontal** **Bottom: accessible from front, single hole**	Size 1	≤1600 A	P07
	Size 2	≤3200 A	P07
	Size 3	≤4000 A	P07

1) Front connections are tinned as standard.
2) The permissible temperature rise limits according to IEC 60947-2 are 5 K lower for a tin surface than for a silver surface.
3) Not for 3WL1 size 1 with high breaking capacity H and circuit breakers with very high breaking capacity C.
4) Not for size 3 with very high breaking capacity C.
5) Not for size 2, 3 circuit breakers with very high breaking capacity C.
6) Not for 3WL1 size 1 with high breaking capacity H

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

3WL....-.....-.... -Z

			Order code

Connection

Connection technology for main connections (withdrawable versions)

Top: vertical **Bottom: horizontal**	Size 1	≤2000 A	P18
	Size 2	≤3200 A	P18
	Size 3	≤5000 A	P18
Top: [1] connecting flange **Bottom: horizontal**	Size 1	≤2000 A	P19
	Size 2	≤3200 A	P19
	Size 3	≤4000 A	P19
Top: horizontal **Bottom: vertical**	Size 1	≤2000 A	P23
	Size 2	≤3200 A	P23
	Size 3	≤5000 A	P23
Top: [1] horizontal **Bottom: connecting flange**	Size 1	≤2000 A	P28
	Size 2	≤3200 A	P28
	Size 3	≤4000 A	P28

Connection technology for auxiliary conductors (for fixed-mounted and withdrawable versions)

Connection technology for screwless terminals (tension spring)	Fixed-mounted		N61
	Withdrawable		P61

Operating mechanisms and auxiliary releases

Motorized operating mechanisms	Only possible if the 13th digit of the article number = "1"	24 ... 30 V DC	M01
		48 ... 60 V DC	M03
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	M05
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	M06
Mechanical operating cycles counter, 5-digit [2]			C01
Closing coils	• Suitable for uninterrupted duty, 100% OP • Only possible if the 13th digit of the article number = "1"	24 V DC	M21
		30 V DC	M22
		48 V DC	M23
		60 V DC	M24
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	M25
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	M26
	• Not suitable for uninterrupted duty, 5% OP, synchronizable [3] • Only possible if the 13th digit of the article number = "1"	24 V DC	M31
		48 V DC	M33
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	M35
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	M36
Opening coils (shunt trips) [3] [4]	Not suitable for uninterrupted duty, 5% OP, synchronizable	24 V DC	M41
		48 V DC	M43
		110 ... 127 V AC 50/60 Hz/110 ... 125 V DC	M45
		208 ... 240 V AC 50/60 Hz/220 ... 250 V DC	M46

[1] Not for size 2, 3 circuit breakers with very high breaking capacity C.

[2] Only possible with motorized operating mechanism.

[3] Overexcited, i.e. switching time 50 ms (standard >80 ms).

[4] Only possible if the 14th digit of the article number for the circuit breaker is "A", i.e. "without 1st auxiliary release".

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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).

3WL....-.....-.... -Z

				Order code
Auxiliary switches and signaling switches				
Position signaling switches for guide frames		1 CO | 1 CO | 1 CO (connected | test | disconnected position)		R15
		3 CO | 2 CO | 1 CO (connected | test | disconnected position)		R16
Signaling switches	Ready-to-close signaling switch (S20)		1 NO	C22
	Spring charge signaling switch [1] (S21)		1 NO	C20
	For the first auxiliary release [1] (S22)		1 CO	C26
	For the second auxiliary release [1] (S23)		1 CO	C27
	1st tripped signaling switch [1] [2] (S24)		1 CO	K07
	2nd tripped signaling switch [1] [2] [3] (S25)		1 NO	K06
Further accessories				
Pushbuttons/disconnect switches/closing lockouts				
EMERGENCY-OFF pushbuttons	Mushroom pushbutton instead of the mechanical OFF pushbutton			S24
Local electric close on operator panel [1] (S10)	This prevents unauthorized electrical closing from the operator panel. Mechanical closing and remote closing remain possible. Possible only for circuit breakers with closing coil (CC)		With sealing cap	C11
			With CES lock	C12
Motor disconnect switch on operator panel [4] (S12)	This prevents automatic charging of the stored energy mechanism by motorized operating mechanism			S25
Special packaging for increased transport requirements (moisture protection)				
Cardboard packaging with water-repellent coating on corrugated cardboard (moisture protection)				A61
Arc chute covers				
• Not available for: – 1000 V version (order code "A05"), – DC version – 4000 A size 2 – 1150 V version (order code "A15") – 130 kA version, size 2 – 150 kA version, size 3				
Arc chute covers	3-pole/4-pole			R10
Shutters				
Shutter: 2-part, lockable, with padlocks [5]	3-pole/4-pole			R21

[1] Not possible with "communications interface" option, order code "F02", "F12" or "F35".
[2] Not available for non-automatic air circuit breakers.
[3] Only possible with option "K07".
[4] Only for breakers with motorized operating mechanism, not possible with order codes "C11", "C12".
[5] Padlock not included in the scope of supply.

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

3WL....-.....-.... -Z

			Order code

Further accessories

Instrument transformers (without energy transformers), for powering the ETU

- Used in converter applications with high harmonic components; can only be used with ETU45B or ETU76B
  - External 24 V DC supply required
  - Undervoltage release required
- Comprises:
  - 3 (3-pole) or 4 (4-pole) transformers
  - 24 V DC relay
  - Warning signs
  - Manual

Transformer	3-pole/4-pole	Sizes 2, 3	**K60**

Operating Manual, printed version

French/Italian			**A11**
Spanish/Portuguese			**A12**

Interlocking

Mechanical interlocking mechanism

- Interlocking module with Bowden cable 2 m

Mechanical interlocks		For fixed-mounted breakers	**S55**
		For withdrawable circuit breakers with guide frame	**R55**
		For guide frames (ordered separately)	**R56**
		For withdrawable circuit breakers (ordered separately)	**R57**

Locking provisions (for fixed-mounted and withdrawable versions)

- The disconnector unit fulfills the requirements for main circuit breakers according to EN 60204-1

Locking provisions	Against unauthorized closing from the operator panel	Made by CES	**S01**
		Made by IKON	**S03**
		Assembly kit FORTRESS or CASTELL [1]	**S05**
		Assembly kit for padlocks [2]	**S07**
		Made by RONIS	**S08**
		Made by PROFALUX	**S09**

Locking provisions (for fixed-mounted and withdrawable versions)

Locking provisions	For charging handle with padlock [2]		**S33**

[1] Locks must be ordered from the manufacturer.

[2] Padlock not included in the scope of supply.

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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).

3WL....-.....-.... -Z

			Order code

Interlocking

Locking provisions (for withdrawable version)

- 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".

Locking provisions	Against unauthorized closing from the operator panel	Made by CES	**R61**
		Made by RONIS	**R68**
		Made by PROFALUX	**R60**

Locking provisions (for withdrawable version)

- Safety lock for mounting onto the circuit breaker

Locking provisions	To prevent movement of the withdrawable circuit breaker	Made by CES	**S71**
		Made by PROFALUX	**S75**
		Made by RONIS	**S76**

Locking mechanisms

- Not possible in combination with order code "R81", "R85" or "R86".

For fixed-mounted circuit breakers	To prevent opening of the cabinet door in ON position	**S30**
For withdrawable circuit breakers	To prevent opening of the cabinet door in connected position	**R30**
	To prevent activation when the cabinet door is open [1) 3)]	**R40**
	To prevent movement when the cabinet door is open [2)]	**R50**

Locking mechanisms to prevent movement of the withdrawable circuit breakers 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"

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

Seals

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

Accessories from current catalog

Use of the withdrawable circuit breaker in combination with an older guide frame

Reduction of the technical specifications for withdrawable circuit breakers 3WL1 for use in combination with older guide frames supplied

- Possible article numbers of the existing "older" guide frames
  - 3WL92..-.A..-....
  - 3WL92..-.B..-....
  - 3WL92..-.D..-....
  - 3WL92..-.E..-....
- Article numbers of circuit breakers with reduced technical specifications
  - 3WL1...-...3.-.... – Z
  - 3WL1...-...4.-.... - Z

For sizes 1, 2, 3.

Use of the circuit breaker in older guide frames, including the appropriate guide frame coding	**A41**

[1)] Not available in combination with R50

[2)] Not available in combination with R40

[3)] Combination with R81, R85 and R86 on request

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Further technical specifications

Manual operating mechanism

		3WL11 – 3WL13
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

		3WL11 – 3WL13	
Primary operating range			
Version		For continuous command (100% OP)	5% OP
Primary operating range		0.85 ... 1.1 × U_s	0.85 ... 1.1 × U_s
Extended operating range for battery operation	At 24 ... 30 V DC, 48 ... 60 V DC 110 ... 125 V DC 220 ... 250 V DC	0.85 ... 1.26 × U_s	0.85 ... 1.26 × U_s
Rated operational voltage			
Rated control supply voltage U_s	50/60 Hz AC	110 ... 127 V, 208 ... 240 V	
	DC	24 ... 30 V, 48 ... 60 V, 110 ... 125 V, 220 ... 250 V	
Operation			
Closing power	DC/AC	40 W/40 VA	≤60 V: 200 W ≥110 V: 250 W
Continuous power	DC/AC	8 W/8 VA	-
Minimum command duration at 100% U_s		60 ms	60 ms
Maximum command duration at 100% U_s		–	2000 ms
Make time of the circuit breaker at 100% U_s		100 ms	50 ms
Fuse protection of the control circuit at U_s for closing coil			
Smallest permissible DIAZED fuse, gL, slow-response	24 ... 30 V DC	2 A	10 A
	48 ... 60 V DC	2 A	10 A
	110 ... 125 V DC/110 ... 127 V AC	1 A	4 A
	220 ... 250 V DC/208 ... 240 V AC	1 A	2 A
Miniature circuit breaker with C characteristic	24 ... 30 V DC	2 A	10 A
	48 ... 60 V DC	2 A	10 A
	110 ... 125 V DC/110 ... 127 V AC	1 A	4 A
	220 ... 250 V DC/208 ... 240 V AC	1 A	2 A
Fuse protection of the control circuit at U_s for spring charging motor + closing coil			
Smallest permissible DIAZED fuse, gL, slow-response	24 ... 30 V DC	6 A	10 A
	48 ... 60 V DC	6 A	10 A
	110 ... 125 V DC/110 ... 127 V AC	2 A	4 A
	220 ... 250 V DC/208 ... 240 V AC	2 A	2 A
Miniature circuit breaker with C characteristic	24 ... 30 V DC	6 A	10 A
	48 ... 60 V DC	6 A	10 A
	110 ... 125 V DC/110 ... 127 V AC	2 A	4 A
	220 ... 250 V DC/208 ... 240 V AC	2 A	2 A

Motor

		3WL11 – 3WL13
Primary operating range		
Primary operating range		0.85 ... 1.1 × U_s
Extended operating range for battery operation	At 24 V DC, 48 V DC 60 V DC, 110 V DC 220 V DC	0.85 ... 1.26 × U_s
Operation		
Power consumption of motor	AC/DC	135 VA/135 W
Time required to charge the stored energy mechanism	at 1 × U_s	≤10 s
Short-circuit protection		
Smallest permissible DIAZED fuse (operational class gL)/automatic circuit breaker with C characteristic (for different rated control supply voltages)	At U_s = 24 ... 30 V	6 A
	At U_s = 48 ... 60 V	6 A
	At U_s = 110 ... 125 V DC/ 110 ... 127 V AC	2 A
	At U_s = 220 ... 250 V DC/ 208 ... 240 V AC	2 A

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Accessory options

Further technical specifications

Signals of the electronic trip unit

Signals of the electronic trip unit	3WL11 – 3WL13
Measuring accuracy of the electronic trip unit	Protective functions acc. to EN 60947; current indication ≤10%; measurement function for base quantities ≤1%; measurement function for derived quantities ≤4%

Undervoltage releases UVR (F3) and UVR-t_d (F4)

		3WL11 – 3WL13
Primary operating range		
Response values	Pickup	≥0.85 × U_s (circuit breaker can be closed)
	Dropout	0.35 ... 0.7 × U_s (circuit breaker is opened)
Primary operating range		0.85 ... 1.1 × U_s
Extended operating range for battery operation	At 24 V DC, 30 V DC, 48 V DC, 110 V DC, 220 V DC	0.85 ... 1.26 × U_s
Rated operational voltage		
Rated control supply voltage U_s	Instantaneous 50/60 Hz AC	110 ... 127 V, 208 ... 240 V, 380 ... 415 V
	Instantaneous DC	24 V, 30 V, 48 V, 60 V, 110 ... 125 V, 220 ... 250 V [1]
	Delayed 50/60 Hz AC	110 ... 127 V, 208 ... 240 V, 380 ... 415 V
	Delayed DC	48 V, 110 ... 125 V, 220 ... 250 V
Operation		
Power consumption (pickup/uninterrupted duty)	AC	20/5 VA
	DC	20/5 W
Opening time of the circuit breaker		
Version UVR (F3)	Instantaneous	≤80 ms
	With delay	200 ms
Version UVR-t_d (F8)	With delay, t_d = 0.2 ... 3.2 s	0.2 ... 3.2 s
	Reset through additional NC contact – direct tripping	≤100 ms
Short-circuit protection		
Smallest permissible DIAZED fuse (operational class gL)/ miniature circuit breaker with C characteristic		1 A TDz (slow-response)/1 A

Shunt trip (ST) (F1, F2)

		3WL11 – 3WL13		
Primary operating range				
Version		For continuous command (100% OP), locks out on momentary-contact commands	5% OP	With spring energy store consisting of shunt trip and capacitor trip device
Primary operating range		0.85 ... 1.1 × U_s	0.85 ... 1.1 × U_s	0.85 ... 1.1 × U_s
Extended operating range for battery operation		0.85 ... 1.26 × U_s	0.85 ... 1.26 × U_s	–
Response values	Pickup	>0.7 × U_s (circuit breaker is tripped)	>0.7 × U_s (circuit breaker is tripped)	–
Rated operational voltage				
Rated control supply voltage U_s	50/60 Hz AC	110 ... 127 V, 208 ... 240 V		230 V
	DC	24 ... 30 V, 48 ... 60 V, 110 ... 125 V, 220 ... 250 V		220 V
Operation				
Closing power DC	DC/AC	40 W/40 VA	≤60 V: 200 W ≥110 V: 250 W	1 VA/1 W
Continuous power	DC/AC	8 W/8 VA	–	–
Minimum command duration at 100% U_s		60 ms	60 ms	–
Maximum command duration at 100% U_s		–	2000 ms	–
Opening time of the circuit breaker at 100% U_s		80 ms	50 ms	80 ms
Storage time at U_s/Recharging time at U_s		–	–	max. 5 min/min. 5 s
Fuse protection of the control circuit at U_s for shunt trip				
Smallest permissible DIAZED fuse, gL, slow-response	24 ... 30 V DC	2 A	10 A	–
	48 ... 60 V DC	2 A	10 A	–
	110 ... 125 V DC/110 ... 127 V AC	1 A	4 A	–
	220 ... 250 V DC/208 ... 240 V AC	1 A	2 A	–
Miniature circuit breaker with C characteristic	24 ... 30 V DC	2 A	10 A	–
	48 ... 60 V DC	2 A	10 A	–
	110 ... 125 V DC/110 ... 127 V AC	1 A	4 A	–
	220 ... 250 V DC/208 ... 240 V AC	1 A	2 A	–

[1] 24 V and 30 V only with undervoltage release UVR (F3)

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Remote trip alarm reset coil for mechanical tripped indicator (F7) 3WL11 – 3WL13

Primary operating range		
Primary operating range		0.85 ... 1.1 × U_s
Extended operating range for battery operation	At 24 ... 30 V DC, 48 ... 60 V DC, 110 ... 125 V DC, 220 ... 250 V DC	0.7 ... 1.26 × U_s
Operation		
Power consumption	AC/DC	60 VA/60 W
Min. command duration at U_s for the remote trip alarm reset coil		60 ms
Short-circuit protection		
Smallest permissible DIAZED fuse (operational class gL)/ miniature circuit breaker with C characteristic		2 A TDz (slow-response)/2 A at U_s = 24 ... 60 V DC, 1 A TDz (slow-response)/1 A at > 100 V DC and 100 V AC

Contact position-driven auxiliary switches (S1, S2, S3, S4, S7, S8) 3WL11 – 3WL13

Rated operational voltage					
Rated insulation voltage U_i	AC/DC	500 V			
Rated operational voltage U_e	AC/DC	500 V			
Rated impulse withstand voltage U_{imp}		4 kV			
Contact reliability		From 1 mA at 5 V DC			
Breaking capacity					
Alternating current 50/60 Hz	Rated operational voltage U_e	24 ... 230 V		380 V, 400 V	
	Rated operational current I_e/AC-12	10 A		10 A	
	Rated operational current I_e/AC-15	4 A		3 A	
Direct current	Rated operational voltage U_e	24 V	48 V	110 V	220 V
	Rated operational current I_e/DC-12	10 A	8 A	3.5 A	1 A
	Rated operational current I_e/DC-13	8 A	4 A	1.2 A	0.4 A
Short-circuit protection					
Largest permissible DIAZED fuse (operational class gL)		10 A TDz, 10 A Dz			
Largest permissible miniature circuit breaker with C characteristic		10 A			

Ready-to-close signaling switches (S20) (acc. to DIN VDE 0630) 3WL11 – 3WL13

Breaking capacity			
Alternating current 50/60 Hz	Rated operational voltage U_e	250 V	
	Rated operational current I_e	8 A	
Direct current	Rated operational voltage U_e	125 V	250 V
	Rated operational current I_e	0.4 A	0.2 A
	Contact reliability	From 1 mA at 5 V DC	
Short-circuit protection			
Largest permissible DIAZED fuse (operational class gL)		2 A Dz (quick-response)	

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Accessory options

Further technical specifications

Tripped signaling switches (S24) and signaling switches for auxiliary releases (S22, S23) (acc. to DIN VDE 0630)		**3WL11 – 3WL12**		
Breaking capacity				
Alternating current 50/60 Hz	Rated operational voltage U_e	250 V		
	Rated operational current I_e/AC-12	8 A		
Direct current	Rated operational voltage U_e	24 V	125 V	250 V
	Rated operational current I_e/DC-12	6 A	0.4 A	0.2 A
	Contact reliability	From 1 mA at 5 V DC		
Short-circuit protection				
Largest permissible DIAZED fuse (operational class gL)		6 A Dz (quick-response)		
Tripped signaling switches				
Signal duration after tripping		Until manual or electrical remote reset (option)		

Position signaling switch on guide frame		**3WL11 – 3WL13**		
Type of contacts				
Message	"Circuit breaker in connected position"	3 W	or	1 W
	"Circuit breaker in test position"	2 W	or	1 W
	"Circuit breaker in disconnected position"	1 W	or	1 W
Contact reliability (valid from April 1, 2020)		From 1 mA at 5 V DC		
Rated operational voltage				
Rated insulation voltage U_i	50/60 Hz AC	440 V		
	DC	250 V		
Rated operational voltage U_e		250 V		
Rated impulse withstand voltage U_{imp}		4 kV		
Breaking capacity				
Rated operational current I_e	I_e/AC-12	24 V 10 A, 110/127 V 10 A, 220/240 V 10 A, 320/440 V 10 A		
	I_e/AC-15	220/240 V 4 A, 320/440 V 3 A		
	I_e/DC-12	24 V 10 A, 48 V 2.5 A, 220/240 V 0.2 A		
	I_e/DC-13	24 V 3.0 A, 220/240 V 0.1 A		
	A 300 (AC)	120 V 6 A, 240 V 3 A		
	R 300 (DC)	125 V 0.22 A, 250 V 0.11 A		
Short-circuit protection				
Largest permissible DIAZED fuse (operational class gL)		8 A TDz (slow-response)		
Largest permissible miniature circuit breaker with C characteristic		8 A TDz (slow-response)		

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Guide frames for AC

The structure shown below is intended as an overview of each position and its meaning.
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www.siemens.com/lowvoltage/3wl-configurator

	5	6	7	8	9	10	11	12	13	14	15	16
3WL9	2	1							–			1

			SZ 1	SZ 2	SZ 3	
Size (SZ)	1					1
	2					2
	3					3
Max. rated current $I_{n\,max}$ (guide frames)	1000 A [5) 6)]		■	–	–	1
	1600 A [5) 6)]		■	–	–	2
	2000 A [6)]		■	■	–	3
	2500 A [6)]		–	■	–	4
	3200 A [7)]		–	■	–	5
	4000 A [6)]		–	■	■	6
	5000 A		–	–	■	7
	6300 A		–	–	■	8
Number of poles	3-pole					F
	4-pole					G
Main connection	Front, single hole		■ [1)]	■ [2) 6)]	■ [3)]	A
	Front, double hole		■	■ [2) 6)]	■ [3)]	B
	Horizontal		■	■ [2)]	■ [4)]	C
	Vertical		■	■	■	D
	Connecting flange		■	■ [2) 6)]	■ [3)]	E
Short-circuit breaking capacity I_{cu} at 500 V	N,	55 kA	■	–	–	N
	S,	66 kA	■	–	–	S
	H,	85 kA	■ [5)]	–	–	H
	N, S and H	≤100 kA	–	■	■	H
	C	130 kA	–	■	–	C
	C	150 kA	–	–	■	C

[1)] Not available for rated circuit breaker current 2000 A and breaking capacity H
[2)] Not available for rated circuit breaker current 4000 A
[3)] Not available for rated circuit breaker current 5000 A + 6300 A + breaking capacity C
[4)] Not available for rated circuit breaker current 6300 A
[5)] For size 1 with breaking capacity H, please select the max. rated current I_n 2000 A of the guide frame
[6)] Not available for breaking capacity C
[7)] For all rated circuit breaker currents up to 3200 A with breaking capacity C

Options

	5	6	7	8	9	10	11	12	13	14	15	16
3WL9	2	1							–			1

Number of auxiliary supply connectors	Without	0
	1 connector	1
	2 connectors	2
	3 connectors	3
	4 connectors	4
Type of auxiliary circuit connections	Without [8)]	0
	With screw terminals (SIGUT, standard)	1
	With screwless terminals (tension spring)	2
Position signaling switch	Without	0
	1 CO | 1 CO | 1 CO (connected | test | disconnected position)	1
	3 CO | 2 CO | 1 CO (connected | test | disconnected position)	2
Shutters	Without	A
	With shutter, 2-part, lockable	B

[8)] Can only be selected if the number of auxiliary supply connectors is zero.

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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/3wl-configurator**

1

	5	6	7	8	9	10	11	12	13	14	15	16
3WL9	2	1	2	–					–		0	1

Max. rated current $I_{n\,max}$	2000 A	3
	4000 A	6
Number of poles	3-pole	H
	4-pole	J
Main connection	Front, single hole[1]	A
	Front, double hole[1]	B
	Horizontal	C
	Vertical	D
	Connecting flange	E

[1] Not available for rated circuit breaker current 4000 A

Options

	5	6	7	8	9	10	11	12	13	14	15	16
3WL9	2	1	2	–					–		0	1

Number of auxiliary supply connectors	Without	0
	1 connector	1
	2 connectors	2
	3 connectors	3
	4 connectors	4
Type of auxiliary circuit connections	Without [2]	0
	With screw terminals (SIGUT, standard)	1
	With screwless terminals (tension spring)	2
Position signaling switch	Without	0
	1 CO | 1 CO | 1 CO (connected | test | disconnected position)	1
	3 CO | 2 CO | 1 CO (connected | test | disconnected position)	2
Shutters	Without	A
	With shutter, 2-part, lockable	B

[2] Can only be selected if the number of auxiliary supply connectors is zero.

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Accessories and spare parts

Accessories for electronic trip units ETU

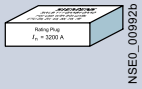
Protective devices with device holder and optional measurement function


NSE0_01610b

- For replacement in existing circuit breakers, please specify the circuit breaker ID No. when ordering.

Type	With protective function	Measurement function	Article No.
ETU15B	LI	Without	3WL9311-5AA00-0AA2
ETU25B	LSI	Without	3WL9312-5AA00-0AA2
ETU27B	LSING	Without	3WL9312-7AA00-0AA2
ETU45B (without display)	LSIN(G)	Without	3WL9314-5AA00-0AA2
		With measurement function Plus	3WL9314-5AA30-0AA2
ETU76B	LSIN(G)	Without	3WL9317-6AA00-0AA2
		With measurement function Plus	3WL9317-6AA30-0AA2

Rating plugs


NSE0_00992b

- With the rating plug selected, the maximum rated current $I_{n\,max}$ of the circuit breaker must not be exceeded. The following applies: $I_n \leq I_{n\,max}$

Size	Rated current I_n	Article No.
1, 2	250 A	3WL9111-0AA51-0AA0
	315 A	3WL9111-0AA52-0AA0
	400 A	3WL9111-0AA53-0AA0
	500 A	3WL9111-0AA54-0AA0
	630 A	3WL9111-0AA55-0AA0
	800 A	3WL9111-0AA56-0AA0
	1000 A	3WL9111-0AA57-0AA0
1, 2, 3	1250 A	3WL9111-0AA58-0AA0
	1600 A	3WL9111-0AA61-0AA0
	2000 A	3WL9111-0AA62-0AA0
2, 3	2500 A	3WL9111-0AA63-0AA0
	3200 A	3WL9111-0AA64-0AA0
	4000 A	3WL9111-0AA65-0AA0
3	5000 A	3WL9111-0AA66-0AA0
	6300 A	3WL9111-0AA67-0AA0

Ground-fault modules


NSE0_01027a

- Alarm and tripping
- For direct metering of the ground-fault current, e.g. in the neutral point of the transformer, a 1200 A/1 A current transformer, class 1, is required. The internal load of the 3WL circuit breaker is 0.11 Ω. If the ground-fault current is to be determined using the vectorial sum of the phases, a transformer must be installed in the neutral conductor.

Type	Accessory for	Article No.
GFM AT 45B	ETU45B	3WL9111-0AT53-0AA0
GFM AT 55B – 76B	ETU76B	3WL9111-0AT56-0AA0

Display


NSE0_01609

Accessory for	Version	Article No.
ETU45B	4-line	3WL9111-0AT81-0AA0

Internal current transformers, for N conductor including wiring kit

ETU Release 2	Size	Article No.
–	1	3WL9111-0AA11-0AA0
	2	3WL9111-0AA12-0AA0
	3	3WL9111-0AA13-0AA0
✓	1	3WL9111-0AA14-0AA0
	2	3WL9111-0AA15-0AA0
	3	3WL9111-0AA16-0AA0

External current transformers for N conductor


NSE0_00990a


NSE0_00991a

Copper connection pieces	Size	Article No.
–	1	3WL9111-0AA21-0AA0
	2	3WL9111-0AA22-0AA0
	3	3WL9111-0AA23-0AA0
✓	1	3WL9111-0AA31-0AA0
	2	3WL9111-0AA32-0AA0
	3	3WL9111-0AA33-0AA0

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Accessories and spare parts

Accessories for electronic trip units ETU

EMC filter

- Common-mode interference suppressor filters (e.g. in IT networks, caused by frequency converters)
- Insertion loss (asymmetric) in the range 40 kHz to 10 MHz >40 dB.

Types	Article No.
Only for ETU Release 2	3WL9111-0AK34-0AA0

Sealable and lockable covers

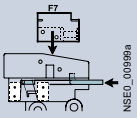


Accessory for	Article No.
ETU15B to ETU45B	3WL9111-0AT45-0AA0
ETU76	3WL9111-0AT46-0AA0

Automatic reset of the reclosing lockout

Version	Article No.
Spare part for option K01	3WL9111-0AK21-0AA0

Remote trip alarm reset coils



- For mechanical tripped indicator
- Spare part for options K10 to K13
- **Note:** Automatic reset of the reclosing lockout 3WL9111-0AK21-0AA0 is also required

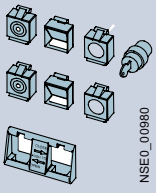
Voltage	Article No.
24 ... 30 V DC	3WA9111-0EM42
48 ... 60 V DC	3WA9111-0EM44
120 V AC/125 V DC	3WA9111-0EM45
208 ... 250 V AC/208 ... 250 V DC	3WA9111-0EM46

Retrofittable internal wiring

Use	Male connector	Accessory for	Article No.
Internal wiring of **Cubicle**BUS for connection to terminal X8	Without male connector for retrofitting the communication	ETU45B and ETU76B	3WL9111-0AK30-0AA0
For connection of the external N and G transformers to terminal X8	Without male connector	Not for ETU Release 2	3WL9111-0AK31-0AA0
		ETU Release 2	3WL9111-0AK33-0AA0

Locking provisions and interlocks

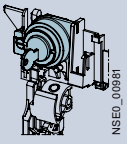
Interlocking sets for mechanical Open/Close



- 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	3WL9111-0BA21-0AA0
Made by CES	3WL9111-0BA22-0AA0
Made by IKON	3WL9111-0BA24-0AA0

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

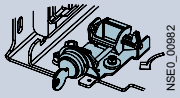
Type	Scope of supply	Article No.
Assembly kit FORTRESS or CASTELL	Without locks, cylinders or keys	3WL9111-0BA31-0AA0
Made by RONIS	Locks, cylinders and keys included	3WL9111-0BA33-0AA0
Made by KIRK-Key	Without locks, cylinders or keys	3WL9111-0BA34-0AA0
Made by PROFALUX	Locks, cylinders and keys included	3WL9111-0BA35-0AA0
Made by CES	Locks, cylinders and keys included	3WL9111-0BA36-0AA0
Made by IKON	Locks, cylinders and keys included	3WL9111-0BA38-0AA0
Assembly kit for padlocks	Without padlock	3WL9111-0BA41-0AA0

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Locking provisions and interlocks

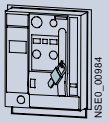
Locking provision against unauthorized closing, for withdrawable circuit breakers



- 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

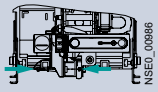
Type	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included	3WL9111-0BA51-0AA0
Made by IKON	Locks, cylinders and keys included	3WL9111-0BA53-0AA0
Made by KIRK-Key [1]	Without locks, cylinders or keys	3WL9111-0BA57-0AA0
Made by RONIS	Locks, cylinders and keys included	3WL9111-0BA58-0AA0
Made by PROFALUX	Locks, cylinders and keys included	3WL9111-0BA50-0AA0

Locking provisions for charging handle with padlock



Version	Scope of supply	Article No.
Spare part for option S33	Without padlock	3WL9111-0BA71-0AA0

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

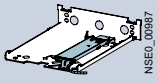
Type	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included	3WL9111-0BA73-0AA0
Made by IKON	Locks, cylinders and keys included	3WL9111-0BA75-0AA0
Made by PROFALUX	Locks, cylinders and keys included	3WL9111-0BA76-0AA0
Made by RONIS	Locks, cylinders and keys included	3WL9111-0BA77-0AA0
Made by KIRK-Key [1]	Without locks, cylinders or keys	3WL9111-0BA80-0AA0

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	3WL9111-0BA43-0AA0

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



- Consisting of Bowden cable and lock in the cabinet door on the circuit breaker
- Spare part for option R81, R85, R86
- **Note:** Not possible in combination with "Locking mechanism to prevent opening of the cabinet door" (order code "R30") or "Locking mechanism to prevent movement with the cabinet door open" (order code "R50")

Type	Article No.
Made by CES	3WL9111-0BA81-0AA0
Made by IKON	3WL9111-0BA83-0AA0
Made by PROFALUX	3WL9111-0BA85-0AA0
Made by RONIS	3WL9111-0BA86-0AA0

Locking mechanisms to prevent opening of the cabinet door in ON position



- Fixed-mounted
- Defeatable
- **Note:** Not possible in combination with "Locking mechanism to prevent movement of the withdrawable circuit breakers in disconnected position" (order codes "R81", "R85" or "R86").

Version	Article No.
Spare part for option S30	3WL9111-0BB12-0AA0

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

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Accessories and spare parts

Locking provisions and interlocks

Locking mechanisms to prevent opening of the cabinet door

- Guide frames
- Defeatable
- **Note:** Not possible in combination with "Locking mechanism to prevent movement of the withdrawable circuit breakers in disconnected position" (order codes "R81", "R85" or "R86").

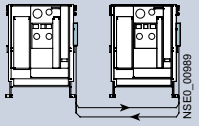
Version	Article No.
Spare part for option R30	3WL9111-0BB13-0AA0

Locking mechanisms to prevent movement with the cabinet door open

- Guide frames
- **Note:** Not possible in combination with "Locking mechanism to prevent movement of the withdrawable circuit breakers in disconnected position" (order codes "R81", "R85" or "R86").

Version	Article No.
Spare part for option R50	3WL9111-0BB15-0AA0

Mechanical interlocks



- With Bowden cable 2000 mm (one required for each circuit breaker)

Type	When ordered separately	Spare part for	Article No.
Fixed-mounted circuit breaker	–	Option S55	3WL9111-0BB21-0AA0
Module for withdrawable circuit breakers with guide frame	–	Option R55	3WL9111-0BB24-0AA0
Module for guide frame	✓	Option R56	3WL9111-0BB22-0AA0
Module for withdrawable circuit breaker	✓	Option R57	3WL9111-0BB23-0AA0
Adapter for size 3 withdrawable circuit breaker	✓	–	3WL9111-0BB30-0AA0

Couplings on the circuit breaker (with ring) for mutual interlocking



- Can be used in all circuit breakers

Article No.
3WL9112-8AH47-0AA0

Bowden cable

Length	Article No.
2000 mm	3WL9111-0BB45-0AA0
3000 mm	3WL9111-0BB46-0AA0
4500 mm	3WL9111-0BB47-0AA0

Test devices

Manual tester, Release 2 for electronic trip units ETU15B to ETU76B



- For testing the electronic trip unit functions of all 3WL ETUs (Release 1 and Release 2)

Article No.
3WL9111-0AT32-0AA0

Function test unit

- For testing the tripping characteristics for electronic trip units ETU15B to ETU76B (Release 1 and Release 2)

Article No.
3WL9111-0AT44-0AA0

TD400 Kit IEC [1)]

- Commissioning/Service Tool for IEC 3WL (ETU Release 2) and 3VA
- With adapter, cable and case
- Not suitable for 3WL10 and 3VA27

Article No.
3VW9011-0AT40

TD400 adapter (spare part)

Version	Article No.
For 3VA	3VW9011-0AT43
Only for 3WL ETU Release 1	3VW9011-0AT44
Only for 3WL ETU Release 2	3VW9011-0AT45

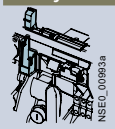
[1)] A country-specific radio license is required to operate the Bluetooth interface. Before activating the Bluetooth function, ensure that the license is available: www.siemens.com/lowvoltage/certificates

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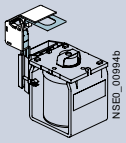
Indicators and control elements

Ready-to-close signaling switches (S20)



Version	Contacts	Article No.
Spare part for option C22	1 NO	3WL9111-0AH01-0AA0

Signaling switch (S22 or S23)



- Not possible with communication port, order code "F02", "F12" or "F35".
- Auxiliary supply connector X7 required for circuit breakers or guide frames. If this is not already available, please order additionally

Version	Contacts	Article No.
Spare part for options C26 and C27	1st or 2nd auxiliary release	3WL9111-0AH02-0AA0

1st tripped signaling switch (S24)

- Not possible with communication port, order code "F02", "F12" or "F35".
- Auxiliary supply connector X7 required for circuit breakers or guide frames. If this is not already available, please order additionally

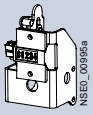
Version	Contacts	Article No.
Spare part for option K07	1 CO	3WL9111-0AH14-0AA0

2nd tripped signaling switch (S25)

- Not possible with communication port, order code "F02", "F12" or "F35".
- Auxiliary supply connector X7 required for circuit breakers or guide frames. If this is not already available, please order additionally
- Can only be used in combination with 1st tripped signaling switch

Version	Contacts	Article No.
Spare part for option K06	1 NO	3WL9111-0AH17-0AA0

Operating cycles counters



- Only in conjunction with motorized operating mechanism

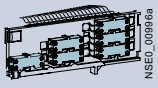
Version	Version	Article No.
Spare part for option C01	Mechanical	3WL9111-0AH07-0AA0

Spring charge signaling switch

- Not possible with communication port, order code "F02", "F12" or "F35".
- Auxiliary supply connector X7 required for circuit breakers or guide frames. If this is not already available, please order additionally

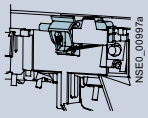
Version	Contacts	Article No.
Spare part for option C20	1 NO	3WL9111-0AH08-0AA0

Position signaling switches for guide frames



Version	Contacts	Article No.
Spare part for options R15 and R16	1st block (3 CO)	3WL9111-0AH11-0AA0
	2nd block (6 CO)	3WL9111-0AH12-0AA0

Local electric close (S10) for operator panel



- Not possible with communication port, order code "F02", "F12" or "F35".
- Not possible with motor disconnect switch
- Button + wiring (Auxiliary supply connector X7 required for circuit breakers or guide frames. If this is not already available, please order additionally)
- **Note:** Possible only for circuit breakers with closing coil.

Version	Type	Article No.
Spare part for options C11 and C12	With sealing cap C11	3WL9111-0AJ02-0AA0
	With CES assembly kit C12	3WL9111-0AJ03-0AA0
	With IKON assembly kit	3WL9111-0AJ05-0AA0

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Accessories and spare parts

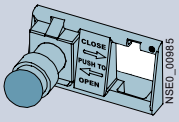
Indicators and control elements

Motor disconnect switch (S12)

- Mounting onto operator panel
- Not possible with local electric close

Version	Article No.
Spare part for option S25	3WL9111-0AJ06-0AA0

EMERGENCY-OFF pushbuttons

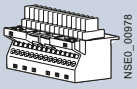


- Mushroom pushbutton instead of the mechanical OFF pushbutton

Type	Article No.
Spare part for option S24	3WL9111-0BA72-0AA0

Auxiliary conductor connections

Male connectors for circuit breakers ①



Article No.
3WA9111-0AB01

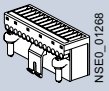
Extension for male connector

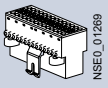
- Male connector must be ordered separately

Version	Article No.
1000 V	3WA9111-0AB02

Auxiliary supply connector for circuit breakers or guide frames ②

Version	Article No.
Screw connection (SIGUT)	3WA9111-0AB03
Screwless connection (tension spring)	3WL9111-0AB04-0AA0



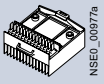


Coding kits ③



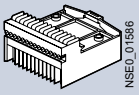
Version	Article No.
For fixed-mounted X5 to X8	3WA9111-0AB07

Sliding contact modules for guide frames ④



Article No.
3WA9111-0AB08

One-part sliding contact modules for guide frames ⬤



Version	Article No.
Screw connection (SIGUT)	3WL9111-0AB18-0AA0

Blanking blocks for circuit breakers

Article No.
3WA9111-0AB12

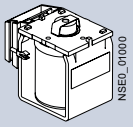
For a complete auxiliary circuit connection you must order:
Fixed-mounted version: ① + ② + ③
Withdrawable version: ① + ④ + ② or ① + ⑤

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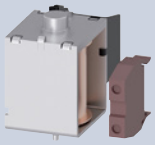
Auxiliary release

Closing coils/shunt trips



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

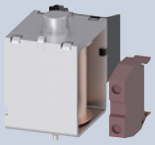
Closing coils (CC)



- For momentary duty, with cut-off switch S15

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

Shunt trips (ST)



- For momentary duty, with cut-off switch S14

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

Undervoltage release

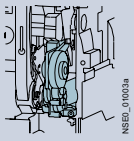




Version	Voltage	Article No.
Instantaneous	24 V DC	3WA9111-0AE02
	30 V DC	3WL9111-0AE02-0AA0
	48 V DC	3WA9111-0AE04
	60 V DC	3WL9111-0AE07-0AA0
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AE05
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AE06
	380 ... 415 V AC	3WA9111-0AE07
Delayed	48 V DC	3WA9111-0AE13
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AE15
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AE16
	380 ... 415 V AC	3WA9111-0AE17

Operating mechanism

Motorized operating mechanisms

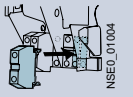


- Auxiliary supply connector X5 required for circuit breakers or guide frames.
  If this is not already available, please order additionally

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

Auxiliary contacts

Auxiliary switch blocks



Contacts	Article No.
2 NO + 2 NC	3WL9111-0AG01-0AA0
2 NO	3WL9111-0AG02-0AA0
1 NO + 1 NC	3WL9111-0AG03-0AA0

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Accessories and spare parts

Door sealing frames, hoods, shutters

Door sealing frames



Version	Article No.
Spare part for option T40	3WL9111-0AP01-0AA0

Protective covers IP55



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

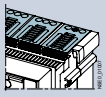
Article No.
3WL9111-0AP02-0AA0

Shutters

Version	Number of poles	Size	Breaking capacity	Article No.
Spare part for option R21	3-pole	1	N, S, H	3WL9111-0AP04-0AA0
		2	N, S, H	3WL9111-0AP06-0AA0
			C	3WL9111-0AP43-0AA0
		3	H, C	3WL9111-0AP07-0AA0
	4-pole	1	N, S, H	3WL9111-0AP08-0AA0
		2	N, S, H	3WL9111-0AP11-0AA0
			C	3WL9111-0AP44-0AA0
		3	H, C	3WL9111-0AP12-0AA0

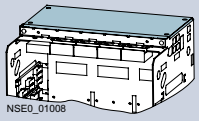
Arc chute

Arc chute



Voltage	Size	Breaking capacity	Article No.
690 V	1	N, S, H	3WL9111-0AS01-0AA0
	2	N, S, H	3WL9111-0AS02-0AA0
		C	3WL9111-0AS10-0AA0
	3	H, C	3WL9111-0AS03-0AA0
1000 V/1150 V	2	H, C	3WL9111-0AS05-0AA0
	3	H, C	3WL9111-0AS06-0AA0

Arc chute covers



- Parts kit for guide frame
- Spare part for option R10
- Not available for:
  - 1000 V version (order code "A05"),
  - 1150 V version (order code "A15")
  - DC version
  - 4000 A size 2
  - Circuit breakers with very high breaking capacity C.

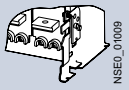
Number of poles	Size	Article No.
3-pole	1	3WL9111-0AS32-0AA0
	2	3WL9111-0AS36-0AA0
	3	3WL9111-0AS38-0AA0
4-pole	1	3WL9111-0AS42-0AA0
	2	3WL9111-0AS44-0AA0
	3	3WL9111-0AS46-0AA0

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Coding for withdrawable version

Coding for withdrawable version



- By customer, for 36 coding variants

Size	Article No.
1, 2	3WL9111-0AR12-0AA0
3	3WL9111-0AR13-0AA0

Grounding connections

Grounding connection between the guide frame and the withdrawable 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]		3WL9111-0BA01-0AA0
	3		3WL9111-0BA02-0AA0
For withdrawable circuit breakers	1	3-pole	3WL9111-0BA05-0AA0
		4-pole	3WL9111-0BA08-0AA0
	2	3-pole [1]	3WL9111-0BA06-0AA0
		4-pole [1]	3WL9111-0BA04-0AA0
	3	3-pole	3WL9111-0BA07-0AA0
		4-pole	3WL9111-0BA10-0AA0

[1] Cannot be used for size 2 with very high breaking capacity C and size 2, 4000 A.

Support bracket

Support bracket



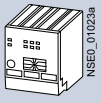
- For mounting fixed-mounted circuit breakers on vertical plane
- Only for sizes 1 and 2 (1 set = 2 units)

Article No.
3WL9111-0BB50-0AA0

Modules of the CubicleBUS

- Each **Cubicle**BUS module is supplied with a 0.2 m pre-assembled cable to connect the modules with each other. A longer pre-assembled cable is required for connection to the circuit breaker.
- All communication components, **Cubicle**BUS modules and measurement functions are available for the electronic trip units ETU45B and ETU76B.

Modules of the CubicleBUS modules



Type	Article No.
Digital output module with rotary coding switch, relay outputs	3WL9111-0AT26-0AA0
Digital output module, configurable, relay outputs	3WL9111-0AT20-0AA0
Digital input module	3WL9111-0AT27-0AA0
Analog output module	3WL9111-0AT23-0AA0
ZSI module	3WL9111-0AT21-0AA0

Preassembled cables for the CubicleBUS

For connection to 3WL	Length	Article No.
With COM15/COM16/COM35	0.5 m	3WL9111-0BC04-0AA0
	1 m	3WL9111-0BC02-0AA0
	2 m	3WL9111-0BC03-0AA0
Without COM15/COM16/COM35	2 m	3WL9111-0BC05-0AA0

Voltage transformers

- Required for 3WL circuit breakers with measurement function Plus, if no direct voltage tap is available.
- 380 ... 690 V/100 V, class 0.5

Number of poles	Measurement function	Article No.
3-pole	With measurement function Plus	3WL9111-0BB68-0AA0

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Accessories and spare parts

Retrofitting and spare parts

- For retrofitting the COM15, COM16 or COM35 communications modules in withdrawable 3WL circuit breakers with Z options A05 (1000 V AC), A15 (1150 V AC) or A16 (690 V + 20%), the following additional assembly kits are required: 3WL9111-0AT62-0AA0 for circuit breakers size 1 or 3WL9111-0AT63-0AA0 for circuit breakers size 2/3

COM35 PROFINET IO/Modbus TCP modules



Version	Article No.
For electronic trip units ETU45B and ETU76B	3WL9111-0AT65-0AA0

PROFINET IO/Modbus TCP retrofit kits

- Retrofit kit for the PROFINET IO/Modbus TCP communication including COM35, BSS and set of cables for all 3WL air circuit breakers with ETU45B and ETU76B electronic trip units

Article No.
3WL9111-0AT66-0AA0

PROFIBUS retrofit kits

- Retrofit kit for the PROFIBUS communication including COM15, BSS and set of cables for all 3WL air circuit breakers with ETU45B and ETU76B electronic trip units

Article No.
3WL9111-0AT12-0AA0

COM15 PROFIBUS modules



Version	Article No.
For electronic trip units ETU45B and ETU76B	3WL9111-0AT15-0AA0

COM16 Modbus RTU modules

Version	Article No.
For electronic trip units ETU45B and ETU76B	3WL9111-0AT17-0AA0

Modbus RTU retrofit kits IEC

- Retrofit kit for the Modbus communication including COM16, BSS and set of cables for all 3WL air circuit breakers with ETU45B and ETU76B electronic trip units

Article No.
3WL9111-0AT18-0AA0

Additional parts for retrofitting the COM15/COM16/COM35 communications modules

- In withdrawable 3WL circuit breakers with Z options:
  - A05 (1000 V AC) or
  - A15 (1150 V AC) or
  - A16 (690 V + 20%)

Size	Article No.
1	3WL9111-0AT62-0AA0
2, 3	3WL9111-0AT63-0AA0

Breaker status sensors (BSS)



Version	Article No.
• For acquisition via communication of the circuit breaker states ON/OFF/tripped • For electronic trip units ETU45B and ETU76B	3WL9111-0AT16-0AA0

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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.: IEC61850, IEC60870-5-104, IEC60870-5-101, Modbus and DNP) to higher-level systems.



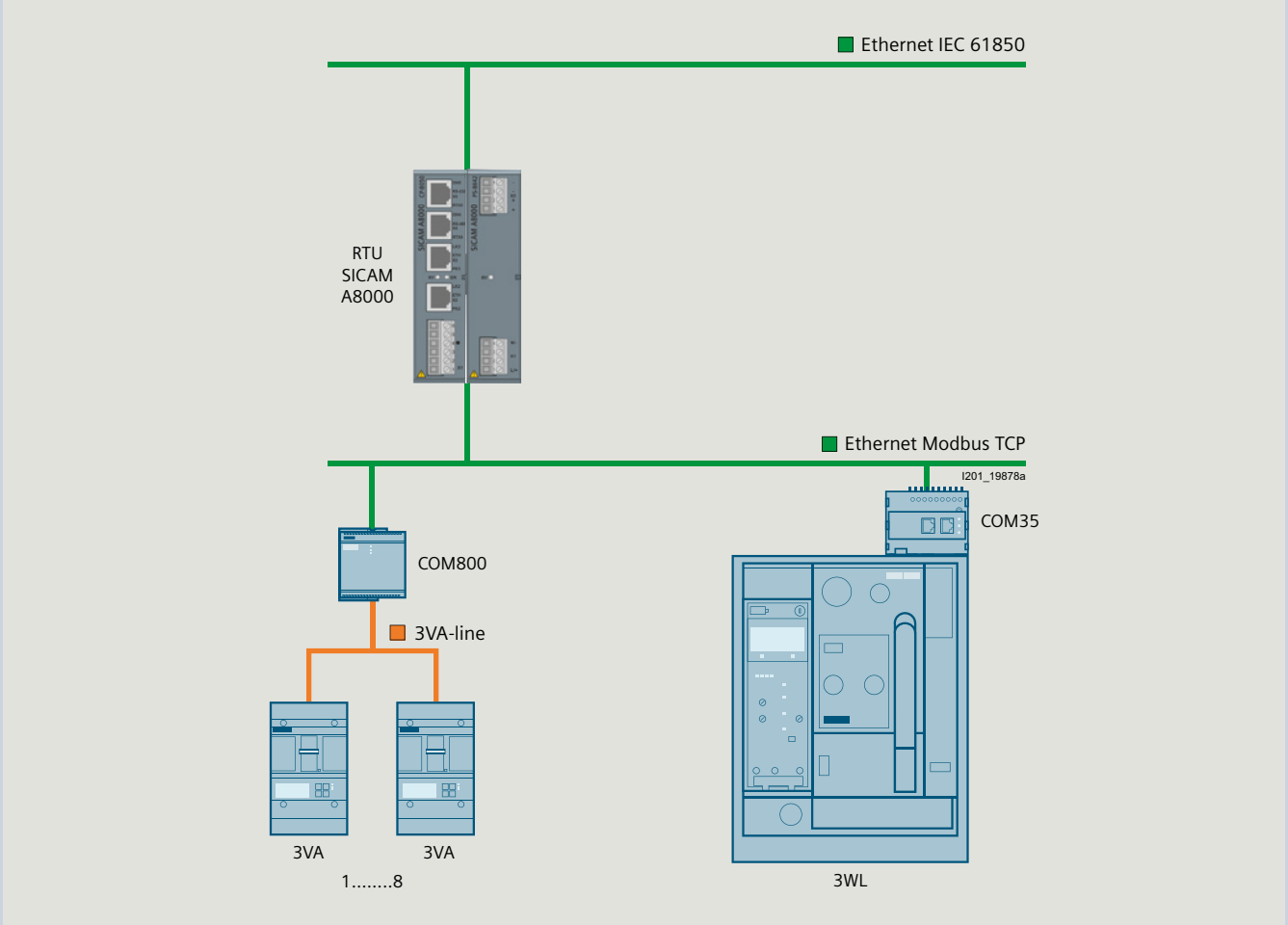


Type	Operational voltage	Article No.
SICAM CP-8021 [1]	–	6MF2802-1AA00
SICAM CP-8050 [2]	–	6MF2805-0AA00
SICAM PS-8620	24 ... 60 V DC (12 W)	6MF2862-0AA00
SICAM PS-8622	110 ... 220 V DC (12 W)	6MF2862-2AA00

[1] Dimensioned for device quantities of max. 1× 3WL and 1× 3VA

[2] Dimensioned for device quantities of max. 3× 3WL and 8× 3VA

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 downloaded from SIOS free of charge www.siemens.com/lowvoltage/product-support (109779191)



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Accessories and spare parts

Storage devices

Capacitor trip device

- For shunt trips
- Storage time 5 min
- Also suitable for 3VL, 3VA 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	
220 ... 240 V	220 ... 250 V	3WL9111-0BA14-0AA0

Spare parts

Measurement function Plus for retrofitting

- As spare part or for retrofitting the measurement function Plus with an external voltage transformer
  - For ETU45B or ETU76B Release 2
  - Voltage transformer required
  - Voltage converter required
  - A measuring accuracy of 3% is achieved if retrofitted.

	Article No.
	3WL9111-0AT05-0AA0

Voltage converter

Version	Article No.
As spare part or for retrofitting the measurement function Plus	3WL9111-0AT06-0AA0

Components for conversion of an existing internal voltage tap [2)]

- Conversion requires 3 components for 3-pole 3WL
- Conversion requires 4 components for 4-pole 3WL
- Conversion of a measurement function (Z option A05) is not possible.

Conversion of internal voltage tap to main contact	Size	Article No.
From bottom to top	1	3WL9111-0AT71-0AA0
	2	3WL9111-0AT72-0AA0
	3	3WL9111-0AT73-0AA0
From top to bottom	1	3WL9111-0AT74-0AA0
	2	3WL9111-0AT75-0AA0
	3	3WL9111-0AT76-0AA0

Transformers (without iron core), Rogowski coil only (instrument transformer for the protective function)

- Used in converter applications with high harmonic components;
  can only be used with ETU45B or ETU76B
  - External 24 V DC supply required
  - Undervoltage release required (e.g. 3WL9111-0AE01-0AA0)
- As retrofit kit or as spare part. With new circuit breakers, please use the Z option K60
- **Scope of supply:**
  - Transformer
  - Warning signs
  - Manual

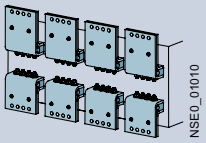
Number of poles	Size	Article No.
3-pole	1	3WL9111-0AA42-0AA0
	2	3WL9111-0AA43-0AA0
	3	3WL9111-0AA44-0AA0
4-pole	1	3WL9111-0AA45-0AA0
	2	3WL9111-0AA46-0AA0
	3	3WL9111-0AA47-0AA0

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Main conductor connections, fixed-mounted versions (essential accessory)

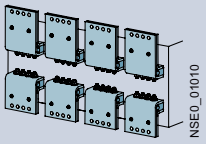
Front-accessible main connections, single hole at top



- Not for 3WL1 size 1 with high breaking capacity H

Size	Rated current I_n	Article No.
1	≤1000 A	3WL9111-0AL01-0AA0
	1250 ... 1600 A	3WL9111-0AL02-0AA0
2 [4]	≤2000 A	3WL9111-0AL03-0AA0
	≤2500 A	3WL9111-0AL04-0AA0
	≤3200 A	3WL9111-0AL05-0AA0
3	≤4000 A	3WL9111-0AL06-0AA0

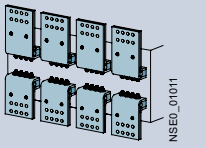
Front-accessible main connections, single hole at bottom



- Not for 3WL1 size 1 with high breaking capacity H

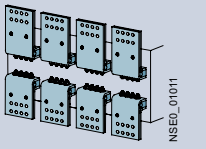
Size	Rated current I_n	Article No.
1	≤1000 A	3WL9111-0AL51-0AA0
	1250 ... 1600 A	3WL9111-0AL52-0AA0
2 [4]	≤2000 A	3WL9111-0AL53-0AA0
	≤2500 A	3WL9111-0AL54-0AA0
	≤3200 A	3WL9111-0AL55-0AA0
3	≤4000 A	3WL9111-0AL56-0AA0

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



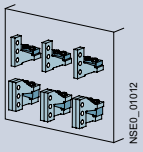
Size	Rated current I_n	Article No.
1	≤1000 A [1]	3WL9111-0AL07-0AA0
	1250 ... 2000 A [5]	3WL9111-0AL08-0AA0
2 [4]	≤2000 A	3WL9111-0AL11-0AA0
	≤2500 A	3WL9111-0AL12-0AA0
	≤3200 A	3WL9111-0AL13-0AA0
3	≤4000 A	3WL9111-0AL14-0AA0

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



Size	Rated current I_n	Article No.
1	≤1000 A [1]	3WL9111-0AL57-0AA0
	1250 ... 2000 A [5]	3WL9111-0AL58-0AA0
2 [4]	≤2000 A	3WL9111-0AL61-0AA0
	≤2500 A	3WL9111-0AL62-0AA0
	≤3200 A	3WL9111-0AL63-0AA0
3	≤4000 A	3WL9111-0AL64-0AA0

Rear vertical main connections



Size	Rated current I_n	Article No.
1 [2]	≤2000 A	3WL9111-0AM01-0AA0
2 [3]	≤3200 A	3WL9111-0AM02-0AA0
3	≤6300 A	3WL9111-0AM03-0AA0

[1] Not for 3WL1 size 1 with high breaking capacity H
[2] In the case of vertical connection size 1 with breaking capacity N and S, up to 1000 A one 3WL9111-0AM01-0AA0 vertical connection is required, up to 2000 A or with breaking capacity H two 3WL9111-0AM01-0AA0 vertical connections are required.
[3] In the case of vertical connection size 2, up to 2500 A one 3WL9111–0AM02–0AA0 vertical connection is required, up to 3200 A two 3WL9111-0AM02-0AA0 vertical connections are required.
[4] Not for circuit breakers with very high breaking capacity C.
[5] Can be used for size 1 with H breaking capacity of 630 A ... 2000 A.

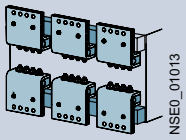
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Accessories and spare parts

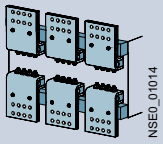
Main conductor connections, withdrawable versions (essential accessory)

Front-accessible main connections, single hole at top or at bottom [1) 2)]



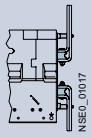
Size	Rated current I_n	Article No.
1	≤1000 A	3WL9111-0AN01-0AA0
	1250 ... 1600 A	3WL9111-0AN02-0AA0
2 [3)]	≤2000 A	3WL9111-0AN03-0AA0
	≤2500 A	3WL9111-0AN04-0AA0
	≤3200 A	3WL9111-0AN05-0AA0
3	≤4000 A	3WL9111-0AN06-0AA0

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



Size	Rated current I_n	Article No.
1	≤1000 A [2)]	3WL9111-0AN07-0AA0
	1250 ... 2000 A [5)]	3WL9111-0AN08-0AA0
2 [3)]	≤2000 A	3WL9111-0AN11-0AA0
	≤2500 A	3WL9111-0AN12-0AA0
	≤3200 A	3WL9111-0AN13-0AA0
3	≤4000 A	3WL9111-0AN14-0AA0

Supports for front and DIN connection bars



Number of poles	Size	Article No.
3-pole for 3 bars	1	3WL9111-0AN41-0AA0
	2	3WL9111-0AN42-0AA0
	3	3WL9111-0AN43-0AA0
4-pole for 4 bars	1	3WL9111-0AN44-0AA0
	2	3WL9111-0AN45-0AA0
	3	3WL9111-0AN46-0AA0

Rear vertical main connections

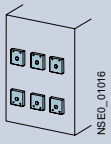


Size	Rated current I_n	Connection pieces	Article No.
1	≤1000 A [2)]		3WL9111-0AN15-0AA0
	1250 ... 2000 A [5)]		3WL9111-0AN16-0AA0
2	≤2000 A [3)]		3WL9111-0AN17-0AA0
	≤2500 A [3)]		3WL9111-0AN18-0AA0
	≤3200 A [3)]		3WL9111-0AN21-0AA0
	1600 ... 3200 A [4)]		3WL9111-0AN38-0AA0
3	≤5000 A		3WL9111-0AN22-0AA0
	≤6300 A	3 pieces for 3-pole switches	3WL9111-0AN23-0AA0
	≤6300 A, top	4 pieces for 4-pole switches	3WL9111-0AN20-0AA0
	≤6300 A, bottom	4 pieces for 4-pole switches	3WL9111-0AN10-0AA0

Rear horizontal main connections

Size	Rated current I_n	Article No.
1	≤1000 A [2)]	3WL9111-0AN32-0AA0
	1250 ... 2000 A [5)]	3WL9111-0AN33-0AA0
2	≤2000 A [3)]	3WL9111-0AN34-0AA0
	≤2500 A [3)]	3WL9111-0AN35-0AA0
	≤3200 A and 4000 A DC [3)]	3WL9111-0AN36-0AA0
	1600 ... 3200 A [4)]	3WL9111-0AN47-0AA0
3	≤5000 A	3WL9111-0AN37-0AA0

Connecting flange



Size	Rated current I_n	Article No.
1	≤1000 A [2)]	3WL9111-0AN24-0AA0
	1250 ... 2000 A [5)]	3WL9111-0AN25-0AA0
2 [3)]	≤2000 A	3WL9111-0AN26-0AA0
	≤2500 A	3WL9111-0AN27-0AA0
	≤3200 A	3WL9111-0AN28-0AA0
3	≤4000 A	3WL9111-0AN31-0AA0

1) When using front-accessible main connections (withdrawable circuit breakers) supports are required.
2) Not for 3WL1 size 1 with high breaking capacity H
3) Not for circuit breakers with very high breaking capacity C.
4) Only for circuit breakers with very high breaking capacity C.
5) Can be used for size 1 with H breaking capacity of 630 A ... 2000 A.

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Conversion kit

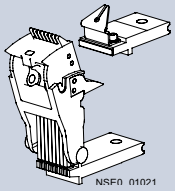
Conversion kit for converting fixed-mounted circuit breakers into withdrawable circuit breakers

- Guide frames and sliding contact modules must be ordered separately
- Conversion from fixed-mounted to withdrawable circuit breakers is not possible for 3WL1 circuit breakers with very high breaking capacity C and for circuit breakers with Z options A05, A15 or A16

Number of poles	Size	Article No.
3-pole	1	3WL9111-0BC11-0AA0
	2	3WL9111-0BC12-0AA0
	3	3WL9111-0BC13-0AA0
4-pole	1	3WL9111-0BC14-0AA0
	2	3WL9111-0BC15-0AA0
	3	3WL9111-0BC16-0AA0

Main contact elements

Main contact elements [1) 2)]



- **Notes:**
  - The circuit breaker ID number must be specified when ordering [3)]
  - Specified for each connection (depending on the number of poles on the circuit breaker, order 3 or 4 units)
  - Article number is automatically adapted to the circuit breaker ID No.

Size	Rated current I_n	Article No.
1	≤1600 A [4)]	3WL9111-0AM90 L1Y
2	≤2500 A	3WL9111-0AM91 L1Y
	≤4000 A	3WL9111-0AM92 L1Y
3	≤6300 A	3WL9111-0AM93 L1Y

1) Not for circuit breakers with very high breaking capacity C.
2) Replacement of the main contact elements for 3WL1 circuit breakers with very high breaking capacity C is only possible at the factory.
3) Please specify the circuit breaker ID No. in plain text when ordering.
4) Not for size 1 circuit breakers with breaking capacity H and circuit breakers with I_n = 2000A.

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System overview 3WL10

IEC AC ..

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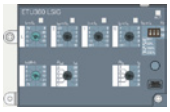
1

Circuit breakers and non-automatic circuit breakers



Size 0

Trip units



Electronic trip units ETU (LI, LSI, LSIG)



Electronic trip units ETU (LSI, LSIG)

Accessories



Communi-cation and I/O modules



Rating plugs



Breaker Connect modules



Measurement function (Basic/ Advanced)



External ground fault transformers

Main conductor connections



Fixed-mounted, withdrawable versions



Rear vertical/horizontal connections



Front connections



Front connections, extended



Terminals for Cu/Al cable connection

Motor



Spring charging motor

Accessories



Remote reset magnets



Mechanical operating cycles counters

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

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Auxiliary releases/closing coils



Shunt trips, undervoltage releases



Closing coils

Auxiliary switches and signaling switches

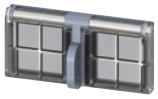


Auxiliary, alarm, and signaling switches



Position signaling switches

Interlocking



Interlocking sets



Locking provisions



Locking mechanisms



Door sealing frames



Protective covers

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

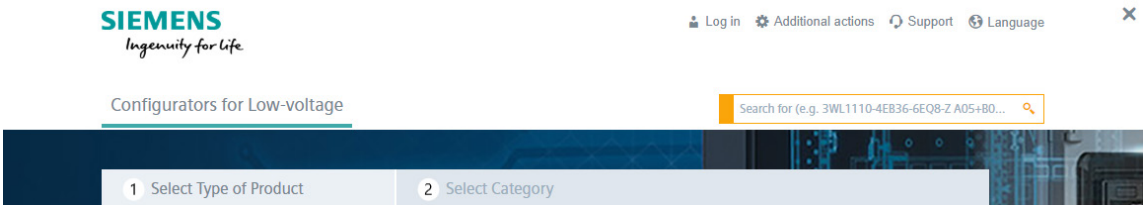
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Online configurator highlights

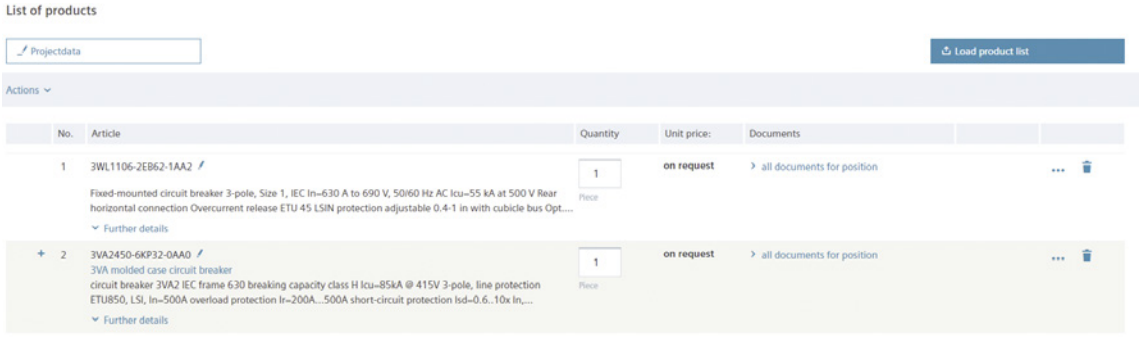
www.siemens.com/lowvoltage/configurators

Search function with global direct input

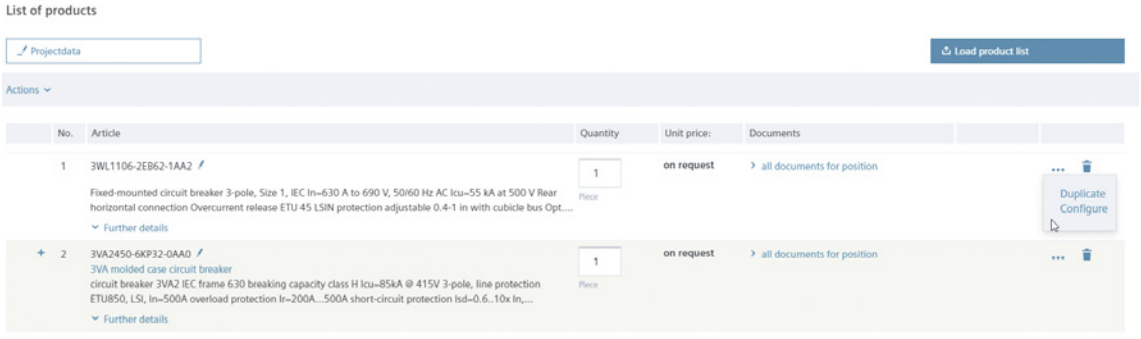
Searches for specific terms and jumps to MLFB based on input to the correct configurator



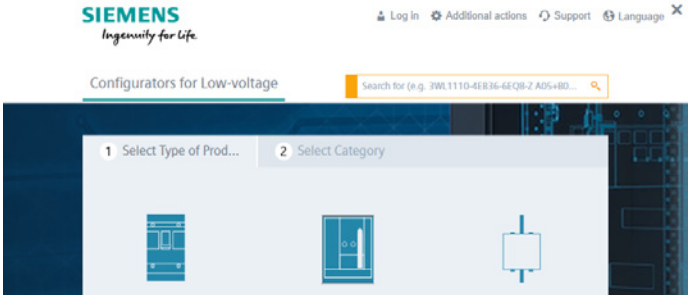
Product list stores multiple configurations and can transfer them collectively to the shopping cart



Recall of completed configurations for modification or additional configuration



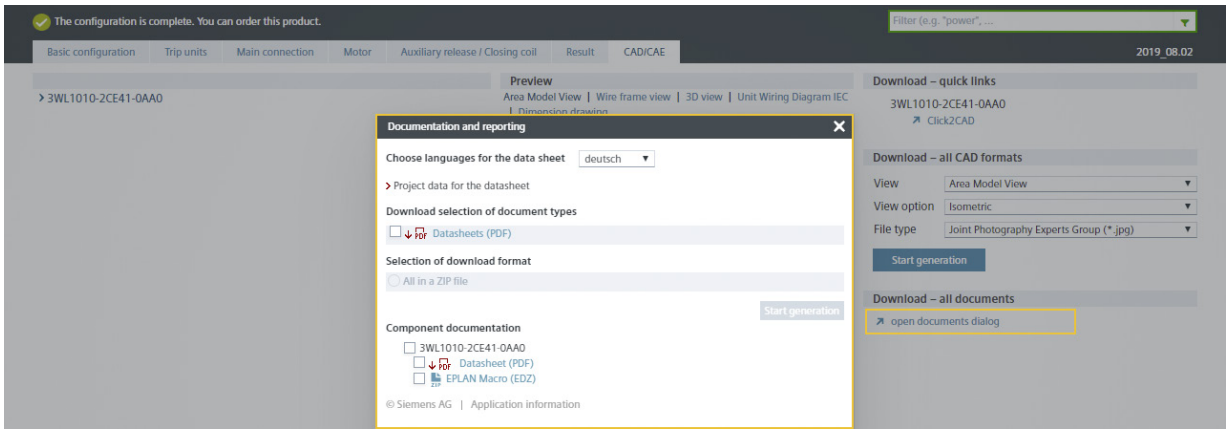
Responsive Design



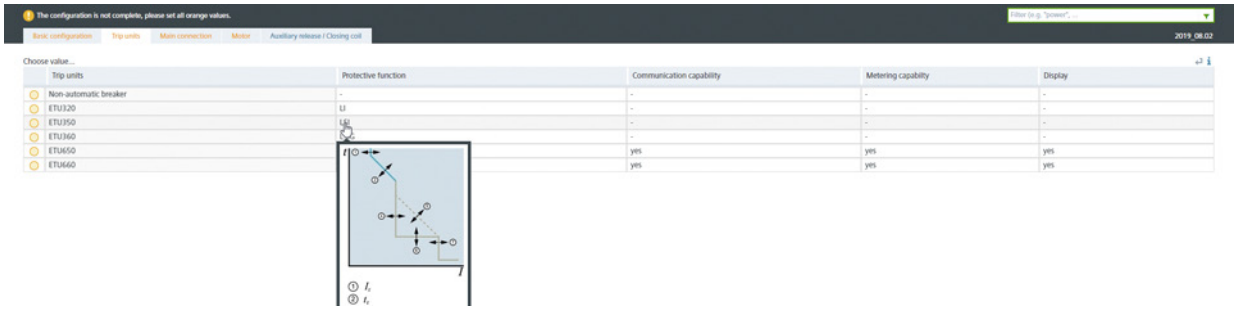
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www.siemens.com/lowvoltage/3wl10-configurator

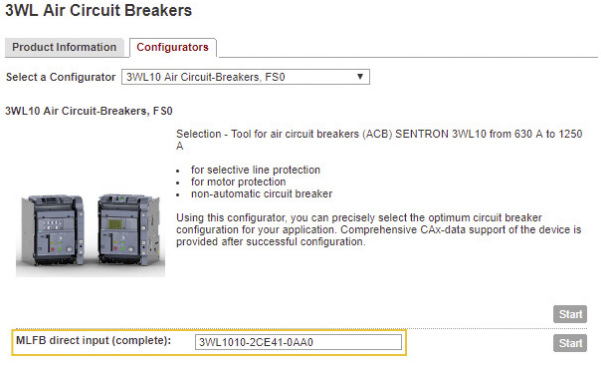
Download an ePlan selector for 3WL10



Mouseover display of characteristic curves to show the protective function



Direct entry of an already known article number or parts of an article number



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Structure of the article numbers

Basic configuration

**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/3wl10-configurator**

1

	6	7		8	9	10	11	12		13	14	15	16
3WL10			–						–				

Circuit breakers, non-automatic circuit breakers and ETU

Max. rated current $I_{n\,max}$	630 A				0	6	
	800 A				0	8	
	1000 A				1	0	
	1250 A				1	2	
Short-circuit breaking capacity I_{cu} at 415 V	B	Basic (42 kA)			1		
	N	ECO (55 kA)			2		
	S	Standard (66 kA)			3		
Non-automatic circuit breaker [1]	Without measurement function, without communications interface	Without trip unit			A	A	
Circuit breakers, ETU 3-series	Without measurement function, without communications interface	With trip unit	ETU320 LI	(N) [2]	A	B	
			ETU350 LSI	(N) [2]	A	C	
			ETU360 LSIG	(N) [2]	A	D	
Circuit breakers, ETU 6-series		With trip unit	ETU650 LSI	(N) [2]		E	
			ETU660 LSIG	(N) [2]		F	
	Without communications interface	Without measurement function			A		
	With communications interface	Without measurement function			B		
		Measurement function Basic	Voltage tap on bottom		C		
			Voltage tap on top		D		
		Measurement function Advanced	Voltage tap on bottom		E		
			Voltage tap on top		F		

[1] Only possible with N = ECO (55 kA) and S = Standard (66 kA)
[2] Neutral conductor protection for 3-pole breakers with an external neutral conductor transformer or for 4-pole breakers

Number of poles	Fixed-mounted versions	3-pole		0
		4-pole	Neutral left	1
			Neutral right	2
	Withdrawable	3-pole		3
		4-pole	Neutral left	4
			Neutral right	5

Connection [3]

Type of mounting	Withdrawable	Without frame	0
		Rear vertical connection	1
		Rear horizontal connection	2
		Adapter for cable lug connection (rear)	4
		Front-accessible, extended main connection	5
	Fixed-mounted versions	Rear vertical connection	1
		Rear horizontal connection	2
		Front main connection	3
		Circular conductor terminals (front)	4
		Front-accessible, extended main connection	5

[3] Broadened connections available as accessories.

Quick selection guide, pages 1/66 and 1/68

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3WL10 6 7 – 8 9 10 11 12 – 13 14 15 16

Motor

Operating mechanisms	Manual operating mechanism		0
	Spring charging motor	24 ... 30 V AC/DC	1
		48 ... 60 V AC/DC	2
		110 V AC/DC	3
		230 V AC/DC	4

Auxiliary releases, closing coils

Closing coil (CC), remote reset magnet (RR)	Without closing coil, without remote reset magnet		A
	Closing coils (CC)	24 V AC/DC	B
		30 V AC/DC	C
		48 V AC/DC	D
		60 V AC/DC	E
		110 ... 120 V AC/DC	F
		120 ... 127 V AC/DC	G
		220 ... 240 V AC/DC	H
		240 ... 250 V AC/DC	J
	Closing coil (CC) and additional remote reset magnet (RR)	24 V AC/DC	K
		110 V AC/DC	L
		220 V AC/DC	M
2nd auxiliary release	Without 2nd auxiliary release		A
	With undervoltage release (UVR)	24 V AC/DC	B
		30 V AC/DC	C
		48 V AC/DC	D
		60 V AC/DC	E
		110 ... 120 V AC/DC	F
		120 ... 127 V AC/DC	G
		220 ... 240 V AC/DC	H
		240 ... 250 V AC/DC	J
		380 ... 400 V AC/DC	K
		415 ... 440 V AC/DC	L
	With undervoltage release (UVR), delayable with external time-delay device Scope of supply: UVR + time-delay device	24 ... 30 V AC/DC	M
		110 ... 127 V AC/DC	N
		220 ... 250 V AC/DC	P
	With 2nd shunt trip (ST2)	24 V AC/DC	Q
		30 V AC/DC	R
		48 V AC/DC	S
		60 V AC/DC	T
		110 ... 120 V AC/DC	U
		120 ... 127 V AC/DC	V
		220 ... 240 V AC/DC	W
		240 ... 250 V AC/DC	X
1st auxiliary release	Without 1st Auxiliary release		0
	Shunt trips (ST)	24 V AC/DC	1
		30 V AC/DC	2
		48 V AC/DC	3
		60 V AC/DC	4
		110 ... 120 V AC/DC	5
		120 ... 127 V AC/DC	6
		220 ... 240 V AC/DC	7
		240 ... 250 V AC/DC	8

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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/3wl10-configurator

1

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

3WL....-.....-.... -Z

Accessories for basic configuration

Mounting options for fixed-mounted versions

- In the basic configuration, the fixed-mounted circuit breaker is mounted onto the rear panel. Floor mounting is possible as an option. The device must additionally be modified if it is to be extended to include functionalities such as external auxiliary switches or mechanical interlocking mechanism.[1)]

			Order code
Mounting options for fixed-mounted versions [1)]	Floor mounting	Mounting support standard	**A07**
		Mounting support extended [2)]	**S56**
	Rear panel mounting onto mounting plate	Side wall extended [2)]	**S57**

Accessories for electronic trip units ETU

Rating plugs

- As standard, the electronic trip units are equipped with a rating plug for setting the rated current I_n , which is equal to the maximum rated circuit breaker current (<$I_{n\,max}$). The rated current of the selected rating plug must be less than or equal to $I_{n\,max}$.
- To downrate the circuit breaker, a rated current smaller than $I_{n\,max}$ is selected for the rating plug via a Z option.
- Other functions can also be activated using rating plugs (L = OFF or Rc protection).

				Order code
Rating plug	For setting the rated current I_n	For all ETUs	400 A	**B04**
			630 A	**B06**
			800 A	**B08**
			1000 A	**B10**
	For setting the rated current I_n, with overload protection L = OFF	For 6-series ETUs	400 A	**L04**
			630 A	**L06**
			800 A	**L08**
			1000 A	**L10**
			1250 A	**L12**
	For setting the rated current I_n, for enabling of the residual current protective function. The residual current function is only possible with the MF Advanced measurement function.	For ETU660 only	400 A	**G04**
			630 A	**G06**
			800 A	**G08**
			1250 A	**G12**

Communications modules

- No more than two different communications modules can be used at the same time.
- When using an IOM040 digital I/O module (Z option K56), only 1 communications module can be used.

			Order code
Communications modules	COM040	PROFIBUS	**F02**
	COM041	PROFINET	**F03**
	COM043	Modbus TCP	**F11**
	COM042	Modbus RTU	**F12**

Breaker Connect modules

- When a circuit breaker with a communications interface is ordered, a Breaker Connect module for external 24 V DC power supply of the electronic components is also supplied ready installed.
- By means of this Z option, the Breaker Connect module for 24 V DC is replaced by a Breaker Connect module for 110 ... 240 V AC/DC.

		Order code
Breaker Connect modules	110 ... 240 V AC/DC	**F26**

I/O modules internal

			Order code
I/O modules internal	Digital I/O module IOM040	2 inputs, 2 outputs	**K56**

[1)] These functionalities can be applied directly to the frame of the withdrawable circuit breaker, without any modification of the side wall.
[2)] Not possible in connection with or as an alternative to the mounting support, standard (A07).

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

3WL....-.....-.... -Z

				Order code

Accessories for the motor

Mechanical operating cycles counter, 5-digit				**C01**

Auxiliary switches and signaling switches

- Auxiliary and signaling switches for currents >100 mA and up to 400 V AC are installed as standard.
- For currents <100 mA for PLC connections, these auxiliary and signaling switches can be replaced.
- The auxiliary/signaling switches for 24 V DC digital signals are designed for
  - a minimum load above 1 mA at 5 V DC, and
  - a maximum breaking capacity of 100 mA at 24 V DC.

Position signaling switches for guide frames [1]		2 CO | 2 CO | 2 CO (connected | test | disconnected position)		**K55**
Signaling switches	Ready-to-close signaling switches		1 CO digital, 24 V DC	**K50**
	Tripped signaling switches (S24)		1 CO digital, 24 V DC	**K53**
	Spring charge signaling switch (S21)		1 CO digital, 24 V DC	**K54**
Auxiliary switches	ON/OFF AUX	4 CO digital, 24 V DC		**K51**
		2 CO 400 V AC + 2 CO digital 24 V DC		**K52**

Locking, blocking and interlocking

Locking provisions [1]	To prevent movement of the withdrawable circuit breaker	Cylinder lock	Made by RONIS	**R78**
		For no more than 3 padlocks, 8 mm		**R65**
Locking mechanisms	To prevent movement to disconnected position			**R79**
Locking provisions	Against unauthorized closing in the operator panel (safe OFF)	Cylinder lock, made by RONIS		**S08**
		For no more than 3 padlocks, plastic 4 mm		**S22**
		For no more than 1 padlock, metal 7 mm		**S23**
		For no more than 2 padlocks, metal 8 mm		**S07**
Interlocking sets	For mechanical Open and/or Close on the operator panel	For no more than 3 padlocks, plastic 4 mm		**S42**
		For no more than 1 padlock, metal 7 mm		**S43**
		For no more than 2 padlocks, metal 8 mm		**S44**
Protective covers	For mechanical Open/Close, not lockable			**S41**
Door sealing frames IP30	IP3x			**T30**

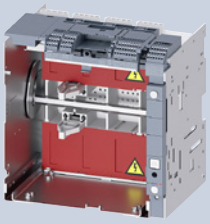
[1] Can be used both for individual orders of the guide frame and complete orders (circuit breaker + guide frame).

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Guide frames

Guide frames for ordering separately without circuit breakers



- Guide frames without breakers up to 1250 A
- **Note:** All CB bus modules for communication COM04x/IOM300/Breaker Connect module, as well as COMPSS signaling switches are configured without frames in the withdrawable circuit breaker and defined there by means of Z options, and are included with the circuit breaker. PSS Standard is always included in the frame and can be changed to an electronics-capable signal by means of a Z option.

Number of poles	Connection type	Article No.
3-pole	Rear vertical	3VW8112-0AA01
	Rear horizontal	3VW8112-0AB01
	4× 240 mm² Cu/Al cable connection, for cable lug connections	3VW8112-0AD01
	Front connection bars, extended	3VW8112-0AE01
4-pole	Rear vertical	3VW8112-0BA01
	Rear horizontal	3VW8112-0BB01
	4× 240 mm² Cu/Al cable connection, for cable lug connections	3VW8112-0BD01
	Front connection bars, extended	3VW8112-0BE01

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

3VW8....-.....-.... -Z

Order code

Locking, blocking and interlocking

Locking provisions	To prevent movement of the withdrawable circuit breaker	Cylinder lock, made by RONIS	**R78**
		For no more than 3 padlocks, 8 mm	**R65**
Locking mechanisms	To prevent movement to disconnected position (only in combination with R78 or R65)		**R79**

Auxiliary/signaling switches

Position signaling switch PSS for guide frame	For 24 V DC digital signals, for minimum currents	2 CO | 2 CO | 2 CO (connected | test | disconnected position)	**K55**

Auxiliary and signaling switches for currents >100 mA and up to 400 V AC are installed as standard.
For currents <100 mA for PLC connections, these auxiliary and signaling switches can be modified.
The auxiliary/signaling switches for 24 V DC digital signals are designed for

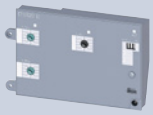
- a minimum load above 1 mA at 5 V DC, and
- a maximum breaking capacity of 100 mA at 24 V DC.

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Electronic trip units ETU and accessories

Electronic trip units (ETU)





Version	With communications/measurement function/enhanced protective functions	Type	Protective function	Article No.
With rotary coding switches	No	ETU320	LIN	3VW9011-5AA00
		ETU350	LSIN	3VW9012-5AA00
		ETU360	LSING	3VW9012-7AA00
With display	Yes	ETU650	LSIN	3VW9017-5AA00
		ETU660	LSING	3VW9017-7AA00

Measurement functions for ETU650 or ETU660



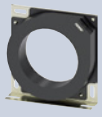
Description	Protective function/version	Arrangement	Article No.
Measurement function	MF Basic	–	3VW9011-0AT01
	MF Advanced	–	3VW9011-0AT04
Set of cables for voltage tap for MF	For 4-pole circuit breakers with neutral right	Top or bottom	3VW9011-0AT08
	For 4-pole circuit breakers with neutral left	Top	3VW9011-0AT75
		Bottom	3VW9011-0AT76
	For 3-pole circuit breakers	Top	3VW9011-0AT72
		Bottom	3VW9011-0AT73

External current transformers for N conductor



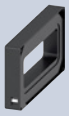
Accessory for	Use	Article No.
ETU320, ETU350, ETU360, ETU650, ETU660	For 3-pole circuit breakers only	3VW9011-0AA30

External current transformers for transformer neutral point



Accessory for	G_{ret} (Ground return)	Article No.
ETU660	100 A	3VW9011-0GF30
	250 A	3VW9011-0GF31

Summation current transformers external Rc-CT for residual current measurement



- Only with MF Advanced measurement function and Rc rating plug

Accessory for	Use	Article No.
ETU660	For external residual current measurement	3VW9011-0RC30

Remote reset magnets RR for the circuit breakers including tripped signaling



- Remote reset magnet (RR) for resetting the circuit breaker after tripping as a result of overcurrent conditions

Accessory for	Voltage	Article No.
ETU320, ETU350, ETU360, ETU650, ETU660	24 V DC	3VW9011-0AK03
	110 V AC/DC	3VW9011-0AK05
	250 V AC/DC	3VW9011-0AK06

Spare part batteries for electronic trip unit ETU



Accessory for	Article No.
ETU320, ETU350, ETU360, ETU650, ETU660	3VW9011-0AT38

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Electronic trip units ETU and accessories

Rating plugs



- Only one module is possible per circuit breaker.

Accessory for	Version	Rated current I_n	Article No.
ETU320, ETU350, ETU360, ETU650, ETU660	Rating plugs for setting (< $I_{n\,max}$) the rated current I_n	400 A	3VW9011-0AA53
		630 A	3VW9011-0AA55
		800 A	3VW9011-0AA56
		1000 A	3VW9011-0AA57
		1250 A	3VW9011-0AA58
ETU 6-series	Rating plug without overload protection (L = OFF) and for setting (< $I_{n\,max}$) the rated current I_n	400 A	3VW9011-0LF53
		630 A	3VW9011-0LF55
		800 A	3VW9011-0LF56
		1000 A	3VW9011-0LF57
		1250 A	3VW9011-0LF58
ETU660	Rating plug Rc for ETU660, for enabling the residual current protective function and setting (< $I_{n\,max}$) the rated current I_n. The residual current function is only possible with the MF Advanced measurement function.	400 A	3VW9011-0RC53
		630 A	3VW9011-0RC55
		800 A	3VW9011-0RC56
		1250 A	3VW9011-0RC58

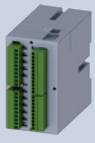
CB bus modules - communications modules



- Contains the communications module
- No more than two different communications modules can be used at the same time
- When using a digital I/O module IOM040 (Z option K56), only 1 communications module can be used
- Can only be used with ETU of the 6-series and require a Breaker Connect module for connection to the circuit breaker. This can also be configured directly on the device by means of a Z option if the communications interface to the ETU 6-series is selected.

Communications module	Protocol	Article No.
COM040	PROFIBUS	3VW9011-0AT15
COM041	PROFINET	3VW9011-0AT14
COM043	Modbus TCP	3VW9011-0AT16
COM042	Modbus RTU	3VW9011-0AT17

CB bus modules - I/O modules external IOM300



- For snapping onto DIN rail

Accessory for	Maximum switching current per contact	Inputs	Outputs	Article No.
ETU 6-series	• 2 A at ≤ 30 V DC • 0.8 A at 50 V DC • 0.2 A at 150 V DC • 4 A at 250 V AC	11	10	3VW9011-0AT20

CB bus modules - I/O modules internal IOM040



- When using a digital I/O module IOM040, only 1 communications module can be used

Accessory for	Maximum switching current per contact	Inputs	Outputs	Article No.
ETU 6-series	• 2 A at ≤ 30 V DC • 0.8 A at 50 V DC • 0.2 A at 150 V DC • 4 A at 250 V AC	2	2	3VW9011-0AT30

Actuator module COM ACT



- For switching the circuit breaker on/off remotely via communication
- Actuation of the closing coil (CC) and the 1st shunt trip (ST)
- Can only be used in combination with a communications module, spring charging motor, closing coil and 1st shunt trip
- Automatically included if the communications interface of the ETU 6-series is selected in the basic circuit breaker configuration

Accessory for	Article No.
ETU 6-series	3VW9011-0AT10

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Breaker Connect modules



- For external power supply for the electronics components

Voltage	Article No.
110 ... 240 V AC/DC	3VW9011-0AT06
24 ... 48 V DC	3VW9011-0AT07

Auxiliary contact signaling switch for communications interface



- Auxiliary contacts for signaling the readiness to close or for position signaling switches of the withdrawable positions.
- Can only be used in combination with communications module.
- Can be combined with standard position signaling switches or ready-to-close signaling contacts.
- **Note:** Both signaling switches are automatically included in the basic circuit breaker (COM PSS only with withdrawable versions) if the communications interface of the ETU 6-series is selected.

Function	Article No.
Ready-to-close signaling switch for communication COM RTC	3VW9011-0AT11
Position signaling switch COM PSS (for withdrawable breaker only)	3VW9011-0AT12

Test devices and Breaker Data Adapters



- Can be used for all ETU 3-series and 6-series

Function	Type	Article No.
Test device • For the trip test via ETU and tripping solenoid including release • Activation of the ETU and the tripping solenoid by means of a battery built into the test device • On activation in the ETU 6-series, the parameters can be configured on the display	TD310	3VW9011-0AT32
Breaker Data Adapter • As gateway for parameterization of the ETU with SENTRON powerconfig • For generation of a report of the set parameters with powerservice	TD410	3VW9011-0AT34
Test devices and Breaker Data Adapters • As gateway for parameterization of the ETU with SENTRON powerconfig – Testing a tripping operation using SENTRON powerconfig • For use with the powerservice software – Testing of the basic protective functions LSING – Testing of the enhanced protective functions – Test data storage – Readout of ETU buffer – Generation of a report of the set parameters	TD420	3VW9011-0AT33

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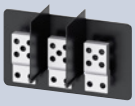
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Accessories and spare parts

Accessories for connection

Front main connections acc. to IEC 60947-2







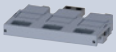




- To be ordered separately for top and bottom

Mounting	Version	Mounting onto	Number of poles/ quantity	Article No.
Fixed-mounted	Front main connections		3-pole/3 units	3VW9011-0AL01
			4-pole/4 units	3VW9011-0AL02
	Extended main connections, including insulation plate and phase barriers, standard	Front main connections	3-pole/3 units	3VW9011-0AL77
			4-pole/4 units	3VW9011-0AL78
	Broadened main connections, including insulation plate and extended phase barriers	Front main connections, top	3-pole/3 units	3VW9011-0AL73
		Front main connections, bottom	3-pole/3 units	3VW9011-0AL75
		Front main connections, top, bottom	4-pole/4 units	3VW9011-0AL74
Withdrawable	Front-accessible main connections	Flange of the guide frame	3-pole/3 units	3VW9011-0AN01
			4-pole/4 units	3VW9011-0AN02
	Broadened main connections	Front-accessible main connections	3-pole/3 units	3VW9011-0AN73
			4-pole/4 units	3VW9011-0AN74

Rear main connections acc. to IEC 60947-2







- To be ordered separately for top and bottom

Mounting	Version	Mounting onto	Number of poles/ quantity	Article No.
Fixed-mounted	Rear main connections, rotatable for horizontal/vertical connection, including terminal cover		3-pole/3 units	3VW9011-0AL32
			4-pole/4 units	3VW9011-0AL33
Withdrawable	Rear main connections, rotatable for horizontal/vertical connection, including terminal cover		3-pole/3 units	3VW9011-0AN32
			4-pole/4 units	3VW9011-0AN33
	Broadened main connections	Rear horizontal main connections	3-pole/3 units	3VW9011-0AN75
			4-pole/4 units	3VW9011-0AN76

Cu/Al cable connections





- To be ordered separately for top and bottom

Mounting	Version	Mounting onto	Number of poles/ quantity	Article No.
Fixed-mounted	Circular conductor terminals 4 x 240 mm² for front cable connection [1], including insulation plate and high, extended terminal cover	Front main connections	3-pole/3 units	3VW9011-0AL71
			4-pole/4 units	3VW9011-0AL72
Withdrawable	Set of circular conductor connection pieces 4 x 240 mm² for cable lugs for rear cable connection	Rear vertical main connections	3-pole/3 units	3VW9011-0AN71
			4-pole/4 units	3VW9011-0AN72

Auxiliary supply connectors in push-in version



- Control wire tap in push-in version for upgrading fixed-mounted circuit breakers and guide frames.
- The device is always fitted at the factory with the exact number of control wire taps required.

Version	Article No.
Push-in	3VW9011-0AB11

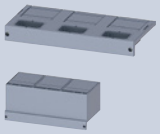
[1] For connecting Al cables up to 1000 A

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Accessories for connection

Terminal covers for fixed-mounted circuit breakers



- Finger-proof for front main connection for fixed-mounted versions
- Necessary isolation measures are always supplied with the corresponding connection technology and do not need to be ordered separately.

Version	Number of poles/quantity	Article No.
Standard	3-pole/2 units	3VW9723-0WD30
	4-pole/2 units	3VW9724-0WD40
Extended	3-pole/2 units	3VW9723-0WF30
	4-pole/2 units	3VW9724-0WF40

Phase barriers for fixed-mounted circuit breakers



- Necessary isolation measures are always supplied with the corresponding connection technology and do not need to be ordered separately.
- For operational voltages >440 V AC the use of phase barriers is mandatory; up to 440 V AC their use is optional.

Height	Number of poles/quantity	Article No.
100 mm (standard)	3-pole/4 units	3VW9723-0WA00
	4-pole/6 units	3VW9724-0WA10
200 mm (extended)	3-pole/4 units	3VW9723-0WA01
	4-pole/6 units	3VW9724-0WA11

Support for floor mounting of fixed-mounted circuit breakers

- For fixed-mounted versions

Version	Use	Article No.
Mounting support standard (circuit breaker feet) (= Z option A07)		3VW9011-0BB51
Mounting support extended (circuit breaker feet), including mechanical transmission of switch position on circuit breaker side panel (= Z option S56)	• Fixation for external auxiliary switches AUX 15 CO (3VW9011-0AG15) • Locking mechanism for control cabinet door, direct (for 3VW9011-0BB10) • Locking mechanism for control cabinet door, Bowden cable (for 3VW9011-0BB16) • Mechanical interlock for 3WL/3VA (for 3VW9011-0BB21)	3VW9011-0BB52

Extension kits for modification of the side wall of the fixed-mounted circuit breaker



- For fixed-mounted versions
- Rear wall fixing on mounting plate
- For modification for mechanical transmission of switch position on circuit breaker side panel (= Z option S57)

Version	Use	Article No.
Extension kit for side wall	• Fixation for external auxiliary switches AUX 15 CO (3VW9011-0AG15) • Locking mechanism for control cabinet door, direct (for 3VW9011-0BB10) • Locking mechanism for control cabinet door, Bowden cable (for 3VW9011-0BB16) • Mechanical interlock for 3WL/3VA (for 3VW9011-0BB21)	3VW9011-0BB53

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Accessories and spare parts

Motor

Spring charging motor (MO)



Description	Voltage	Article No.
For automatic charging of the stored energy mechanism	24 ... 30 V AC/DC	3VW9011-0AF01
	48 ... 60 V AC/DC	3VW9011-0AF02
	100 ... 130 V AC/DC	3VW9011-0AF03
	220 ... 250 V AC/DC	3VW9011-0AF04

Mechanical operating cycles counters MOC



Description	Version	Article No.
In combination with a spring charging motor	5 digits	3VW9011-0AH07

Auxiliary releases, closing coils

Closing coils CC/shunt trips ST



Voltage	Article No.
24 V AC/DC	3VW9011-0AD01
30 V AC/DC	3VW9011-0AD02
48 V AC/DC	3VW9011-0AD03
60 V AC/DC	3VW9011-0AD04
110 ... 120 V AC/DC	3VW9011-0AD05
120 ... 127 V AC/DC	3VW9011-0AD06
220 ... 240 V AC/DC	3VW9011-0AD07
240 ... 250 V AC/DC	3VW9011-0AD08
380 ... 400 V AC	3VW9011-0AD17
415 ... 440 V AC	3VW9011-0AD18

TD320 function test units for closing coils/shunt trips



- The TD320 test unit allows the operational availability and functions of the closing coils and shunt trips with a rated operational voltage between 24 V and 250 V (AC and DC) to be tested.
- The operational availability test is performed cyclically at intervals of 30 seconds.
- The unit has visual indicators in the form of LEDs on the front in order to display the following states:
  - LED POWER ON LIT: Correct function of the YO/YC test device
  - LED DEACTIVATION LIT: Power supply failure, wire break
  - LED SHORT-CIRCUIT LIT: Winding short-circuit
  - LED DEACTIVATION and SHORT-CIRCUIT FLASHING: Incorrect power supply
  - LED DEACTIVATION and SHORT-CIRCUIT OFF: Closing coil/shunt trips OK

Version	Article No.
For all closing coils/shunt trips	3VW9011-0AT31

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Auxiliary releases, closing coils

Auxiliary/signaling switches



- The auxiliary/signaling switches for 24 V DC digital signals are designed for
  - a minimum load above 1 mA at 5 V DC, and
  - a maximum breaking capacity of 100 mA at 24 V DC.
- For external auxiliary switches ON/OFF AUX 15 CO, a 3VW9011-0AG1x fixation must be ordered in addition, and for fixed-mounted circuit breakers a 3VW9011-0BB5x side wall modification

Type	Contacts	Article No.
Ready-to-close signal RTC	1 CO standard	3VW9011-0AH01
	1 CO digital	3VW9011-0AH02
Auxiliary switch ON/OFF AUX	4 CO standard	3VW9011-0AG01
	4 CO digital	3VW9011-0AG02
	2 CO standard + 2 CO digital	3VW9011-0AG03
External auxiliary switch ON/OFF AUX	15 CO standard	3VW9011-0AG05
	15 CO digital	3VW9011-0AG06
Tripped signaling switch S24	1 CO standard	3VW9011-0AH14
	1 CO digital	3VW9011-0AH15
Spring charge signaling switch S21	1 CO standard	3VW9011-0AH10
	1 CO digital	3VW9011-0AH08
Position signaling switch PSS (for withdrawable devices)	2 CO | 2 CO | 2 CO (connected | test | disconnected position) standard	3VW9011-0AH11
	2 CO | 2 CO | 2 CO (connected | test | disconnected position) digital	3VW9011-0AH12

Fixing for external auxiliary switches AUX 15 CO



- External auxiliary switches ON/OFF AUX 15 CO must be ordered separately.

Version	Article No.
For fixed-mounted circuit breakers with rear panel or floor mounting (in combination with Z option S56 or S57)	3VW9011-0AG15
For guide frames	3VW9011-0AG17

Undervoltage releases UVR



Voltage	Article No.
24 V AC/DC	3VW9011-0AE01
30 V AC/DC	3VW9011-0AE02
48 V AC/DC	3VW9011-0AE03
60 V AC/DC	3VW9011-0AE04
110 ... 120 V AC/DC	3VW9011-0AE05
120 ... 127 V AC/DC	3VW9011-0AE06
220 ... 240 V AC/DC	3VW9011-0AE07
240 ... 250 V AC/DC	3VW9011-0AE08
380 ... 400 V AC	3VW9011-0AE17
415 ... 440 V AC	3VW9011-0AE18

External time-delay devices for undervoltage release



- With adjustable delay time from 0.5 to 3 s.
- Suitable for mounting onto DIN rail.

Voltage	Article No.
24 ... 30 V AC/DC	3VW9011-0AE10
48 V AC/DC	3VW9011-0AE11
60 V AC/DC	3VW9011-0AE15
110 ... 127 V AC/DC	3VW9011-0AE12
220 ... 250 V AC/DC	3VW9011-0AE13

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Accessories and spare parts

Interlocking

Locking provision to prevent movement of the withdrawable circuit breaker



Version	Article No.
RONIS cylinder lock (spare part for R78)	3VW9011-0BA80
Padlock 8 mm (spare part for R65), for no more than 3 padlocks	3VW9011-0BA87

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



- Only possible as a supplement in conjunction with R78 (3VW9011-0BA80) and/or R65 (3VW9011-0BA87)

Description	Article No.
Locking mechanism (spare part for R79)	3VW9011-0BA84

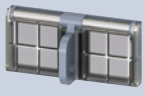
Locking provisions in OFF position



- For fixed-mounted and withdrawable versions
- Against unauthorized closing in the operator panel (safe OFF)
- The disconnector unit fulfills the requirements for main circuit breakers according to EN 60204-1

Description	Article No.
Cylinder lock, made by RONIS (spare part for S08)	3VW9011-0BA33

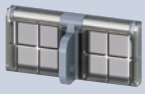
Locking provisions in OFF position



- For fixed-mounted and withdrawable versions
- Against unauthorized closing in the operator panel (safe OFF)
- The disconnector unit fulfills the requirements for main circuit breakers according to EN 60204-1

Description	Version	Article No.
Padlock 4 mm (spare part for S22)	Plastic for no more than 3 locks	3VW9011-0BA41
Padlock 7 mm (spare part for S23)	Metal for no more than 1 lock	3VW9011-0BA42
Padlock 8 mm (spare part for S07)	Metal for no more than 2 locks	3VW9011-0BA44

Interlocking sets for mechanical Open and/or Close on the operator panel



Description	Version	Article No.
Padlock 4 mm (spare part for S42)	Plastic for no more than 3 locks	3VW9011-0BA22
Padlock 7 mm (spare part for S43)	Metal for no more than 1 lock	3VW9011-0BA23
Padlock 8 mm (spare part for S44)	Metal for no more than 2 locks	3VW9011-0BA24

Protective covers for mechanical Open/Close



- Mechanical Open/Close to protect against unintentional actuation on the operator panel.
- Not lockable

Description	Article No.
Not lockable (spare part for S41)	3VW9011-0BA21

Mechanical interlocks



- Mechanical interlock for 3WL/3VA with Bowden cable 2 m
- For fixed-mounted versions, an additional support 3VW9011-0BB52 (option S56) or extension kit 3VW9011-0BB53 (option S57) must be ordered

Mounting	Mounting	Article No.
Fixed-mounted	Rear panel or floor mounting	3VW9011-0BB21
Withdrawable	Mounting onto guide frame	3VW9011-0BB22

Bowden cable, separate

- One required for each circuit breaker

Type	Article No.
1000 mm	3VW9011-0BB23
2000 mm	3WL9111-0BB45-0AA0
3000 mm	3WL9111-0BB46-0AA0

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Interlocking

Locking mechanisms for control cabinet door



- To prevent opening of the control cabinet door in ON position
- It additionally prevents the circuit breaker from being closed when the control cabinet door is open.

Mounting	Version	Article No.
Fixed-mounted onto side panel or floor	Direct fixed interlocking	3VW9011-0BB10
	Locking with Bowden cable	3VW9011-0BB16
Withdrawable	Direct fixed interlocking	3VW9011-0BB14
	Locking with Bowden cable	3VW9011-0BB18

Door sealing frame IP30



- For IP4x and higher, you must order the protective cover IP54 3VW9011-0AP03 or 3VW9011-0AP13.

Description	Mounting	Version	Article No.
Spare part for Z option T30.	Fixed-mounted	IP3x	3VW9011-0AP01
	Withdrawable	IP3x	3VW9011-0AP02

Protective covers IP54



- Protective cover/hood IP54 lockable for fixed-mounted breakers and withdrawable breakers
- For implementing degrees of protection IP4x and IP54 when installing in switchboard door.
- Cannot be combined with IP30 door sealing frame and door mounted rotary operator

Description	Version	Article No.
Lock with unique key	IP54	3VW9011-0AP03
Lock with standard key	IP54	3VW9011-0AP13

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Appendix



Conditions of sale and delivery A/2

Link directory A/4

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Conditions of sale and delivery

1. General Provisions

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

1.1 For customers with a seat or registered office in European Union

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

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

1.2 For customers with a seat or registered office outside European Union

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

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for consulting services the „Standard Terms and Conditions for Consulting Services of the Division DF for Customers with a Seat or Registered Office Outside of Germany"[1)] and/or
- for other services the „International Terms & Conditions for Services"[1)] supplemented by „Software Licensing Conditions"[1)] and/or
- for other supplies of hard- and software the „International Terms & Conditions for Products"[1)] supplemented by „Software Licensing Conditions"[1)]

1.3 For customers with master or framework agreement

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

2. Additional Terms and Conditions

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

Illustrations are not binding.

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

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

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3. Export Regulations

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

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

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

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Products without label, with label „AL:N"/„ECCN:N", or label „AL:9X9999"/„ECCN: 9X9999" may require authorization from responsible authorities depending on the final end-use, or the destination.

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Prior to any transfer of goods, works and services provided by us to a third party you shall in particular check and guarantee by appropriate measures that

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- the regulations of all applicable Sanctioned Party Lists of the European Union and the United States of America concerning the trading with entities, persons and organizations listed therein are considered.

If required to enable authorities or us to conduct export control checks, you, upon request by us, shall promptly provide us with all information pertaining to the particular end customer, the particular destination and the particular intended use of goods, works and services provided by us, as well as any export control restrictions existing.

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Catalog LV 10

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Switches and Socket Outlets
DELTA

PDF



LV 13
3WA Air Circuit Breakers
SENTRON

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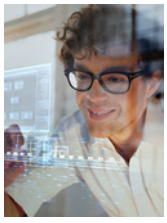
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LV 18
Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification
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IC 10
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