SIEMENS

SENTRON

Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification

siemens.com/lowvoltage

Catalog
LV 18

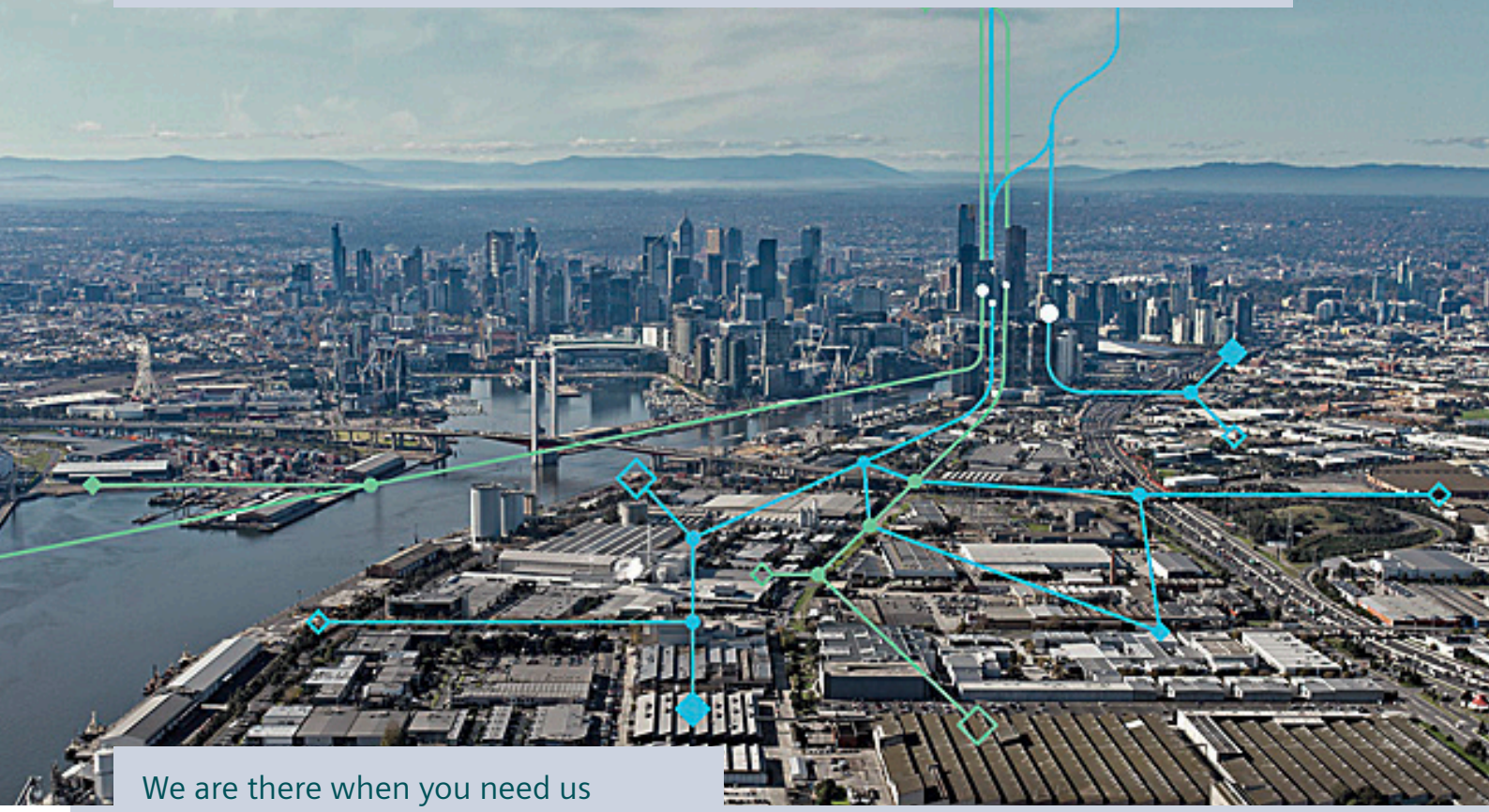
Edition
2025

Innovative solutions for industrial controls and power distribution

Reliable components, systems and software solutions are essential in ensuring smooth power distribution in buildings and industrial plants.

With SIRIUS, SENTRON, SIVACON and ALPHA, we offer an innovative portfolio for standard-compliant and demand-oriented applications.

Efficient engineering tools and innovative cloud-based solutions can be flexibly tailored to individual requirements.



We are there when you need us

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

Catalog LV 18 · 2025

You will find the latest edition and all future editions in SiePortal at **www.siemens.com/lowvoltage/catalogs**

You can find the current prices in SiePortal at
www.siemens.com/lowvoltage/product-catalog

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.

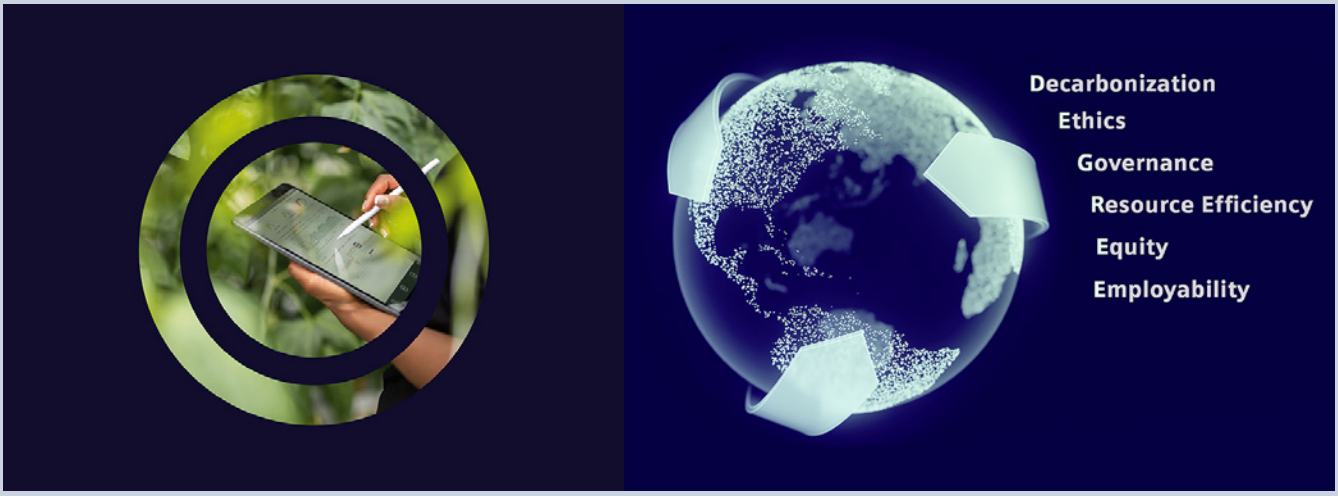
All illustrations are not binding.

Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification

Protecting

Sustainability@Siemens

Transforming the everyday to create a better tomorrow.



Siemens as a company takes an all-round view of environmental, social and governance criteria (ESG) with its DEGREE rulebook (decarbonization, ethics, governance, resource efficiency, equity and employability). Not only are we committed to reducing the carbon footprint in our own plants to net zero by 2030, but also to helping our customers achieve their decarbonization and sustainability objectives.

Mission & strategy

As a focused technology company, Siemens is committed to tackling the world's most profound challenges by leveraging the synergies of digitalization and sustainability.

Technology with a purpose

We develop technologies that interconnect the real world and the digital world and enable our customers to make positive changes to their industries, which form the backbone of our economy: industry, infrastructure, transportation and healthcare.

Our contribution

Siemens makes a difference every single day by providing innovative solutions for challenges in environmental protection, decarbonization, health and safety. Innovative solutions that have a clear purpose: to make the world more sustainable, more integrative and a better place to live.

Facts about sustainability

For almost 175 years, Siemens has been driven by the desire to improve the lives of people around the world with our technologies.

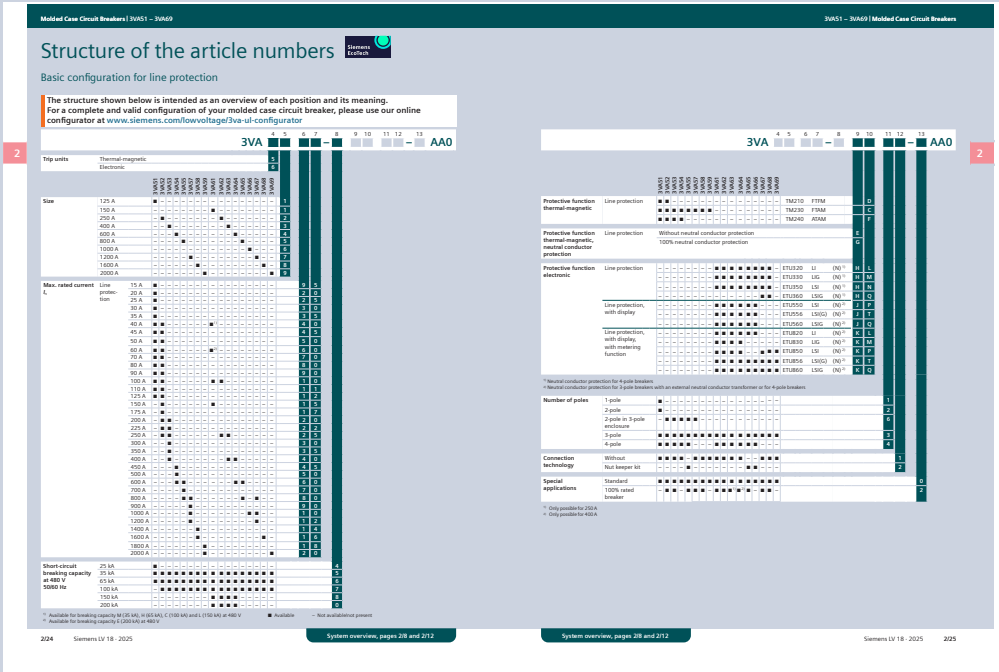
Siemens EcoTech

Siemens EcoTech is an environment label for products that promotes the sustainable transformation of industry and infrastructure. The label offers transparency about the performance of our certified products in relation to criteria relevant to the environment so that you can make well-founded decisions in order to achieve your sustainability objectives: www.siemens.com/SiemensEcoTech

Further information at:
www.siemens.com/sustainability

The fast route to the product

Overview of configurable products for better understanding



Configurable products

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

The fast route to the product

Overview of configurable products for better understanding

new Search function

Search for new products by entering "new" in the text field of the search function

Siemens EcoTech

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

www.siemens.com/lowvoltage/SiemensEcoTech

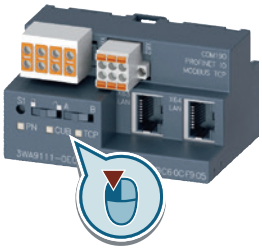
Clickable article numbers

Direct forwarding to the individual products in SiePortal (Product Catalog) by clicking on the article number in the catalog

or by entering this web address incl. article number
www.siemens.com/product_catalog_SIEP?Article No.

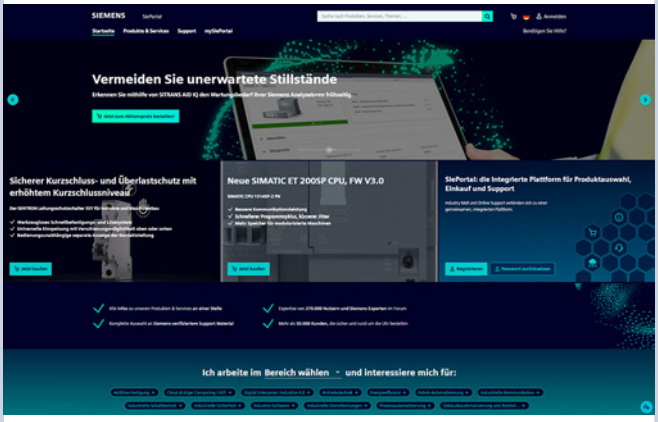
Clickable images

Direct forwarding to the individual motif types in the Industry image database by clicking on the images in the catalog



Industry image database:
www.siemens.com/lowvoltage/picturedb

SiePortal – The integrated platform for product selection, ordering and support



SiePortal:
www.siemens.com/sieportal

SiePortal – Knowledge base for low-voltage products

SiePortal > Support > Knowledge base

- Catalog/Brochure
- Manual
- Characteristic curves
- Certificates
- FAQ etc.

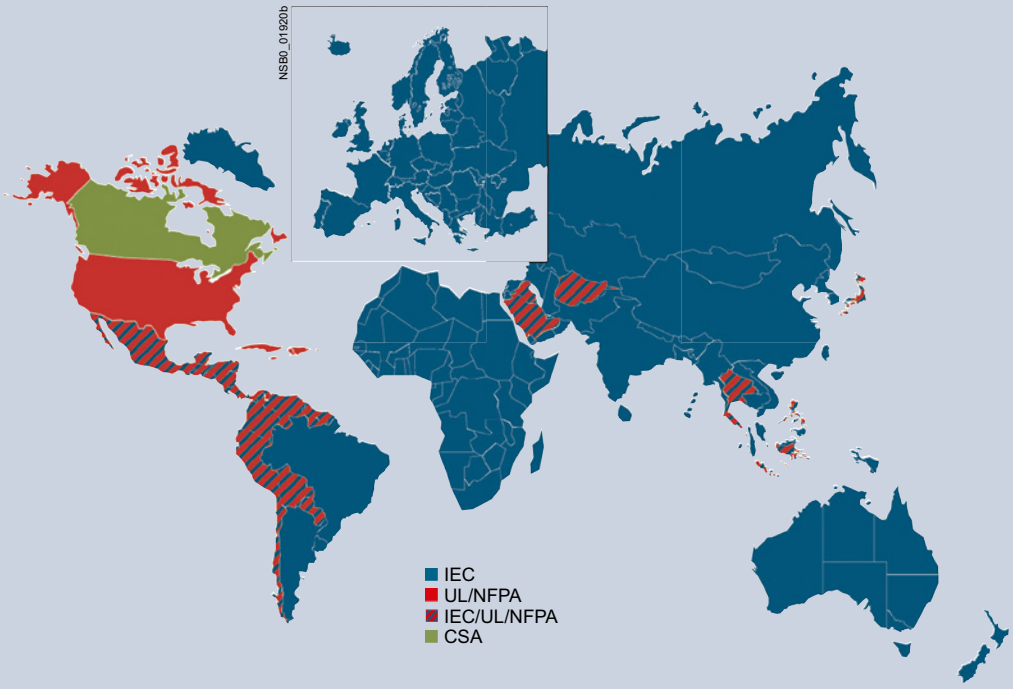
www.siemens.com/lowvoltage/product-support

SiePortal – Product catalog (Internet ordering platform) for low-voltage products

SiePortal > Products & Services

www.siemens.com/lowvoltage/product-catalog

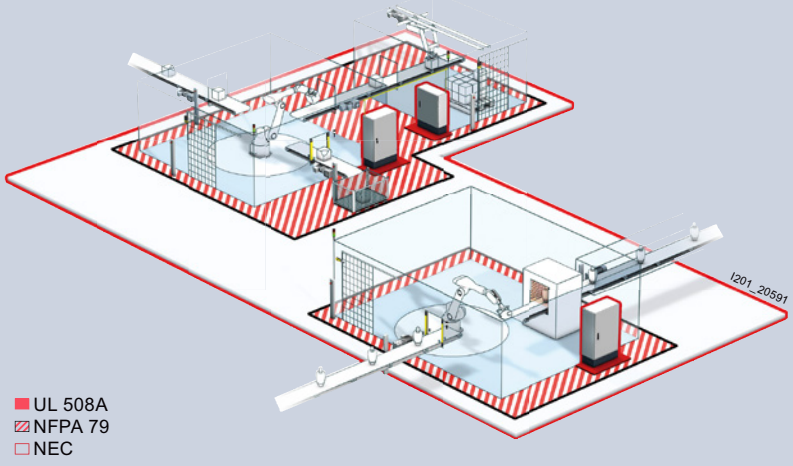
Overview of the key US standards



UL and IEC are fundamentally different. The IEC standards for the IEC market merely define the minimum safety requirements for a device or system. The technical details relating to how safety requirements are to be implemented are in practice a matter for the manufacturer. Every electrical machine or system in the USA is investigated by an inspector, the so-called Authority Having Jurisdiction (AHJ), prior to commissioning. The National Electrical Code (NEC), respective application-specific standards as well as local standards and specifications form the basis for acceptance.

The following standards are of essential importance to mechanical engineers and panel builders:

- UL 508A for industrial control panels
- NFPA 79 (Electrical Standard for Industrial Machinery) for industrial machines
- NEC (National Electrical Code, NFPA 70) for electrical on-site installation



You will find further information at: **www.siemens.com/controlpanel**

Marks	Applications
	The **UL Listing Mark** is the most frequently used symbol. Products (e.g. washing machines, computers, electrical switchgear, fire extinguishers, personal flotation devices, etc.) which carry this mark meet all UL's safety requirements and are allowed to be installed universally and without further instruction or restriction of use. Our own portfolio, for example, offers contactors in accordance with UL 508 or circuit breakers in accordance with UL 489.
	**C-UL Listing Mark:** This mark is applied to products for the Canadian market. You will see this mark on appliances and computer equipment, vending machines, household burglar alarm systems, lighting fixtures, and many other types of products.
	**C-UL US Listing Mark:** Introduced in 1998, this mark indicates compliance of the products with both Canadian and U.S. requirements. The Canada/U.S. UL mark is optional. UL encourages those manufacturers with products certified for both countries to use this combined mark, but they may continue using separate UL marks for the United States and Canada.
	**Recognized Component Mark:** This mark is used on components and devices that are incorporated in machines, systems or products such as washing machines. These components may have restrictions on their performance or may be incomplete in construction. The Component Recognition Mark is found on a wide range of products, including some switches, power supplies, printed wiring boards, some kinds of industrial control equipment and many other products. They are allowed to be installed only by properly qualified personnel, as the "Conditions of Acceptability (CoA)" apply to these devices in all cases. Examples of our products that bear the UR mark include our miniature circuit breakers which meet UL 1077, our time switches which meet UL 917, and our SITOR fuses.
	**Canadian Recognized Component Mark** (similar to the Recognized Component Mark – see above): Components approved for the Canadian market carry this mark.
	**Recognized Component Mark for Canada and the United States:** Components carrying this mark, which became effective in 1998, meet the requirements of the US and Canadian markets for Recognized Components. Although UL had not originally planned to introduce a combined Recognized Component Mark, the popularity of Canada/U.S. listing marks among clients led to the new mark.

Certifications such as Ⓤ and Ⓤ are issued by the so-called NRTLs (Nationally Recognized Testing Laboratories) after successful testing. The OSHA (Occupational Safety and Health Administration) has accredited Underwriters Laboratories Inc. as an NRTL.

Overcurrent protection according to network standards

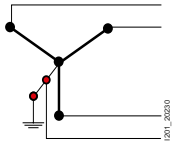
Overcurrent protection

The term "overcurrent" refers to the overload, short-circuit and ground-fault current when this exceeds the rated value of the protective device. Overcurrent protection is understood to be a device designed to open a circuit when the rated current is exceeded. The selected or set overcurrent protection must be dimensioned such that the circuit is interrupted if the current-carrying capacity of the conductors or the equipment is exceeded due to overloads, short circuits or ground faults.

UL 508A distinguishes between straight rating and slash rating. Which of these two ratings applies depends on the existing system type.

Slash rating

There are two voltages (phase – phase/phase – ground) in a solidly grounded wye network. These two voltages are also specified along with the rating, e.g. 480 Y/277 V. A device suitable for this network has a slash rating.



3 phases,
4 conductors

Solidly grounded wye, 3 phases, 4 conductors

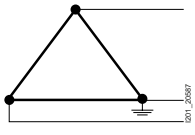
Notice: The PE must not carry any current.
There is no PEN conductor --> N = grounded conductor (white or gray); separate conductors must be used for PE and N.

Usable line voltages:

600Y/347 V [1)]
480Y/277 V [1)]
240Y/131 V [1)]
208Y/120 V [1)]

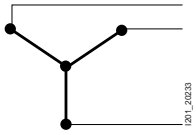
Straight rating

In the common industrial networks there is only one voltage. Such networks are called "straight networks". When choosing short-circuit protection devices, attention must be paid to whether devices are approved for straight or slash rating.



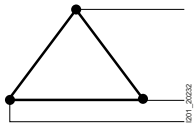
3 phases,
3 conductors

Corner grounded delta,
3 phases, 3 conductors



3 phases,
3 conductors

Ungrounded wye,
3 phases, 3 conductors



3 phases,
3 conductors

Ungrounded delta,
3 phases, 3 conductors

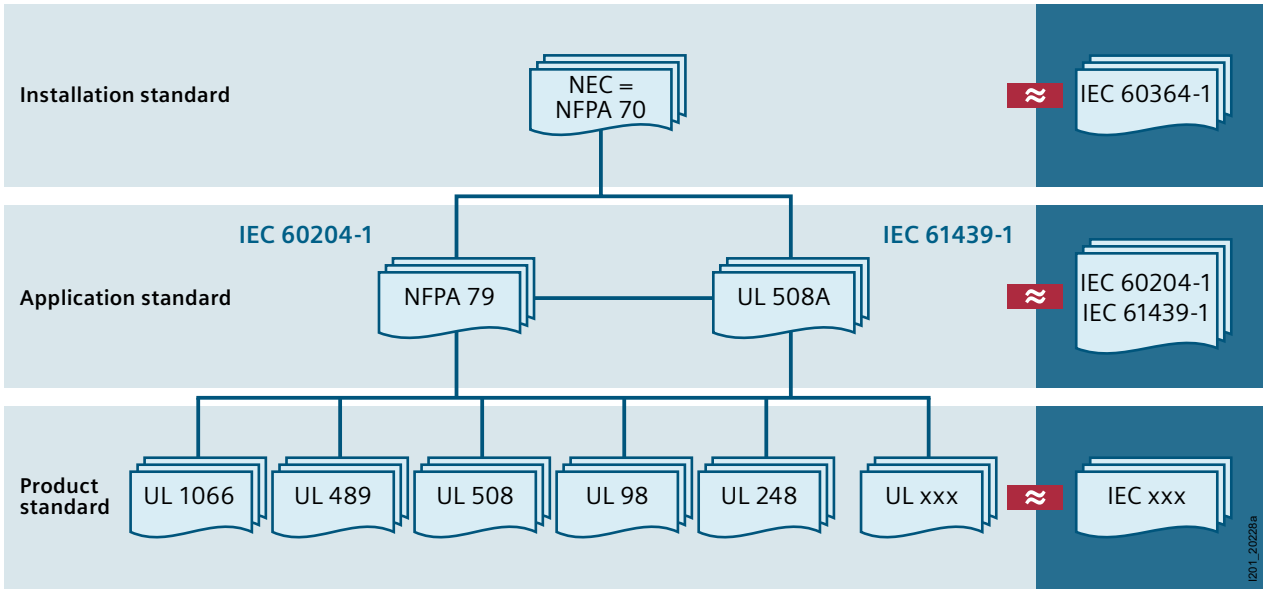
Usable line voltages:

600 V
480 V
240 V

[1)] Y describes the "Solidly grounded circuit". The value "Y" indicates the voltage between the phases (e.g. 480 V), and the value behind the slash indicates the voltage between the phase and the grounding or the neutral conductor (e.g. 277 V with 480 V voltage between the phases).

Brief code comparison of UL/IEC standards

Interaction of the most important US standards



NEC = NFPA 70 vs. IEC 60364-1: Electrical on-site installation

NFPA 79 vs. IEC 60204-1: Industrial machines

UL 508A vs. IEC 61439-1: Industrial control panels

Contact our Support at **www.siemens.com/lowvoltage/certificates** to find out which products (please specify the article number) are approved according to which standard.

The table below contains a summary of the available products and details of the UL, CSA and IEC standards with which the 3WA3 and 3WL5 air circuit breaker and the 3VA5 and 3VA6 molded case circuit breakers comply. However, the table only contains product groups.

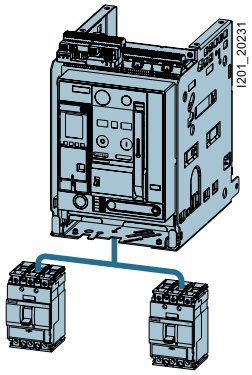
The product groups mentioned might include individual products which are not approved according to UL or CSA. It is essential therefore to research each individual product via our Support.

			UL	CCN UL		UL	**CSA**			**IEC**
		Rated current	Standard	listed	recognized	File No.	Standard	File No.	Class No.	Standard
Air circuit breakers										
ACB	3WA3	≤ 5000 A	UL 1066	PAQX	–	E240124/ E236299	cULus approved			IEC 60947-2
	3WL5	≤ 5000 A	UL 489	DIVQ DIVQ7	–	E231263	cULus approved			IEC 60947-2
Molded case circuit breakers										
Circuit breaker (CB)	3VA51–3VA59	≤ 2000 A	UL 489	DIVQ DIVQ7	–	E364397	cULus approved			IEC 60947-2 [1]
	3VA61–3VA69	≤ 2000 A	UL 489	DIVQ DIVQ7	–	E364397	cULus approved			IEC 60947-2 [1]
Motor circuit protector (MCP)	3VA51–3VA55	≤ 800 A	UL 489	–	DKPU2 DKPU8	E482699	cULus approved			IEC 60947-2
	3VA61–3VA66	≤ 1000 A	UL 489	–	DKPU2 DKPU8	E482699	cULus approved			IEC 60947-2
Molded case switch (MCS)	3VA51–3VA59	≤ 2000 A	UL 489	WJAZ WJAZ7	–	E482701	cULus approved			IEC 60947-2 [1]
	3VA61–3VA66	≤ 1000 A	UL 489	WJAZ WJAZ7	–	E482701	cULus approved			IEC 60947-2
Circuit breaker accessories	3VA9		UL 489	DIHS DIHS7	DIHS2 DIHS8	E354102	cULus approved			IEC 60947-2

[1] No IEC approval for 3VA59 and 3VA69

Applications

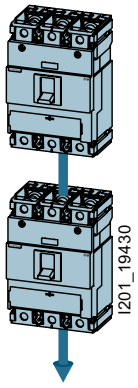
Circuit breaker for line protection/ Inverse time circuit breaker for line protection (CB, CCN code: DIVQ)



The trip units are designed to provide overload and short-circuit protection for:

- Cables
- Leads
- Non-motor loads

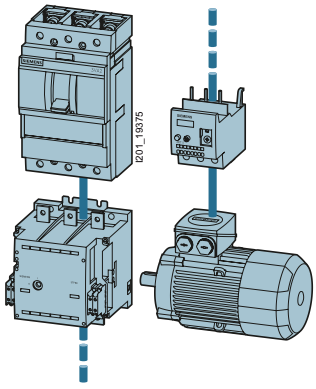
Non-automatic circuit breaker/ Switch disconnector/Molded case switch (MCS, CCN code: WJAZ)



These molded case switches can be used as feeder switches, main switches or non-automatic circuit breakers without overload protection.

They incorporate an integrated short-circuit self-protection system.

Motor circuit protector/ Instantaneous trip circuit breaker/ Protective circuit breaker for motor starter combinations (MCP, CCN-Code: DKPU2)



Starter combinations consist of:

Motor circuit protector + contactor + overload relay

The motor circuit protector handles short-circuit protection and the isolating function. The task of the contactor is the operational switching of the feeder. The overload relay handles overload protection that can be specially matched to the motor.

The motor circuit protector is therefore equipped with an adjustable and instantaneous short-circuit release.

Product approvals in control panel according to UL/NEC

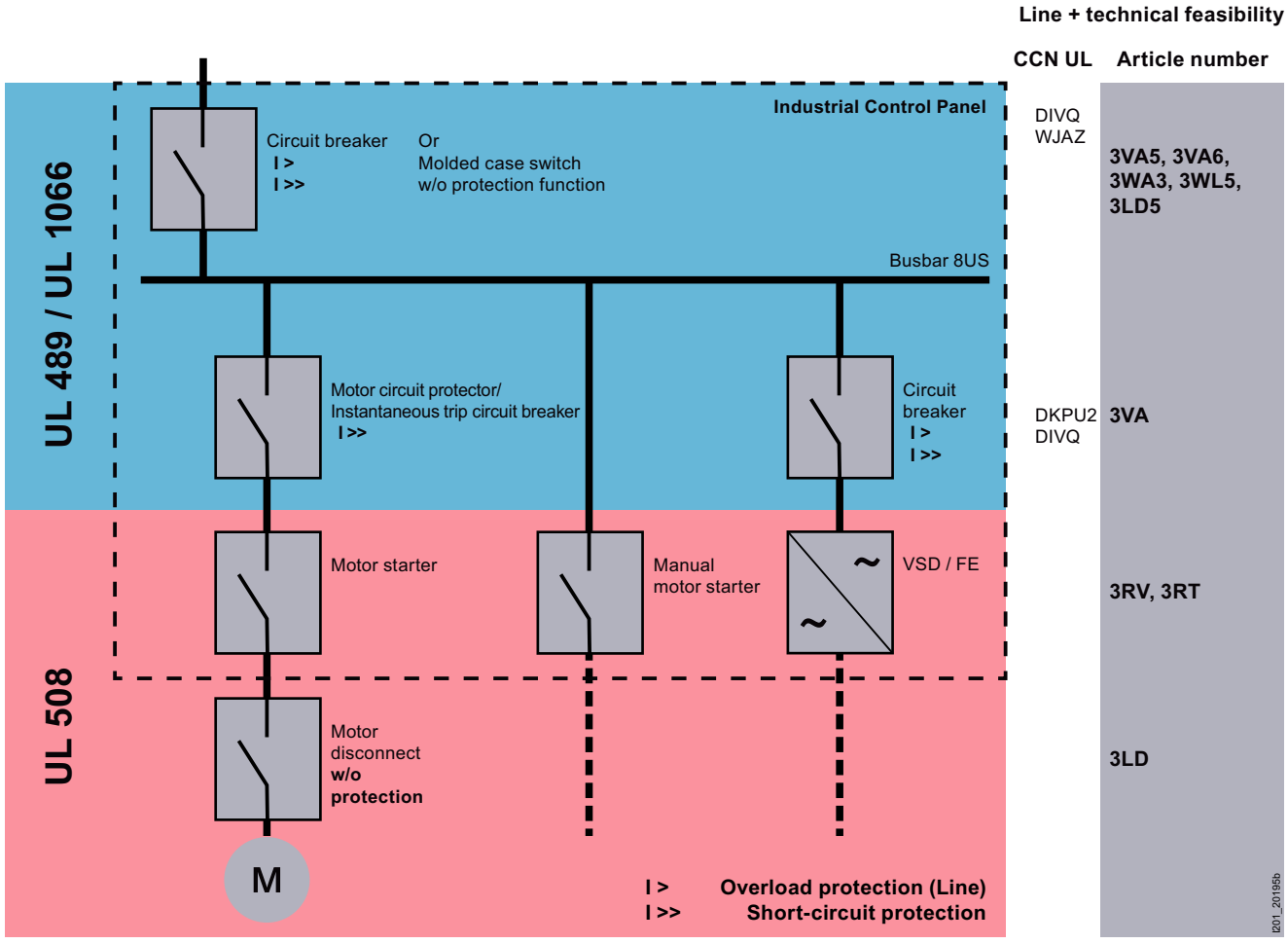


Diagram showing which product approvals may be used at which position in the feeder/supply line according to UL/NEC.

Made for global makers. Simply reliable.

All power distribution systems rely on a secure infeed of electrical energy. The new SENTRON 3WA air circuit breakers reliably protect electrical equipment from damage or fire resulting from short circuit, ground fault, or overload failures.

The UL series 3WA3 meets the requirements of the UL 1066 and IEC 60947-2 standards and can be used worldwide. This is especially advantageous for switchgear manufacturers and OEMs that have to meet both standards. The 3WA air circuit breaker is also part of the Siemens Xcelerator portfolio and therefore provides support with achieving digital and sustainable transformation – faster, simpler, and scalable.

Air Circuit Breakers

Siemens Xcelerator

A multitude of additional information ...

Information + ordering

All the important things at a glance

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

Your product in detail

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

- Brochure
  - 3WA air circuit breakers **(109800077)**

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

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

Siemens YouTube channel

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

Everything you need for your order

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

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

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

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-ul-configurator** **www.siemens.com/lowvoltage/3wl-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 can find further information on services at **www.siemens.com/service-offers**

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

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

… can be found in our online services

Commissioning + operation

SENTRON Powerconfig

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

Free download SENTRON Powerconfig
www.siemens.com/powerconfig

Free download SENTRON Powerconfig mobile via
App Store and **Play Store**

Your product in detail

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

- Operating instructions
- Characteristic curves
- Certificates

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

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

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

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

Manuals

Manuals are available for downloading at
www.siemens.com/lowvoltage/manuals

- Equipment Manual
  – 3WA3 air circuit breakers **(109811114)**
- Configuration Manual
  – 3WL5 air circuit breakers/ non-automatic air circuit breakers **(109775570)**
- System Manual
  – 3WL/3VL circuit breakers with communications capability – Modbus **(39850157)**
  – 3WL/3VL circuit breakers with communications capability – PROFIBUS **(12560390)**
- Communication Manual
  – 3WL air circuit breakers via COM35 – PROFINET IO, Modbus TCP **(109757987)**

Face-to-face or online training

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

- 3WA air circuit breakers (WT-LV3WA)
- 3WL air circuit breakers, sizes 1-3 (WT-LVA3WL)
- Protection systems in low-voltage power distribution (WT-LVAPS)
- Maintenance and operation of 3WA circuit breakers (LV-3WAMAIN)
- Maintenance and operation of 3WL circuit breakers (LV-3WLMAIN)
- Maintenance and operation of 3WL and 3WA circuit breakers (LV-CBMAIN)
- Certification: Maintenance and operation of 3WL and 3WA circuit breakers (LV-CBCERT)
- 3WL and 3WA air circuit breakers protection technology and communication (LV-COPR)

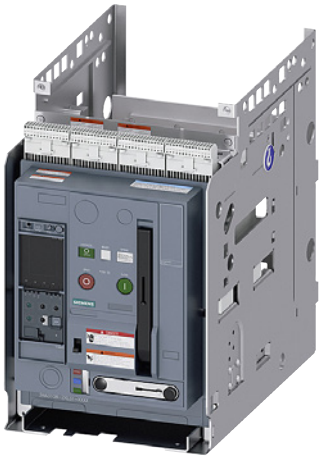
Video tutorial on the 3WL air circuit breaker
www.lowvoltage.siemens.com/wcms/3wl-tutorial

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)

3WA3 and 3WL5 air circuit breakers



3WA3 air circuit breakers

Special features

The 3WA3 series of SENTRON 3WA air circuit breakers can be used worldwide. It meets the requirements of UL 1066/IEC 60947.

- Available in 3 sizes
- Suitable for AC applications
- Rated current range of 800 ... 5000 A
- Breaking capacity according to UL 1066:
  50 ... 150 kA 508 V AC, 50 ... 100 kA for 635 V AC
  (65 ... 85 kA for 730 V AC)
- Breaking capacity according to IEC 60947-2:
  50 ... 100 kA for 500 V AC, 42 ... 85 kA for 690 V AC
  (50 kA for 1000 V AC)
- ETU300 electronic trip unit for simple LSI/LSIG standard applications
- ETU600 (LSI, LSIG) electronic trip unit for more demanding applications with upgradeable, higher requirements
- Communications interface via Modbus RTU, Modbus TCP and PROFINET
- Maintenance mode DAS+ as standard
- Integrated metering value acquisition according to IEC 61557-12

3WL5 air circuit breakers

Special features

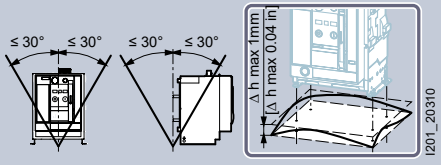
The 3WL5 series of the SENTRON 3WL air circuit breaker can be used worldwide. It meets the requirements of UL 489/IEC 60947.

- Available in 3 sizes
- Suitable for AC and DC applications
- Rated current range of 1000 ... 5000 A
- Breaking capacity according to UL 489:
  65 and 100 kA for 480 V
- Breaking capacity according to IEC 60947-2:
  65 and 100 kA for 500 V
- ETU45 electronic trip unit
- Communications interface via Modbus RTU, PROFINET and PROFIBUS
- Metering value acquisition possible

3WA3 circuit breakers and non-automatic circuit breakers for AC

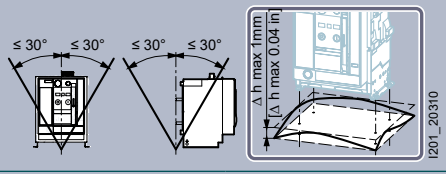
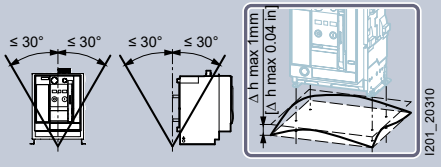
UL 1066/IEC 60947-2

3WA31

Basic data				
Size			1	
Rated current I_n		A	800 ... 2000	
Frequency		Hz	50/60	
Type of mounting			Withdrawable	Fixed-mounted
Number of poles			3/4-pole	3/4-pole
Dimensions				
Width (3-pole | 4-pole)		mm	320 | 410	320 | 410
Height (for breaking capacity N, S and M | H and E)		mm	466 | 516	440
Height (for breaking capacity M, H and C | E)		mm	–	–
Depth		mm	695	357
Electrical characteristics according to UL 1066				
Rated operational voltage U_e 50/60 Hz AC		V	635 and 730	
Electrical characteristics according to IEC 60947-2				
Rated operational voltage U_e 50/60 Hz AC		V	690 and 1000	
Rated insulation voltage U_i		V	1000	
Rated impulse withstand voltage U_{imp}	Main conducting paths	kV	12	
	Auxiliary circuits	kV	4	
	Control circuits	kV	2.5	
Standards, certifications, and approvals				
Standards			UL 1066, IEC 60947-2	
General data				
Permissible ambient temperature	During operation	°C	–40 ... +70	
	Storage	°C	–40 ... +80	
Mounting position				
Degree of protection acc. to IEC 60947-2	Without control cabinet door		IP20	
	With door sealing frame		IP41	
	With cover		IP55	
Isolating function acc. to IEC 60947-2			yes	
Utilization category acc. to IEC 60947-2			B	

[1] Available as a 3-pole circuit breaker with switching capacity C

System overview, page 1/24

3WA32		3WA33	
			
2		3	
800 ... 3200		3200 [1] ... 5000	
50/60		50/60	
Withdrawable	Fixed-mounted	Withdrawable	Fixed-mounted
3/4-pole	3/4-pole	3/4-pole	3/4-pole
460 | 590	460 | 590	704 | 914	704 | 914
466 | 516	440	--	--
--	--	466 | 516	440
695	357	685	357
635 and 730		635 and 730	
690 and 1000		690 and 1000	
1000		1000	
12		12	
4		4	
2.5		2.5	
UL 1066, IEC 60947-2		UL 1066, IEC 60947-2	
–40 ... +70		–40 ... +70	
–40 ... +80		–40 ... +80	
			
IP20		IP20	
IP41		IP41	
IP55		IP55	
yes		yes	
B		B	

System overview, page 1/24

3WA3 circuit breakers and non-automatic circuit breakers for AC

UL 1066/IEC 60947-2 (continued)

3WA31

Rated current I_n				800 A	1000 A	1200 A	1600 A	2000 A
Switching times								
Make time (mechanical)			ms			35		
Electrical make time (through closing coil 100% OP)			ms			80		
Electrical make time (through closing coil 5% OP)			ms			50		
Opening time (mechanical)			ms			38		
Electrical opening time (through closing coil 100% OP)			ms			80		
Electrical opening time (through closing coil 5% OP)			ms			50		
Electrical opening time (through undervoltage release)			ms			80 [1]		
Opening time due to ETU (instantaneous short-circuit release)			ms			50		
Function module for adjusting the rated current of the circuit breaker								
Minimum rated current			A	200	200	200	200	200
Maximum rated current			A	800	1000	1200	1600	2000
Main conductor connections								
Vertical connections with busbars according to ANSI C37.50-2018 (Table 2)			inch	1 unit (3 × 1/4)	2 units (2 × 1/4)	2 units (2.5 × 1/4)	2 units (3 × 1/4)	2 units (4 × 1/4)
Vertical connections with busbars according to IEC 60947-1 (2020, Table 11)			inch	2 units (1.5 × 1/4)	2 units (2 × 1/4)	2 units (2.5 × 1/4)	2 units (3 × 1/4)	3 units (3 × 1/4)
Power loss at I_n								
For 3-phase symmetrical load with maximum rated current 60 Hz AC, rear vertical main connection	Fixed-mounted		W	70 | 55 | 55	105 | 90 | 90	150	175	270
	Withdrawable		W	120 | 125 | 125	200	270	500	650
For 3-phase symmetrical load with maximum rated current 50 Hz AC, rear vertical main connection	Fixed-mounted		W	65 | 55 | 55	100 | 90 | 90	145	165	260
	Withdrawable		W	115 | 115 | 115	185 | 195 | 195	260	480	620
Service life/endurance								
Breaking capacity 3/4-pole						N | S | E		
Mechanical	Without maintenance	Operating cycles				15000 | 15000 | 10000		
	With maintenance [3]	Operating cycles				30000 | 30000 | 15000		
Electrical, acc. to ANSI C37.50	Without maintenance up to 635 V	Operating cycles				10000 | 10000 | 7500		
	With maintenance up to 635 V [3]	Operating cycles				30000 | 30000 | 15000		
	Without maintenance up to 730 V	Operating cycles				– | – | 7500		
	With maintenance up to 730 V [3]	Operating cycles				– | – | 15000		
Electrical, acc. to IEC 60947-2	Without maintenance up to 690 V	Operating cycles				10000		
	With maintenance up to 690 V [3]	Operating cycles				30000 | 30000 | 15000		
	Without maintenance up to 1000 V	Operating cycles				– | – | 1000		
	With maintenance up to 1000 V [3]	Operating cycles				– | – | 15000		

[1] Opening time with short-time delay of the undervoltage release can be set up to 200 ms
[2] IEC 60947-1 (2020, table 11) states conductor cross-sections only up to 3150 A
[3] Maintenance means: Replacing main contact elements and arc chutes (see operating instructions: www.siemens.com/lowvoltage/manuals)
[4] Data available only for switching capacity E

System overview, page 1/24

	3WA32					3WA33		
								
800 A	**1200 A**	**1600 A**	**2000 A**	**2500 A**	**3200 A**	**3200 A (only 3-pole)**	**4000 A**	**5000 A**
35						35		
80						100		
50						50		
34						34		
80						73		
50						50		
80 [1]						80 [1]		
50						50		
200	200	200	200	200	200	800	800	800
800	1200	1600	2000	2500	3200	3200	4000	5000
1 unit (3 × 1/4)	2 units (2 × 1/4)	2 units (3 × 1/4)	2 units (4 × 1/4)	3 units (4 × 1/4)	3 units (5 × 1/4)	4 units (5 × 1/4)	4 units (5 × 1/4)	6 units (5 × 1/4)
2 units (1.5 × 1/4)	2 units (2.5 × 1/4)	2 units (3 × 1/4)	3 units (3 × 1/4)	4 units (3 × 1/4)	3 units (6 × 1/4)	–	4 units (5 × 1/4)	6 units (5 × 1/4) [2]
40	85	145	210	210	340	400	540	700
75	155	280	380	480	780	550	960	1260
35	75	135	200	200	325	–	520	620
70	145	270	360	450	710	–	900	1140
N | S | M | H | E						**C**	**M | H | E | C**	
10000						5000	7400 | 7500 | 7500 | 5000	
20000						10000	15000 | 15000 | 15000 | 10000	
10000				4000		2000	2000	
20000						10000	15000 | 15000 | 15000 | 10000	
10000				4000		2000	2000	
20000						10000	15000 | 15000 | 15000 | 10000	
10000				4000		–	2000	
20000						–	15000	
– | – | – | – | 1000						–	1000 [4]	
– | – | – | – | 20000						–	15000 [4]	

System overview, page 1/24

3WA3 circuit breakers and non-automatic circuit breakers for AC

UL 1066/IEC 60947-2 (continued)

3WA31

Rated current I_n			800 A	1000 A	1200 A	1600 A	2000 A
Switching frequency (electrical operating cycles)							
Breaking capacity N and S							
	3-pole	1/h			60		
	4-pole	1/h			60		
Breaking capacity M and H							
	3-pole	1/h			60		
	4-pole	1/h			60		
Breaking capacity E							
Up to 690 V [1]/730 V [2]	3/4-pole	1/h			60		
Up to 1000 V	3/4-pole	1/h			20		
Weights (circuit breaker with vertical main connections)							
3-pole	Fixed-mounted circuit breaker	kg	40	40	40	45	46
	Withdrawable circuit breaker without guide frames	kg	48.5	48.5	48.5	54.5	55.5
	Guide frames	kg	50.5	50.5	50.5	51.5	58.5
4-pole	Fixed-mounted circuit breaker	kg	49	49	49	54	55
	Withdrawable circuit breaker without guide frames	kg	59.5	59.5	59.5	75.5	76.5
	Guide frames	kg	61.5	61.5	61.5	62.5	69.5
Auxiliary conductor connections							
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)							
Standard connection = Push-in connection	Without end sleeve		2 × 0.5 … 2.5 mm² (AWG 20 … 14)				
	With end sleeve acc. to DIN 46228 Part 1		2 × 0.5 … 2.5 mm² (AWG 20 … 14)				
	With end sleeve acc. to DIN 46228 Part 4		2 × 0.5 … 2.5 mm² (AWG 20 … 14)				
	With twin end sleeve		2 × 0.5 … 1.5 mm² (AWG 20 … 16)				
	Stripped length		10 … 11 mm (0.39 … 0.43 inch)				
Optional connection with screw connection	Without end sleeve		2 × 0.5 … 1.5 mm² (AWG 20 … 16)/1 × 0.5 … 2.5 mm² (AWG 20 …14)				
	With end sleeve acc. to DIN 46228 Part 1		2 × 0.5 … 1.5 mm² (AWG 20 … 16)/1 × 0.5 … 2.5 mm² (AWG 20 …14)				
	With end sleeve acc. to DIN 46228 Part 4		1 × 0.5 … 1.5 mm² (AWG 20 … 16)				
	With twin end sleeve		1 × 0.5 … 1.5 mm² (AWG 20 … 16)				
	Stripped length		7 … 8 mm (0.28 … 0.31 inch)				
Optional connection with ring or fork lugs	Maximum width of the lug		7 mm (1/4 inch)				
	Hole diameter		> 3 mm (> 1/8 inch)				
	Tightening torque		0.5 Nm (4.5 LB. IN.)				
	Screwdriver		Philips 1				
	Recommendation: TE, PIDG series (catalog number)		PIDG R 16-14 6 (50881)				
	Max. number of lugs per connection		2 (back to back)				
Position signaling switch module							
Spring-loaded terminals for standard signaling contacts	Without end sleeve		0.2 … 2.5 mm² (AWG 28 … 12)				
	With end sleeve acc. to DIN 46228 Part 4		0.25 … 1.5 mm² (AWG 20 … 16)				
	Stripped length		5 … 6 mm (0.2 … 0.24 inch)				
Push-in connection for standard signaling contacts	Solid		0.5 … 2.5 mm² (AWG 20 … 12)				
	Finely stranded with end sleeve		0.5 … 1.5 mm² (AWG 20 … 16)				
	Stripped length		10 … 12 mm (0.39 … 0.47 inch)				
Push-in connection for COM signaling contacts	Solid		0.5 … 2.5 mm² (AWG 20 … 12)				
	Finely stranded with end sleeve		0.5 … 1.5 mm² (AWG 20 … 16)				
	Stripped length		10 … 12 mm (0.39 … 0.47 inch)				

[1] U_e acc. to IEC 60947-2
[2] U_e acc. to UL 1066

System overview, page 1/24

	3WA32					3WA33		
								
800 A	**1200 A**	**1600 A**	**2000 A**	**2500 A**	**3200 A**	**3200 A (only 3-pole)**	**4000 A**	**5000 A**
60						–		
60						–		
60						60		
60						60		
60						60		
20						20		
56	56	56	61	74	74	162.5	137	159
68.5	68.5	68.5	72.5	81.5	81.5	164	116.5	138.5
55.5	55.5	55.5	63.5	69.5	69.5	138	113.5	121.5
74	74	74	79	92	92	–	174	204
87.5	87.5	87.5	91.5	115.5	115.5	–	146.5	176.5
76.5	76.5	76.5	84.5	97.5	97.5	–	152.5	160.5
2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)						2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)						2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)						2 × 0.5 ... 2.5 mm² (AWG 20 ... 14)		
2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)						2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
10 ... 11 mm (0.39 ... 0.43 inch)						10 ... 11 mm (0.39 ... 0.43 inch)		
2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)						2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/ 1 × 0.5 ... 2.5 mm² (AWG 20 ...14)		
2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/1 × 0.5 ... 2.5 mm² (AWG 20 ...14)						2 × 0.5 ... 1.5 mm² (AWG 20 ... 16)/ 1 × 0.5 ... 2.5 mm² (AWG 20 ...14)		
1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)						1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)						1 × 0.5 ... 1.5 mm² (AWG 20 ... 16)		
7 ... 8 mm (0.28 ... 0.31 inch)						7 ... 8 mm (0.28 ... 0.31 inch)		
7 mm (1/4 inch)						7 mm (1/4 inch)		
> 3 mm (> 1/8 inch)						> 3 mm (> 1/8 inch)		
0.5 Nm (4.5 LB. IN.)						0.5 Nm (4.5 LB. IN.)		
Philips 1						Philips 1		
PIDG R 16-14 6 (50881)						PIDG R 16-14 6 (50881)		
2 (back to back)						2 (back to back)		
0.2 ... 2.5 mm² (AWG 28 ... 12)						0.2 ... 2.5 mm² (AWG 28 ... 12)		
0.25 ... 1.5 mm² (AWG 20 ... 16)						0.25 ... 1.5 mm² (AWG 20 ... 16)		
5 ... 6 mm (0.2 ... 0.24 inch)						5 ... 6 mm (0.2 ... 0.24 inch)		
0.5 ... 2.5 mm² (AWG 20 ... 12)						0.5 ... 2.5 mm² (AWG 20 ... 12)		
0.5 ... 1.5 mm² (AWG 20 ... 16)						0.5 ... 1.5 mm² (AWG 20 ... 16)		
10 ... 12 mm (0.39 ... 0.47 inch)						10 ... 12 mm (0.39 ... 0.47 inch)		
0.5 ... 2.5 mm² (AWG 20 ... 12)						0.5 ... 2.5 mm² (AWG 20 ... 12)		
0.5 ... 1.5 mm² (AWG 20 ... 16)						0.5 ... 1.5 mm² (AWG 20 ... 16)		
10 ... 12 mm (0.39 ... 0.47 inch)						10 ... 12 mm (0.39 ... 0.47 inch)		

System overview, page 1/24

3WA3 circuit breakers and non-automatic circuit breakers for AC

UL 1066/IEC 60947-2 (continued)

3WA31

Breaking capacity acc. to UL 1066			N	S	E
Rated operational voltage U_e		V	508/635 [1]	635	730
Short-circuit breaking capacity I_{cu}					
I_{cs} at U_e up to 254 V AC		kA RMS	50	65	85
I_{cs} at U_e up to 508 V AC		kA RMS	50	65	85
I_{cs} at U_e up to 635 V AC		kA RMS	– | 50 [1]	65	65
I_{cs} at U_e up to 730 V AC		kA RMS	–	–	65
Short-circuit breaking capacity I_{cw}					
I_{cw} at U_e up to 508 V AC	0.5 s	kA RMS	42 | 50 [1]	50 | 65 [6]	65
I_{cw} at U_e up to 508 V AC	1 s	kA RMS	42 | 50 [1]	50 | 65 [6]	65
I_{cw} at U_e up to 635 V AC	0.5 s	kA RMS	– | 50 [1]	50 | 65 [6]	65
I_{cw} at U_e up to 730 V AC	1 s	kA RMS	–	–	65
Rated short-circuit breaking capacity I_{cm}					
I_{cm} at U_e up to 508 V AC		kA	115	150	196
I_{cm} at U_e up to 635 V AC		kA	115	150	150
I_{cm} at U_e up to 730 V AC		kA	–	–	150
Short-circuit breaking capacity I_{cs} of the non-automatic air circuit breakers with instantaneous release with an external protective relay					
I_{cs} at U_e up to 254 V AC		kA RMS	50	65	85
I_{cs} at U_e up to 508 V AC		kA RMS	50	65	85
I_{cs} at U_e up to 635 V AC		kA RMS	– | 50 [1]	65	65
I_{cs} at U_e up to 730 V AC		kA RMS	–	–	65
Minimum dimensions of housing					
Width × Height × Depth	3-pole	inch	14 × 22.5 × 19.5	14 × 22.5 × 19.5	14 × 22.5 × 19.5
Width × Height × Depth	4-pole	inch	22 × 22.5 × 19.5	22 × 22.5 × 19.5	22 × 22.5 × 19.5
Breaking capacity acc. to IEC 60947-2			**N**	**S**	**E**
Rated operational voltage U_e		V	690	690	1000
Rated short-circuit breaking capacity I_{cu}					
I_{cu} | I_{cs} at U_e up to 415/440 V AC		kA	50 | 50	65 | 65	– | –
I_{cu} | I_{cs} at U_e up to 500 V AC		kA	50 | 50	65 | 65	– | –
I_{cu} | I_{cs} at U_e up to 690 V AC		kA	42 | 42	50 | 50	65 | 65
I_{cu} | I_{cs} at U_e up to 1000 V AC		kA	– | –	– | –	50 | 50
Rated short-circuit breaking capacity I_{cm}					
I_{cm} at U_e up to 415/440 V AC		kA	105	143	–
I_{cm} at U_e up to 500 V AC		kA	105	143	–
I_{cm} at U_e up to 690 V AC		kA	88	105	143
I_{cm} at U_e up to 1000 V AC		kA	–	–	105
Rated short-time withstand current I_{cw}					
I_{cw} at U_e up to 500 V AC	0.5 s	kA	50	65	–
	1 s	kA	50	65	–
	2 s	kA	35	45	–
	3 s	kA	30	35	–
I_{cw} at U_e up to 690 V AC	0.5 s	kA	42	50	65
	1 s	kA	42	50	65
	2 s	kA	35	45	65
	3 s	kA	30	35	60
I_{cw} at U_e up to 1000 V AC	0.5 s	kA	–	–	50
	1 s	kA	–	–	50
	2 s	kA	–	–	50
	3 s	kA	–	–	50
Conditional rated short-circuit breaking capacity I_{cc} of the non-automatic air circuit breakers					
Up to 500 V AC			50	65	–
Up to 690 V AC			42	50	65
Up to 1000 V AC			–	–	50
IT network capability					
1-pole short-circuit breaking capacity I_{IT} according to IEC 60947-2 annex H	≤ 500 V	kA	50	50	50
	≤ 690 V	kA	–	–	50
	≤ 1000 V	kA	–	–	–

[1] Size 1 with $I_{n\,max}$ = 1600 A and 2000 A
[2] Size 2 with $I_{n\,max}$ ≤ 2500 A
[3] Size 2 with $I_{n\,max}$ = 3200 A
[4] Size 3 with $I_{n\,max}$ = 4000 A
[5] Size 3 with $I_{n\,max}$ = 5000 A
[6] Size 1 with $I_{n\,max}$ = 2000 A

System overview, page 1/24

3WA32

3WA33

N	S	M	H	E	M	H	E	C
635	635	635	635	730	635	635	730	635
50	65	85	100	100	85	100	100	150
50	65	85	100	100	85	100	100	150
50	65	65	85	85	65	85	100	100
–	–	–	–	85	–	–	100	–
50	65	85	85	85	85	100	100	100
50	65	85	85	85	85	100	100	100
50	65	65	85	85	65	85	100	100
–	–	–	–	85	65	85	100	100
115	150	196	230	230	196	230	230	345
115	150	150	196	196	196	196	230	230
–	–	–	–	196	–	–	230	–
50	65	85	100	100	85	100	100	150
50	65	85	100	100	85	100	100	150
50	65	65	85	85	65	85	100	100
–	–	–	–	85	–	–	100	–
22 × 22.5 × 19.5	22 × 22.5 × 19.5	22 × 22.5 × 19.5	22 × 22.5 × 19.5	22 × 22.5 × 19.5	32 × 22.5 × 19.5	32 × 22.5 × 19.5	32 × 22.5 × 19.5	32 × 22.5 × 19.5
32 × 22.5 × 19.5	32 × 22.5 × 19.5	32 × 22.5 × 19.5	32 × 22.5 × 19.5	32 × 22.5 × 19.5	42 × 22.5 × 19.5	42 × 22.5 × 19.5	42 × 22.5 × 19.5	42 × 22.5 × 19.5
N	**S**	**M**	**H**	**E**	**M**	**H**	**E**	**C**
690	690	690	690	1000	690	690	1000	–
50 | 50	65 | 65	85 | 85	100 | 100	– | –	85 | 85	100 | 100	–	–
50 | 50	65 | 65	85 | 85	100 | 100	– | –	85 | 85	100 | 100	–	–
42 | 42	50 | 50	65 | 65	85 | 85	85 | 85	65 | 65	85 | 85	100 | 100	–
– | –	– | –	– | –	– | –	85 | 85	– | –	– | –	85 | 85	–
105	143	187	220	–	187	220	–	–
105	143	187	220	–	187	220	–	–
88	105	143	187	187	143	187	187 [4] | 220 [5]	–
–	–	–	–	105	–	–	187	–
50	65	85	100	–	85	100	–	–
50	65	85	85	–	85	100	–	–
50	65	65 [2] | 85 [3]	65 [2] | 85 [3]	–	70 [4] | 85 [5]	70 [4] | 100 [5]	70 [4] | 100 [5]	–
50	55	55 [2] | 75 [3]	55 [2] | 75 [3]	–	57 [4] | 85 [5]	57 [4] | 100 [5]	57 [4] | 100 [5]	–
42	50	65	85	85	65	85	100	–
42	50	65	85	85	65	85	100	–
42	50	65	65 [2] | 85 [3]	65 [2] | 85 [3]	65	70 [4] | 85 [5]	70 [4] | 100 [5]	–
42	50	55 [2] | 65 [3]	55 [2] | 75 [3]	55 [2] | 75 [3]	57 [4] | 65 [5]	57 [4] | 85 [5]	57 [4] | 100 [5]	–
–	–	–	–	85	–	–	85	–
–	–	–	–	85	–	–	85	–
–	–	–	–	65 [2] | 85 [3]	–	–	70 [4] | 85 [5]	–
–	–	–	–	55 [2] | 75 [3]	–	–	57 [4] | 85 [5]	–
50	65	85	100	–	85	100	100	–
42	50	65	85	85	65	85	85 [4] | 100 [5]	–
–	–	–	–	85	–	–	85	–
50	50	50	50	–	50	50	–	–
–	–	–	–	50	–	–	50	–
–	–	–	–	–	–	–	–	–

System overview, page 1/24

Electronic trip units

Differentiation

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

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

System overview, page 1/24

ETU300 electronic trip unit

Protective functions

ETU300 LSI, ETU300 LSIG

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

ETU300 LSIG

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

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

System overview, page 1/24

ETU600 electronic trip unit

Protective functions

ETU600 LSI, ETU600 LSIG, ETU600 LSIG Hi-Z			Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	**Variable setting range**	**Setting values with rotary switch**					
L: Overload protection LT							
Tripping	Can be switched on/off		■	■	■	■	■
Current setting I_r	0.4 ... 1.0 × I_n	0.5/0.6/0.7/0.75/0.8/0.85/0.9/0.95/1.0 × I_n	■	■	■	■	■
Tripping time t_r at 6 × I_r	At I^2t: 0.5 ... 30 s and at I^4t: 0.5 ... 5 s	1/2/5/8/10/14/17/21/25 s	■	■	■	■	■
Characteristic LT curve	I^2t and I^4t		■	■	■	■	■
Thermal memory	Can be switched on/off		■	■	■	■	■
Cooling time constant	10 and 18 × t_r		■	■	■	■	■
Phase failure detection	Can be switched on/off		■	■	■	■	■
Overload pre-alarm PAL	Can be switched on/off		■	■	■	■	■
Current setting $I_{r\ PAL}$	0.7 ... 1.0 × I_r		■	■	■	■	■
Delay time $t_{r\ PAL}$	0.5 ... 1.0 × t_r		■	■	■	■	■
L: Overload protection LT, neutral conductor							
Tripping	Can be switched on/off		■	■	■	■	■
Current setting I_{rN}	0.2 ... 2.0 × I_n for 4-pole circuit breakers max. $I_{n\ max}$		■	■	■	■	■
Current setting $I_{rN\ PAL}$	0.7 ... 1.0 × I_N		■	■	■	■	■
S: Short-time-delayed short-circuit protection ST							
Tripping	Can be switched on/off		■	■	■	■	■
Current setting I_{sd}	0.6 × I_n ... 0.8 × I_{cw} max. 0.8 × I_{cw} [1]	1.5/2/2.5/3/4/5/6/8/10 × I_r max. 0.8 × I_{cw} [1]	■	■	■	■	■
Tripping time t_{sd}	0.02 ... 0.4 s	At Fix: 0.08/0.15/0.22/0.3/0.4 s At I^2t: 0.1/0.2/0.3/0.4 s	■	■	■	■	■
Characteristic ST curve	I^0t and I^2t		■	■	■	■	■
Reference point $I_{ST\ ref}$	6-12 × I_r		■	■	■	■	■
Intermittent detection	Can be switched on/off		■	■	■	■	■
S: Directional short-time-delayed short-circuit protection dST							
Tripping	Can be switched on/off		□	□	□	■	■
Direction setting	Forward: ↓ or ↑		□	□	□	■	■
Current setting I_{sd} FW	0.6 × I_n ... 0.8 × I_{cw}		□	□	□	■	■
Current setting I_{sd} REV	0.6 × I_n ... 0.8 × I_{cw}		□	□	□	■	■
Tripping time t_{sd} FW	0.05 ... 0.4 s		□	□	□	■	■
Tripping time t_{sd} REV	0.05 ... 0.4 s		□	□	□	■	■
I: Instantaneous short-circuit protection INST							
Tripping	Can be switched on/off		■	■	■	■	■
Current setting I_i	1.5 × I_n ... 0.8 × I_{cs} max. 0.8 × I_{cs} [1]	1.5/2/3/4/6/8/10/12/15 × I_n max. 0.8 × I_{cs} [1]	■	■	■	■	■

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

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

System overview, page 1/24

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 × 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

System overview, page 1/24

ETU600 electronic trip unit

Protective functions

ETU600 LSI			Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Protective function	**Variable setting range**						
G: Ground fault GF alarm							
Alarm	Can be switched on/off		□	□	□	■	■
Current setting $I_{g\ alarm}$ 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: Metering 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 × 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

System overview, page 1/24

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: Metering 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 × 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

System overview, page 1/24

ETU600 electronic trip unit

Operation, interfaces and metering function

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

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

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

System overview, page 1/24

ETU600		Current metering	ready4COM	PMF-I Energy efficiency	PMF-II Basic Power Monitoring	PMF-III Advanced Power Monitoring
Metering function						
Integrated voltage tap at top/bottom		–	–	■	■	■
Voltage tap module VTM		–	–	■	■	■
Type acc. to IEC 61557-12	PMF-I	–	–	■	■	■
	PMF-II	–	–	–	■	■
	PMF-III	–	–	–	–	■
Metering values						
Temperature		–	■	■	■	■
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

Licenses for activating the test function in SENTRON Powerconfig software

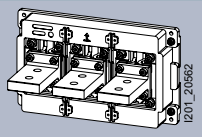
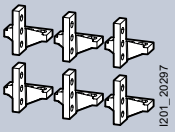
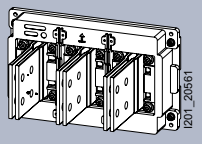
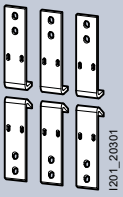
License (ALM)	Test scope	Test values can be set	Documentation	Article No.
Basic (unlimited)	LSIG	No	No	Free of charge
Standard (365 days)	LSIG	Yes	Yes	7KN2720-0CE00-1YC1
Extended new (365 days)	• LSIG • dST • Phase unbalance current • Phase unbalance voltage • Total harmonic distortion (THD) for current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

System overview, page 1/24

Connection

Main circuit connection

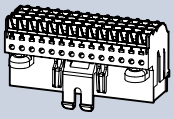
3WA31 – 3WA33

Fixed-mounted	Withdrawable
 Rear horizontal	 Rear horizontal (T-connectors)
 Rear vertical	 Rear vertical
 Front connection with double hole	

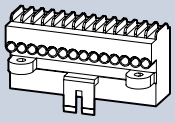
Secondary disconnect terminal

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

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



Screwless connection (push in)



Screw connection (optional)

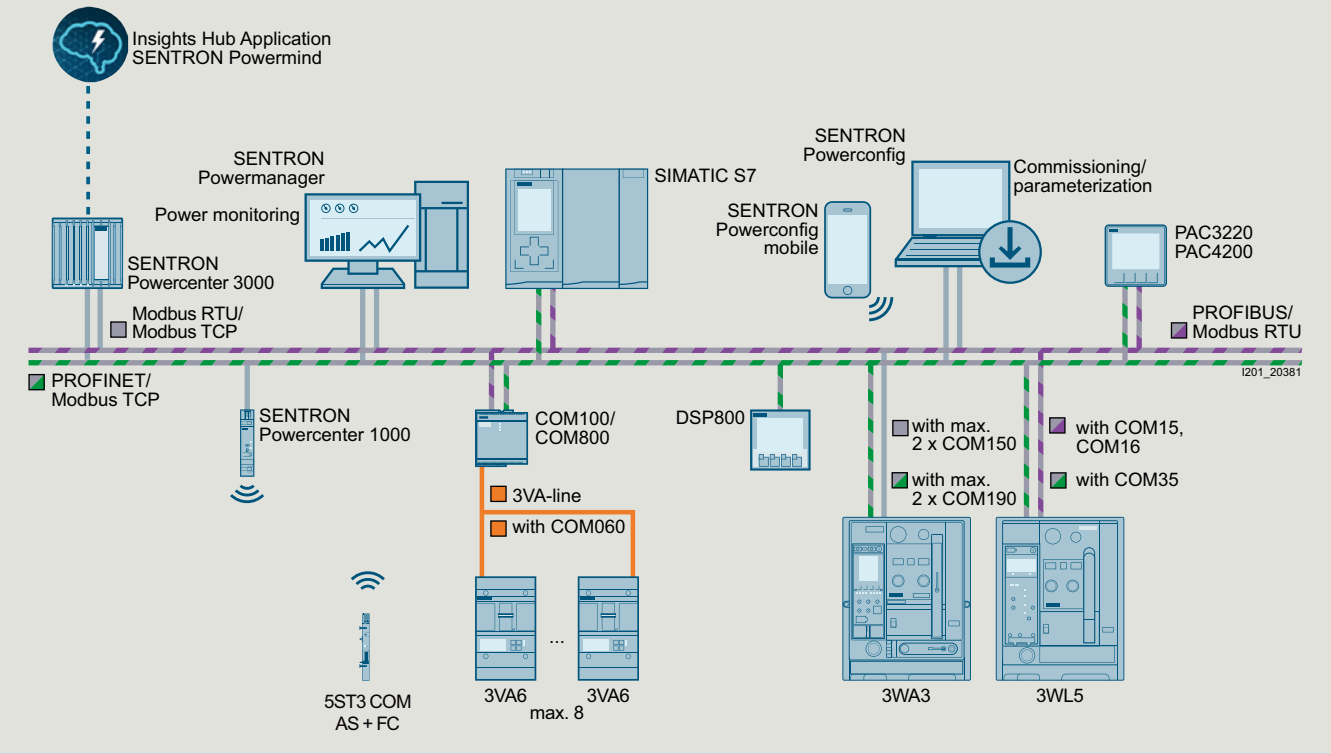
For size 1, up to 4 secondary disconnect terminal blocks are possible; for sizes 2 and 3, up to 5 secondary disconnect terminal blocks are possible

- Circuit breakers and non-automatic circuit breakers with secondary disconnect terminal blocks are supplied from the factory:
  - Non-automatic circuit breakers with 3 blocks
  - Non-automatic circuit breakers with ready4COM feature with 4 blocks
  - Circuit breakers with ETU600 LSI or LSIG with 4 blocks
  - Circuit breakers with ETU600 LSIG-HiZ with 5 blocks
  - Circuit breakers with ETU300 LSI/LSIG with 4 blocks

For dimension drawings, see Equipment Manual – 3WA3 air circuit breakers
www.siemens.de/lowvoltage/handbuch (109811114)

System overview, page 1/24

Communication



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

For the optional communications interface with the COM190 or COM150 communications module, a circuit breaker with the ready4COM feature must be selected as the circuit breaker/non-automatic air circuit breaker. The first COM190 or COM150 communications module must be selected via a Z option. If you want to use a further COM190 or COM150 communications module, this must be ordered separately as an accessory. Both COM190 or COM150 communications modules can be run in parallel.

The first IOM230 digital input/output module can be selected via a Z option.
The up to four further digital input/output modules must be ordered separately as accessories.

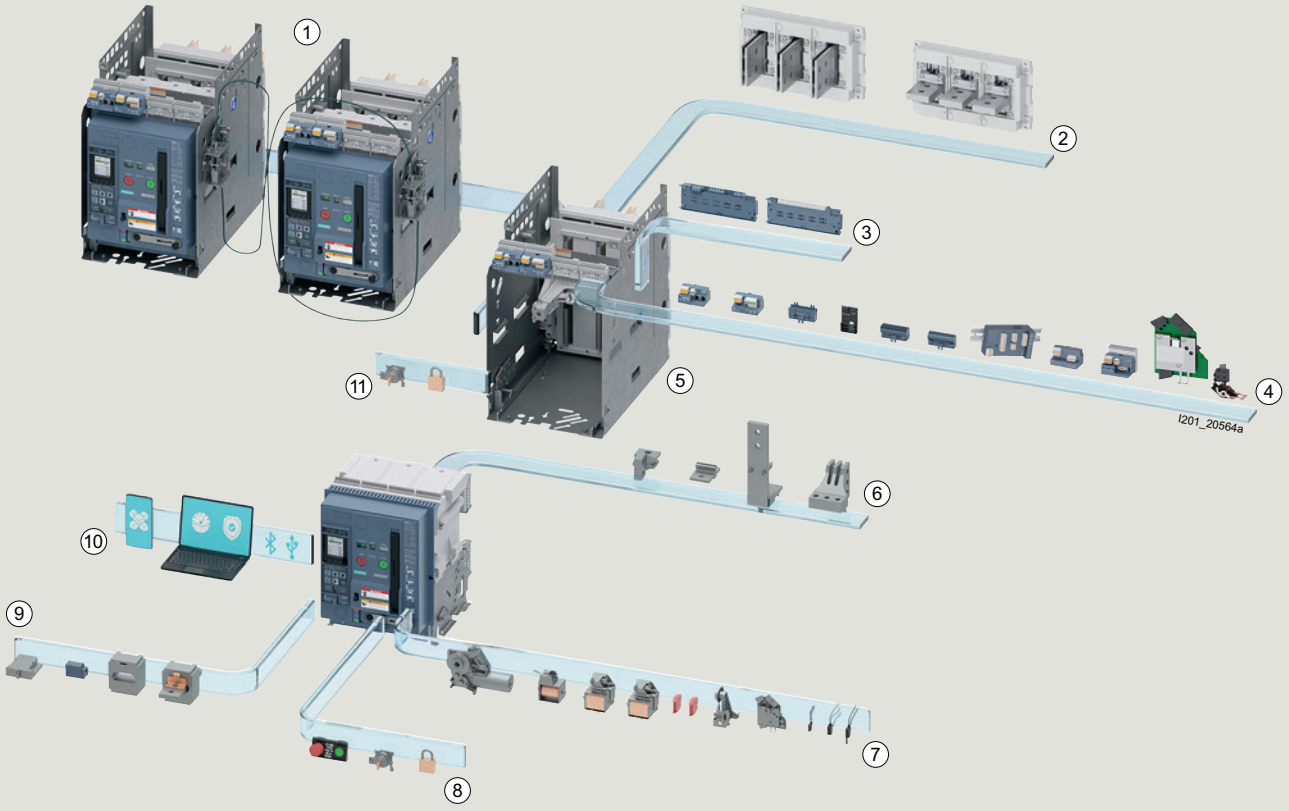
You will find further information on the COM190 in the Equipment Manual – 3WA3 air circuit breakers
www.siemens.de/lowvoltage/handbuch (109811114)

System overview, page 1/24

3WA31 – 3WA33 system overview

Circuit breakers and non-automatic circuit breakers for AC

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



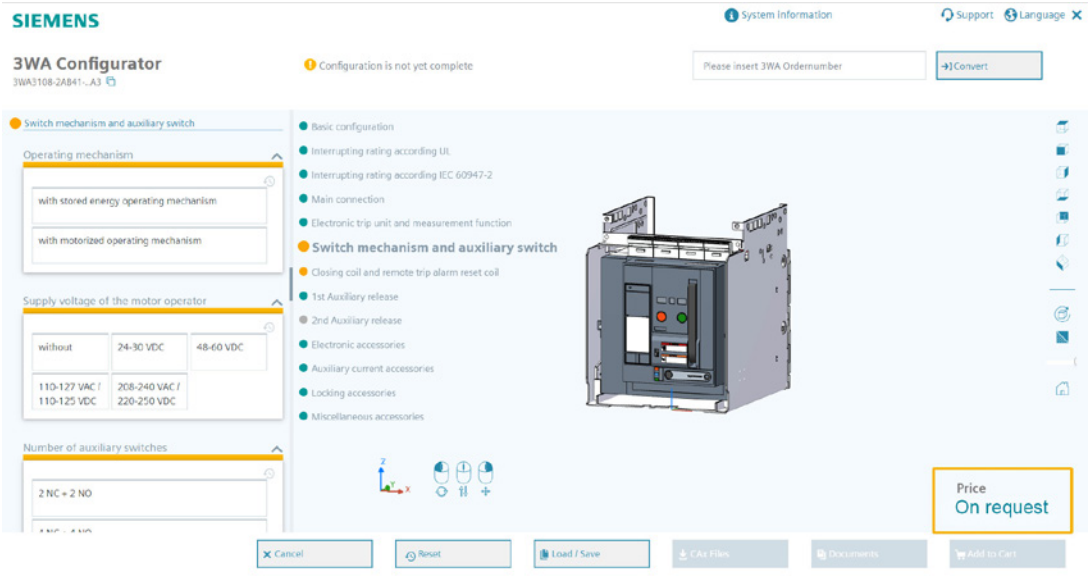
1. Interlocking solutions with Bowden cable
2. Main connection variants for guide frame
3. Position signaling switch (PSS) for the guide frame
4. Interfaces/COM-modules/Aux. terminals
5. Guide frame with shutter
6. Main connection variants for fixed-mounted version
7. Internal accessories: aux. release,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

Online configurator highlights

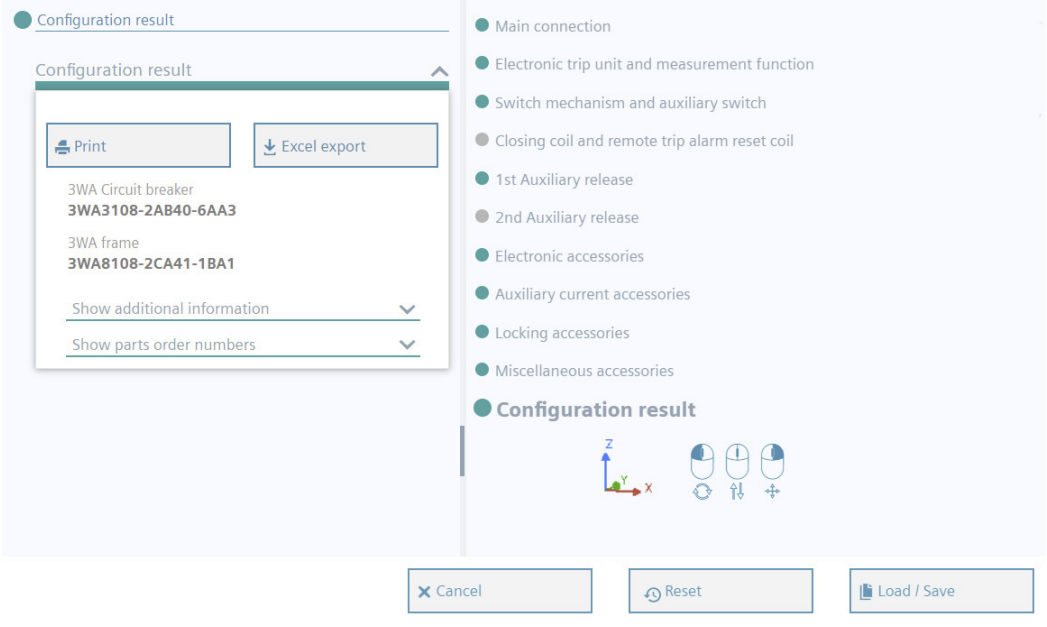
www.siemens.com/lowvoltage/3wa-ul-configurator

Graphical display

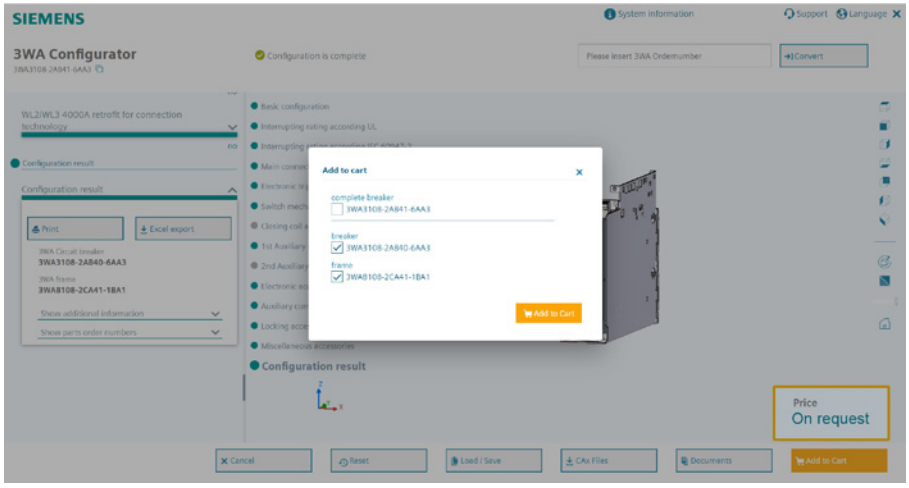
- Integration of the legend as a color system
  - Orange: still to be selected
  - Petrol: already selected
  - Gray: preselected (default)
- Graphical highlighting of the individual configuration steps: "What you see is what you get"



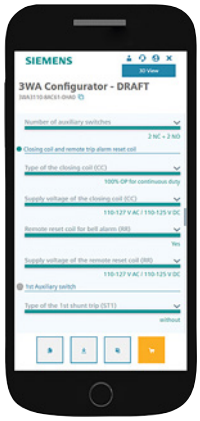
Splitting function (Frame and circuit breaker can be ordered separately)



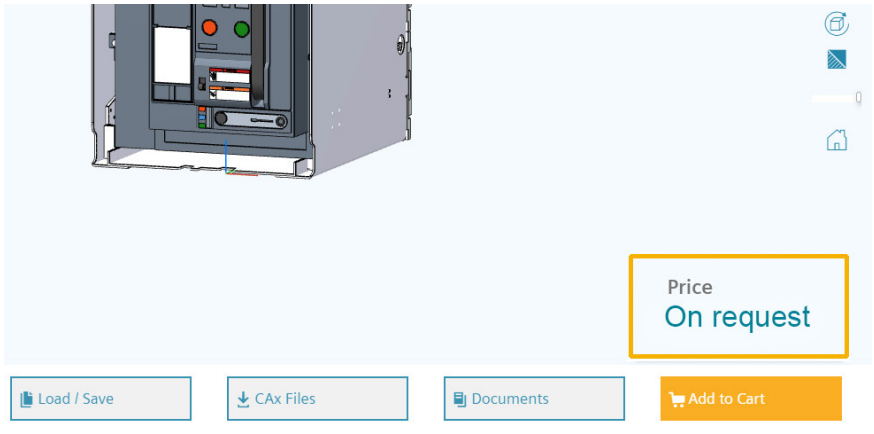
Selection of circuit breaker as complete unit or with splitting function (default) in shopping cart



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



Dynamic customer price during configuration



Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers up to 635 V (UL 1066)/690 V (IEC 60947-2)

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-ul-configurator

1

	5	6	7		8	9	10	11		12	13	14	15	16
3WA3				–						–				

Circuit breakers and non-automatic circuit breakers

Size (SZ)	1					1			
	2					2			
	3					3			
		SZ 1	SZ 2	SZ 3					
Max. rated current $I_{n\,max}$	800 A	■	■	–		0	8		
	1000 A	■	–	–		1	0		
	1200 A	■	■	–		1	2		
	1600 A	■	■	–		1	6		
	2000 A	■	■	–		2	0		
	2500 A	■	■	–		2	5		
	3200 A	–	■	■ [1]		3	2		
	4000 A	–	–	■		4	0		
	5000 A	–	–	■		5	0		
					acc. to UL 1066 508/635 V	acc. to IEC 60947-2 415/500 V			
Short-circuit breaking capacity I_{cu}	N	■	■	–	50/50 [3] kA	50/50 kA	2		
	S	■	■	–	65/65 kA	65/65 kA	3		
	M	–	■	■	85/65 kA	85/85 kA	4		
	H	–	■	■	100/85 kA	100/100 kA	5		
	C	–	–	■ [2]	150/100 kA	–	6		
Non-automatic circuit breakers [5]							A	A	
Non-automatic circuit breakers, ready4COM feature [5]							C	A	
Application packages with protective and metering functions for circuit breakers	ETU300 electronic trip unit	Protective function	LSI				A	B	
			LSIG				A	C	
	ETU600 electronic trip unit	Current metering					A		
		Current metering, ready4COM feature [5]					C		
	ETU600 electronic trip unit with metering function, internal voltage tap in the circuit breaker, VTM680 voltage tap module and ready4COM	PMF-I	Voltage tap on top				L		
		Energy efficiency	Voltage tap on bottom				E		
		PMF-II Basic Power Monitoring	Voltage tap on top				M		
			Voltage tap on bottom				F		
		PMF-III Advanced Power Monitoring	Voltage tap on top				N		
			Voltage tap on bottom				G		
	Protective functions	■	■	■	LSI			E	
		■	■	■	LSIG			F	
		–	■	■	LSIG Hi-Z			G	

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 [4]	3-pole	6
			4-pole, Neutral left	7

[1] Available only as a 3-pole circuit breaker with switching capacity C
[2] Available only as a 3-pole circuit breaker
[3] For size 1, only available for 1600 ... 2000 A
[4] Frame size 1 with breaking capacity H is not offered as a non-automatic circuit breaker
[5] If ready4COM circuit breakers are ordered with closing coils/shunt trips, these are installed in the factory as communication-capable versions (CC-COM/ST-COM)

Quick selection guide, page 1/6

1

	5	6	7	8	9	10	11	12	13	14	15	16
3WA3			–						–			

Connection

Possible IEC connections with Z option D03

			Fixed-mounted			Withdrawable			Fixed-mounted		
			Vertical connection	Horizontal connection	Front double hole	Without guide frame	Vertical connection	Rotatable T-connector	Vertical connection	Horizontal connection	Front double hole
Size 1											
Short-circuit breaking capacity	N, S	800 A	1	2	3 [1]	0	1	2	1	2	3
		1000 A	1	2	3 [1]	0	1	2	1	2	3
		1200 A	1	2	3 [1]	0	1	2	1	2	3
		1600 A	1	2	–	0	1	2	1	2	–
		2000 A	1	2	–	0	1	–	1	2	–
Size 2											
Short-circuit breaking capacity	N, S, M	800 A	1	2	3 [1]	0	1	2 [2]	1	2	3
		1200 A	1	2	3 [1]	0	1	2 [2]	1	2	3
		1600 A	1	2	3 [1]	0	1	2 [2]	1	2	3
		2000 A	1	2	3 [1]	0	1	2 [2]	1	2	3
		2500 A	1	2	3 [1]	0	1	–	1	2	3
		3200 A	1	2	–	0	1	–	1	–	–
	H	800 A	1	2	3	0	1	–	1	2	3
		1200 A	1	2	3	0	1	–	1	2	3
		1600 A	1	2	3	0	1	–	1	2	3
		2000 A	1	2	3	0	1	–	1	2	3
		2500 A	1	2	3	0	1	–	1	2	3
		3200 A	1	2	–	0	1	–	1	–	–
Size 3											
Short-circuit breaking capacity	M, H	4000 A	1	2	3	0	1	–	1	2	3
		5000 A	1	2	–	0	1	–	1	2	–
	C [2]	4000 A	1	2	–	0	1	–	–	–	–
		5000 A	1	2	–	0	1	–	–	–	–

[1] Front terminals at the top according to UL not possible in conjunction with voltage taps (PMF)
[2] Available only for a 3-pole circuit breaker

Quick selection guide, page 1/6

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers up to 635 V (UL 1066)/690 V (IEC 60947-2)

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-ul-configurator

1

	5	6	7	8		9	10	11	12		13	14	15	16
3WA3					–					–				

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), 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
	With undervoltage release (UVR-t) [4)], 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

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 property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.
4) The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

Quick selection guide, page 1/6

	5	6	7	8		9	10	11	12		13	14	15	16
3WA3					–					–				

Auxiliary releases

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

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

Quick selection guide, page 1/6

1

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers up to 730 V (UL 1066)/1000 V (IEC 60947-2)

**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-ul-configurator**

Position		5	6	7		8	9	10	11	12		13	14	15	16
3WA3		■	■	■	–	■	■	■	■	□	–	□	□	□	□

Circuit breakers and non-automatic circuit breakers

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

		SZ 1	SZ 2	SZ 3	Position 6	Position 7
Max. rated current $I_{n\,max}$	800 A	■	■	–	0	8
	1000 A	■	–	–	1	0
	1200 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

		SZ 1	SZ 2	SZ 3	acc. to UL 1066 508/635/730 V	acc. to IEC 60947-2 690/1000 V	Position 8
Short-circuit breaking capacity I_{cu}	E	■	–	–	85/65/65	65/50	8
		–	■	–	100/85/85	85/50	8
		–	–	■	100/100/100	85/85	8

	Position 9	Position 10
Non-automatic circuit breakers	A	A
Non-automatic circuit breakers, ready4COM feature	C	A

				SZ 1	SZ 2	SZ 3	Position 9	Position 10
Application packages with protective and metering functions for circuit breakers	ETU300 electronic trip unit	Protective function	LSI				A	B
			LSIG				A	C
	ETU600 electronic trip unit	Current metering					A	
		Current metering, ready4COM feature					C	
	ETU600 electronic trip unit with metering function, internal voltage tap in the circuit breaker, VTM640 voltage tap module and ready4COM	PMF-I Energy efficiency	Voltage tap on top				U	
			Voltage tap on bottom				Q	
		PMF-II Basic Power Monitoring	Voltage tap on top				V	
			Voltage tap on bottom				R	
		PMF-III Advanced Power Monitoring	Voltage tap on top				W	
			Voltage tap on bottom				S	
	Protective functions		LSI	■	■	■		E
			LSIG	■	■	■		F
			LSIG Hi-Z	–	■	■		G

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

[1] Position signaling switch for circuit breakers/non-automatic circuit breakers without ready4COM:
6 × connected position + 0 × test position + 0 × disconnected position;
position signaling switch for circuit breakers/non-automatic circuit breakers with ready4COM:
4 × connected position + 0 × test position + 0 × disconnected position + message through communications interface for disconnected position and for "not available".

Quick selection guide, page 1/6

	5	6	7	8	9	10	11	12	13	14	15	16
3WA3			–					–				

Connection

Possible IEC connections with Z option D03

			Fixed-mounted			Withdrawable			Fixed-mounted		
			Vertical connection	Horizontal connection	Front double hole	Without guide frame	Vertical connection	Rotatable T-connector	Vertical connection	Horizontal connection	Front double hole
Size 1											
Short-circuit breaking capacity	E	800 A	1	2	3 [1]	0	1	–	1	2	–
		1000 A	1	2	3 [1]	0	1	–	1	2	–
		1200 A	1	2	3 [1]	0	1	–	1	2	–
		1600 A	1	2	–	0	1	–	1	2	–
		2000 A	1	2	–	0	1	–	1	2	–
Size 2											
Short-circuit breaking capacity	E	800 A	1	2	3 [1]	0	1	–	1	2	3
		1200 A	1	2	3 [1]	0	1	–	1	2	3
		1600 A	1	2	3 [1]	0	1	–	1	2	3
		2000 A	1	2	3 [1]	0	1	–	1	2	3
		2500 A	1	2	3 [1]	0	1	–	1	2	3
		3200 A	1	2	–	0	1	–	1	2	–
Size 3											
Short-circuit breaking capacity	E	4000 A	1	2	3	0	1	–	1	2	–
		5000 A	1	2	–	0	1	–	1	2	–

[1] Front terminals at the top according to UL not possible in conjunction with voltage taps (PMF)

Quick selection guide, page 1/6

Structure of the article numbers

Basic configuration for AC circuit breakers and AC non-automatic circuit breakers up to 730 V (UL 1066)/1000 V (IEC 60947-2)

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-ul-configurator

1

	5	6	7	8		9	10	11	12		13	14	15	16
3WA3					–					–				

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), 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
	With undervoltage release (UVR-t) [3], adjustable delay 0.2 ... 3.2 s		48 V DC			S
			60 V DC			T
			110 ... 127 V AC/110 ... 125 V DC			U
			208 ... 240 V AC/220 ... 250 V DC			V

[1] Remote trip alarm reset coil is not available for non-automatic circuit breakers
[3] If the property ready4COM is selected in conjunction with 100% OP closing coils/shunt trips, communication-capable closing coils (CC-COM)/shunt trips (ST-COM) are installed in the factory. Optionally, this communication capability of the 100% OP closing coils/shunt trips can be deselected with option M71.
[4] The maximum allowable cable length to the actuator for quick shutdown is currently ≤ 50 m (maximum allowable cable length between the terminals ≤ 100 m).

Quick selection guide, page 1/6

	5	6	7	8		9	10	11	12		13	14	15	16
3WA3					–					–				

Auxiliary releases

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

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

Quick selection guide, page 1/6

Accessory options

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

1

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

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

Order code

Option plug for electronic trip unit

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

	Rated current I_n	SZ 1	SZ 2	SZ 3	Order code
Option plug	200 A	■	■	–	B72
	225 A	■	■	–	B71
	250 A	■	■	–	B02
	300 A	■	■	–	B73
	315 A	■	■	–	B03
	350 A	■	■	–	B74
	400 A	■	■	–	B04
	450 A	■	■	–	B75
	500 A	■	■	–	B05
	600 A	■	■	–	B76
	630 A	■	■	–	B06
	700 A	■	■	–	B07
	800 A	■	■	■	B08
	1000 A	■	■	■	B10
	1200 A	■	■	■	B11
	1250 A	■	■	■	B12
	1600 A	■	■	■	B16
	2000 A	–	■	■	B20
	2500 A	–	■	■	B25
	3000 A	–	■	■	B30
	3200 A	–	–	■	B32
	4000 A	–	–	■	B40
	5000 A	–	–	■	B50

IOM230 digital input/output module [1)]

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

ZSI200 Zone-selective interlocking module [1)]

Zone-selective interlocking with ETU600	A module, circuit breaker internal. A module including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, connecting cables and **Cubicle**BUS^2 terminating resistor	F20

COM190 communications module [1) 2)]

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

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

COM150 communications module [1)]

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

Modbus RTU	A module with terminal connection and optional internal terminating resistor, circuit breaker internal. A module including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, connecting cables and **Cubicle**BUS^2 terminating resistor; two communications modules can be run at the same time. The second communications module must be ordered separately as 3WA9111-0EC15.	F15

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

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

System overview, page 1/24

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

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

			Order code
ready4COM circuit breakers without communication-capable closing coils/shunt trips			
Note	If this option is used, remote switching directly via communication is no longer possible.		M71
Automatic reset			
• Only possible for circuit breakers with an electronic trip unit			
Circuit breakers without automatic reset of the reclosing lockout	3WA3 circuit breakers are supplied with automatic reset of the reclosing lockout from the factory. This option removes it. If a circuit breaker with a remote trip alarm reset coil RR is ordered, this option is not possible.		K02
Connections			
Vertical connections/ Front connections	For fixed-mounted circuit breakers acc. to IEC 60947-2		D03
Circuit breakers without Bluetooth function			
Circuit breakers without Bluetooth function	In this version of the circuit breaker, Bluetooth is not provided. Neither can Bluetooth be retrofitted by replacing the electronic trip unit.		D80
Secondary disconnect terminal system			
• Can be ordered for circuit breakers with guide frames and for guide frames			
Manual connector with screw terminal	With screw connection instead of push-in connection (standard)		N03
Manual connector for ring lugs	With screw connection for ring lugs instead of push-in connection (standard)		N05
Mechanical operating cycles counters			
Mechanical operating cycles counter, 5-digit	Can be used with all circuit breakers and non-automatic circuit breakers including those without a spring charging motor		C01
Signaling switches			
Trip alarm switch	2nd trip alarm switch (S25) 1st trip alarm switch included as standard for circuit breakers. Can only be used with circuit breakers with an electronic trip unit without ready4COM.	1 NO	K06
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		R10
Long shutters: 2-part, lockable with padlocks	All 3WA3 guide frames or withdrawable circuit breakers with guide frames are equipped with short shutters as standard. If = Z option R22 is ordered, they are supplied with long shutters. Padlocks not included in scope of supply.	3-pole/4-pole	R22
Covers for electronic trip unit	Top cover with safety lock (The lower sealable cover of the rotary coding switch is included in the scope of supply of the circuit breaker)		F40

System overview, page 1/24

Accessory options

For a complete and valid configuration of your air circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3wa-ul-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 [1]		R55
	For guide frames (ordered separately)		R56
	For withdrawable circuit breakers (ordered separately)		R57
Locking provisions (for fixed-mounted and withdrawable circuit breakers) [2]			
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 [3]	S05
		Assembly kit Kirk Key [3]	S06
		Made by RONIS	S08
		Made by PROFALUX	S09
Locking provisions	For charging handle with padlock [4]		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
		Assembly kit Kirk Key [3]	S72
		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
Assembly kit Kirk Key [3]			R62
Locking provision against unauthorized closing, for withdrawable circuit breakers (Double Kirk Key)			
• Locks not included in the scope of supply			
Size 1-3			R71
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 [5]		R40
	To prevent movement when the control cabinet door is open [1]		R50
Increased degree of protection for installation in a control cabinet			
Door sealing frame for degree of protection IP41			T40

[1] Not available in combination with R40
[2] The locking provision with a padlock is included in the standard scope of supply of the 3WA3 circuit breakers
[3] Locks must be ordered from the manufacturer
[4] Padlock not included in the scope of supply
[5] Not available in combination with R50 and R55

System overview, page 1/24

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

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

Order code

Circuit breakers with a metering function for connection of an external voltage transformer

- The circuit breaker is equipped with a metering function. The scope of measured values is the same as for the PMF metering function. Unlike the metering function with internal voltage tap, this version is not certified according to IEC 61557-12.
- External voltage transformers are required for the function.
- Only possible for circuit breakers of frame sizes 2 and 3 with ETU600 and A or C in position 9 of the article number.

Scope of measured values Metering function	PMF-I	**V61**
	PMF-II	**V62**
	PMF-III	**V63**

System overview, page 1/24

Accessory options

Further technical specifications

Manual operating mechanism	3WA31 – 3WA33
Switching on/charging energy store	
Maximum force required to operate the hand lever	≤ 230 N
Required number of strokes on the hand lever	9

Closing coils (CC/CC-COM) [1]		3WA31 – 3WA33	
Rated operational voltage			
Rated control supply voltage U_s		24 … 30 V DC	
		48 … 60 V DC	
		110 … 127 V AC/110 … 125 V DC	
		208 … 240 V AC/220 … 250 V DC	
Primary operating range			
Primary operating range (acc. to IEC 60947-2)		75 … 110% U_s	
Extended operating range for battery operation		75 … 126% U_s	
Integrated freewheeling diode		Yes	No
Operation			
Version		100% OP	5% OP
Closing power	AC/DC	60 VA/60 W	300 VA/300 W
Continuous power	AC/DC	8 VA/8 W	–
Minimum command time at 100% U_s		60 ms	60 ms
Maximum command time at 100% U_s		–	2000 ms
Opening time of the circuit breaker at 100% U_s		80 ms	50 ms
Fuse protection of the control circuit at U_s for closing coil			
Fuse gG	24 … 30 V DC	2 A	10 A
	48 … 60 V DC	2 A	10 A
	110 … 127 V AC/110 … 125 V DC	2 A	4 A
	208 … 240 V AC/220 … 250 V DC	2 A	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	2 A	10 A
	48 … 60 V DC	2 A	10 A
	110 … 127 V AC/110 … 125 V DC	2 A	4 A
	208 … 240 V AC/220 … 250 V DC	2 A	2 A
Fuse protection of the control circuit at U_s for spring charging motor + closing coil [2]			
Fuse gG	24 … 30 V DC	8 A	10 A
	48 … 60 V DC	8 A	10 A
	110 … 127 V AC/110 … 125 V DC	4 A	4 A
	208 … 240 V AC/220 … 250 V DC	4 A	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	8 A	10 A
	48 … 60 V DC	8 A	10 A
	110 … 127 V AC/110 … 125 V DC	4 A	4 A
	208 … 240 V AC/220 … 250 V DC	4 A	2 A

[1] Technical specifications also apply to 3WL see page 1/88
[2] With the same control circuit for the closing coil and spring charging motor

Spring charging motor [1]		3WA31 – 3WA33
Rated operational voltage		
Rated control supply voltage U_s		24 … 30 V DC
		48 … 60 V DC
		110 … 127 V AC/110 … 125 V DC
		208 … 240 V AC/220 … 250 V DC
Primary operating range		
Primary operating range (acc. to IEC 60947-2)		85 … 110% U_s
Extended operating range for battery operation		85 … 126% U_s
Operation		
Closing power	AC/DC	135 VA/135 W
Continuous power	AC/DC	135 VA/135 W
Charging time at 100% U_s		≤ 10 s

[1] Technical specifications also apply to 3WL see page 1/88

System overview, page 1/24

Spring charging motor [1)]

		3WA31 – 3WA33
Fuse protection of the control circuit at U_s for spring charging motor		
Fuse gG	24 … 30 V DC	6 A
	48 … 60 V DC	6 A
	110 … 127 V AC/110 … 125 V DC 208 … 240 V AC/220 … 250 V DC	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	6 A
	48 … 60 V DC	6 A
	110 … 127 V AC/110 … 125 V DC 208 … 240 V AC/220 … 250 V DC	2 A

[1)] Technical specifications also apply to 3WL see page 1/88

Undervoltage releases UVR and UVR-t [1)]

		3WA31 – 3WA33
Rated operational voltage		
Rated control supply voltage U_s: UVR		24 … 30 V DC
		48 … 60 V DC
		110 … 127 V AC/110 … 125 V DC
		208 … 240 V AC/220 … 250 V DC
Rated control supply voltage U_s: UVR-t [2)]		48 DC
		60 DC
		110 … 127 V AC/110 … 125 V DC
		208 … 240 V AC/220 … 250 V DC
Operating limits	Operate voltage	< 70% U_s
	Pick-up voltage	85 … 126% U_s
Integrated freewheeling diode		Yes
Closing power	AC/DC	60 VA/50 W
Continuous power	AC/DC	5 VA/5 W
Break time		
U_s = 0 with UVR instantaneous		≤ 80 ms
U_s = 0 with UVR short-time delayed		≤ 200 ms
U_s = 0 with UVR-t delayed		0.2 … 3.2 s
With UVR-t by disconnection at terminals X5.13 and X5.14 (quick shutdown) [2)]		≤ 100 ms (maximum allowable cable length between the terminals)/cable length ≦ 50 m
Fuse protection of the control circuit		
Fuse gG	24 … 30 V (UVR) DC	2 A
	48 … 60 V (UVR) DC	2 A
	48 V (UVR-t) DC	2 A
	60 V (UVR-t) DC	2 A
	110 … 127 V AC/ 110 … 125 V DC	2 A
	208 … 240 V AC/220 … 250 V DC	2 A
Automatic circuit breaker with C characteristic	24 … 30 V (UVR) DC	4 A
	48 … 60 V (UVR) DC	4 A
	48 V (UVR-t) DC	4 A
	60 V (UVR-t) DC	4 A
	110 … 127 V AC/110 … 125 V DC	4 A
	208 … 240 V AC/220 … 250 V DC	6 A
Automatic circuit breaker with D characteristic	24 … 30 V (UVR) DC	2 A
	48 … 60 V (UVR) DC	2 A
	48 V (UVR-t) DC	2 A
	60 V (UVR-t) DC	2 A
	110 … 127 V AC/110 … 125 V DC	2 A
	208 … 240 V AC/220 … 250 V DC	4 A

[1)] Technical specifications also apply to 3WL see page 1/88
[2)] The maximum allowable cable length to the actuator for quick shutdown is currently ≦ 50 m (maximum allowable cable length between the terminals ≦ 100 m).

System overview, page 1/24

Accessory options

Further technical specifications

Shunt trip (ST/ST-COM/ST2) [1]		3WA31 – 3WA33	
Rated operational voltage			
Rated control supply voltage U_s		24 … 30 V DC	
		48 … 60 V DC	
		110 … 127 V AC/110 … 125 V DC	
		208 … 240 V AC/220 … 250 V DC	
Primary operating range			
Primary operating range (acc. to IEC 60947-2)		75 … 110% U_s	
Extended operating range for battery operation		75 … 126% U_s	
Integrated freewheeling diode		Yes	No
Operation			
Version		100% OP	5% OP
Closing power AC/DC	24 … 30 V DC/48 … 60 V DC	60 VA/60 W	300 VA/300 W
	110 … 127 V AC/110 … 125 V DC		
	208 … 240 V AC/220 … 250 V DC		
Continuous power AC/DC		8 VA/8 W	–
Minimum command time at 100% U_s		60 ms	60 ms
Maximum command time at 100% U_s		–	2000 ms
Make time of the circuit breaker at 100% U_s		80 ms	50 ms
Fuse protection of the control circuit			
Fuse gG	24 … 30 V DC	2 A	10 A
	48 … 60 V DC	2 A	10 A
	110 … 127 V AC/110 … 125 V DC	2 A	4 A
	208 … 240 V AC/220 … 250 V DC	2 A	2 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	2 A	10 A
	48 … 60 V DC	2 A	10 A
	110 … 127 V AC/110 … 125 V DC	2 A	4 A
	208 … 240 V AC/220 … 250 V DC	2 A	2 A

[1] Technical specifications also apply to 3WL see page 1/88

Remote trip alarm reset coil for mechanical tripped indicator (F7) [1]		3WA31 – 3WA33
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
Operation		
Power consumption	AC/DC	60 VA/60 W
Minimum command time at 1 × U_s		60 ms
Fuse protection of the control circuit		
Fuse gG	24 … 30 V DC	2 A
	48 … 60 V DC	2 A
	110 … 127 V AC/110 … 125 V DC	1 A
	208 … 240 V AC/220 … 250 V DC	1 A
Automatic circuit breaker with C characteristic	24 … 30 V DC	2 A
	48 … 60 V DC	2 A
	110 … 127 V AC/110 … 125 V DC	1 A
	208 … 240 V AC/220 … 250 V DC	1 A

[1] Technical specifications also apply to 3WL see page 1/88

Contact position-driven auxiliary switches (S1 bis S8) [1]	3WA31 – 3WA33
Type	NO or NC
Contact reliability	From 1 mA at 5 V DC
Rated insulation voltage U_i	660 V DC/660 V AC 50/60 Hz
Rated impulse withstand voltage U_{imp}	6 kV

[1] Technical specifications also apply to 3WL see page 1/88

System overview, page 1/24

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

		3WA31 – 3WA33	
Breaking capacity			
Rated operational current I_e	DC12	24 V	10 A
		48 V	8 A
		110 V	3.5 A
		220/240 V	1 A
	DC13	24 V	6 A
		48 V	4 A
		110 V	1.2 A
		220/240 V	0.4 A
		440 V	0.2 A
	AC12	≤ 660 V	10 A
	AC15	≤ 230 V	6 A
		400 V	4 A
		500 V	3 A
		690 V	2 A

[1)] Technical specifications also apply to 3WL see page 1/88

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

		3WA31 – 3WA33	
Type		NO contact	
Contact reliability		From 1 mA at 5 V DC [1)]	
Rated insulation voltage U_i		250 V DC/250 V AC	
Breaking capacity			
Rated operational current I_e	DC12	24 V	5 A
		60 V	0.4 A
		110/127 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	2.5 A
		60 V	0.22 A
		110/127 V	0.22 A
		220/240 V	0.1 A
	AC12	≤ 240 V	6 A
	A300 AC	≤ 250 V	6 A
	R300 DC	110 ... 125 V	0.22 A
		220 ... 250 V	0.11 A
	AC15	220 V	5 A
		240 V	4 A

Trip alarm switches (S24, S25)

		3WA31 – 3WA32	
1st trip alarm switch S24		Changeover contact	
2nd trip alarm switch S25		NO contact	
Contact reliability		From 1 mA at 5 V DC [1)]	
Rated insulation voltage U_i		250 V DC/250 V AC 50/60 Hz	
Breaking capacity			
Rated operational current I_e	DC12	24 V	5 A
		60 V	0.4 A
		110/127 V	0.4 A
		220/240 V	0.2 A
	DC13	24 V	2.5 A
		60 V	0.2 A
		110/127 V	0.2 A
		220/240 V	0.1 A
	AC12	≤ 240 V	6 A
	A300 AC	≤ 250 V	6 A
	R300 DC	110 ... 125 V	0.22 A
		220 ... 250 V	0.11 A
	AC15	220 V	5 A
		240 V	4 A

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

System overview, page 1/24

Accessory options

Further technical specifications

Position signaling switches on guide frame [1]			**3WA31 – 3WA33**	
Type			Changeover contact (not COM)	
Contact reliability from [1]			1 mA at 5 V DC	
Rated insulation voltage U_i			250 V, 50/60 Hz	
Rated impulse withstand voltage U_{imp}			4 kV	
Connection type				
PSS321			Spring-loaded terminal or push-in (depending on version)	
PSS600			Push-in	
PSS111 COM			• COM contacts: Push-in • Other contacts: Spring-loaded terminal or push-in	
PSS400 COM			Push-in	
Cross-sections that can be connected by the customer				
Spring-loaded terminal			1 × 0.2 mm² (AWG 28) ... 1 × 2.5 mm² (AWG 14)	
Push-in solid			1 × 0.5 mm² (AWG 20) ... 1 × 2.5 mm² (AWG 14)	
Push-in finely stranded with end sleeve			1 × 0.5 mm² (AWG 20) ... 1 × 1.5 mm² (AWG 16)	
Breaking capacity				
Rated operational current I_e	Utilization category according to IEC 60947-5	DC12	24 V	5 A
			60 V	0.4 A
			127 V	0.4 A
			220/240 V	0.2 A
		DC13	24 V	2.5 A
			60 V	0.22 A
			127 V	0.22 A
			250 V	0.2 A
		AC12	≤ 240 V AC	6 A
		AC15	250 V	4 A
			220 V	5 A
	Utilization category according to UL 508	A300 AC	125 V	5 A
			250 V	1 A
		R300 DC	30 V	0.1 A

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

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

ETU600		**3WA31 – 3WA33**
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

System overview, page 1/24

Summary of power consumption data

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

System overview, page 1/24

Guide frames for AC

Breaking capacity N, S, M, H, C

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-ul-configurator

1

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

Guide frames

		SZ 1	SZ 2	SZ 3				
Size	1				1			
	2				2			
	3				3			
Max. rated current $I_{n\,max}$	800 A	■	■	–		0	8	
	1000 A	■	–	–		1	0	
	1200 A	■	■	–		1	2	
	1600 A	■	■	–		1	6	
	2000 A	■	■	–		2	0	
	2500 A	–	■	–		2	5	
	3200 A	–	■	■ [1]		3	2	
	4000 A	–	–	■		4	0	
	5000 A	–	–	■		5	0	

					acc. to UL 1066 508/635 V	acc. to IEC 60947-2 415/500 V	
Short-circuit breaking capacity I_{cu}	N	■	■	–	50/50 kA [2]	50/50 kA	2
	S	■	■	–	65/65 kA	65/65 kA	3
	M	–	■	■	85/65 kA	85/85 kA	4
	H	–	■	■	100/85 kA	100/100 kA	5
	C	–	–	■ [1]	150/100 kA	–	6

Number of poles	3-pole	3
	4-pole, Neutral left	4

[1] Only 3-pole circuit breakers available
[2] For size 1, only available for 1600 ... 2000 A

System overview, page 1/24

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

Guide frames

			Main connection	
			Vertical	Rotatable T-connector
Size 1				
Short-circuit breaking capacity	N, S	800 A	1	2
		1000 A	1	2
		1200 A	1	2
		1600 A	1	2
		2000 A	1	–
Size 2				
Short-circuit breaking capacity	N, S, M	800 A	1	2 [1]
		1200 A	1	2 [1]
		1600 A	1	2 [1]
		2000 A	1	2 [1]
		2500 A	1	–
		3200 A	1	–
	H	800 A	1	–
		1200 A	1	–
		1600 A	1	–
		2000 A	1	–
		2500 A	1	–
		3200 A	1	–
Size 3				
Short-circuit breaking capacity	M, H	4000 A	1	–
		5000 A	1	–
	C [3]	4000 A	1	–
		5000 A	1	–

Push-in connection [2]	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 PSS600 (6x connected position)	D
	Position signaling switch PSS400 COM (4x connected position) plus connection to a communications module (Signal: disconnected position, absent)	H

[1] Only available for 3-pole circuit breakers
[2] Conversion to screw connection is possible with Z option N03
[3] Only 3-pole circuit breakers available

System overview, page 1/24

Guide frames for AC

Breaking capacity E

**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-ul-configurator**

1

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

Guide frames

		BG 1	BG 2	BG 3				
Size	1				1			
	2				2			
	3				3			
Max. rated current $I_{n\,max}$	800 A	■	■	–		0	8	
	1000 A	■	–	–		1	0	
	1200 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	
					acc. to UL 1066 508/635/ 730 V	acc. to IEC 60947-2 690/ 1000 V		
Short-circuit breaking capacity I_{cu}	E	■	–	–	85/65/65	65/50	8	
		–	■	–	100/85/85	85/50	8	
		–	–	■	100/100/ 100	85/85	8	
Number of poles	3-pole							3
	4-pole, Neutral left							4

System overview, page 1/24

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

Guide frames

			Main connection			
			Vertical	Rotatable T-connector		
Baugröße 1						
Short-circuit breaking capacity	E	800 A	1	–		
		1000 A	1	–		
		1200 A	1	–		
		1600 A	1	–		
		2000 A	1	–		
Baugröße 2						
Short-circuit breaking capacity	E	800 A	1	–		
		1200 A	1	–		
		1600 A	1	–		
		2000 A	1	–		
		2500 A	1	–		
		3200 A	1	–		
Baugröße 3						
Short-circuit breaking capacity	E	4000 A	1	–		
		5000 A	1	–		

Push-in connection [1]	SZ 1, SZ 2, SZ 3	X5, X6, X7	Non-automatic circuit breakers without ready4COM feature	A
		X5, X6, X7, X8	Circuit breakers/non-automatic circuit breakers with ready4COM feature	B
	SZ 2, SZ 3	X5, X6, X7, X8, X9	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 PSS600 (6x connected position)	D
	Position signaling switch PSS400 COM (4x connected position) plus connection to a communications module (Signal: disconnected position, absent)	H

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

System overview, page 1/24

Accessories and spare parts

Accessories for electronic trip unit

Electronic trip unit

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

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

Spare part battery for ETU600

	Article No.
	3WA9111-0EE81

Option plug

Basic configuration	Rated current I_n	SZ 1	SZ 2	SZ 3	Article No.	
Protective function LSI: LT, ST, INST					3WA9111-1EB	..
Protective function LSI: LT, ST, INST, GFs (ground-fault protection GFs)					3WA9111-1EG	..
Protective function LSIG: LT, ST, INST, GF (ground-fault protection GFx with extended setting range)					3WA9111-1EX	..
	200 A	■	■	–		72
	225 A	■	■	–		71
	250 A	■	■	–		02
	300 A	■	■	–		73
	315 A	■	■	–		03
	350 A	■	■	–		74
	400 A	■	■	–		04
	450 A	■	■	–		75
	500 A	■	■	–		05
	600 A	■	■	–		76
	630 A	■	■	–		06
	700 A	■	■	–		07
	800 A	■	■	■		08
	1000 A	■	■	■		10
	1200 A	■	■	■		11
	1250 A	■	■	■		12
	1600 A	■	■	■		16
	2000 A	■	■	■		20
	2500 A	–	■	■		25
	3000 A	–	■	■		30
	3200 A	–	■	■		32
	4000 A	–	–	■		40
	5000 A	–	–	■		50

Function packages for ETU600

Protective and alarm functions	Article No.
Ground fault alarm (GF alarm)	3WA9111-0ES01
Directional short-time-delayed short-circuit protection (dST) and reverse power protection (RP) [1]	3WA9111-0ES05
Enhanced protective functions (EPF) [1]	**Article No.**
Full package with unbalance, voltage, active power, frequency, THD and phase sequence detection	3WA9111-0ES11
Phase unbalance current and phase unbalance voltage	3WA9111-0ES12
Undervoltage and overvoltage	3WA9111-0ES13
Active power import and active power export	3WA9111-0ES14
Underfrequency and overfrequency	3WA9111-0ES15
Total harmonic distortion for current and voltage	3WA9111-0ES16
Phase sequence detection	3WA9111-0ES17
Functional expansions	**Article No.**
Second protection parameter set	3WA9111-0ES21
Waveform memory	3WA9111-0ES24
Extended metering function	**Article No.**
Upgrade to metering function PMF-II Basic Power Monitoring (metering values, see catalog page 1/21)	3WA9111-0ES52
Upgrade to metering function PMF-III Advanced Power Monitoring (metering values, see catalog page 1/21)	3WA9111-0ES53

[1] Requires an internal voltage tap and a voltage tap module

System overview, page 1/24

Accessories for electronic trip unit

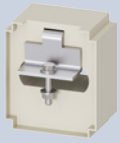
Licenses to activate test function in SENTRON Powerconfig software

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

Upgrading to ready4COM feature through BSS200 breaker status sensor for ETU600

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

External current sensors for the N conductor



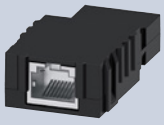
Version	Size	Article No.
For mounting on busbar	1	3WA9111-0AA21
	2	3WA9111-0AA22
	3	3WA9111-0AA23
For busbar connection DIN connection	1	3WA9111-0AA31
	2	3WA9111-0AA32
	3	3WA9111-0AA33

Sealable and lockable covers

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

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

Adapter for connecting the ETU300 to the TD400



Version	Article No.
Via the adapter, the ETU300 can be connected to the TD400 to supply it with an external voltage. There is no parameterization or documentation option via SENTRON Powerconfig	3VW9011-0AT46

Remote trip alarm reset coils [1)]

- For mechanical tripped indicator

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

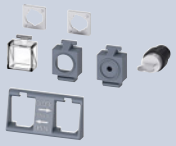
Version	Article No.
Including adapter for mounting on the secondary disconnect terminal system of the circuit breaker, adapter for mounting on DIN rail	3WA9111-0EM62

[1)] Article numbers also apply to 3WL see page 1/91

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

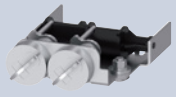
Type	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included (S01)	3WA9111-0BA35
Made by IKON	Locks, cylinders and keys included (S03)	3WA9111-0BA36
Assembly kit FORTRESS or CASTELL [1]	Without locks, cylinders or keys (S05)	3WA9111-0BA31
Made by KIRK-Key [1]	Without locks, cylinders or keys (S06)	3WA9111-0BA33
Assembly kit for padlocks	Without padlock (S07) [2]	3WA9111-0BA37
Made by RONIS	Locks, cylinders and keys included (S08)	3WA9111-0BA32
Made by PROFALUX [2]	Locks, cylinders and keys included (S0)	3WA9111-0BA34

Locking provision against unauthorized closing of the withdrawable circuit breaker

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

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

Locking provision against unauthorized closing, for withdrawable circuit breakers (Double Kirk Key)



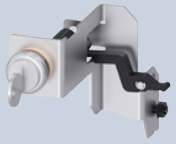
- Locks not included in the scope of supply
- Spare part for option R71

Type	Article No.
Size 1 (for circuit breakers 3- and 4-pole)	3WA9111-1BA56
Size 2 + 3 (for circuit breakers 3-pole)	3WA9111-1BA57
Size 2 (for circuit breakers 4-pole)	3WA9111-1BA58
Size 3 (for circuit breakers 4-pole)	3WA9111-1BA60

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.

[2] The locking provision with a padlock is included in the standard scope of supply of the 3WA3 circuit breakers.

System overview, page 1/24

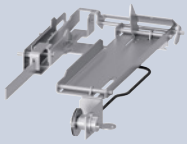
Locking provisions and interlocks

Interlocking systems

- 2 of the same keys for 3 circuit breakers
- Locking provision in OFF position
- Lock in the operator panel
- A maximum of 2 circuit breakers can be switched on

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

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



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

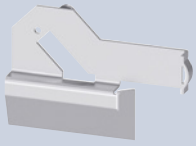
Type	Article No.
Made by CES	3WA9111-0BA81
Made by IKON	3WA9111-0BA82
Made by PROFALUX	3WA9111-0BA83
Made by RONIS	3WA9111-0BA84

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

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

Version		Article No.
Spare part for option S30	Fixed-mounted circuit breaker	3WA9111-0BB12
Spare part for option R30	Guide frames	3WA9111-0BB13

Locking mechanisms to prevent movement when the control cabinet door is open



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

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

Mechanical interlocks

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

Type	Circuit breaker and guide frame when ordered separately	Spare part for	Article No.
Fixed-mounted circuit breaker	–	Option S55	3WA9111-0BB21
Module for withdrawable circuit breakers with guide frame	–	Option R55 [1]	3WA9111-0BB22
Module for guide frame	✓	Option R56	3WA9111-0BB23
Module for withdrawable circuit breaker	✓	Option R57	3WA9111-0BB24
Adapter for size 3 withdrawable circuit breaker	✓	–	3WA9111-0BB25
Coupling for combining mutual mechanical interlocking with auxiliary switch blocks for withdrawable circuit breakers (MOC)	–	–	3WA9111-1AG88

Coupling on the circuit breaker for mutual interlocking with Bowden cable

- Can be used in all circuit breakers

Article No.
3WA9111-0BB31

Bowden cable for mutual mechanical interlocking

Length	Article No.
2000 mm	3WA9111-0BB41
3000 mm	3WA9111-0BB42
4500 mm	3WA9111-0BB43

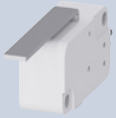
[1] Not possible in combination with R40

System overview, page 1/24

Accessories and spare parts

Indicators and control elements

Ready-to-close signaling switches (S20)



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

1st trip alarm switch (S24)

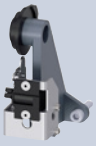
Version	Article No.
Spare part for signaling switch installed as standard	3WA9111-0AH02

2nd trip alarm switch (S25)

- Can only be used with a circuit breaker with an electronic trip unit without ready4COM
- The 1st trip alarm switch (1 changeover contact) is installed in every circuit breaker with a trip unit as standard

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

Mechanical operating cycles counter (5-digit)



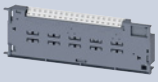
Version	For circuit breakers/non-automatic circuit breakers	Article No.
Spare part for option C01	With manual operating mechanism	3WA9111-0AH04
	With spring charging motor	3WA9111-0AH05

Spring charge signaling switch (S21)

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

Contacts	Article No.
1 NO	3WA9111-0AH06

Position signaling switch for withdrawable circuit breakers



- All conventional contacts are implemented as changeover contacts.

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

Local electric close (S10) for operator panel

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

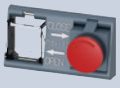
Version	Article No.
With sealing cap, spare part for option C11	3WA9111-0AH21
With CES assembly kit, spare part for option C12	3WA9111-0AH22
With IKON assembly kit	3WA9111-0AH23

Motor disconnect switch (S12)

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

Version	Article No.
Spare part for option C24	3WA9111-0AH24

Emergency OPEN button



- Mushroom pushbutton instead of local mechanical open

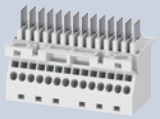
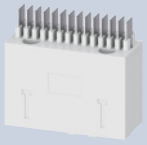
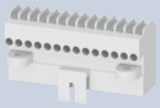
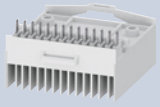
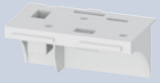
Version	Article No.
Spare part for option C25	3WA9111-0AH25

System overview, page 1/24

Secondary disconnect terminals for circuit breakers and guide frames

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

Secondary disconnect terminal

	Version	Type	Article No.
	Base part 1		3WA9111-0AB01
	1000 V extension [1]		3WA9111-0AB02
	Manual connector 2	Screw connection	3WA9111-0AB03
		Push-in connection	3WA9111-0AB04
		Ring lug connection	3WA9111-0AB05
	Coding kits 3	For secondary disconnect terminal blocks X5 to X9 for fixed-mounted circuit breakers	3WA9111-0AB07
	Sliding contact module 4	For guide frames	3WA9111-0AB08
	Blanking block		3WA9111-0AB12

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

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

Auxiliary releases

Closing coil (CC)/shunt trip (ST) [1]

- Suitable for uninterrupted duty

Version	Voltage	Article No.
100% OP Switching time ≦ 80 ms	24 ... 30 V DC	3WA9111-0AD02
	48 ... 60 V DC	3WA9111-0AD04
	110 ... 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

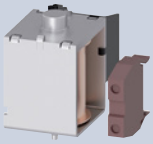
[1] Article numbers also apply to 3WL see page 1/97

System overview, page 1/24

Accessories and spare parts

Auxiliary releases

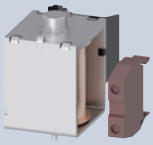
Closing coils (CC) [1]



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

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

Shunt trips (ST) [1]



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

Version	Voltage	Article No.
5% OP Switching time 50 ms	24 ... 30 V DC	3WA9111-0AD22
	48 ... 60 V DC	3WA9111-0AD24
	110 ... 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
- Suitable also 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 voltage		Article No.
50/60 Hz AC	DC	
208 ... 240 V	220 ... 250 V	3WA9111-0AD81

Undervoltage release (UVR) [1]

Version	Voltage	Article No.
Instantaneous ≤ 0.08 s (UVR) and short-time delayed ≤ 0.2 s	24 ... 30 V DC	3WA9111-0AE02
	48 ... 60 V DC	3WA9111-0AE04
	110 ... 125 V DC/110 ... 127 V AC	3WA9111-0AE05
	220 ... 250 V DC/208 ... 240 V AC	3WA9111-0AE06
Delayed (UVR-t) [2], 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

[1] Article numbers also apply to 3WL see page 1/97
[2] The maximum allowable cable length to the actuator for quick shutdown is currently ≦ 50 m (maximum allowable cable length between the terminals ≦ 100 m).

Operating mechanism [1]

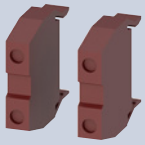
Spring charging motor to charge the stored energy mechanism

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

[1] Article numbers also apply to 3WL see page 1/97

Auxiliary contacts

Auxiliary switches (AUX)



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

System overview, page 1/24

Auxiliary contacts

Auxiliary switch blocks for withdrawable circuit breakers (MOC)

Contacts	Version	Size	Article No.
4 NO + 4 NC	In connected position	1, 2	3WA9111-1AG81
		3	3WA9111-1AG82
	In connected position and test position	1, 2	3WA9111-1AG83
		3	3WA9111-1AG84
	Coupling for combining MOC with mutual mechanical interlocking	–	3WA9111-1AG88

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

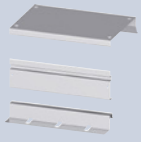
	Article No.
Protective cover acc. to UL	3WA9111-1AP03
Protective cover acc. to IEC	3WA9111-0AP03

Arc chute, arc chute cover

Arc chute

Size	Rated current I_n	Breaking capacity	Type of mounting	Article No.
1	800 ... 2000 A	N, S	Fixed-mounted breakers and withdrawable breakers	3WA9111-1AS00
		E	Fixed-mounted breakers	3WA9111-1AS01
			Withdrawable breakers	3WA9111-1AS02
2	800 ... 3200 A	N, S, M	Fixed-mounted breakers and withdrawable breakers	3WA9111-1AS10
		H, E		3WA9111-1AS11
3	3200 [1] ... 5000 A	M, H	Fixed-mounted breakers and withdrawable breakers	3WA9111-1AS20
		E, C		3WA9111-1AS21

Arc chute cover



- Parts kit for guide frame
- Spare part for option R10

Number of poles	Size	Rated current I_n	Breaking capacity	Article No.
3-pole	1	800 ... 2000 A	N, S	3WA9111-1AS30
			E	3WA9111-1AS31
	2	800 ... 3200 A	N, S, M	3WA9111-1AS40
			H, E	3WA9111-1AS41
	3	3200 [1] ... 5000 A	M, H	3WA9111-1AS50
			E, C	3WA9111-1AS51
4-pole	1	800 ... 2000 A	N, S	3WA9111-1AS60
			E	3WA9111-1AS61
	2	800 ... 3200 A	N, S, M	3WA9111-1AS70
			H, E	3WA9111-1AS71
	3	4000 ... 5000 A	M, H	3WA9111-1AS80
			E	3WA9111-1AS81

System overview, page 1/24

Accessories and spare parts

Coding for withdrawable version

Coding for withdrawable version

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

Article No.
3WA9111-0BB50

[1] 3200 A for switching capacity C, 4000 A for switching capacity M, H, E available

Modules of the **Cubicle**BUS²

COM190 PROFINET IO/Modbus TCP communications module [1]

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

COM150 communications module Modbus RTU

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

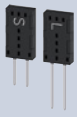
IOM230 digital input/output module (2 inputs and 3 outputs)

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

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

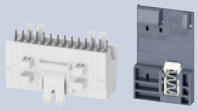
Version	Article No.
For mounting on DIN rail, including connecting cables and terminating resistor for **Cubicle**BUS² • Type of output contact: CO • Maximum uninterrupted current of an output at 110 ... 230 V AC: 10 A	3WA9111-0EC12

Terminating resistor for CubicleBUS²



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

Adapters



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

ZSI200 Zone-selective interlocking module

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

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

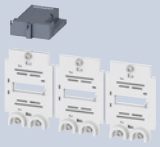
System overview, page 1/24

Internal voltage tap

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

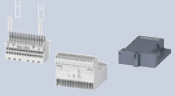
Conversion	Circuit breaker	Size	Article No.
From bottom to top	3-pole	1	3WA9111-0EK11
		2	3WA9111-0EK12
		3	3WA9111-0EK13
	4-pole	1	3WA9111-0EK21
		2	3WA9111-0EK22
		3	3WA9111-0EK23
From top to bottom	3-pole	1	3WA9111-0EK31
		2	3WA9111-0EK32
		3	3WA9111-0EK33
	4-pole	1	3WA9111-0EK41
		2	3WA9111-0EK42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

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



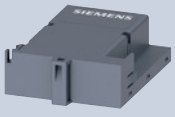
For breaking capacity	Set for circuit breaker	Size	Article No.
N, S, M, H, C with VTM680 voltage tap module with power supply of ETU600	3-pole	1	3WA9111-0EK51
		2	3WA9111-0EK52
		3	3WA9111-0EK53
	4-pole	1	3WA9111-0EK61
		2	3WA9111-0EK62
		3	3WA9111-0EK63
E with VTM640 voltage tap module	3-pole	1	3WA9111-0EK55
		2	3WA9111-0EK56
		3	3WA9111-0EK57
	4-pole	1	3WA9111-0EK65
		2	3WA9111-0EK66
		3	3WA9111-0EK67

Retrofit kit to connect an external voltage transformer



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

Voltage tap module



Version	For breaking capacity	Article No.
VTM680, with power supply of ETU600 [1]	N, S, M, H, C	3WA9111-0EM12
VTM640	E	3WA9111-0EM11

[1] When replacing the VTM680 voltage tap module in an 3WA air circuit breaker with ID number lower than ID No. OE/230101500000, the internal cable harness of the voltage tap must also be replaced. In this case, the accessory "Retrofit of the internal voltage tap on the lower main conducting paths" is required.

System overview, page 1/24

Accessories and spare parts

Main conductor connections fixed-mounted versions according to UL 1066

Rear vertical main connections

- Fixing accessories are included in scope of supply

Size	Breaking capacity	Rated current I_n	Description	Article No.
1	N	800 ... 1200 A	Connection at top/bottom, 1 unit	3WA9111-1AJ10
		1600 ... 2000 A	Connection at top/bottom, 1 unit	3WA9111-1AJ11
	S, E	800 ... 2000 A	Connection at top/bottom, 1 unit	3WA9111-1AJ11
2 (3-pole)	N, S, M, H, E	800 ... 1600 A	Connection at top, 1 set for 3-pole circuit breakers	3WA9111-1AB20
			Connection at bottom, 1 set for 3-pole circuit breakers incl. supports	3WA9111-1AC20
		2000 A	Connection at top, 1 set for 3-pole circuit breakers	3WA9111-1AB21
			Connection at bottom, 1 set for 3-pole circuit breakers incl. supports	3WA9111-1AC21
		2500 ... 3200 A	Connection at top, 1 set for 3-pole circuit breakers	3WA9111-1AB22
			Connection at bottom, 1 set for 3-pole circuit breakers incl. supports	3WA9111-1AC22
2 (4-pole)	N, S, M, H, E	800 ... 1600 A	Connection at top, 1 set for 4-pole circuit breakers	3WA9111-1AB24
			Connection at bottom, 1 set for 4-pole circuit breakers incl. supports	3WA9111-1AC24
		2000 A	Connection at top, 1 set for 4-pole circuit breakers	3WA9111-1AB25
			Connection at bottom, 1 set for 4-pole circuit breakers incl. supports	3WA9111-1AC25
		2500 ... 3200 A	Connection at top, 1 set for 4-pole circuit breakers	3WA9111-1AB26
			Connection at bottom, 1 set for 4-pole circuit breakers incl. supports	3WA9111-1AC26
3	M, H, E	4000 A	Connection at top/bottom, 1 unit	3WA9111-1AJ31
		5000 A	Connection at top, 1 unit	3WA9111-1AB33
			Connection at bottom, 1 unit	3WA9111-1AC33
	C	3200 ... 5000 A	Connection at top, 1 unit (only 3-pole)	3WA9111-1AB33
			Connection at bottom, 1 unit (only 3-pole)	3WA9111-1AC33

Front connection

- Fixing accessories are included in scope of supply
- Front connections are used to facilitate connection in the power distribution equipment. However, they must be tested by the customer in accordance with the requirements from the relevant UL switchgear standards.

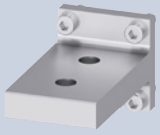
Size	Breaking capacity	Rated current I_n	Description	Article No.
1	N, S	800 ... 1200 A	Connection at top, 1 unit [1]	3WA9111-1AF10
			Connection at bottom, 1 unit [1]	3WA9111-1AG10
2	N, S, M, H, E	800 ... 1600 A	Connection at top, 1 unit [1]	3WA9111-1AF20
			Connection at bottom, 1 unit [1]	3WA9111-1AG20
		2000 A	Connection at top, 1 unit [1]	3WA9111-1AF21
			Connection at bottom, 1 unit [1]	3WA9111-1AG21
		2500 A	Connection at top, 1 unit [1]	3WA9111-1AF23
			Connection at bottom, 1 unit [1]	3WA9111-1AG23
3	M, H, E	4000 ... 5000 A	Connection at top, 1 unit [2]	3WA9111-1AF31
			Connection at bottom, 1 unit [2]	3WA9111-1AG31

[1] Front terminals at the top according to UL not possible in conjunction with voltage taps (PMF)
[2] Mounting possible only on 5000 A circuit breakers.

System overview, page 1/24

Main conductor connections for withdrawable units according to UL 1066

T-connectors [1]



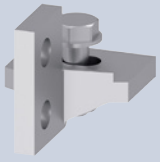
- Spare parts for rear panels of guide frame with rotatable T-connectors
- 1 unit

Size	Breaking capacity	Rated current I_n	Article No.
1	N, S	800 ... 1200 A	3WA9111-1AD40
		1600 A	3WA9111-1AD41
2	N, S, M	800 ... 1600 A	3WA9111-1AD50
		2000 A [2]	3WA9111-1AD51

[1] Rotatable T-connectors are preassembled horizontally at the factory. The connections can be rotated to the vertical position by the customer. Better thermal behavior can be expected with vertical mounting. This may have to be verified by a temperature-rise test.
[2] Rear panels size 2, 2000 A, 4-pole not available. Use of 3-pole circuit breakers only

Main conductor connections fixed-mounted versions according to IEC 60947-2

Rear vertical main connections



- Connection method according to IEC 60947-2 for mounting on 3WA3 fixed-mounted versions

Size	Breaking capacity	Rated current I_n	Description	Article No.
1	N, S, E	800 ... 2000 A	Mounting at top or bottom, 1 unit [1]	3WA9111-0AM11
2	N, S, M, H, E	800 ... 3200 A	Mounting at top or bottom, 1 unit [2]	3WA9111-0AM21
3	M, H, E	4000 ... 5000 A	Mounting at top or bottom, 1 unit	3WA9111-0AM33

Front connections, double hole

- Connection method according to IEC 60947-2 for mounting on 3WA3 fixed-mounted versions

Size	Breaking capacity	Rated current I_n	Description	Article No.
1	N, S	800 ... 1000 A	Mounting at top, 1 unit	3WA9111-0AL11
			Mounting at bottom, 1 unit	3WA9111-0AL13
		1200 ... 2000 A	Mounting at top, 1 unit	3WA9111-0AL12
			Mounting at bottom, 1 unit	3WA9111-0AL14
2	N, S, M, H, E	800 ... 2000 A	Mounting at top, 1 unit	3WA9111-0AL21
			Mounting at bottom, 1 unit	3WA9111-0AL24
		2500 A	Mounting at top, 1 unit	3WA9111-0AL22
			Mounting at bottom, 1 unit	3WA9111-0AL25
	S, M, H, E new	3200 A	Mounting at top, 1 unit	3WA9111-0AL23
			Mounting at bottom, 1 unit	3WA9111-0AL26
3	M, H	4000 A	Mounting at top, 1 unit	3WA9111-0AL31
			Mounting at bottom, 1 unit	3WA9111-0AL32

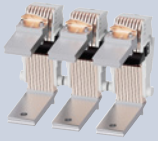
[1] With breaking capacity N and S up to 1000 A, 1 × 3WA9111-0AM11 is required for each connection. Up to 2000 A and with breaking capacity E in all cases, 2 × 3WA9111-0AM11 are required for each connection.
[2] Up to 2500 A, 1 vertical connection is required for each connection. Up to 3200 A, 2 vertical connections are required for each connection.

System overview, page 1/24

Accessories and spare parts

Main contact elements

Main contact elements for AC circuit breakers

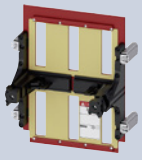


- The article number contains a complete set for one circuit breaker
- On the following circuit breakers, the main contact elements can only be replaced in the factory:
  Size 1 breaking capacity E (3WA31..-8..)
  Size 3 breaking capacity C (3WA33..-6..)

Number of poles	Size	Breaking capacity	Rated current I_n	Article No.
3	1	N	800 ... 1200 A	3WA9111-1AQ30
			1600 A	3WA9111-1AQ31
		S	800 ... 1600 A	3WA9111-1AQ31
		N, S	2000 A	3WA9111-1AQ32
	2	N, S, M, H, E	800 ... 1600 A	3WA9111-1AQ40
			2000 A	3WA9111-1AQ41
			2500 ... 3200 A	3WA9111-1AQ43
	3	M, H, E	4000 A	3WA9111-1AQ50
			5000 A	3WA9111-1AQ51
4	1	N	800 ... 1200 A	3WA9111-1AQ60
			1600 A	3WA9111-1AQ61
		S	800 ... 1600 A	3WA9111-1AQ61
		N, S	2000 A	3WA9111-1AQ62
	2	N, S, M, H, E	800 ... 1600 A	3WA9111-1AQ70
			2000 A	3WA9111-1AQ71
			2500 ... 3200 A	3WA9111-1AQ72
	3	M, H, E	4000 A	3WA9111-1AQ80
			5000 A	3WA9111-1AQ81

Shutter

Short shutter



- All 3WA3 guide frames or withdrawable circuit breakers with guide frames are equipped with short shutters as standard. If Z option R22 is ordered, they are supplied with long shutters.
- The following article numbers are intended for spare part orders.

Number of poles	Size	Breaking capacity	Rated current I_n	Article No.
3	1	N, S, E	800 ... 2000 A	3WA9111-1AP10
	2	N, S, M H, E	800 ... 3200 A	3WA9111-1AP20
	3	M, H, E	4000 ... 5000 A	3WA9111-1AP30
		C	3200 ... 5000 A	3WA9111-1AP32
4	1	N, S, E	800 ... 2000 A	3WA9111-1AP11
	2	N, S, M, H, E	800 ... 3200 A	3WA9111-1AP21
	3	M, H, E	4000 ... 5000 A	3WA9111-1AP31

Long shutters

- All 3WA3 guide frames or withdrawable circuit breakers with guide frames are equipped with short shutters as standard. If Z option R22 is ordered, they are supplied with long shutters.
- The following article numbers are intended for spare part orders.

Number of poles	Size	Breaking capacity	Rated current I_n	Article No.
3	1	N, S, E	800 ... 2000 A	3WA9111-1AP14
	2	N, S, M H, E	800 ... 3200 A	3WA9111-1AP24
	3	M, H, E	4000 ... 5000 A	3WA9111-1AP34
		C	3200 ... 5000 A	3WA9111-1AP36
4	1	N, S, E	800 ... 2000 A	3WA9111-1AP15
	2	N, S, M, H, E	800 ... 3200 A	3WA9111-1AP25
	3	M, H, E	4000 ... 5000 A	3WA9111-1AP35

System overview, page 1/24

Interfaces

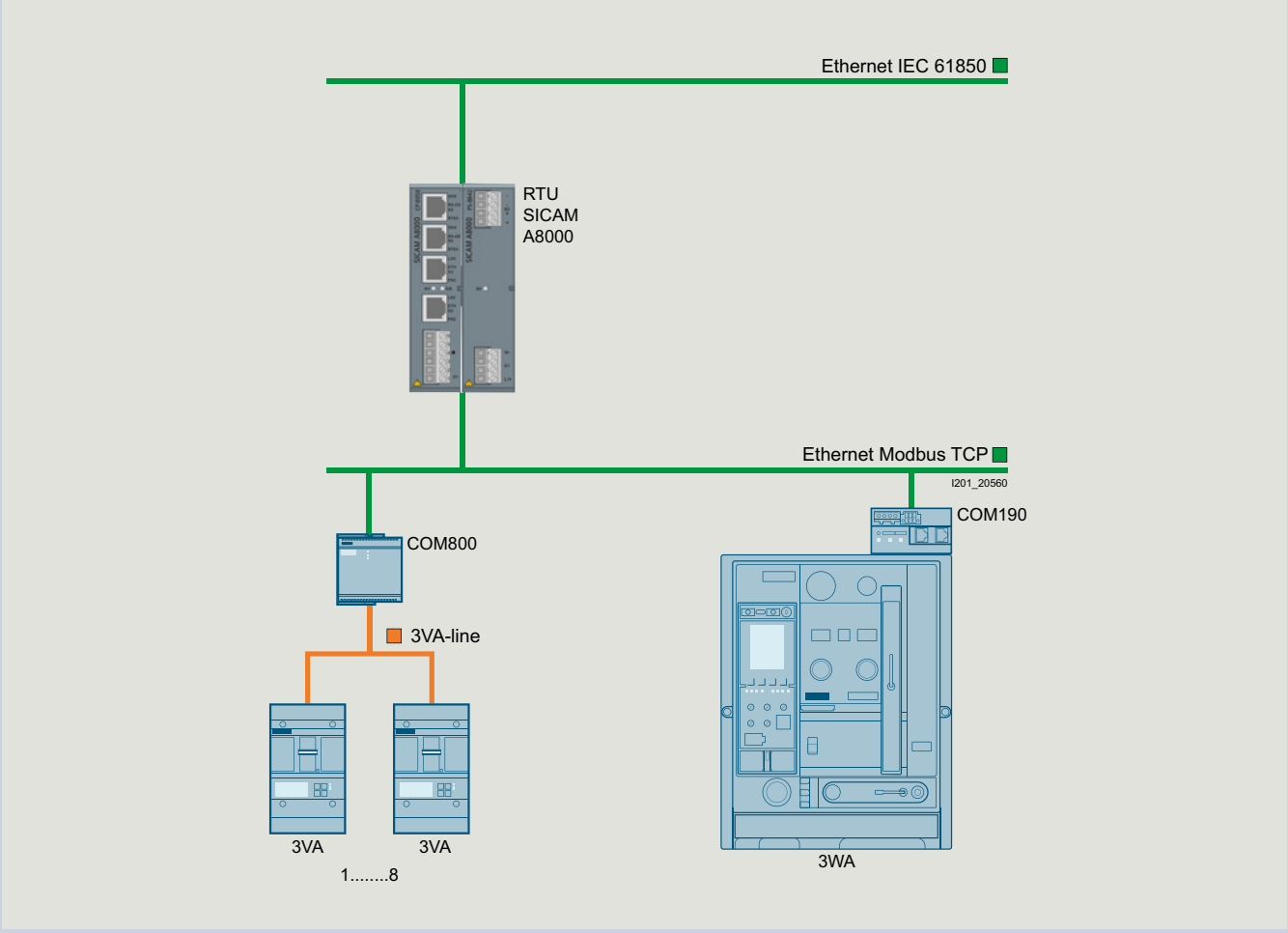
Interface to the IEC 61850

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

Type	Operational voltage	Article No.
SICAM CP-8021 [1]	–	6MF2802-1AA00
SICAM CP-8031 [2]	–	6MF2803-1AA00
SICAM CP-8050 [3]	–	6MF2805-0AA00
SICAM PS-8620	24 ... 60 V DC (12 W)	6MF2862-0AA00
SICAM PS-8622	110 ... 220 V DC (12 W)	6MF2862-2AA00

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

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



3WL5 circuit breakers and non-automatic circuit breakers for AC and DC

UL 489/IEC 60947-2

AC

			3WL51		3WL52	
Basic data						
Rated operational voltage U_e		V	600 Y/347		600	
Rated current I_n		A	630 ... 1600		2000 ... 3200	
Size			1		2	
Type of mounting			Withdrawable	Fixed-mounted	Withdrawable	Fixed-mounted
Number of poles			3-/4-pole	3-/4-pole	3-/4-pole	3-/4-pole
Dimensions						
Width (3-pole | 4-pole)		mm	320 | 410	320 | 410	460 | 590	460 | 590
Height (standard | A05, A15, A16, DC greater than 600 V)		mm	465.5	434	465.5	434
Depth		mm	471	291	471	291
Approvals						
General product approvals			VDE, UL/cULus, CE, CCC, EAC, C-Tick		VDE, UL/cULus, CE, CCC, EAC, C-Tick	
Breaking capacity			S		H	
Short-circuit breaking capacity acc. to UL 489						
Short-circuit breaking capacity up to 480 V AC $I_{cu} = I_{cs}$		kA	65		100	
Short-circuit breaking capacity up to 600 Y V AC/347 V $I_{cu} = I_{cs}$		kA	50		85 [1]	
Short-circuit breaking capacity up to 600 V AC $I_{cu} = I_{cs}$		kA	–		85	
Short-circuit breaking capacity acc. to IEC 60947-2						
Short-circuit breaking capacity up to 500 V AC $I_{cu} = I_{cs}$		kA	65		100	
Short-circuit breaking capacity I_{cm} at 500 V AC $I_{cu} = I_{cs}$		kA	143		220	
Short-circuit breaking capacity up to 690 V AC $I_{cu} = I_{cs}$		kA	50		85	
Short-circuit breaking capacity I_{cm} at 690 V AC $I_{cu} = I_{cs}$		kA	105		187	
Rated short-time withstand current I_{cw} acc. to UL 489						
Rated short-time withstand current I_{cw} at max. delay time t_{sd}	0.4 s	kA	65		85	
Rated short-time withstand current I_{cw} acc. to IEC 60947-2						
Rated short-time withstand current I_{cw} at max. delay time t_{sd}	0.5 s	kA	65		85	
	1 s	kA	50		80	
Rated short-circuit current I_{cc} of the non-automatic air circuit breakers						
Rated short-circuit current I_{cc} at 600 V DC		kA	–		–	
Rated short-circuit current I_{cc} at 1000 V DC		kA	–		–	

[1] Covered by 600 V AC (delta) test.

AC

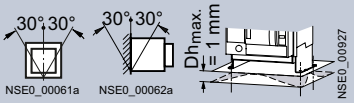
DC

3WL53		3WL5232
≤ 600 Y/347		600
4000 ... 5000		3200
3		2
Withdrawable	Fixed-mounted	Fixed-mounted
3-/4-pole	3-/4-pole	3-pole
704 | 914	704 | 914	460
465.5	434	434
471	291	291
VDE, UL/cULus, CE, CCC, EAC, C-Tick		VDE, UL/cULus, CE, CCC, EAC, C-Tick
H		**DC**
100		–
85		–
–		–
100		–
220		–
85		–
187		–
85		–
85		–
80		
–		25
–		–

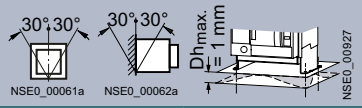
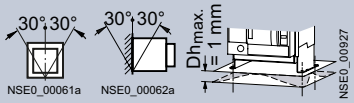
3WL5 circuit breakers and non-automatic circuit breakers for AC

UL 489/IEC 60947-2

3WL51

Rated current I_n			≤ 1000 A	1600 A
General data				
Isolating function acc. to EN 60947-2			Yes	
Utilization category			B	
Permissible ambient temperature	During operation	°C	–25 ... +55	
	Storage	°C	–25 ... +70	
Mounting position				
Degree of protection	With cover		IP55	
	Without cover (with door sealing frames)		IP41	
Voltage				
Rated operational voltage U_e at 50/60 Hz		AC V	600 Y/347	
Permissible load at 50/60 Hz				
For main conductors	At 40 °C	A	≤1000	1600
	At 55 °C	A	≤1000	1600
	At 60 °C	A	≤1000	1600
Power loss at I_n				
With 3-phase symmetrical load	Fixed-mounted circuit breaker	W	100	150
	Withdrawable circuit breaker	W	195	350
Switching times				
Make time		ms	35	
Opening time		ms	38	
Electrical make time (through activation solenoid) [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				
Mechanical	Without maintenance	Operating cycles	10000	
Electrical	Without maintenance	Operating cycles	4000	
Switching frequency				
Mechanical/electrical		1/h	60	
Minimum intervals				
Between tripping by the electronic trip unit and the next closure of the circuit breaker (only with automatic mechanical reset of the reclosing lockout)		ms	80	

[1] Make time through closing coil for synchronization purposes (short-time excited) 50 ms

3WL52				3WL53	
					
2000 A	**2500 A**	**3000 A**	**3200 A**	**4000 A**	**5000 A**
Yes				Yes	
B				B	
–25 … +55				–25 … +55	
–25 … +70				–25 … +70	
					
IP55				IP55	
IP41				IP45	
600	600	600	600	≤ 600 Y/347	
2000	2500	3000	3200	4000	5000
2000	2500	3000	3200	4000	5000
2000	2500	3000	3200	4000	5000
180	270	410	410	520	630
320	520	710	710	810	1050
35				35	
34				34	
100				100	
73				73	
≤ 80				≤ 80	
50				50	
10000				10000	
4000				1000	
60				60	
80				80	

3WL5 circuit breakers and non-automatic circuit breakers for AC

UL 489/IEC 60947-2

3WL51

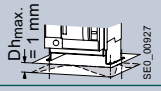
Rated current I_n			≤ 1000 A	1600 A
Connection				
Minimum main conductor cross-sections				
Copper bars, bare		Unit × mm × mm	2 × 6.4 × 76.2	
Auxiliary conductor (Cu) max. number of auxiliary conductors × cross-section (solid/stranded)				
Standard connection = screw connection	Without end sleeve		2 × 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]		1 × 0.5 … 1 × 1.5 mm² (AWG 20 … 16)	
	With twin end sleeve		2 × 0.5 … 2 × 1.5 mm² (AWG 20 … 16)	
Screwless connection	Without end sleeve		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)	
Minimum dimension of breaker compartment				
Width × Height × Depth	3-pole	mm	400 × 460 × 380	
	3-pole with A17	mm	–	
	4-pole	mm	500 × 460 × 380	
Weights				
3-pole	Fixed-mounted circuit breaker	kg	43	
	Withdrawable circuit breaker	kg	45	
	Guide frames	kg	25	
4-pole	Fixed-mounted circuit breaker	kg	50	
	Withdrawable circuit breaker	kg	54	
	Guide frames	kg	30	

[1] Notice: Approval of end sleeves

	3WL52			3WL53	
					
2000 A	**2500 A**	**3000 A**	**3200 A**	**4000 A**	**5000 A**
2 × 6.4 × 102	2 × 6.4 × 127 or 4 × 6.4 × 63.5	4 × 6.4 × 102	4 × 6.4 × 102	4 × 10 × 120	
	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)	
	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 × 1.5 mm² (AWG 20 … 16)			2 × 0.5 … 2 × 1.5 mm² (AWG 20 … 16)	
500 × 460 × 380	500 × 460 × 380	500 × 460 × 380	500 × 460 × 380	800 × 460 × 380	800 × 460 × 380
–	560 × 570 × 500	–	560 × 570 × 500	810 × 570 × 500	–
600 × 460 × 380	600 × 460 × 380	–	560 × 570 × 500	1000 × 460 × 380	1000 × 460 × 380
56	59	64	64	82	
60	63	68	–	88	
31	39	45	–	60	
67	71	77	77	99	
72	76	82	–	106	
37	47	54	–	84	

3WL5 non-automatic circuit breakers for DC

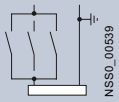
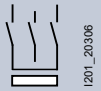
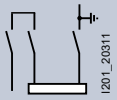
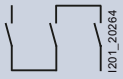
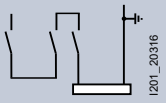
UL 489/IEC 60947-2

			3WL5232
Rated current I_n			**3200 A**
General data			
Isolating function acc. to EN 60947-2			Yes
Utilization category			B
Permissible ambient temperature	During operation	°C	–25 ...+55
	Storage	°C	–25 ... +70
Mounting position			
Degree of protection	With cover		IP55
	Without cover (with door sealing frames)		IP41
Voltage			
Rated operational voltage U_e		DC V	600
Permissible load			
For main conductors, acc. to IEC 60947-2	At 40 °C	A	3200
	At 55 °C	A	3200
	At 60 °C	A	3200
For main conductors, acc. to UL 489B	At 40 °C	A	3200
	At 55 °C	A	3200
	At 60 °C	A	3200
Power loss at I_n			
With 3-phase symmetrical load	Fixed-mounted circuit breaker	W	410
	Withdrawable circuit breaker	W	–
Switching times			
Make time		ms	35
Opening time		ms	34
Electrical make time (through activation solenoid) [1]		ms	100
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			
Mechanical	Without maintenance	Operating cycles	10000
Electrical	Without maintenance	Operating cycles	1000
Switching frequency			
Mechanical/electrical		1/h	60
Connection			
Minimum main conductor cross-sections			
Copper bars, bare		Unit	4 × 6.4 × 102
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)
	With end sleeve acc. to DIN 46228 Part 2 [2]		1 × 0.5 ... 1 × 1.5 mm² (AWG 20 ... 16)
	With twin end sleeve		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)
	With end sleeve acc. to DIN 46228 Part 2		2 × 0.5 ... 2 × 1.5 mm² (AWG 20 ... 16)
Weights			
3-pole	Fixed-mounted circuit breaker	kg	64
Dimensions 3-/4-pole			
Fixed-mounted	Width	mm	460/590
	Height	mm	434
	Depth	mm	291
Withdrawable	Height	mm	465.5
	Depth	mm	471

[1] Make time through closing coil for synchronization purposes (short-time excited) 50 ms
[2] Notice: Approval of end sleeves.

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	2-pole
Rated operational voltage up to 300 V		
	 Grounded system [2]	
Rated operational voltage up to 600 V		
		 Grounded system
Rated operational voltage up to 1000 V [3]		
	 Grounded system	

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

Electronic trip units ETU

Available for air circuit breakers

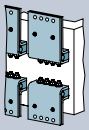
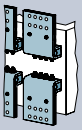
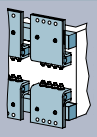
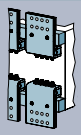
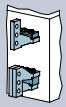
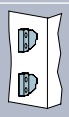
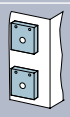
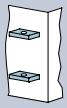
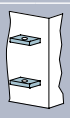
			ETU45B (LSI)	ETU45B (LSIG)
Basic protective functions				
L	Overload protection (L tripping)	Setting range of operating value $I_r = I_n \times$ ...	0.4 | 0.45 | 0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.8 | 0.9 | 1	0.4 | 0.45 | 0.5 | 0.55 | 0.6 | 0.65 | 0.7 | 0.8 | 0.9 | 1
		Switchable overload protection (from I^2t- auf I^4t-dependent function)	■	■
		Setting range of delay t_r at I^2t (Reference point 6 × I_n)	2 | 3.5 | 5.5 | 8 | 10 | 14 | 17 | 21 | 25 | 30 s	2 | 3.5 | 5.5 | 8 | 10 | 14 | 17 | 21 | 25 | 30 s
		Setting range of the delay t_r at I^4t (Reference point 6 × I_n)	1 | 2 | 3 | 4 | 5 s	1 | 2 | 3 | 4 | 5 s
		Thermal memory can be switched on/off	■	■
		Phase failure sensitivity/asymmetry	At t_{sd} = 20 ms (M)	At t_{sd} = 20 ms (M)
S	Short-time-delayed short-circuit protection (ST tripping)	Setting range of operating value $I_{sd} = I_n \times$ ...	1.25 | 1.5 | 2 | 2.5 | 3 | 4 | 6 | 8 | 10 | 12 | OFF	1.25 | 1.5 | 2 | 2.5 | 3 | 4 | 6 | 8 | 10 | 12 | OFF
		Setting range of the delay time t_{sd} at I^2t	100 | 200 | 300 | 400 ms	100 | 200 | 300 | 400 ms
		Setting range of the delay time t_{sd} (t = const.)	M (0.02 ms) | 100 | 200 | 300 | 400 ms	M (0.02 ms) | 100 | 200 | 300 | 400 ms
		ZSI function	Via module of the **Cubicle**BUS	Via module of the **Cubicle**BUS
I	Instantaneous short-circuit protection (INST tripping)	Setting range 2 = $I_n \times$ ...	OFF | 1.5 | 2.2 | 3 | 4 | 6 | 8 | 10 | 12 | 0.8 × I_{cs}	OFF | 1.5 | 2.2 | 3 | 4 | 6 | 8 | 10 | 12 | 0.8 × I_{cs}
N	Neutral conductor protection	N conductor setting range $I_N = I_n \times$ ...	OFF | 50% | 100%	OFF | 50% | 100%
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	–	–
		Detection of ground-fault current through external current transformer	–	■
		Setting range of the operating current $I_g = I_n \times$ ...	–	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)
		Setting range of the operating current I_g for alarm	–	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)
		Setting range of the delay time t_g	–	100 | 200 | 300 | 400 | 500 ms
		Switchable ground-fault protection characteristic (I^2t-dependent function)	–	■
		Setting range of the delay time t_g at I^2t	–	100 | 200 | 300 | 400 | 500 ms
		ZSI-G function	–	Via module of the **Cubicle**BUS

[1] Sizes 1 and 2/size 3

		ETU45B (LSI)	ETU45B (LSIG)
Parameter set changeover	Switchable between parameter set A and B	–	–
LCD		Optional	Optional
Voltage tap on top/bottom		Optional	Optional
Metering function		Metering function Plus	Metering function Plus
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)		■	■

Connection

Main circuit connection

Connection	3WL5 Fixed-mounted		3WL5 Withdrawable	
Front-mounted	 1-hole	 2-hole	 1-hole	 2-hole
Rear-mounted	 Vertical		 Vertical	 Flanges
	 Horizontal		 Horizontal	

Auxiliary circuit connections

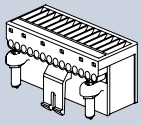
3WL5: Withdrawable version

- 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

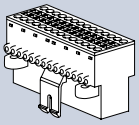
3WL5: Fixed-mounted version

- 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)

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.

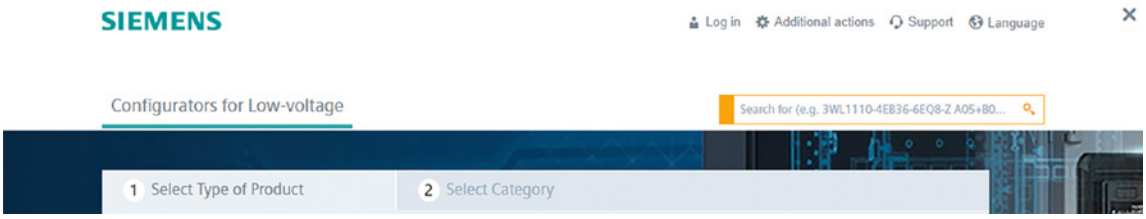
	Available for air circuit breakers 3WL5
Closing coils (CC)	■
Undervoltage releases (UVR)/ shunt trips (ST)	■
Shunt trips (ST)	■
Remote trip alarm reset coils (RR)	■
Motorized operating mechanisms (MO)	■
Mechanical operating cycles counters	■

Online configurator highlights

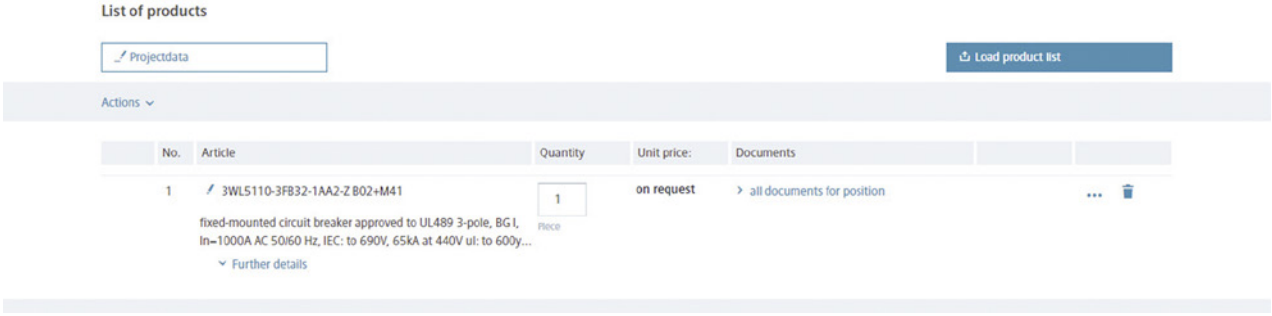
www.siemens.com/lowvoltage/configurators

Search function with global direct input

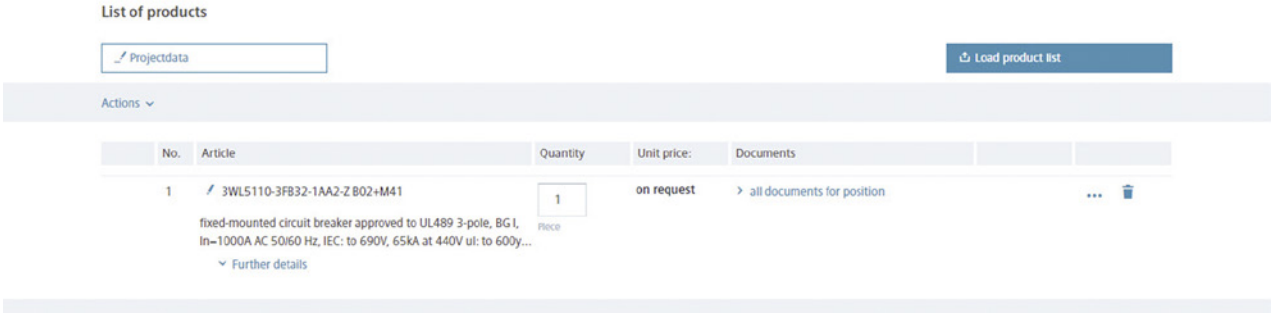
Searches for specific terms and jumps to article number based on input to the correct configurator



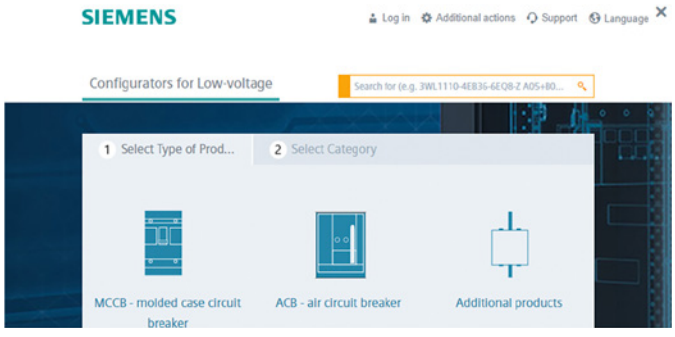
Product list stores multiple configurations and can transfer them collectively to the shopping cart



Recall of completed configurations for modification or additional configuration

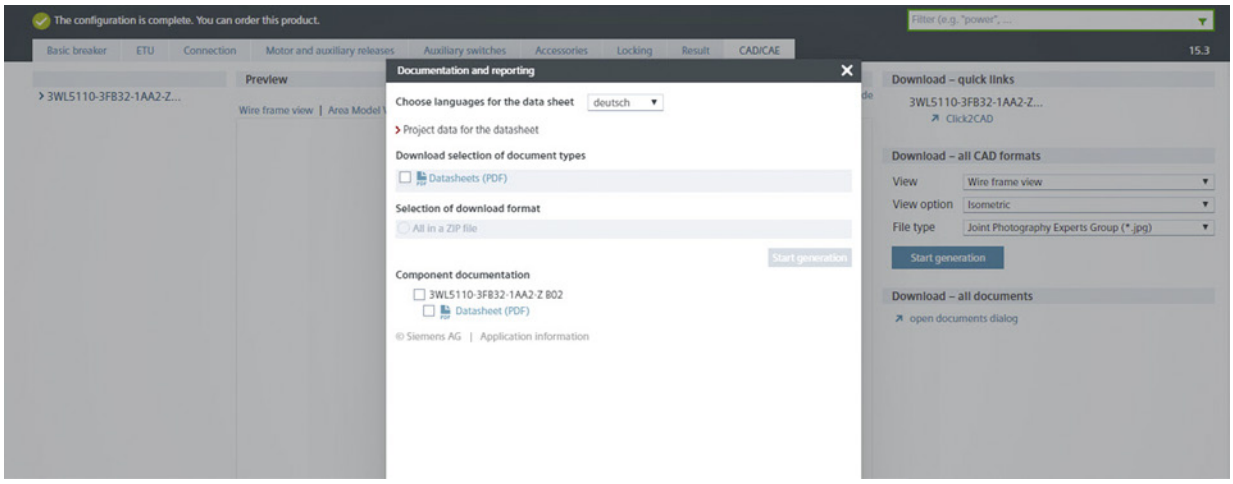


Responsive Design

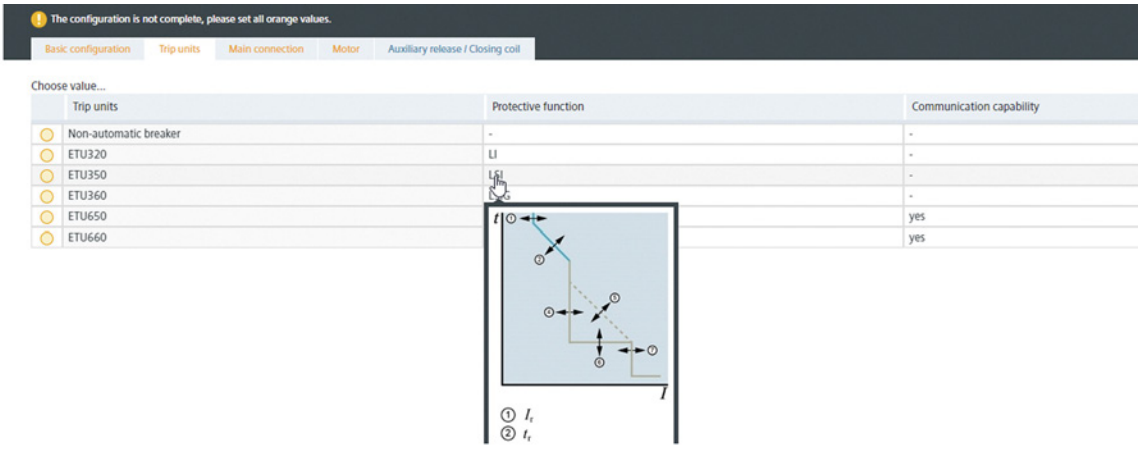


www.siemens.com/lowvoltage/3wl-configurator

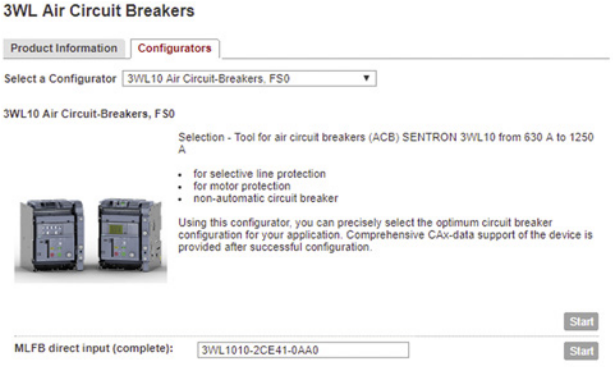
Download an ePlan Selector for 3WL5



Mouseover display of characteristic curves to show the protection function



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



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**

3WL5	5	6	7	–	8	9	10	11	12	–	13	14	15	16

Circuit breaker and ETU

Size (SZ)	1								1	
	2								2	
	3								3	
		SZ 1	SZ 2	SZ 3						
Max. rated current I_n	1000 A	■	–	–		1	0			
	1600 A	■	–	–		1	6			
	2000 A	–	■	–		2	0			
	2500 A	–	■	–		2	5			
	3000 A	–	■	–		3	0			
	3200 A	–	■ [1]	–		3	2			
	4000 A	–	–	■		4	0			
	5000 A	–	–	■		5	0			
Short-circuit breaking capacity I_{cu} at 480 V	S Standard	■	–	–	≤ 65 kA					3
	H High	–	■	■	≤ 100 kA					4
Trip units	Without electronic trip unit							A	A	
	Without ground-fault protection	ETU45B			LSIN			E	B	
		ETU45B (with display)			LSIN			F	B	
	With ground-fault protection	ETU45B			LSING			E	G	
		ETU45B (with display)			LSING			F	G	
Number of poles	3-pole								3	
	4-pole								4	

Connection

		SZ 1	SZ 2	SZ 3		
Type of mounting	Fixed-mounted	■	■	■	Vertical	1
		■	■ [2]	■	Horizontal	2
		■	■ [2]	■ [3]	Front single hole	3
		■	■ [2]	■ [3]	Front double hole	4
	Withdrawable	■	■ [2]	■	Without frame	5
		■	■ [2]	■	Rear horizontal connection	6
		■	■ [2]	■	Rear vertical connection	7
		■	■ [2]	■ [3]	Connecting flange	8

[1] For fixed-mounted versions only
[2] Not available for 3200 A
[3] Not available for 5000 A

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

3WL5 | 5 | 6 7 | – | 8 | 9 10 | 11 | 12 | – | 13 | 14 | 15 | 16

Motor

				13	14	15	16
Stored energy mechanism	Manual recharging of the stored energy mechanism	With mechanical operation		1			
		With mechanical and electrical operation, closing coil (CC) suitable for uninterrupted duty, 100% OP	110 V AC 50/60 Hz/110 ... 125 V DC	2			
			240 V AC 50/60 Hz/220 V DC	3			
	Motorized recharging	With mechanical and electrical operation, closing coil (CC) 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 (ST) 100% OP	24 V DC			B		
		30 V DC			C		
		48 V DC			D		
		60 V DC			E		
		110 ... 127 V AC, 110 ... 125 V DC			F		
		208 ... 240 V AC, 220 ... 250 V DC			G		
2nd auxiliary release	Without 2nd auxiliary release					A	
	With shunt trip (ST) 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 (UVR), 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	
	With undervoltage release (UVR-t) [1], 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	

Auxiliary switches

		16
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

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

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

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**

	5	6	7		8	9	10	11	12		13	14	15	16
3WL5				–						–				

Non-automatic circuit breaker and ETU

Size (SZ)	2 [1]	2	
Max. rated current I_n	3200 A	3 2	
Short-circuit breaking capacity I_{cu}	25 kA at 690 V	8	
Non-automatic air circuit breaker	Without electronic trip unit	A A	
Number of poles	3-pole	3	

Connection

Type of mounting	Fixed-mounted	Vertical	1
		Horizontal	2

[1] Can also be used for variable frequencies of 0 ... 30 Hz.
Z option A17 must always be ordered additionally.

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

3WL5 5 6 7 – 8 9 10 11 12 – 13 14 15 16

Motor

Stored energy mechanism	Manual recharging of the stored energy mechanism	With mechanical operation		1
		With mechanical and electrical operation, closing coil (CC) suitable for uninterrupted duty, 100% OP	110 V AC 50/60 Hz/110 ... 125 V DC	2
			240 V AC 50/60 Hz/220 V DC	3
	Motorized recharging	With mechanical and electrical operation, closing coil (CC) 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 (ST) 100% OP	24 V DC	B
		30 V DC	C
		48 V DC	D
		60 V DC	E
		110 ... 127 V AC, 110 ... 125 V DC	F
		208 ... 240 V AC, 220 ... 250 V DC	G

2nd auxiliary release	Without 2nd auxiliary release		A
	With shunt trip (ST) 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 (UVR), 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
	With undervoltage release (UVR-t) [1], 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

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

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

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

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

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

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

Accessories for basic configuration

IT network capability at 690 V AC + 10% according to IEC 60947-2 annex H

			Order code
Rated operational voltage AC	Size 2	3WL5225-4..31-...	A17
		3WL5225-4..32-...	A17
		3WL5232-4..31-...	A17
	Size 3	3WL5340-4..31-...	A17
		3WL5340-4..32-...	A17
		3WL5350-4..31-...	A17
		3WL5350-4..32-...	A17
Rated operational voltage DC	Size 2	3WL5232-8AA31-...	A17
		3WL5232-8AA32-...	A17

Accessories for electronic trip units ETU

Rating plugs

- Only one module is possible per circuit breaker.
- 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
	Sizes 2, 3	2000 A	B20
		2500 A	B25
		3000 A	B30
		3200 A	B32
	Size 3	4000 A	B40
		5000 A	B50

Communication and metering function

Breaker status sensor (BSS)	For determining the statuses ON/OFF/Tripped	F01
PROFIBUS DP communication port [1]	Including COM15 and breaker status sensor (BSS)	F02
Modbus RTU communication port [1]	Including COM16 and breaker status sensor (BSS)	F12
PROFINET IO/Modbus TCP communication port [1]	Including COM35 and breaker status sensor (BSS)	F35
Metering function Plus [2]	Without communication module	F05

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

[2] Additional voltage transformers are always required for connection of the metering function Plus, e.g. GE Grid Solutions Model 468.

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

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.

EMC filter			**F31**

Overload and short-circuit protection for neutral conductors

- Only possible with 4-pole circuit breaker with ETU45B

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

Remote resetting

Automatic reset of the reclosing lockout			**K01**
• Remote reset for displays and reset buttons including 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

Connection technology for main connections (fixed-mounted versions)

Top:[1] horizontal Bottom: accessible from front, single hole	Size 1	≤ 1600 A	**N11**
	Size 2	≤ 2000 A	**N11**
		≤ 2500 A	**N11**
		≤ 3200 A	**N11**
	Size 3	≤ 4000 A	**N11**
Top: vertical Bottom: horizontal	Size 1	≤ 1600 A	**N20**
		≤ 2000 A	**N20**
	Size 2	≤ 2000 A	**N20**
		≤ 2500 A	**N20**
		≤ 3200 A	**N20**
	Size 3	≤ 4000 A	**N20**
		≤ 5000 A	**N20**
Top: horizontal Bottom: vertical	Size 1	≤ 1600 A	**N24**
		≤ 2000 A	**N24**
	Size 2	≤ 2000 A	**N24**
		≤ 2500 A	**N24**
		≤ 3200 A	**N24**
	Size 3	≤ 4000 A	**N24**
		≤ 5000 A	**N24**

[1] Cannot be used for DC non-automatic air circuit breakers and circuit breakers with the Z option A17.

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

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 and bottom: accessible from front, single hole	Size 1	≤ 1600 A	P00
	Size 2	≤ 3200 A	P00
	Size 3	≤ 4000 A	P00
Top and bottom: accessible from front, double hole	Size 1	≤ 1600 A	P01
	Size 2	≤ 3200 A	P01
	Size 3	≤ 4000 A	P01
Top: horizontal Bottom: accessible from front, single hole	Size 1	≤ 1600 A	P07
	Size 2	≤ 3200 A	P07
	Size 3	≤ 4000 A	P07
Connection technology for main connections (withdrawable versions)			
Top: vertical Bottom: horizontal	Size 1	≤ 1600 A	P18
	Size 2	≤ 3200 A	P18
	Size 3	≤ 5000 A	P18
Top: connecting flange Bottom: horizontal	Size 1	≤ 1600 A	P19
	Size 2	≤ 3200 A	P19
	Size 3	≤ 4000 A	P19
Top: horizontal Bottom: vertical	Size 1	≤ 1600 A	P23
	Size 2	≤ 3200 A	P23
	Size 3	≤ 5000 A	P23
Top: horizontal Bottom: connecting flange	Size 1	≤ 1600 A	P28
	Size 2	≤ 3200 A	P28
	Size 3	≤ 4000 A	P28
Connection technology for auxiliary conductors (for fixed-mounted and withdrawable circuit breakers)			
Connection technology for screwless terminals (tension spring)	Fixed-mounted		N61
	Withdrawable		P61

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

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

			Order code
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 [1]			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) [2] [3]	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
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 [4] (S21)	1 NO	C20
	For the first auxiliary release [5] (S22)	1 CO	C26
	For the second auxiliary release [5] (S23)	1 CO	C27
	1st tripped signaling switch [4] [6] (S24)	1 CO	K07
	2nd tripped signaling switch [4] [5] [6] (S25)	1 NO	K06

[1] Only possible with motorized operating mechanism.
[2] Only possible if the 14th digit of the Article number for the circuit breaker is "A", i.e. "without 1st auxiliary release".
[3] Overexcited, i.e. switching time 50 ms (standard > 80 ms).
[4] Not possible with "communication port" option, order code "F02", "F12" or "F35".
[5] Only possible with option "K07".
[6] Not available for non-automatic air circuit breakers.

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

			Order code
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 [2] (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
Shutters			
Shutter: 2-part, lockable, with padlocks [3]	3-pole/4-pole	Sizes 1, 2, 3	R21
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 [4]	R55
		For guide frames (ordered separately)	R56
		For withdrawable circuit breakers (ordered separately)	R57
Locking provisions (for fixed-mounted and withdrawable circuit breakers)			
• 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 [5]	S05
		Assembly kit for padlocks [3]	S07
		Made by RONIS	S08
		Made by PROFALUX	S09
Locking provisions (for fixed-mounted and withdrawable versions)			
Locking provisions	For charging handle with padlock [3]		S33
Locking provisions (for withdrawable circuit breaker)			
• 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

[1] Not possible with "communication port" option, order code "F02", "F12" or "F35".

[2] Only for breakers with motorized operating mechanism, not possible with order codes "C11", "C12".

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

[4] Not possible in combination with R40

[5] Locks must be ordered from the manufacturer.

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 circuit breaker)

- 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".
- R30 and R50 only possible on complete order for a circuit breaker with a guide frame or when ordering the guide frame separately

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 movement when the cabinet door is open	**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**

Accessory options

Further technical specifications

Manual operating mechanism

	3WL5
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

Note:
The motor operators are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find the technical specifications in section 3WA see page 1/40
Please note: The communication-capable closing coils (CC-COM) can be used only in conjunction with 3WA.

Motor

Note:
The motor operators are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find the technical specifications in section 3WA see page 1/40

Signals of the electronic trip unit

	3WL5
Signals of the electronic trip unit	
Measuring accuracy of the electronic trip unit	Protective functions acc. to EN 60947; current indication ≤ 10%; metering function for base quantities ≤ 1%; metering function for derived quantities ≤ 4%

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

Note:
The undervoltage releases (UVR/UVR-t) are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find the technical specifications in section 3WA see page 1/41

Shunt trip (ST) (F1, F2)

Note:
The shunt trips (ST) are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find the technical specifications in section 3WA see page 1/42
Please note: The communication-capable shunt trips (ST-COM) can be used only in conjunction with 3WA.

Remote trip alarm reset coil for mechanical tripped indicator (F7)

Note:
The remote trip alarm reset coils are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find the technical specifications in section 3WA see page 1/42

Contact position-driven auxiliary switches (S1, S2, S3, S4, S7, S8)

Note:
The switch position dependent auxiliary switches are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find the technical specifications in section 3WA see page 1/42

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

		3WL5		
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		

Tripped signaling switches (S24) and signaling switches for auxiliary releases (S22, S23) (acc. to DIN VDE 0630)

		3WL5		
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		
Tripped signaling switches				
Signal duration after tripping		Until manual or electrical remote reset (option)		

Position signaling switches on guide frame

		3WL5		
Type of contacts				
Message	"Circuit breaker in connected position"	3 CO	or	1 CO
	"Circuit breaker in test position"	2 CO	or	1 CO
	"Circuit breaker in disconnected position"	1 CO	or	1 CO
Contact reliability		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		
	A300 AC	120 V 6 A, 240 V 3 A		
	R300 DC	125 V 0.22 A, 250 V 0.11 A		

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/3wl-configurator

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

		SZ 1	SZ 2	SZ 3		7	8	9	10
Size (SZ)	1					1			
	2					2			
	3					3			
Max. rated current I_n	1000 A	■	–	–			1		
	1600 A	■	–	–			2		
	2000 A	–	■	–			3		
	2500 A	–	■	–			4		
	3000 A	–	■	–			5		
	4000 A	–	–	■			6		
	5000 A	–	–	■			7		
Number of poles	3-pole	■	■	■				A	
	4-pole	■	■	■				B	
Main connection	Front, single hole	■	■	■[1]					A
	Front, double hole	■	■	■[1]					B
	Horizontal	■	■	■					C
	Vertical	■	■	■					D
	Connecting flange	■	■	■[1]					E

[1] Not available for rated circuit breaker current 5000 A

Options

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

		11	12	13	14
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 switches	Without			0	
	1 CO | 1 CO | 1 CO (connected | test | isolated position)			1	
	3 CO | 2 CO | 1 CO (connected | test | isolated position)			2	
Shutters	Without				A
	With shutter, 2-part, lockable				B

[2] Can only be selected if the number of auxiliary supply connectors = without

Accessories and spare parts

Accessories for electronic trip units ETU

ETU45B electronic trip units and optional metering function

- For replacement in existing circuit breakers, please specify the circuit breaker ID No. when ordering.
- The electronic trip unit is supplied without a rating plug
- The rating plug must be ordered separately

Type	With protective function	Metering function	Article No.
ETU45B (without display)	LSIN(G)	Without	3WL9354-5AA00-0AA1
		With metering function Plus	3WL9354-5AA20-0AA1

Rating plugs

- 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	3WL9111-2AA51-0AA0
	315 A	3WL9111-2AA52-0AA0
	400 A	3WL9111-2AA53-0AA0
	500 A	3WL9111-2AA54-0AA0
	630 A	3WL9111-2AA55-0AA0
	800 A	3WL9111-2AA56-0AA0
	1000 A	3WL9111-2AA57-0AA0
1, 2, 3	1250 A	3WL9111-2AA58-0AA0
	1600 A	3WL9111-2AA61-0AA0
2, 3	2000 A	3WL9111-2AA62-0AA0
	2500 A	3WL9111-2AA63-0AA0
	3000 A	3WL9111-2AA77-0AA0
	3200 A	3WL9111-2AA64-0AA0
3	4000 A	3WL9111-2AA65-0AA0
	5000 A	3WL9111-2AA66-0AA0

Ground-fault modules

- 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	3WL9111-2AT53-0AA0

Display

For ETU	Version	Article No.
ETU45B	4-line	3WL9111-1AT81-0AA0

External current transformers for N conductor

Version	Size	Article No.
For mounting on busbar	1	3WL9111-0AA21-0AA0
	2	3WL9111-0AA22-0AA0
	3	3WL9111-0AA23-0AA0
For busbar connection	1	3WL9111-0AA31-0AA0
	2	3WL9111-0AA32-0AA0
	3	3WL9111-0AA33-0AA0

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	3WL9111-0AK32-0AA0

Accessories and spare parts

Accessories for electronic trip units ETU

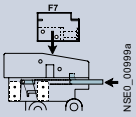
Sealable and lockable covers

Accessory for	Article No.
ETU45B	3WL9111-0AT45-0AA0

Automatic reset of the reclosing lockout

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

Remote trip alarm reset coils



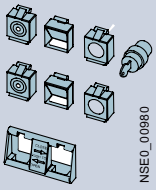
Note:
The remote trip alarm reset coils are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find the article numbers of the remote trip alarm reset coils in section 3WA – Accessories and spare parts, see page 1/51

Retrofittable internal wiring

Use	Male connector	Accessory for	Article No.
Internal wiring of **Cubicle**BUS for connection to terminal X8	Without male connector	ETU45B	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

Locking provisions and interlocks

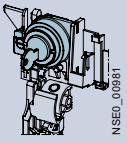
Interlocking sets for mechanical Open/Close



- 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

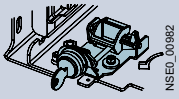
Locking provision against unauthorized closing from the operator panel



- 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

Locking provision against unauthorized closing, for withdrawable circuit breakers



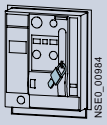
- The disconnector unit fulfills the requirements for main circuit breakers acc. to EN 60204-1
- Consisting of lock in the cabinet door, active in connected position, function is retained when circuit breaker is replaced
- Spare part for option R60, R61, R68

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

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

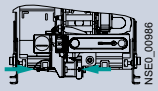
Locking provisions and interlocks

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

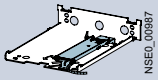
Type	Scope of supply	Article No.
Made by CES	Locks, cylinders and keys included	3WL9111-0BA73-0AA0
Made by IKON	Locks, cylinders and keys included	3WL9111-0BA75-0AA0
Made by PROFALUX	Locks, cylinders and keys included	3WL9111-0BA76-0AA0
Made by RONIS	Locks, cylinders and keys included	3WL9111-0BA77-0AA0
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

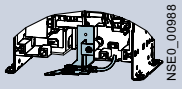
Locking mechanisms to prevent movement of the withdrawable circuit breakers in disconnected position



- 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

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").

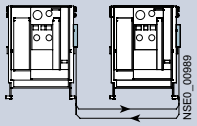
Version	Article No.
Spare part for option R50	3WL9111-0BB15-0AA0

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

Accessories and spare parts

Locking provisions and interlocks

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 [1]	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

[1] Not possible in combination with R40

Test devices

Manual tester, Release 2 for ETU25B to ETU45B electronic trip units

- 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 ETU15B to ETU76B electronic trip units (Release 1 and Release 2)

Article No.
3WL9111-0AT44-0AA0

TD400 Kit IEC [1]

- Commissioning/Service Tool for UL 3WL5 (ETU Release 1)
- With adapter, cable and case

Article No.
3VW9011-0AT41

TD400 adapter (spare part)

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

Storage devices

Capacitor trip device

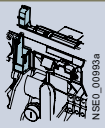
- For shunt trips
- Storage time 5 min
- Also suitable for 3VL circuit breakers
- **Note:** Rated control supply voltage must match the rated control supply voltage of the shunt trips.

Rated control supply voltage/rated operational voltage		Article No.
50/60 Hz AC	DC	
208 ... 240 V	220 ... 250 V	3WL9111-0BA14-0AA0

[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

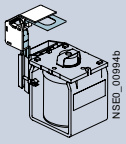
Indicators and control elements

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

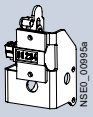
Version	Contacts	Article No.
Spare part for option K07	1 CO	3WL9111-0AH14-0AA0

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 counter



- Only in conjunction with motorized operating mechanism

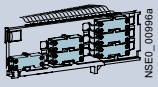
Type	Version	Article No.
Spare part for option C01	Mechanical	3WL9111-0AH07-0AA0

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

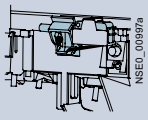
Version	Contacts	Article No.
Spare part for option C20	1 NO	3WL9111-0AH08-0AA0

Position signaling switches for guide frames



Version	Contacts	Article No.
Spare part for Z-option R15	3 changeover contacts (1 × connected/1 × test/1 × disconnected position)	3WL9111-0AH11-0AA0
Spare part for Z-option R16	6 changeover contacts (3 × connected/2 × test/1 × disconnected position)	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

Motor disconnect switch (S12)

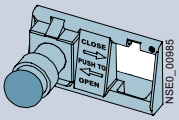
- Mounting onto operator panel
- Not possible with local electric close

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

Accessories and spare parts

Indicators and control elements

EMERGENCY-OFF pushbuttons

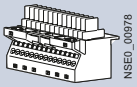


- Mushroom pushbutton instead of the mechanical OFF pushbutton

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

Auxiliary conductor connections

Male connectors for circuit breakers 1



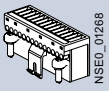
Article No.
3WA9111-0AB01

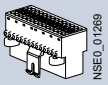
Extension for male connector

- Male connector must be ordered separately

Version	Article No.
1000 V	3WA9111-0AB02

Auxiliary supply connector for circuit breakers or guide frames 2



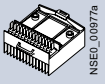


Version	Article No.
Screw connection (SIGUT)	3WA9111-0AB03
Screwless connection (tension spring)	3WL9111-0AB04-0AA0

Coding kits 3

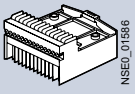
Version	Article No.
For fixed-mounted X5 to X8	3WA9111-0AB07

Sliding contact modules for guide frames 4



Article No.
3WA9111-0AB08

One-part sliding contact modules for guide frames 5



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

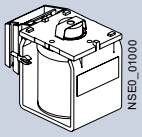
Blanking blocks for circuit breakers

Article No.
3WA9111-0AB12

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

Auxiliary releases

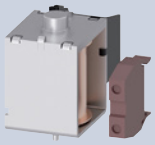
Closing coils/shunt trips



Note:
The closing coils (CC) and shunt trips (ST) are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find article numbers in section 3WA see page 1/55

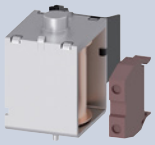
Please note: The communication-capable closing coil (CC-COM) and shunt trips (ST-COM) can be used only in conjunction with 3WA.

Closing coil (CC)



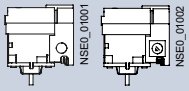
Note:
The closing coils (CC) with 5% OP are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find article numbers in section 3WA see page 1/56

Shunt trip (ST)



Note:
The shunt trips (ST) with 5% OP are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find article numbers in section 3WA see page 1/56

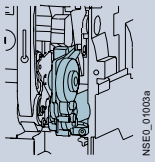
Undervoltage release



Note:
The undervoltage releases (UVR and UVR-t) are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find article numbers in section 3WA see page 1/56

Operating mechanism

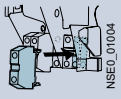
Motorized operating mechanisms



Note:
The motor operators are identical for the 3WL and 3WA and can be used in both circuit breaker lines.
You will find article numbers in section 3WA see page 1/56

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

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

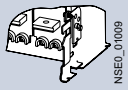
Article No.
3WL9111-0AP03-0AA0

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
		3	H, C	3WL9111-0AP07-0AA0
	4-pole	1	N, S, H	3WL9111-0AP08-0AA0
		2	N, S, H	3WL9111-0AP11-0AA0
		3	H, C	3WL9111-0AP12-0AA0

Coding for withdrawable version

Coding for withdrawable version



- By customer, for 36 coding variants

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

Support brackets

Support brackets

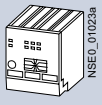
- For mounting fixed-mounted circuit breakers on vertical plane
- Only for sizes 1 and 2 (1 set = 2 units)

Article No.
3WL9111-0BB50-0AA0

CubicleBUS modules

- 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 metering functions are available for the ETU45B electronic trip units.

CubicleBUS modules



Type	Article No.
Digital output module with rotary coding switch, relay outputs	3WL9111-1AT26-0AA0
Digital output module, configurable, relay outputs	3WL9111-1AT20-0AA0
Digital input module	3WL9111-1AT27-0AA0
Analog output module	3WL9111-1AT23-0AA0
ZSI module	3WL9111-1AT21-0AA0

Preassembled cables for CubicleBUS modules

For connection to 3WL	Length	Article No.
With COM15/COM16/COM35	0.2 m	3WL9111-0BC04-0AA0
	1 m	3WL9111-0BC02-0AA0
	2 m	3WL9111-0BC03-0AA0
Without COM15/COM16/COM35	2 m	3WL9111-0BC05-0AA0

Retrofitting and spare parts

- All communication components, **Cubicle**BUS modules and metering functions are available for the ETU45B electronic trip units.

COM35 PROFINET IO/Modbus TCP modules

Version	Article No.
For ETU45B electronic trip units	3WL9111-1AT66-0AA0

COM15 PROFIBUS modules

Version	Article No.
For ETU45B electronic trip units	3WL9111-1AT65-0AA0

COM16 Modbus modules

Version	Article No.
For ETU45B electronic trip units	3WL9111-1AT15-0AA0

Breaker status sensor (BSS)

Version	Article No.
For ETU45B electronic trip units	3WL9111-1AT16-0AA0

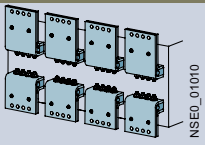
Metering function Plus

- A measuring accuracy of 3% is achieved if retrofitted.

Version	Article No.
For ETU45B electronic trip units external voltage transformer required, e.g. GE Grid Solutions Model 468.	3WL9111-1AT03-0AA0

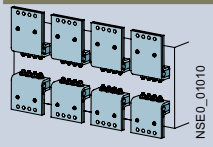
Main conductor connections, fixed-mounted versions (essential accessory)

Front-accessible main connections, single hole at top



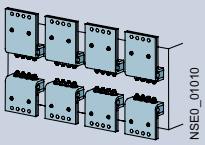
Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AL01-0AA0
	1250 ... 1600 A	3WL9111-0AL02-0AA0
2	≤ 2000 A	3WL9111-0AL03-0AA0
	≤ 2500 A	3WL9111-0AL04-0AA0
	≤ 3200 A	3WL9111-0AL05-0AA0
3	≤ 4000 A	3WL9111-0AL06-0AA0

Front-accessible main connections, single hole at bottom



Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AL51-0AA0
	1250 ... 1600 A	3WL9111-0AL52-0AA0
2	≤ 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

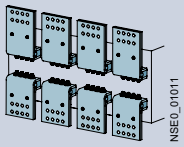


Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AL07-0AA0
	1250 ... 1600 A	3WL9111-0AL08-0AA0
2	≤ 2000 A	3WL9111-0AL11-0AA0
	≤ 2500 A	3WL9111-0AL12-0AA0
	≤ 3200 A	3WL9111-0AL13-0AA0
3	≤ 4000 A	3WL9111-0AL14-0AA0

Accessories and spare parts

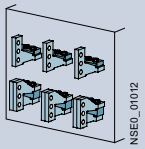
Main conductor connections, fixed-mounted versions (essential accessory)

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 ... 1600 A	3WL9111-0AL58-0AA0
2	≤ 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



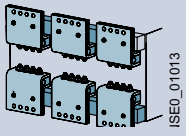
Size	Rated current I_n	Article No.
1 [1]	≤ 1600 A	3WL9111-0AM01-0AA0
2 [2]	≤ 3200 A	3WL9111-0AM02-0AA0
3	≤ 6300 A	3WL9111-0AM03-0AA0

[1] 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 1600 A or with breaking capacity H two 3WL9111-0AM01-0AA0 vertical connections are required.

[2] 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.

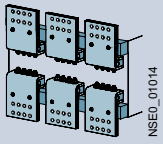
Main conductor connections, withdrawable versions (essential accessory)

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



Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AN01-0AA0
	1250 ... 1600 A	3WL9111-0AN02-0AA0
2	≤ 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]

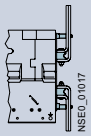


Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AN07-0AA0
	1250 ... 1600 A	3WL9111-0AN08-0AA0
2	≤ 2000 A	3WL9111-0AN11-0AA0
	≤ 2500 A	3WL9111-0AN12-0AA0
	≤ 3200 A	3WL9111-0AN13-0AA0
3	≤ 4000 A	3WL9111-0AN14-0AA0

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

Main conductor connections, withdrawable versions (essential accessory)

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

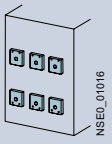
Rear vertical main connections

Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AN15-0AA0
	1250 ... 1600 A	3WL9111-0AN16-0AA0
2	≤ 2000 A	3WL9111-0AN17-0AA0
	≤ 2500 A	3WL9111-0AN18-0AA0
	≤ 3200 A	3WL9111-0AN21-0AA0
3	≤ 5000 A	3WL9111-0AN22-0AA0

Rear horizontal main connections

Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AN32-0AA0
	1250 ... 1600 A	3WL9111-0AN33-0AA0
1	≤ 2000 A	3WL9111-0AN34-0AA0
	≤ 2500 A	3WL9111-0AN35-0AA0
	≤ 3200 A	3WL9111-0AN36-0AA0
3	≤ 5000 A	3WL9111-0AN37-0AA0

Connecting flange



Size	Rated current I_n	Article No.
1	≤ 1000 A	3WL9111-0AN24-0AA0
	1250 ... 1600 A	3WL9111-0AN25-0AA0
2	≤ 2000 A	3WL9111-0AN26-0AA0
	≤ 2500 A	3WL9111-0AN27-0AA0
	≤ 3200 A	3WL9111-0AN28-0AA0
3	≤ 4000 A	3WL9111-0AN31-0AA0

Conversion kit

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

- Only for AC circuit breakers/non-automatic air circuit breakers
- Guide frames and sliding contact modules must be ordered separately

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

One system. For all applications.

Requirements for cost- and energy-efficient operation of electrical power distribution are on the increase. Whether in industrial plants, in infrastructure or in buildings: As a modular, highly adaptable system, the 3VA series of molded case circuit breakers ensures fully reliable protection of personnel and plant, and supports every process phase – from planning to operation of electrical power distribution.

Comprehensively certified. Deployable worldwide.

3VA molded case circuit breakers are available in various ranges with IEC approval; other ranges are available that comply with standard IEC 60947 and standard UL 489. The system is therefore ideally suited for mechanical engineering companies and switchgear manufacturers. The full range of functionalities of molded case circuit breakers can be used for plant and equipment operating in Europe and North America, with absolute standards compliance assured.

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

Siemens EcoTech

www.siemens.com/lowvoltage/SiemensEcoTech

Molded Case Circuit Breakers

A multitude of additional information ...

Information + ordering

All the important things at a glance

For information about molded case circuit breakers, please visit our website **www.siemens.com/sentron-3va**

Your product in detail

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

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

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

Siemens YouTube channel

- 3VA molded case circuit breakers (general) **sie.ag/2gSX4K**
- 3VA UL Large Frame molded case circuit breakers **sie.ag/23vHbX**

Smart Control Panel Design

With the Smart Control Panel Design in the TIA Selection Tool, it is possible to design and dimension the electrical equipment of a machine in conformity with the standards – from the suitable switching devices to the correctly dimensioned cables
www.siemens.com/controlpanel/cpd

Everything you need for your order

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

- Molded case circuit breakers **sie.ag/2mmLcAk**

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

Configurators

The configurator reduces the time and effort required in the planning and ordering process, and allows for individual adaptations. Configure your 3VA molded case circuit breaker at
www.siemens.com/lowvoltage/3va-ul-configurator

The following are additionally available for your 3VA molded case 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 can find further information on services at
www.siemens.com/service-offers

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

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

… can be found in our online services

Commissioning + operation

SENTRON Powerconfig

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

Free download SENTRON Powerconfig
www.siemens.com/powerconfig

Free download SENTRON Powerconfig mobile via
App Store and **Play Store**

Your product in detail

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

- Operating instructions
- Characteristic curves
- Certificates

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

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

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

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

Manuals

Manuals are available for downloading at
www.siemens.com/lowvoltage/manuals

- Configuration Manual
  – 3VA selectivity **(109743975)**
- Communication Manual
  – 3VA molded case circuit breakers with IEC and UL certification **(98746267)**
- Equipment Manual
  – 3VA molded case circuit breakers with UL and IEC certification **(109758561)**

Face-to-face or online training

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

- 3VA molded case circuit breakers (WT-LVA3VA)
- Protection systems in low-voltage power distribution (WT-LVAPS)

Technical overview – Molded case circuit breakers

The fast way to get you to our online services

This page provides you with comprehensive information and links on molded case circuit breakers
www.siemens.com/lowvoltage/product-support (109767421)

Molded case circuit breakers for all applications

3VA51 ... 3VA59
molded case circuit breakers

Ideal for standard applications

The 3VA5 molded case circuit breaker is suitable for numerous applications in infrastructure and industrial plants – and this applies worldwide thanks to IEC and UL certification.

Its additional functionality is the perfect complement to the circuit breaker series – and it features a consistent design and wide range of accessories.

Special features

- Compact design
- AC/DC applications
- Universal platform of accessories
- 1, 2, 2 in 3, 3 and 4-pole version
- Also available as a molded case switch and motor circuit protector
- Available in different sizes with rated currents from 1 ... 2000 A

UL certificate

- 3VA5/6 molded case circuit breaker for line protection E364397 (CCN [1]: DIVQ)
- 3VA5/6 motor circuit protector: E482699 (CCN: DKPU2)
- 3VA5/6 molded case switch: E482701 (CCN: WJAZ)
- Accessories: E354102

[1] CCN = UL Category Code Number

3VA61 ... 3VA69
molded case circuit breakers

Perfect for advanced applications

Whether in industry or infrastructure – the 3VA6 molded case circuit breaker can handle all tasks with ease. It can be easily integrated into higher-level energy management or automation systems.

It reliably signals plant conditions and measured values, helping you to increase plant availability and identify any potential for savings.

Special features

- Very good selective protection response
- AC applications
- Integrated metering function for current, voltage and energy values
- Connection to a communication system
- Various circuit breaker versions available as "100% rated" (uninterrupted current carrying) and as "current limiting" breaker according to UL 489
- Integrated DAS+ (Dynamic Arc-Flash Sentry) function in accordance with American standard NEC 240.87 to reduce arc flash energy in the switchboard for frame sizes 1200, 1600 and 2000 A (3VA UL Large Frame)
- Available in different sizes with rated currents from 25 ... 2000 A

UL certificate

- 3VA5/6 molded case circuit breaker for line protection E364397 (CCN [1]: DIVQ)
- 3VA5/6 motor circuit protector: E482699 (CCN: DKPU2)
- 3VA5/6 molded case switch: E482701 (CCN: WJAZ)
- Accessories: E354102

[1] CCN = UL Category Code Number

Molded case circuit breakers and accessories

Protective functions	3VA51	3VA52	3VA53	3VA54	3VA55	3VA57	3VA58	3VA59
Size	125 A	250 A	400 A	600 A	800 A	1200 A	1600 A	2000 A
Molded case switch (MCS)								
With short-circuit release for intrinsic device protection	■	■	■	■	■	■	■	■
Thermal-magnetic								
Line protection	■	■	■	■	■	■	■	■
Protective circuit breaker for motor starter combinations, motor circuit protector (MCP)	■	■	■	■	■	–	–	–
Electronic								
Line protection	–	–	–	–	–	–	–	–
Line protection, with display	–	–	–	–	–	–	–	–
Line protection, with display and metering function	–	–	–	–	–	–	–	–
Protective circuit breaker for motor starter combinations, motor circuit protector (MCP)	–	–	–	–	–	–	–	–

Accessories

Size	125 A	250 A	400 A	600 A	800 A	1200 A	1600 A	2000 A
Accessories								
Auxiliary switches and signaling switches	■	■	■	■	■	■	■	■
Auxiliary releases	■	■	■	■	■	■	■	■
Connection technology	■	■	■	■	■	■	■	■
Plug-in version	–	–	–	–	–	–	–	–
Withdrawable version	–	–	–	–	–	–	–	–
Front mounted rotary operator	■	■	■	■	■	■	■	■
Door mounted rotary operator	■	■	■	■	■	■	■	■
Side wall mounted rotary operator	■	■	–	–	–	–	–	–
Operator kit with Bowden cable/linkage	■	■	■	■	–	–	–	–
Motor operator MO 320 (mounted on front)	■	■	■	■	–	–	–	–
Motor operator with SEO520 stored energy mechanism	–	■	–	–	–	–	–	–
Locking, blocking and interlocking	■	■	■	■	■	■	■	■
Communication link	–	–	–	–	–	–	–	–
EFB300	–	–	–	–	–	–	–	–
MMB300	–	–	–	–	–	–	–	–
Testing and commissioning devices	–	–	–	–	–	–	–	–
Cover frame	■	■	■	■	■	■	■	■
Mounting plate for circuit breaker	–	–	–	–	–	–	●	●
Assembly kit for multiple feed-in terminals	–	–	–	–	–	■	■	–

● Must be used ■ Available – Not available/not present









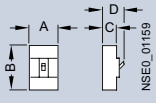
3VA61	3VA62	3VA63	3VA64	3VA65	3VA66	3VA67	3VA68	3VA69
150 A	250 A	400 A	600 A	800 A	1000 A	1200 A	1600 A	2000 A
–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–
■	■	■	■	■	■	■	■	–
■	■	■	■	■	■	■	■	–
■	■	■	■	■	■	■	■	■
■	■	■	■	■	–	–	–	–

150 A	250 A	400 A	600 A	800 A	1000 A	1200 A	1600 A	2000 A
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
■	■	■	■	–	–	–	–	–
■	■	■	■	–	–	–	–	–
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
■	■	–	–	–	–	–	–	–
■	■	■	■	–	–	–	–	–
■	■	■	■	–	–	–	–	–
■	■	–	–	–	–	–	–	–
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■	■
–	–	–	–	–	–	–	●	●
–	–	–	–	–	–	■	■	–

3VA5 molded case circuit breakers up to 2000 A

Technical specifications




			3VA51			3VA51			3VA51			3VA52		
Basic data														
Number of poles			1-pole			2-pole			3/4-pole			2 in 3-pole, 3/4-pole		
Size		A	125			125			125			250		
Rated current I_n		A	15 ... 125			15 ... 125			15 ... 125			40 ... 250		
Frequency		Hz	0 ... 400			0 ... 400			0 ... 400			0 ... 400		
Electrical characteristics according to UL 489														
Rated operational voltage U_e 50/60 Hz AC		V	347			600 Y/347 and 480			600 Y/347 and 480			600		
Electrical characteristics according to IEC 60947-2														
Rated operational voltage U_e 50/60 Hz AC		V	415			415			690			690		
Rated insulation voltage U_i		V	500			600			800			800		
Rated impulse withstand voltage U_{imp}		kV	8			8			8			8		
Breaking capacity (line protection)			**S**	**M**	**H**	**S**	**M**	**H**	**S**	**M**	**H**	**M**	**H**	**C**
UL breaker type			SEAS	MEAS	HEAS	SEAS	MEAS	HEAS	SEAS	MEAS	HEAS	MFAS	HFAS	CFAS
Current Limiting according to UL 489			–	–	–	–	–	–	–	–	–	–	–	–
Short-circuit breaking capacity acc. to UL 489														
50/60 Hz AC	120 V	kA	65	85	100	–	–	–	–	–	–	–	–	–
	240 V	kA	–	–	–	65	85	150	65	85	150	85	100	200
	277 V	kA	25	35	50	–	–	–	–	–	–	–	–	–
	347 V	kA	14	18	18	–	–	–	–	–	–	–	–	–
	480 Y/277 V	kA	–	–	–	25	35	65	25	35	65	35	65	100
	480 V	kA	–	–	–	25	35	65	25	35	65	35	65	100
	600 Y/347 V	kA	–	–	–	14	18	25	14	18	25	18	25	35
	600 V	kA	–	–	–	–	–	–	–	–	–	18	25	35
DC [1]	125 V	kA	14	25	30	14	25	30	–	–	–	–	–	–
	250 V	kA	–	–	–	50	85	100	50	85	100	50	85	100
	500 V	kA	–	–	–	–	–	–	50	85	100	50	85	100
	600 V	kA	–	–	–	–	–	–	50	85	100	50	85	100
	750 V	kA	–	–	–	–	–	–	–	–	–	50	85	100
	1000 V	kA	–	–	–	–	–	–	–	–	–	50	85	100
Short-circuit breaking capacity acc. to IEC 60947-2														
Rated ultimate short-circuit breaking capacity I_{cu} 50/60 Hz AC [2]	240 V	kA	25	36	55	55	85	150	55	85	150	85	100	200
	415 V	kA	5	5	5	36	55	70	36	55	70	55	70	110 (3P) 85 (4P)
	690 V	kA	–	–	–	–	–	–	5	7	10	7	10	10
Rated service short-circuit breaking capacity I_{cs} 50/60 Hz AC [2]	240 V	kA	25	36	55	55	85	150	55	85	150	85	100	200
	415 V	kA	5	5	5	36	55	70	36	55	70	55	70	110 (3P) 85 (4P)
	690 V	kA	–	–	–	–	–	–	5	5	5	7	10	10
DC [1]	125 V	kA	14	25	30	14	25	30	–	–	–	–	–	–
	250 V	kA	–	–	–	50	85	100	50	85	100	50	85	100
	500 V	kA	–	–	–	–	–	–	50	85	100	50	85	100
	600 V	kA	–	–	–	–	–	–	50	85	100	50	85	100
	750 V	kA	–	–	–	–	–	–	–	–	–	50	85	100
	1000 V	kA	–	–	–	–	–	–	–	–	–	25	36	50
Dimensions														
	A	mm	25.4			50.8			76.2 (3P) | 101.6 (4P)			105 (3P) | 140 (4P)		
	B	mm	140			140			140			185		
	C	mm	76.5			76.5			76.5			83		
	D	mm	93.4			93.4			93.4			107		

■ Available – Not available/not present

[1] For detailed data on DC breaking capacity, number of switching poles and circuit diagrams, see FAQ www.siemens.com/lowvoltage/product-support (109775443)

System overview, page 2/20






3VA53			3VA54			3VA55			3VA57			3VA58			3VA59		
2 in 3-pole, 3/4-pole			2 in 3-pole, 3/4-pole			2 in 3-pole, 3/4-pole			2 in 3-pole, 3-pole			3-pole			3-pole		
400			600			800			1200			1600			2000		
200 ... 400			450, 500, 600			600, 700, 800			800, 900, 1000, 1200			1400, 1600			1800, 2000		
0 ... 400			0 ... 400			0 ... 400			0 ... 400			0 ... 400			0 ... 400		
600			600			600			600			600			600		
690			690			690			690			690			–		
800			800			800			800			800			–		
8			8			8			8			8			–		
M	H	C	M	H	C	M	H	C	M	H	C	M	H	C	M	H	C
MJAS	HJAS	CJAS	MLAS	HLAS	CLAS	MMAS	HMAS	CMAS	MNAS	HNAS	CNAS	MPAS	HPAS	CPAS	MRAS	HRAS	CRAS
–	–	–	–	–	–	–	–	–	–	–	■	–	–	■	–	–	■
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
85	100	200	85	100	200	85	100	200	85	100	200	85	100	200	85	100	200
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
35	65	100	35	65	100	35	65	100	35	65	100	35	65	100	35	65	100
35	65	100	35	65	100	35	65	100	35	65	100	35	65	100	35	65	100
18	25	35	20	25	35	18	25	50	25	35	65	25	35	65	25	35	65
18	25	35	20	25	35	18	25	50	25	35	65	25	35	65	25	35	65
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
50	85	100	50	85	100	50	85	100	22	25	42	22	25	42	22	25	42
50	85	100	50	85	100	50	85	100	50	85	100	35	50	65	35	50	65
50	85	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
50	85	100	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
6	6	10	6	6	10	18	25	50	–	–	–	–	–	–	–	–	–
85	100	200	85	100	200	85	100	200	65	110	200	65	100	200	–	–	–
55	70	110	55	70	110	55	70	110	50	70	110	50	70	110	–	–	–
7	10	10	7	10	10	25	35	35	20	30	35	20	30	35	–	–	–
85	100	200	85	100	200	85	100	150	35	55	100	35	55	100	–	–	–
55	70	110	55	70	110	55	70	85	25	35	55	25	35	55	–	–	–
5	6	6	6	6	6	19	19	19	15	15	17	15	15	17	–	–	–
8	16	25	8	16	25	50	85	100	–	–	–	–	–	–	–	–	–
8	16	25	8	16	25	50	85	100	50	85	100	50	85	100	–	–	–
8	16	25	8	16	25	50	85	100	50	85	100	50	85	100	–	–	–
8	16	25	8	16	25	50	85	100	50	85	100	50	85	100	–	–	–
–	–	–	–	–	–	50	85	100	50	85	100	50	85	100	–	–	–
–	–	–	–	–	–	25	35	50	–	–	–	–	–	–	–	–	–
138 (3P) | 184 (4P)			138 (3P) | 184 (4P)			210 (3P) | 280 (4P)			229			229			229		
248			248			328			406			406			406		
110			110			120			157			157			157		
137			137			253			208.9			208.9			208.9		

[2] I_{cu} = rated ultimate short-circuit breaking capacity, rms value, according to IEC 60947-2.
I_{cs} = rated service short-circuit breaking capacity, rms value, according to IEC 60947-2.

System overview, page 2/20

3VA5 molded case circuit breakers up to 2000 A

Application




			3VA51	3VA51	3VA51	3VA52
Basic data						
Number of poles			1-pole	2-pole	3/4-pole	2 in 3-pole, 3/4-pole
Size		A	125	125	125	250
Rated current I_n		A	15 ... 125	15 ... 125	15 ... 125	40 ... 250
Frequency		Hz	0 ... 400	0 ... 400	0 ... 400	0 ... 400
3VA5 molded case circuit breakers for line protection						
Service life/endurance (operating cycles)						
Mechanical (CLOSE-OPEN cycles)			20000	20000	20000	20000
Electrical for U_e 480 V (UL 489)/415 V (IEC 60947)			8000	8000	8000	8000
Trip units						
FTFM	TM210		■	■	■	■
FTAM	TM230		–	–	■	■
ATAM	TM240		–	–	■	■
3VA5 motor circuit protector (protective circuit breaker for motor starter combinations)						
Rated current I_n		A	–	–	15 ... 125	150 ... 200
Breaking capacity acc. to UL 489 without contactor at 480 V [1]		kA	–	–	65	65/100
Approval acc. to IEC 60947-2 annex O ICB			–	–	■	■
Integrated, instantaneous short-circuit release for intrinsic device protection						
AM	TM120M		–	–	■	■
3VA5 molded case switch						
Electrical characteristics according to UL 489						
Rated uninterrupted current I_n at 40 °C ambient temperature for short-circuit current rating (SCCR) [2]	Up to 65 kA at 480 V	A	–	100	100	150, 250
	Up to 100 kA at 480 V	A	–	–	–	100, 150, 250
Approval acc. to IEC 60947-2 annex L CBI-X			–	■	■	■
Integrated, instantaneous short-circuit release for intrinsic device protection						
FM	MCS110		–	■	■	■
Standards and specifications						
Standards and specifications			UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2
Direction of power flow and infeed			Top and bottom	Top and bottom	Top and bottom	Top and bottom
Standard connection technology			Without connection technology	Without connection technology	Without connection technology	Without connection technology

■ Available – Not available/not present

[1] Breaking capacity in combinations with contactor (SCCR rating) may differ

[2] The breaking capacity (SCCR rating) is the maximum short-circuit current permissible at the location where the MCS is installed in conjunction with a suitable overload protection device

System overview, page 2/20



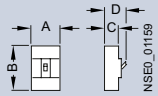



3VA53	3VA54	3VA55	3VA57	3VA58	3VA59
2 in 3-pole, 3/4-pole	2 in 3-pole, 3/4-pole	2 in 3-pole, 3/4-pole	2 in 3-pole, 3-pole	3-pole	3-pole
400	600	800	1200	1600	2000
200 ... 400	450, 500, 600	600, 700, 800	800, 900, 1000, 1200	1400, 1600	1800, 2000
0 ... 400	0 ... 400	0 ... 400	0 ... 400	0 ... 400	0 ... 400
20000	20000	10000	3000	3000	3000
6000	3000	4800	1500	1500	500
–	–	–	–	–	–
■	■	■	■	■	■
■	■	–	–	–	–
250	400, 500, 600	600, 800	–	–	–
65/100	65/100	65/100	–	–	–
■	■	■	–	–	–
■	■	■	–	–	–
400	600	800	1000, 1200	1600	2000
400	600	800	1000, 1200	1600	2000
■	■	■	■	■	–
■	■	■	■	■	■
UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus
Top and bottom	Top and bottom	Top and bottom	Top and bottom	Top and bottom	Top and bottom
Without connection technology	Without connection technology	Nut keeper kit	Without connection technology	Without connection technology	Without connection technology

System overview, page 2/20

3VA6 molded case circuit breakers up to 2000 A

Technical specifications

			3VA61					3VA62				
Basic data												
Number of poles			3/4-pole					3/4-pole				
Size		A	150					250				
Rated current I_n		A	40 ... 150					100, 250				
Frequency		Hz	50 ... 60					50 ... 60				
Electrical characteristics according to UL 489												
Rated operational voltage U_e 50/60 Hz AC		V	600					600				
Electrical characteristics according to IEC 60947-2												
Rated operational voltage U_e 50/60 Hz AC		V	690					690				
Rated insulation voltage U_i		V	800					800				
Rated impulse withstand voltage U_{imp}		kV	8					8				
Breaking capacity (line protection)			**M**	**H**	**C**	**L**	**E**	**M**	**H**	**C**	**L**	**E**
UL breaker type			MDAE	HDAE	CDAE	LDAE	EDAE	MFAE	HFAE	CFAE	LFAE	EFAE
Current limiting according to UL 489			–	–	–	–	■	–	–	–	–	■
Short-circuit breaking capacity acc. to UL 489												
50/60 Hz AC	120 V	kA	–	–	–	–	–	–	–	–	–	–
	240 V	kA	100	100	200	200	–	100	100	200	200	–
	277 V	kA	–	–	–	–	–	–	–	–	–	–
	347 V	kA	–	–	–	–	–	–	–	–	–	–
	480 Y/277 V	kA	35	65	100	150	200	35	65	100	150	200
	480 V	kA	35	65	100	150	200	35	65	100	150	200
	600 Y/347 V	kA	18	22	35	50	100	18	22	35	50	100
	600 V	kA	18	22	35	50	100	18	22	35	50	100
Short-circuit breaking capacity acc. to IEC 60947-2												
Rated ultimate short-circuit breaking capacity I_{cu} 50/60 Hz AC [1]	240 V	kA	85	110	150	200	–	85	110	150	200	–
	415 V	kA	55	85	110	150	150	55	85	110	150	150
	690 V	kA	2.5	2.5	2.5	2.5	3	3	3	3	3	3
Rated service short-circuit breaking capacity I_{cs} 50/60 Hz AC [1]	240 V	kA	85	110	150	200	–	85	110	150	200	–
	415 V	kA	55	85	110	150	150	55	85	110	150	150
	690 V	kA	2.5	2.5	2.5	2.5	3	3	3	3	3	3
Dimensions												
	A	mm	105 (3P) | 140 (4P)					105 (3P) | 140 (4P)				
	B	mm	198					198				
	C	mm	86					86				
	D	mm	107					107				

■ Available – Not available/not present

[1] I_{cu} = rated ultimate short-circuit breaking capacity, rms value, according to IEC 60947-2.
I_{cs} = rated service short-circuit breaking capacity, rms value, according to IEC 60947-2.

System overview, page 2/20







3VA63					3VA64					3VA65			3VA66			3VA67			3VA68			3VA69		
3/4-pole					3/4-pole					3/4-pole			3/4-pole			3-pole			3-pole			3-pole		
400					600					800			1000			1200			1600			2000		
250, 400					400, 600					600, 800			1000			800, 1000, 1200			1600			2000		
50 ... 60					50 ... 60					50 ... 60			50 ... 60			50 ... 60			50 ... 60			50 ... 60		
600					600					600			600			600			600			600		
690					690					690			690			690			690			–		
800					800					800			800			800			800			–		
8					8					8			8			8			8			–		
M	**H**	**C**	**L**	**E**	**M**	**H**	**C**	**L**	**E**	**M**	**H**	**C**	**M**	**H**	**C**	**M**	**H**	**C**	**M**	**H**	**C**	**M**	**H**	**C**
MJAE	HJAE	CJAE	LJAE	EJAE	MLAE	HLAE	CLAE	LLAE	ELAE	MMAE	HMAE	CMAE	MM-NAE	HM-NAE	CM-NAE	MNAE	HNAE	CNAE	MPAE	HPAE	CPAE	MRAE	HRAE	CRAE
–	–	–	–	■	–	–	–	–	■	–	–	–	–	–	–	–	–	■	–	–	■	–	–	■
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
100	100	200	200	–	100	100	200	200	–	100	150	200	100	150	200	85	100	200	85	100	200	85	100	200
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
35	65	100	150	200	35	65	100	150	200	35	65	100	35	65	100	35	65	100	35	65	100	35	65	100
35	65	100	150	200	35	65	100	150	200	35	65	100	35	65	100	35	65	100	35	65	100	35	65	100
18	22	35	50	100	18	22	35	50	100	25	35	50	25	35	50	25	35	65	25	35	65	25	35	65
18	22	35	50	100	18	22	35	50	100	25	35	50	25	35	50	25	35	65	25	35	65	25	35	65
85	110	150	200	–	85	110	150	200	–	85	110	200	85	110	200	65	110	200	65	110	200	–	–	–
55	85	110	150	150	55	85	110	150	150	55	85	110	55	85	110	50	70	110	50	70	110	–	–	–
5	5	5	5	6	6	6	6	6	6	25	35	35	25	35	35	20	30	35	20	30	35	–	–	–
85	110	150	200	–	85	110	150	200	–	85	110	150	85	110	150	35	55	100	35	55	100	–	–	–
55	85	110	150	150	55	85	110	150	150	55	85	85	55	85	85	25	35	50	25	35	50	–	–	–
5	5	5	5	6	6	6	6	6	6	19	19	19	19	19	19	15	15	17	15	15	17	–	–	–
138 (3P) | 184 (4P)					138 (3P) | 184 (4P)					210 (3P) | 280 (4P)			210 (3P) | 280 (4P)			229			229			229		
248					248					328			328			406			406			406		
110					110					120			120			157			157			157		
137					137					253			253			208.9			208.9			208.9		

System overview, page 2/20

3VA6 molded case circuit breakers up to 2000 A

Application

			3VA61	3VA62
Basic data				
Number of poles			3/4-pole	3/4-pole
Size		A	150	250
Rated current I_n		A	40 ... 150	100, 250
Frequency		Hz	50 ... 60	50 ... 60
3VA6 molded case circuit breakers for line protection				
Service life/endurance (operating cycles)				
Mechanical (CLOSE-OPEN cycles)			25000	25000
Electrical for U_e 480 V (UL 489)/415 V (IEC 60947)			14000	12000
Trip units				
LI	ETU320		■	■
	ETU820		■	■
LIG	ETU330		■	■
	ETU830		■	■
LSI	ETU350		■	■
	ETU550		■	■
	ETU850		■	■
LSI (G alarm, no integrated G protection)	ETU556		■	■
	ETU856		■	■
LSIG	ETU360		–	–
	ETU560		■	■
	ETU860		■	■
3VA6 motor circuit protector (protective circuit breaker for motor starter combinations)				
Rated current I_n		A	25 ... 100	110 ... 200
Breaking capacity acc. to UL 489 without contactor at 480 V [1]		kA	100	100
Approval acc. to IEC 60947-2 annex O ICB			■	■
Integrated, instantaneous short-circuit release for intrinsic device protection				
I	ETU310M		■	■
Standards and specifications				
Standards and specifications			UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2
Direction of power flow and infeed			Top and bottom	Top and bottom
Standard connection technology			Without connection technology	Without connection technology

■ Available – Not available/not present

[1] Breaking capacity in combinations with contactor (SCCR rating) may differ

System overview, page 2/20







3VA63	3VA64	3VA65	3VA66	3VA67	3VA68	3VA69
3/4-pole	3/4-pole	3/4-pole	3/4-pole	3-pole	3-pole	3-pole
400	600	800	1000	1200	1600	2000
250, 400	400, 600	600, 800	1000	800, 1000, 1200	1600	2000
50 ... 60	50 ... 60	50 ... 60	50 ... 60	50 ... 60	50 ... 60	50 ... 60
20000	20000	10000	10000	3000	3000	3000
6000	4000	5100	4900	1500	1500	500
■	■	■	■	■	■	–
■	■	■	■	■	■	–
■	■	■	■	■	■	–
■	■	■	■	■	■	–
■	■	■	■	■	■	–
■	■	■	■	–	–	–
■	■	–	–	■	■	■
■	■	■	■	–	–	–
■	■	■	■	■	■	■
				■	■	–
■	■	■	■	–	–	–
■	■	■	■	■	■	■
200, 250	400, 500	800	–	–	–	–
100	100	100	–	–	–	–
■	■	■	–	–	–	–
■	■	■	–	–	–	–
UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus, IEC 60947-2	UL 489/cULus
Top and bottom	Top and bottom	Top and bottom	Top and bottom	Top and bottom	Top and bottom	Top and bottom
Without connection technology	Without connection technology	Nut keeper kit	Nut keeper kit	Without connection technology	Without connection technology	Without connection technology

System overview, page 2/20

Trip units

Protection system for 3VA molded case circuit breakers up to 2000 A

Trip units	Thermal-magnetic	Electronic	Electronic with display	Electronic with display and metering function
				
	TM 2-series	**ETU 3-series**	**ETU 5-series**	**ETU 8-series**
Protective function				
Line protection	TM210, TM230, TM240	ETU320, ETU330, ETU350, ETU360	ETU550, ETU556, ETU560	ETU820, ETU830, ETU850, ETU856, ETU860
Starter protection	TM120M	ETU310M	–	–
Integrated functions				
Parameterizing	Setting and reading the parameters • In A	Setting and reading the parameters • In A and s	Setting and reading the parameters • Via display and communi-cation • Fine setting of the parameters • Reading the measured values	Setting and reading the parameters • Via display and communication • Fine setting of the parameters • Reading the measured values
Status display	–	Indicating the ETU status via LEDs	Indicating the ETU status via LEDs	Indicating the ETU status via LEDs
Interface	–	Interface for test devices	Interface for test devices	Interface for test devices
Metering function	–	–	–	Metering function integrated
Optional expansions				
24 V module	–	–	 24 V module for continuous power supply (also without primary current through the molded case circuit breaker)	 24 V module for continuous power supply (also without primary current through the molded case circuit breaker)
External function box	–	 EFB300 external function box for connection to the ETU	 EFB300 external function box for connection to the ETU	 EFB300 external function box for connection to the ETU
Maintenance mode box	–	 MMB300 maintenance mode box for connection to the ETU [1]	 MMB300 maintenance mode box for connection to the ETU	 MMB300 maintenance mode box for connection to the ETU [1]
Communication module	–	–	 COM060 communication module	 COM060 communication module [1]
Data concentrator	–	–	 COM800/COM100 data concentrator with interface to • PROFIBUS • PROFINET • Modbus RTU • Ethernet (Modbus TCP)	 COM800/COM100 data concentrator with interface to • PROFIBUS • PROFINET • Modbus RTU • Ethernet (Modbus TCP)
External display	–	–	 DSP800 external display for installing in the cubicle door	 DSP800 external display for installing in the cubicle door
Test device	–	 TD300/TD400/TD500 test device	 TD300/TD400/TD500 test device	 TD300/TD400/TD500 test device

[1] For 3VA67, 3VA68 and 3VA69 (3VA UL Large Frame), this function is already integrated in the ETU

System overview, page 2/20

Protective functions of the 3VA5 with thermal-magnetic trip unit

	TM120M AM	TM210 FTFM	TM230 FTAM	TM240 ATAM
Protection				
Motor circuit protector	■	–	–	–
Line protection	–	■	■	■
Version available with				
1-pole breaker	–	■	–	–
2-pole breaker in 3-pole enclosure	–	■	■	–
3-pole breaker	■	■	■	■
4-pole breaker	–	■	■	■
Available protection parameters				
I_r adjustable	–	–	–	■
I_i adjustable	■	–	■	■
I_r fixed	–	■	■	–
I_i fixed	–	■	–	–

Protective functions of the 3VA6 with electronic trip unit

	ETU310M I	ETU320 LI	ETU330 LIG	ETU350 LSI	ETU360 LSIG	ETU550 LSI	ETU556 LSI (G alarm)	ETU560 LSIG	ETU820 LI	ETU830 LIG	ETU850 LSI	ETU856 LSI (G alarm)	ETU860 LSIG
Protection													
Motor circuit protector	■	–	–	–	–	–	–	–	–	–	–		–
Line protection	–	■	■	■	■	■	■	■	■	■	■	■	■
Version available with													
3-pole without external neutral conductor transformer	■	■	■	■	–	–	–	–	–	–	–	–	–
3-pole with external neutral conductor transformer	–	–	–	–	■	■	■	■	–	–	■	■	■
4-pole with protected neutral conductor transformer	–	■	■	■	–	■	■	■	■	■	■	■	■
Available protection parameters													
Characteristic in L range	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t
I_r	–	■	■	■	■	■	■	■	■	■	■	■	■
t_{ld} at 6 × I_r	–	■	■	■	■	■	■	■	■	■	■	■	■
Thermal image	■	■	■	■	■	■	■	■	■	■	■	■	■
Thermal image can be switched on/off	–	–	–	–	–	■	■	■	–	–	■	■	■
I_{sd}	–	–	–	■	■	■	■	■	–	–	■	■	■
t_{sd} at 8 × I_r	–	–	–	■	■	■	■	■	–	–	■	■	■
Characteristic in S range: I^2t_{sd}	–	–	–	■	■	■	■	■	–	–	■	■	■
Characteristic in S range: selectable I^2t_{sd}/t_{sd}	–	–	–	–	–	■	■	■	–	–	■	■	■
I_i	■	■	■	■	■	■	■	■	■	■	■	■	■
I_N [1]	–	■	■	■	■	■	■	■	■	■	■	■	■
I_g	–	–	■	–	■	–	–	■	–	■	–	–	■
t_g at 2 × I_g	–	–	■	–	■	–	–	■	–	■	–	–	■
Characteristic in G range: I^2t_g	–	–	–	–	–	–	–	■	–	■	–	–	■
Characteristic in G range: selectable I^2t_g/t_g	–	–	–	–	–	–	–	■	–	■	–	–	■
Ground-fault alarm function	–	–	–	–	–	–	■	■	–	–	–	■	■
ZSI	–	■	■	■	■	■	■	■	■	■	■	■	■
Arc fault mitigation mode	–	■	■	■	■	■	■	■	■	■	■	■	■

■ Available – Not available/not present

[1] Available for circuit breakers with an external current transformer for the N conductor and for 4-pole circuit breakers

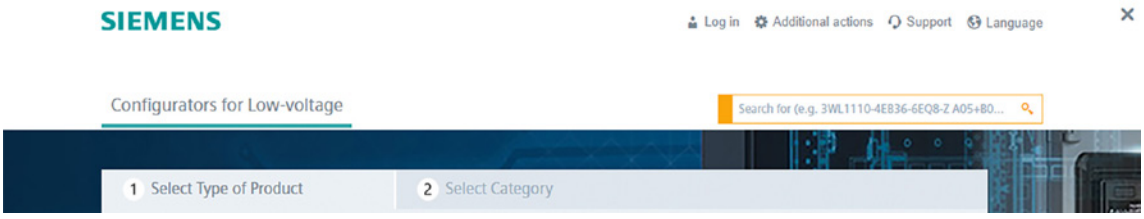
System overview, page 2/20

Online configurator highlights

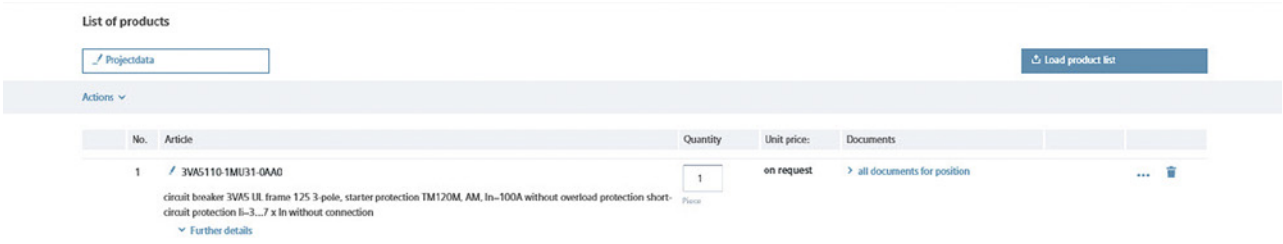
www.siemens.com/lowvoltage/configurators

Search function with global direct input

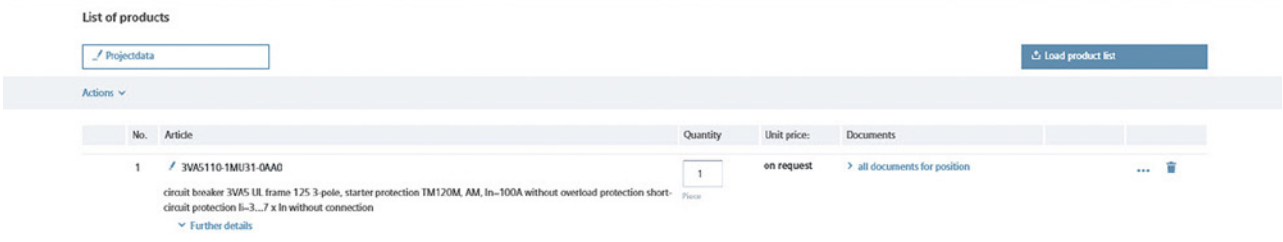
Searches for specific terms and jumps to article number based on input to the correct configurator



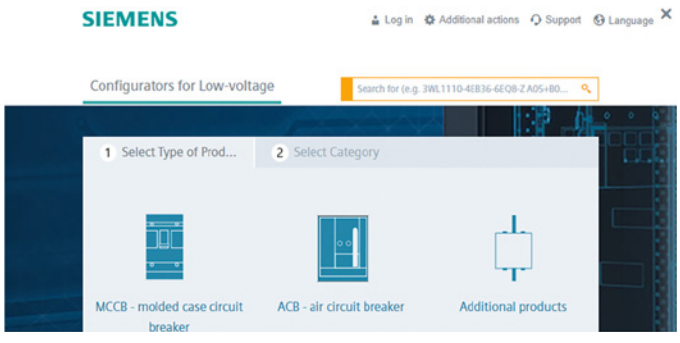
Product list stores multiple configurations and can transfer them collectively to the shopping cart



Recall of completed configurations for modification or additional configuration

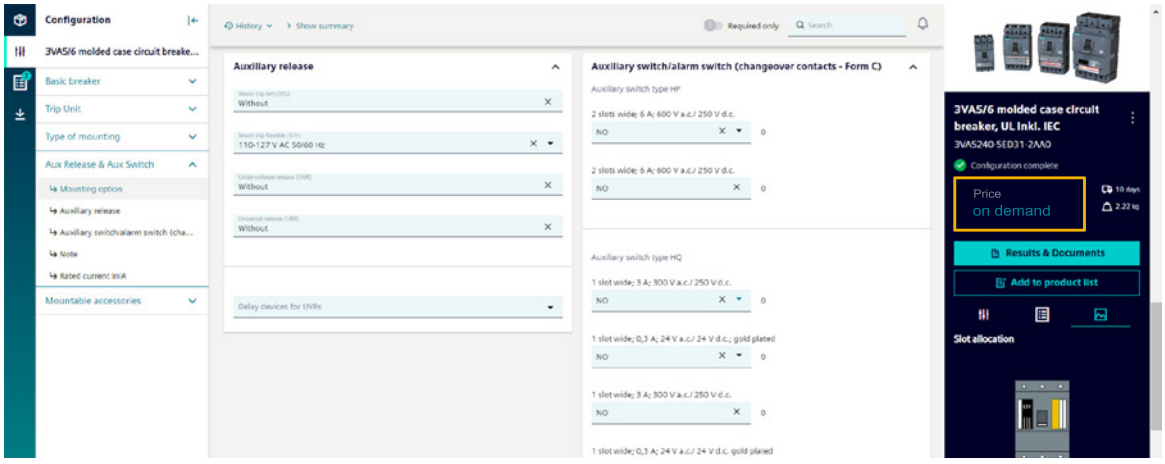


Responsive Design

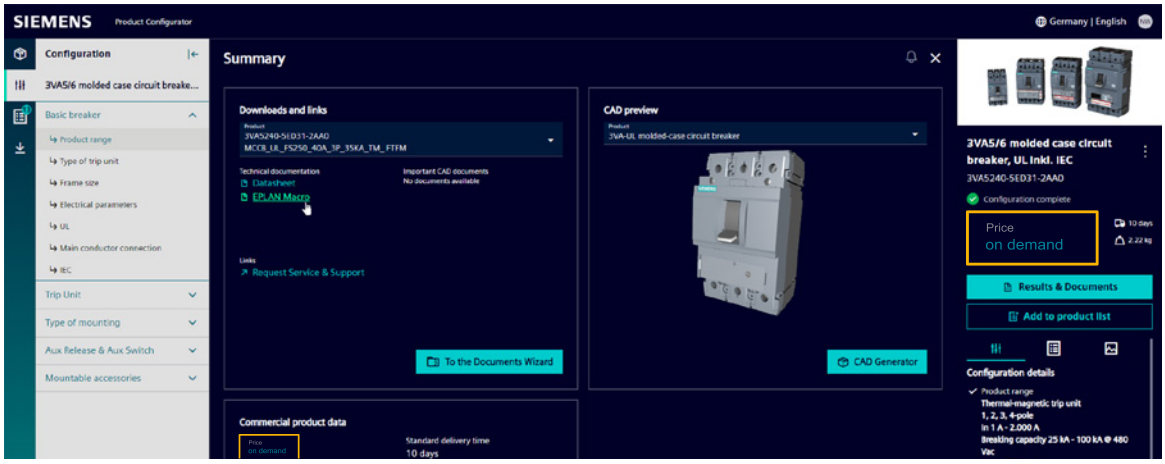


www.siemens.com/lowvoltage/3va-ul-configurator

Visualization of the internally mountable accessories (slot assignment)



Download of the individual edz files for 3VA



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

System overview

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

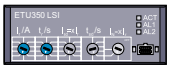
Molded case circuit breakers

3VA5 for standard applications

3VA6 for applications with more stringent requirements

Trip unit

Thermal-magnetic trip unit (TMTU)



Electronic trip unit (ETU)

Electronic trip unit (ETU) with display, and optionally with metering function

Trip unit accessories

24 V module

Communication module

Data concentrator

External display

Test device

Type of mounting

Fixed-mounted

Withdrawable unit, complete kit

Plug-in unit, complete kit

Supplementary accessories

Auxiliary circuit connector

Door feedthrough

Position signaling switch

Cylinder lock adapter

Crank

Main conductor connections

Bus connectors

Bus connectors broadened

Circular conductor terminal

Box terminal

Connection accessories

Insulation accessories

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

Auxiliary releases/ auxiliary switches


Shunt trip STF/STL


Universal release UNI


Undervoltage release UVR

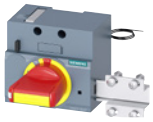

Auxiliary switch AUX


Trip alarm switch TAS


Leading changeover switch LCS


Electrical alarm switch EAS

Mountable accessories


Manual operator


Motor operator


Operator kit with Bowden cable


Variable depth flange mounted operator

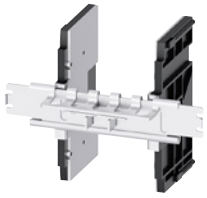
Additional circuit breaker accessories


Cover frame


Locking provision


Cylinder lock

Mechanical interlocking mechanisms

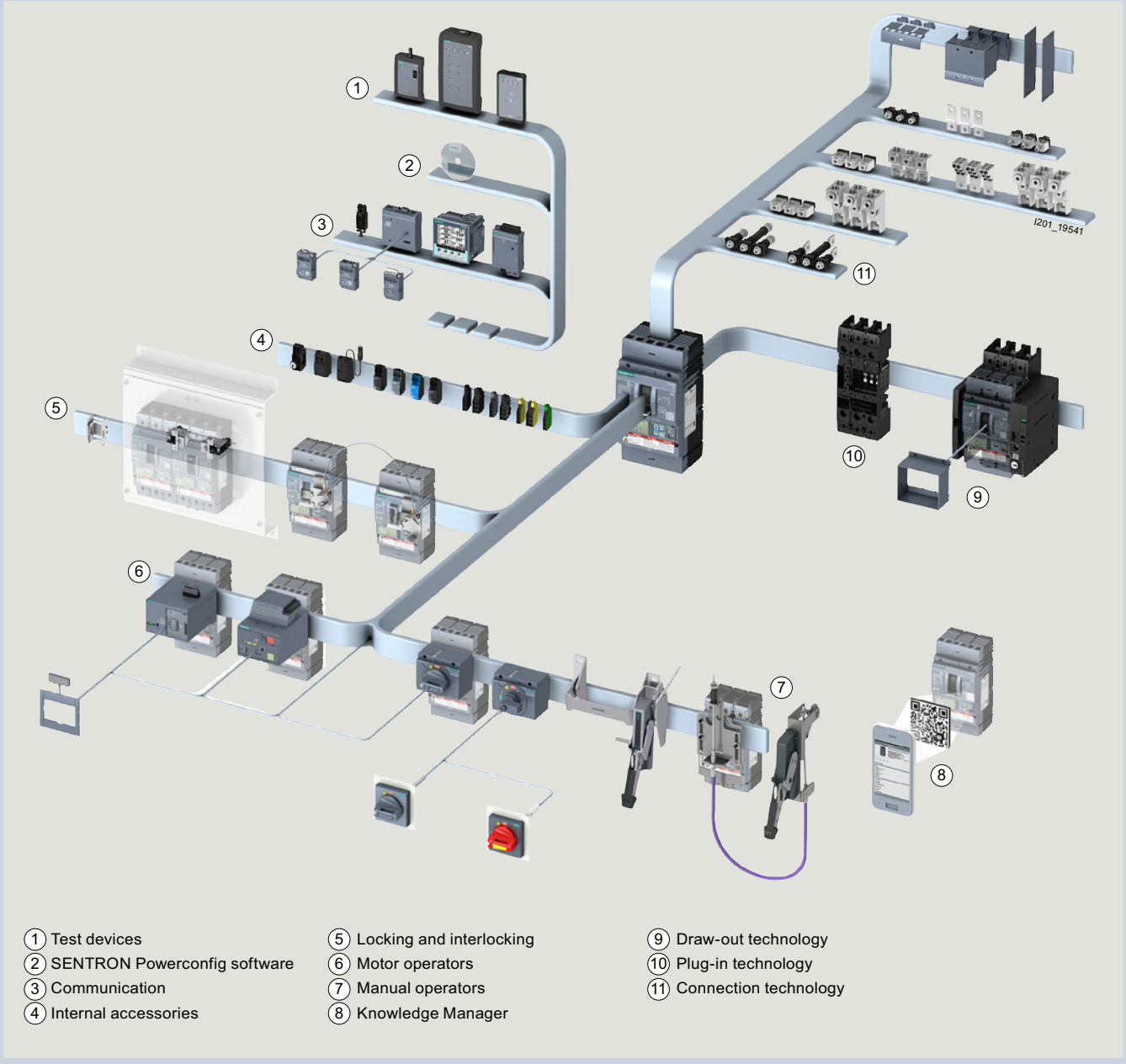

Sliding bar interlock


Interlocking with rod


Handle interlocking module with bowden cable

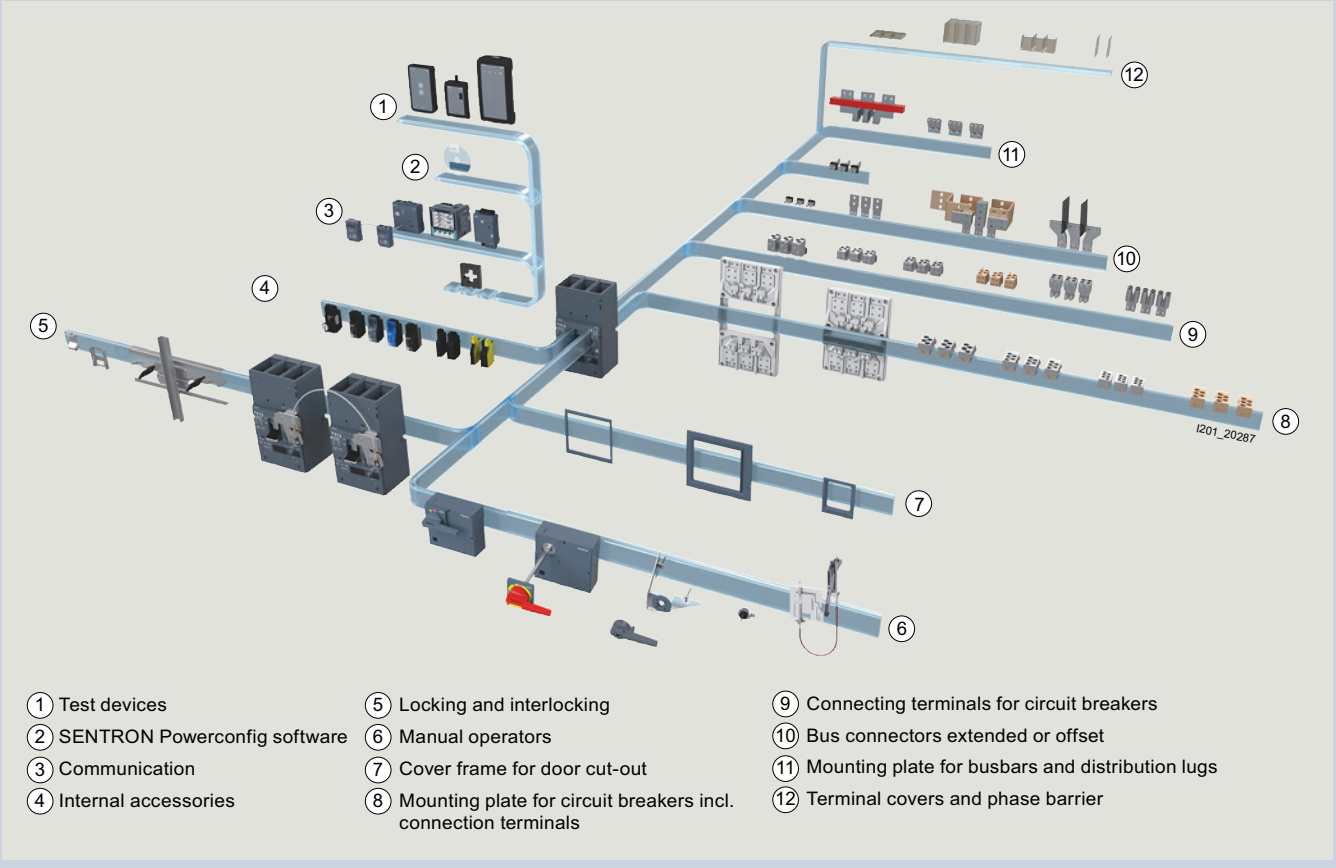
Note:
You will find a detailed range of accessories in the Accessories section.

System overview



1 Test devices
2 SENTRON Powerconfig software
3 Communication
4 Internal accessories
5 Locking and interlocking
6 Motor operators
7 Manual operators
8 Knowledge Manager
9 Draw-out technology
10 Plug-in technology
11 Connection technology

Size up to 1000 A



1 Test devices
2 SENTRON Powerconfig software
3 Communication
4 Internal accessories
5 Locking and interlocking
6 Manual operators
7 Cover frame for door cut-out
8 Mounting plate for circuit breakers incl. connection terminals
9 Connecting terminals for circuit breakers
10 Bus connectors extended or offset
11 Mounting plate for busbars and distribution lugs
12 Terminal covers and phase barrier

Size up to 1200 A

Structure of the article numbers

Siemens EcoTech

Basic configuration for line protection

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

2

		4	5	6	7		8	9	10	11	12		13	
		3VA	■	■	■	■	–	■					–			AA0

			3VA51	3VA52	3VA53	3VA54	3VA55	3VA57	3VA58	3VA59	3VA61	3VA62	3VA63	3VA64	3VA65	3VA66	3VA67	3VA68	3VA69	4	5	6	7	8
Trip units	Thermal-magnetic																			5				
	Electronic																			6				
Size	125 A		■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–		1			
	150 A		–	–	–	–	–	–	–	–	■	–	–	–	–	–	–	–	–		1			
	250 A		–	■	–	–	–	–	–	–	–	■	–	–	–	–	–	–	–		2			
	400 A		–	–	■	–	–	–	–	–	–	–	■	–	–	–	–	–	–		3			
	600 A		–	–	–	■	–	–	–	–	–	–	–	■	–	–	–	–	–		4			
	800 A		–	–	–	–	■	–	–	–	–	–	–	–	■	–	–	–	–		5			
	1000 A		–	–	–	–	–	–	–	–	–	–	–	–	–	■	–	–	–		6			
	1200 A		–	–	–	–	–	■	–	–	–	–	–	–	–	–	■	–	–		7			
	1600 A		–	–	–	–	–	–	■	–	–	–	–	–	–	–	–	■	–		8			
	2000 A		–	–	–	–	–	–	–	■	–	–	–	–	–	–	–	–	■		9			
Max. rated current I_n	Line protection	15 A	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			9	5	
		20 A	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			2	0	
		25 A	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			2	5	
		30 A	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			3	0	
		35 A	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			3	5	
		40 A	■	■	–	–	–	–	–	–	■[1]	–	–	–	–	–	–	–	–			4	0	
		45 A	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			4	5	
		50 A	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			5	0	
		60 A	■	■	–	–	–	–	–	–	■[2]	–	–	–	–	–	–	–	–			6	0	
		70 A	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			7	0	
		80 A	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			8	0	
		90 A	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			9	0	
		100 A	■	■	–	–	–	–	–	–	■	■	–	–	–	–	–	–	–			1	0	
		110 A	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			1	1	
		125 A	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			1	2	
		150 A	–	■	–	–	–	–	–	–	■	–	–	–	–	–	–	–	–			1	5	
		175 A	–	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			1	7	
		200 A	–	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–			2	0	
		225 A	–	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–			2	2	
		250 A	–	■	■	–	–	–	–	–	–	■	■	–	–	–	–	–	–			2	5	
		300 A	–	–	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–			3	0	
		350 A	–	–	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–			3	5	
		400 A	–	–	■	–	–	–	–	–	–	■	■	–	–	–	–	–	–			4	0	
		450 A	–	–	–	■	–	–	–	–	–	–	–	–	–	–	–	–	–			4	5	
		500 A	–	–	–	■	–	–	–	–	–	–	–	–	–	–	–	–	–			5	0	
		600 A	–	–	–	■	■	–	–	–	–	–	■	■	–	–	–	–	–			6	0	
		700 A	–	–	–	–	■	–	–	–	–	–	–	–	–	–	–	–	–			7	0	
		800 A	–	–	–	–	■	■	–	–	–	–	–	■	–	■	–	–	–			8	0	
		900 A	–	–	–	–	–	■	–	–	–	–	–	–	–	–	–	–	–			9	0	
		1000 A	–	–	–	–	–	■	–	–	–	–	–	–	–	■	■	–	–			1	0	
		1200 A	–	–	–	–	–	■	–	–	–	–	–	–	–	–	■	–	–			1	2	
		1400 A	–	–	–	–	–	–	■	–	–	–	–	–	–	–	–	–	–			1	4	
		1600 A	–	–	–	–	–	–	■	–	–	–	–	–	–	–	–	■	–			1	6	
		1800 A	–	–	–	–	–	–	–	■	–	–	–	–	–	–	–	–	–			1	8	
		2000 A	–	–	–	–	–	–	–	■	–	–	–	–	–	–	–	–	■			2	0	
Short-circuit breaking capacity at 480 V 50/60 Hz	25 kA		■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–					4
	35 kA		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					5
	65 kA		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					6
	100 kA		–	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					7
	150 kA		–	–	–	–	–	–	–	–	■	■	■	■	–	–	–	–	–					8
	200 kA		–	–	–	–	–	–	–	–	■	■	■	■	–	–	–	–	–					0

[1] Available for breaking capacity M (35 kA), H (65 kA), C (100 kA) and L (150 kA) at 480 V
[2] Available for breaking capacity E (200 kA) at 480 V

■ Available – Not available/not present

Quick selection guide, pages 2/8 and 2/12

3VA 4 5 6 7 – 8 9 10 11 12 – 13 **AA0**

		3VA51	3VA52	3VA53	3VA54	3VA55	3VA57	3VA58	3VA59	3VA61	3VA62	3VA63	3VA64	3VA65	3VA66	3VA67	3VA68	3VA69				9	10	11	12	13
Protective function thermal-magnetic	Line protection	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	TM210	FTFM			D			
		■	■	■	■	■	■	■	■	–	–	–	–	–	–	–	–	–	TM230	FTAM			C			
		■	■	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	TM240	ATAM			F			
Protective function thermal-magnetic, neutral conductor protection	Line protection	Without neutral conductor protection																				E				
		100% neutral conductor protection																				G				
Protective function electronic	Line protection	–	–	–	–	–	–	–	–	■	■	■	■	■	■	■	■	–	ETU320	LI	(N) [1]	H	L			
		–	–	–	–	–	–	–	–	■	■	■	■	■	■	■	■	–	ETU330	LIG	(N) [1]	H	M			
		–	–	–	–	–	–	–	–	■	■	■	■	■	■	■	■	–	ETU350	LSI	(N) [1]	H	N			
		–	–	–	–	–	–	–	–	–	–	–	–	–	–	■	■	–	ETU360	LSIG	(N) [1]	H	Q			
	Line protection, with display	–	–	–	–	–	–	–	–	■	■	■	■	■	■	–	–	–	ETU550	LSI	(N) [2]	J	P			
		–	–	–	–	–	–	–	–	■	■	■	■	■	■	–	–	–	ETU556	LSI(G)	(N) [2]	J	T			
		–	–	–	–	–	–	–	–	■	■	■	■	■	■	–	–	–	ETU560	LSIG	(N) [2]	J	Q			
	Line protection, with display, with metering function	–	–	–	–	–	–	–	–	■	■	■	■	■	■	–	–	–	ETU820	LI	(N) [2]	K	L			
		–	–	–	–	–	–	–	–	■	■	■	■	–	–	–	–	–	ETU830	LIG	(N) [2]	K	M			
		–	–	–	–	–	–	–	–	■	■	■	■	–	–	■	■	■	ETU850	LSI	(N) [2]	K	P			
		–	–	–	–	–	–	–	–	■	■	■	■	■	■	■	■	■	ETU856	LSI(G)	(N) [2]	K	T			
		–	–	–	–	–	–	–	–	■	■	■	■	■	■	■	■	■	ETU860	LSIG	(N) [2]	K	Q			

[1] Neutral conductor protection for 4-pole breakers
[2] Neutral conductor protection for 3-pole breakers with an external neutral conductor transformer or for 4-pole breakers

Number of poles	1-pole	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–						1			
	2-pole	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–						2			
	2-pole in 3-pole enclosure	–	■	■	■	■	■	–	–	–	–	–	–	–	–	–	–						6			
	3-pole	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						3			
	4-pole	■	■	■	■	■	–	–	–	■	■	■	■	■	■	–	–						4			
Connection technology	Without	■	■	■	■	–	■	■	■	■	■	■	■	–	–	■	■	■						1		
	Nut keeper kit	–	–	–	–	■	–	–	–	–	–	–	–	■	■	–	–	–						2		
Special applications	Standard	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■								0
	100% rated breaker	–	■	■	–	■	■	■	–	■	■	■ [1]	■ [2]	■	–	■	■	–								2

[1] Only possible for 250 A
[2] Only possible for 400 A

Quick selection guide, pages 2/8 and 2/12

Structure of the article numbers

Siemens EcoTech

Basic configuration for motor circuit protectors and molded case switches

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

2

			3VA51	3VA52	3VA53	3VA54	3VA55	3VA57	3VA58	3VA59	3VA61	3VA62	3VA63	3VA64	3VA65	4 5	6 7	8	9 10	11 12
3VA																		–		– **0AA0**
Trip units	Thermal-magnetic															5				
	Electronic															6				
Size	125 A		■	–	–	–	–	–	–	–	–	–	–	–		1				
	150 A		–	–	–	–	–	–	–	–	■		–	–	–	1				
	250 A		–	■	–	–	–	–	–	–	–	■	–	–	–	2				
	400 A		–	–	■	–	–	–	–	–	–	–	■	–	–	3				
	600 A		–	–	–	■	–	–	–	–	–	–	–	■	–	4				
	800 A		–	–	–	–	■	–	–	–	–	–	–	–	■	5				
	1200 A		–	–	–	–	–	■	–	–	–	–	–	–	–	7				
	1600 A		–	–	–	–	–	–	■	–	–	–	–	–	–	8				
	2000 A		–	–	–	–	–	–	–	■	–	–	–	–	–	9				
Max. rated current I_n	Motor circuit protector	1 A	■	–	–	–	–	–	–	–	–	–	–	–	–		8	1		
		2 A	■	–	–	–	–	–	–	–	–	–	–	–	–		0	2		
		3 A	■	–	–	–	–	–	–	–	–	–	–	–	–		0	3		
		5 A	■	–	–	–	–	–	–	–	–	–	–	–	–		0	5		
		7 A	■	–	–	–	–	–	–	–	–	–	–	–	–		0	7		
		10 A	■	–	–	–	–	–	–	–	–	–	–	–	–		9	1		
		15 A	■	–	–	–	–	–	–	–	–	–	–	–	–		9	5		
		25 A	■	–	–	–	–	–	–	■	–	–	–	–	–		2	5		
		30 A	■	–	–	–	–	–	–	■	–	–	–	–	–		3	0		
		40 A	■	–	–	–	–	–	–	■	–	–	–	–	–		4	0		
		50 A	■	–	–	–	–	–	–	■	–	–	–	–	–		5	0		
		70 A	■	–	–	–	–	–	–	■	–	–	–	–	–		7	0		
		80 A	■	–	–	–	–	–	–	■	–	–	–	–	–		8	0		
		90 A	■	–	–	–	–	–	–	■	–	–	–	–	–		9	0		
		100 A	■	–	–	–	–	–	–	■	–	–	–	–	–		1	0		
		110 A	■	–	–	–	–	–	–	–	■	–	–	–	–		1	1		
		125 A	■	–	–	–	–	–	–	–	■	–	–	–	–		1	2		
		150 A	–	■	–	–	–	–	–	–	■	–	–	–	–		1	5		
		200 A	–	■	–	–	–	–	–	–	■	–	–	–	–		2	0		
		250 A	–	■	■	–	–	–	–	–	–	■	–	–	–		2	5		
		400 A	–	–	–	■	–	–	–	–	–	■	■	–	–		4	0		
		500 A	–	–	–	■	–	–	–	–	–	–	■	–	–		5	0		
		600 A	–	–	–	■	■	–	–	–	–	–	–	–	–		6	0		
		800 A	–	–	–	–	■	–	–	–	–	–	–	–	■		8	0		
	Molded case switch	100 A	■	■	–	–	–	–	–	–	–	–	–	–	–		1	0		
		150 A	–	■	–	–	–	–	–	–	–	–	–	–	–		1	5		
		250 A	–	■	–	–	–	–	–	–	–	–	–	–	–		2	5		
		400 A	–	–	■	–	–	–	–	–	–	–	–	–	–		4	0		
		600 A	–	–	–	■	–	–	–	–	–	–	–	–	–		6	0		
		800 A	–	–	–	–	■	–	–	–	–	–	–	–	–		8	0		
		1000 A	–	–	–	–	–	■	–	–	–	–	–	–	–		1	0		
		1200 A	–	–	–	–	–	■	–	–	–	–	–	–	–		1	2		
		1600 A	–	–	–	–	–	–	■	–	–	–	–	–	–		1	6		
		2000 A	–	–	–	–	–	–	–	■	–	–	–	–	–		2	0		
Short-circuit breaking capacity at 480 V 50/60 Hz	Without, with SCCR rating as a combined device	65 kA	–	■	■	■	■	–	–	–	–	–	–	–	–				0	
			■	–	–	–	–	–	–	–	–	–	–	–	–				1	
			–	–	–	–	–	■	■	■	–	–	–	–	–				6	
		100 kA	–	■	■	■	■	–	–	–	■	■	■	■	■				1	
			–	–	–	–	–	■	■	■	–	–	–	–	–				7	

■ Available – Not available/not present

Quick selection guide, pages 2/8 and 2/12

3VA [4] [5] [6] [7] – [8] [9] [10] [11] [12] – **0AA0**

			3VA51	3VA52	3VA53	3VA54	3VA55	3VA57	3VA58	3VA59	3VA61	3VA62	3VA63	3VA64	3VA65			[9]	[10]	[11]	[12]
Protective function thermal-magnetic	Motor circuit protector	Setting range I_i high	■	■	■	■	■	–	–	–	–	–	–	–	–	TM120M	AM	M	H		
		Setting range I_i low	■	■	■	■	–	–	–	–	–	–	–	–	–	TM120M	AM	M	U		
Protective function only intrinsic device protection	Molded case switch		■	■	■	■	■	■	■	■	–	–	–	–	–	MCS110	–	B	B		
Protective function electronic	Motor circuit protector		–	–	–	–	–	–	–	–	■	■	■	■	■	ETU310M	I	M	S		
Number of poles	Motor circuit protector		■	■	■	■	■	–	–	–	■	■	■	■	■	3-pole				3	
	Molded case switch		■	–	–	–	–	–	–	–	–	–	–	–	–	2-pole				2	
			–	■	■	■	■	■	–	–	–	–	–	–	–	2-pole in 3-pole enclosure				6	
			■	■	■	■	■	■	■	■	–	–	–	–	–	3-pole				3	
			–	■	–	–	–	–	–	–	–	–	–	–	–	4-pole				4	
Connection technology	Without		■	■	■	■	–	■	■	■	■	■	■	■	–						1
	Nut keeper kit		–	–	–	–	■	–	–	–	–	–	–	–	■						2

Quick selection guide, pages 2/8 and 2/12

Internal accessories

Auxiliary and alarm switches (changeover contacts)

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

					3VA51 3VA52 3VA53 3VA54 3VA55	3VA61 3VA62 3VA63 3VA64 3VA65 3VA66	3VA57 3VA58 3VA59	3VA67 3VA68 3VA69
Auxiliary switches AUX								
• Used to signal the position of the main contacts of the molded case circuit breaker • The contacts of the auxiliary switch and the molded case circuit breaker close in unison								
Type	**Width**	**I_e max (IEC 60947-5-1)**	**U_e max AC/DC (IEC 60947-5-1)**	**Version**				
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard		3VA9978-0AA12		
		0.3 A	24 V/24 V	Electronic-compatible		3VA9978-0AA13		
HP	14 mm (2 slots)	10 A	600 V/250 V	Standard		3VA9978-0AA11		
Leading changeover switches LCS								
• Used for load shedding, for example • Signal the opening of the main contacts with a lead time of 20 ms in advance of molded case circuit breaker trips								
Type	**Width**	**I_e max (IEC 60947-5-1)**	**U_e max AC/DC (IEC 60947-5-1)**	**Version**				
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard	3VA9978-0AA22		–	
		0.3 A	24 V/24 V	Electronic-compatible	3VA9978-0AA23		–	
HP	14 mm (2 slots)	10 A	600 V/250 V	Standard	3VA9978-0AA21		–	
Trip alarm switches TAS								
• Signal every molded case circuit breaker tripping operation • Are actuated whenever the molded case circuit breaker switches to the TRIP position								
Type	**Width**	**I_e max (IEC 60947-5-1)**	**U_e max AC/DC (IEC 60947-5-1)**	**Version**				
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard		3VA9978-0AB12		
		0.3 A	24 V/24 V	Electronic-compatible		3VA9978-0AB13		
HP	14 mm (2 slots)	10 A	600 V/250 V	Standard		3VA9978-0AB11		
Electrical alarm switches EAS								
• Are actuated as soon as the main contacts of the molded case circuit breaker open in the event that the breaker is tripped by the ETU								
Type	**Width**	**I_e max (IEC 60947-5-1)**	**U_e max AC/DC (IEC 60947-5-1)**	**Version**				
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard	–	3VA9978-0AB22	–	Already integrated
		0.3 A	24 V/24 V	Electronic-compatible	–	3VA9978-0AB23	–	Already integrated

System overview, page 2/20

Auxiliary releases

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

			3VA51 3VA52 3VA53 3VA54 3VA55	3VA61 3VA62 3VA63 3VA64	3VA57 3VA58 3VA59 3VA65 3VA66 3VA67 3VA68 3VA69
Shunt trips left STL					
• Used for remote-controlled tripping of the molded case circuit breaker • Have particularly low power consumption					
Version	**U_e 50/60 Hz AC**	**U_e DC**			
Standard	–	12 V		3VA9978-0BL10	
	24 V	24 ... 30 V		3VA9978-0BL30	
	48 ... 60 V	48 ... 60 V		3VA9978-0BL31	
	110 ... 127 V	110 ... 127 V		3VA9978-0BL32	
	208 ... 277 V	220 ... 250 V		3VA9978-0BL33	
	380 ... 600 V	–		3VA9978-0BL20	
Shunt trips flexible STF					
• Used for remote-controlled tripping of the molded case circuit breaker • Can be flexibly installed in left-hand and right-hand accessories compartment of molded case circuit breaker					
Version	**U_e 50/60 Hz AC**	**U_e DC**			
	24 V	–	–	3VA9978-0BA20	–
	48 ... 60 V	–	–	3VA9978-0BA21	–
	110 ... 127 V	–	–	3VA9978-0BA22	–
	208 ... 277 V	–	–	3VA9978-0BA23	–
	380 ... 500 V	–	–	3VA9978-0BA24	–
	600 V	–	–	3VA9978-0BA25	–
Universal releases UNI					
• Combination of shunt trip and undervoltage release					
Version	**U_e 50/60 Hz AC**	**U_e DC**			
	–	12 V		3VA9978-0BD11	
	–	24 V		3VA9978-0BD12	
	–	48 V		3VA9978-0BD13	
Undervoltage releases UVR					
• Trip the molded case circuit breaker in the event that the rated operational voltage of a monitored circuit drops below a minimum permissible limit or fails altogether					
Version	**U_e 50/60 Hz AC**	**U_e DC**			
	–	12 V		3VA9978-0BB10	
	–	24 V		3VA9978-0BB11	
	24 V	–		3VA9978-0BB20	
	–	48 V		3VA9978-0BB12	
	120 ... 127 V	–		3VA9978-0BB24	
	–	125 ... 127 V		3VA9978-0BB14	
	208 ... 230 V	–		3VA9978-0BB25	
	–	250 V		3VA9978-0BB16	
	440 ... 480 V	–		3VA9978-0BB27	
Time-delay devices for undervoltage releases					
Version	**U_e 50/60 Hz AC**	**U_e DC**			
	230 V	230 V		3VA9978-0BF22	
	–	24 V		3VA9978-0BF23	

System overview, page 2/20

Manual operators

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

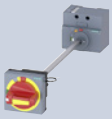
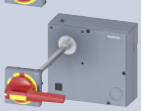
Front mounted rotary operators

- Handle
- Degree of protection IP30
- For 3-pole and 4-pole breakers

	Version	Door open function	Illumination kit	Door interlock	3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
	Standard (gray)	Without	Without	Without	3VA9137-0EK11	3VA9277-0EK11	3VA9447-0EK11
				With	3VA9137-0EK21	3VA9277-0EK21	3VA9447-0EK21
			With	Without	3VA9137-0EK13	3VA9277-0EK13	3VA9447-0EK13
				With	3VA9137-0EK23	3VA9277-0EK23	3VA9447-0EK23
		With	Without	With	3VA9137-0EK31	3VA9277-0EK31	3VA9447-0EK31
			With	With	3VA9137-0EK33	3VA9277-0EK33	3VA9447-0EK33
	EMERGENCY-OFF (red/yellow)	Without	Without	Without	3VA9137-0EK15	3VA9277-0EK15	3VA9447-0EK15
				With	3VA9137-0EK25	3VA9277-0EK25	3VA9447-0EK25
			With	Without	3VA9137-0EK17	3VA9277-0EK17	3VA9447-0EK17
				With	3VA9137-0EK27	3VA9277-0EK27	3VA9447-0EK27
		With	Without	With	3VA9137-0EK35	3VA9277-0EK35	3VA9447-0EK35
			With	With	3VA9137-0EK37	3VA9277-0EK37	3VA9447-0EK37

Door mounted rotary operator

- Shaft 300 mm (325 mm for 1000 A)
- With mounting tolerance compensation
- Handle with masking plate 75 × 75 mm
- Degree of protection IP65
- For 3-pole and 4-pole breakers
- Enclosure types 1, 3R, 12, 4/4X

	Version	Door open function	Illumination kit	Door interlock	3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
	Standard (gray)	Without	Without	With	3VA9137-0FK21	3VA9277-0FK21	3VA9447-0FK21
			With	With	3VA9137-0FK23	3VA9277-0FK23	3VA9447-0FK23
		With	Without	With	3VA9137-0FK31	3VA9277-0FK31	3VA9447-0FK31
			With	With	3VA9137-0FK33	3VA9277-0FK33	3VA9447-0FK33
	EMERGENCY-OFF (red/yellow)	Without	Without	With	3VA9137-0FK25	3VA9277-0FK25	3VA9447-0FK25
			With	With	3VA9137-0FK27	3VA9277-0FK27	3VA9447-0FK27
		With	Without	With	3VA9137-0FK35	3VA9277-0FK35	3VA9447-0FK35
			With	With	3VA9137-0FK37	3VA9277-0FK37	3VA9447-0FK37

System overview, page 2/20

3VA55 3VA65 3VA66	3VA57 3VA58 3VA59 3VA67 3VA68 3VA69
3VA9677-0EK11	3VA9877-0EK11
3VA9677-0EK21	–
–	–
–	–
3VA9677-0EK31	–
–	–
3VA9677-0EK15	3VA9877-0EK15
3VA9677-0EK25	–
–	–
–	–
3VA9677-0EK35	–
–	–
3VA9677-0FK21	3VA9877-0FK21
3VA9677-0FK23	–
3VA9677-0FK31	–
3VA9677-0FK33	–
3VA9677-0FK25	3VA9877-0FK25
3VA9677-0FK27	–
3VA9677-0FK35	–
3VA9677-0FK37	–

System overview, page 2/20

Manual operators

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

Door mounted rotary operators without handle

- Degree of protection IP30
- For 3-pole and 4-pole breakers

Version	Door open function	Illumination kit	Door interlock	3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
With shaft stub (gray)	Without	Without	Without	3VA9137-0GK00	3VA9277-0GK00	3VA9447-0GK00
With shaft stub (gray)	Without	Without	Without	–	–	–

Side wall mounted rotary operators without mounting plates

- Rotary operator with shaft 300 mm
- Handle with masking plate 75 × 75 mm
- Degree of protection IP65
- For 3-pole and 4-pole breakers

Version	Illumination kit	3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
Standard (gray)	Without	3VA9137-0PK11	3VA9277-0PK11	–
	With	3VA9137-0PK13	3VA9277-0PK13	–
EMERGENCY-OFF (red/yellow)	Without	3VA9137-0PK15	3VA9277-0PK15	–
	With	3VA9137-0PK17	3VA9277-0PK17	–

Side wall mounted rotary operators with mounting plates

- Rotary operator with short shaft and mounting plate for mounting directly on the side wall
- Handle with masking plate 75 × 75 mm
- Degree of protection IP65
- For 3-pole and 4-pole breakers

Version	Illumination kit	3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
Standard (gray)	Without	3VA9137-0PK51	3VA9277-0PK51	–
	With	3VA9137-0PK53	3VA9277-0PK53	–
EMERGENCY-OFF (red/yellow)	Without	3VA9137-0PK55	3VA9277-0PK55	–
	With	3VA9137-0PK57	3VA9277-0PK57	–

Door interlock for side wall mounted rotary operators

3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
3VA9177-0VF40	3VA9277-0VF40	–

Extended DIN rails for N/PE terminals

Version	Rated current I_n	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
For mounting plate	≤ 250 A	3VA9987-0GL30	

System overview, page 2/20

	3VA57
	3VA58
	3VA59
3VA55	3VA67
3VA65	3VA68
3VA66	3VA69
3VA9677-0GK00	
–	3VA9877-0GK00
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–

System overview, page 2/20

Manual operators

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

			3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
Supplementary handles for door mounted rotary operators (NFPA 79)					
	• Mandatory according to NFPA 79 • For operation when cabinet door is open				
	Version				
	Standard (gray)		3VA9137-0GC01	3VA9477-0GC01	3VA9477-0GC11
	EMERGENCY-OFF (red/yellow)		3VA9137-0GC05	3VA9477-0GC05	3VA9477-0GC15
	Standard (gray)		–	–	–
	EMERGENCY-OFF (red/yellow)		–	–	–
Handles					
	• With masking plate				
	Version	**Door open function**	**Tolerance compensation**		
	Standard (gray)	Without	Without	8UD1721-0AB11	8UD1731-0AB11
			With	8UD1721-0AB21	8UD1731-0AB21
		With	Without	8UD1721-0AC11	8UD1731-0AC11
			With	8UD1721-0AC21	8UD1731-0AC21
	EMERGENCY-OFF (red/yellow)	Without	Without	8UD1721-0AB15	8UD1731-0AB15
			With	8UD1721-0AB25	8UD1731-0AB25
		With	Without	8UD1721-0AC15	8UD1731-0AC15
			With	8UD1721-0AC25	8UD1731-0AC25
Handle lever extensions					
	• **Note:** The handle lever extension is already included in the scope of supply of the breakers.				
			–	–	3VA9487-0SC10
Shafts					
	**Type**	**Length**			
	8 × 8 mm	300 mm		8UD1900-2WA00	
		600 mm		8UD1900-2WB00	
	12 × 12 mm	305 mm		–	
		325 mm		–	
		600 mm		–	
		610 mm		–	
Adapters for shafts					
	**Type**	**Use**			
	8 × 8 mm	With door mounted rotary operator and side wall mounted rotary operator		8UD1900-2DA00	
	12 × 12 mm	With door mounted rotary operator and side wall mounted rotary operator		–	
Door couplings					
	**Type**				
	8 × 8 mm			8UD1900-2HA00	
	12 × 12 mm			–	
Mounting tolerance compensations					
	**Type**				
	8 × 8 mm			8UD1900-2GA00	
	12 × 12 mm			–	

System overview, page 2/20

	3VA57
	3VA58
	3VA59
3VA55	3VA67
3VA65	3VA68
3VA66	3VA69
3VA9677-0GC01	–
3VA9677-0GC05	–
–	3VA9877-0GC01
–	3VA9877-0GC05
8UD1741-0AB11	
8UD1741-0AB21	
8UD1741-0AC11	
8UD1741-0AC21	
8UD1741-0AB15	
8UD1741-0AB25	
8UD1741-0AC15	
8UD1741-0AC25	
3VA9987-0SC10	3VA9877-0SC10
–	–
–	–
–	–
8UD1900-4WA00	
8UD1900-4WB00	
–	–
–	–
8UD1900-4DA00	
–	–
8UD1900-4HA00	
–	–
8UD1900-4GA00	

System overview, page 2/20

Manual operators

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

2

			3VA51	3VA52 3VA53 3VA54	3VA61 3VA62 3VA63 3VA64
Fixing brackets for shafts					
			3VA9137-0GA80	3VA9477-0GA80	
			–	–	–
Variable depth adapters					
	**Type**				
	8 × 8 mm			3VA9487-0GB10	
Interlocking module UL 508A					
	• Used when the handle is to remain on the circuit breaker when the door is open				
				8UC9400	
Labeling plates for manual operators					
				3VA9087-0SX10	
Illumination kits for manual operators					
	• 24 V DC voltage				
	Version	**Rated current I_n**			
	Front mounted rotary operator	125 ... 250 A		8UD1900-0KA10	–
		150 ... 600 A		–	8UD1900-0KA20
	Door mounted rotary operator and side wall mounted rotary operator	125 ... 600 A		8UD1900-0KA20	
		600 ... 1000A	–	–	–
Cylinder locks (type Kaba), standard masking plates					
	**Use**	**Door open function**	**Key**		
	For door mounted rotary operator and side wall mounted rotary operator (in the masking plate), only for locking, not for interlocking	Without	1	8UD1900-0MB01	
			2	8UD1900-0NB01	
			3	8UD1900-0PB01	
			4	8UD1900-0QB01	
		With	1	8UD1900-0MC01	
			2	8UD1900-0NC01	
			3	8UD1900-0PC01	
			4	8UD1900-0QC01	
Cylinder locks (type KABA), EMERGENCY-OFF masking plates					
	**Use**	**Door open function**	**Key**		
	For door mounted rotary operator and side wall mounted rotary operator (in the masking plate), only for locking, not for interlocking	Without	1	8UD1900-0MB05	
			2	8UD1900-0NB05	
			3	8UD1900-0PB05	
			4	8UD1900-0QB05	
		With	1	8UD1900-0MC05	
			2	8UD1900-0NC05	
			3	8UD1900-0PC05	
			4	8UD1900-0QC05	

System overview, page 2/20

	3VA57
	3VA58
	3VA59
3VA55	3VA67
3VA65	3VA68
3VA66	3VA69
–	–
3VA9677-0GA80	3VA9877-0GA80
–	–
–	–
–	–
–	–
–	–
–	–
8UD1900-0KA30	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–
–	–

System overview, page 2/20

Manual operators

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

	3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
Cylinder locks (type RONIS)			
 • Includes a lock with 2 keys • For locking or interlocking • For installation on the circuit breaker side in all rotary operators • For mounting in the adapter kit for the accessories compartment • **Note:** The cylinder lock adapter for rotary operators is also needed for locking or interlocking circuit breakers via rotary operators			
Key			
1		3VA9980-0VL10	
3		3VA9980-0VL30	
4		3VA9980-0VL40	
Cylinder locks (type RONIS), for 3VA9877-0EK1. front mounted rotary operators and 3VA877-0FK2. door mounted rotary operators			
 • Includes a lock with 2 keys • For locking • For installation on the circuit breaker side in all rotary operators			
		–	
Cylinder lock adapters for rotary operators			
 • To mount the cylinder lock in the rotary operator (also possible with door mounted rotary operator and side wall mounted rotary operator), on circuit breaker side, NOT in masking plate			
		3VA9980-0LF20	
Auxiliary switch modules for rotary operators			
 **Version**			
1 × leading to "ON"	–	–	–
2 × leading to "ON"	3VA9137-0GX10	3VA9477-0GX10	
1 × leading to "OFF"	–	–	–
2 × leading to "OFF"	–	–	–
2 × leading to "ON" and 1 × leading to "OFF"	–	3VA9477-0GX20	
Mounting adapters for side wall mounted rotary operators			
 **Version**			
Necessary accessories for 3VA side wall mounted rotary operators, if 3VA9...-0GX.0 auxiliary switch modules are used	3VA9137-0GX01	3VA9477-0GX01	
Auxiliary switches for 3VA9877-0EK1. front mounted rotary operators and 3VA9877-0FK2. door mounted rotary operators			
 **Version**			
1 × leading to "ON"	–	–	–
2 × leading to "ON"	–	–	–
1 × leading to "OFF"	–	–	–
2 × leading to "OFF"	–	–	–
Operator kit with Bowden cable (MaxFlex operator), plastic			
 • Complete set, comprising: – Switching mechanism – Handle, plastic – Enclosure types 1, 3, 3R, 4, 12, 12K, black = OFF, red = ON – Bowden cable, length 36 inch (0.9 m)			
	3VA9137-0CK12	3VA9277-0CK12	3VA9477-0CK12

System overview, page 2/20

	3VA57
	3VA58
	3VA59
3VA55	3VA67
3VA65	3VA68
3VA66	3VA69
3VA9980-0VL10	–
3VA9980-0VL30	–
3VA9980-0VL40	–
–	3VA9870-0VL10
3VA9670-0LF20	–
–	–
–	–
–	–
–	–
–	–
–	–
–	3VA9877-0GX31
–	3VA9877-0GX32
–	3VA9877-0GX41
–	3VA9877-0GX42
–	–

System overview, page 2/20

Manual operators

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

				3VA51	3VA52 3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
Operator kit with Bowden cable (MaxFlex operator), steel						
 • Complete set, comprising: – Switching mechanism – Handle, steel, epoxy-coated – Enclosure types 1, 3, 3R, 4, 12, 12K, black = OFF, red = ON – Bowden cable, length 36 inch (0.9 m)				3VA9137-0CK72	3VA9277-0CK72	3VA9477-0CK72
Switching mechanisms for operator kit with Bowden cable						
				3VA9137-0CB10	3VA9277-0CB10	3VA9477-0CB10
Handles for operator kit with Bowden cable						
	**Handle**	**Enclosure types**	**OFF**	**ON**		
	Plastic	1, 3, 3R, 4, 12, 12K	Black	Red	3VA9977-0CH12	
	Steel, epoxy-coated	1, 3, 3R, 4, 12, 12K	Black	Red	3VA9977-0CH72	
			Black	Black	3VA9977-0CH74	
	Stainless steel, chrome-plated	1, 2, 3, 3R, 4, 4X, 12, 12K, 13	Black	Red	3VA9977-0CH82	
			Black	Black	3VA9977-0CH84	
Bowden cables for operator kit with Bowden cable						
	**Length**					
	36 inch (0.9 m)			3VA9278-0CC10		3VA9578-0CC10
	48 inch (1.2 m)			3VA9278-0CC20		3VA9578-0CC20
	60 inch (1.5 m)			3VA9278-0CC30		3VA9578-0CC30
	72 inch (1.8 m)			3VA9278-0CC40		3VA9578-0CC40
	84 inch (2.1 m)			3VA9278-0CC50		3VA9578-0CC50
	96 inch (2.4 m)			3VA9278-0CC60		3VA9578-0CC60
	120 inch (3.0 m)			3VA9278-0CC70		3VA9578-0CC70
	144 inch (3.6 m)			3VA9278-0CC80		3VA9578-0CC80
Auxiliary switches for operator kit with Bowden cable						
 • Leading from On to Off						
	Types					
	1 CO				3VA9478-0CX10	
	2 CO				3VA9478-0CX20	
Variable depth flange mounted operator						
 • Complete set, comprising: – Switching mechanism – Handle • For mounting depths 200 ... 400 mm						
	Handle		**ON**			
	Steel, epoxy-coated		Red	3VA9138-0DK72	3VA9278-0DK72	3VA9478-0DK72
	Steel, chrome-plated		Red	3VA9138-0DK82	3VA9278-0DK82	3VA9478-0DK82
			Black	3VA9138-0DK84	3VA9278-0DK84	3VA9478-0DK84

System overview, page 2/20

	3VA57
	3VA58
	3VA59
3VA55	3VA67
3VA65	3VA68
3VA66	3VA69
3VA9677-0CK72	–
3VA9677-0CB10	–
–	–
3VA9877-0CH72	–
3VA9877-0CH74	–
3VA9877-0CH82	–
–	–
–	–
3VA9877-0CC20	–
3VA9877-0CC30	–
3VA9877-0CC40	–
–	–
3VA9877-0CC60	–
3VA9877-0CC70	–
3VA9877-0CC80	–
–	–
–	–
–	–
–	–
–	–

System overview, page 2/20

Motor operators

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

Motor operators without stored energy mechanisms (MO320)

Addressable via control signals	Isolating features in accordance with IEC/EN 60947-1	Make time, typically for 3VA5	Make time, typically for 3VA6	Break time, typically for 3VA5	Break time, typically for 3VA6	Rated operational power
■	■	800 ... 1700 ms	1000 ... 1700 ms	800 ... 1400 ms	800 ... 1400 ms	250 W, max. 500 W (60 ms)

Motor operators with stored energy mechanisms (SEO520)

Addressable via control signals	Isolating features in accordance with IEC/EN 60947-1	Make time, typically for 3VA5	Make time, typically for 3VA6	Break time, typically for 3VA5	Break time, typically for 3VA6	Rated operational power
■	■	< 80 ms	< 80 ms	< 80 ms	< 80 ms	300 W, max. 500 W (60 ms)

Mechanical operating cycles counters (for installation in the SEO520)

Mounting	Article No.
For installation in the SEO520	3VA9987-0HX10

Cylinder lock adapters for SEO520

Mounting	Article No.
For installation of cylinder locks in the SEO520 up to 250 A	3VA9980-0LF30

Cylinder locks (type RONIS)

- Includes a lock with 2 keys
- For locking the operating mode (Manual/Auto/Lock) for SEOs up to 250 A

Key	Article No.
1	3VA9980-0VL10
3	3VA9980-0VL30
4	3VA9980-0VL40

System overview, page 2/20

		3VA51	3VA52 3VA61 3VA62	3VA53 3VA54	3VA63 3VA64
Rated control supply voltage	**With communication**				
24 ... 60 V DC	–	3VA9137-0HA10	3VA9277-0HA10	3VA9447-0HA10	
110 ... 230 V AC/ 110 ... 250 V DC	–	3VA9137-0HA20	3VA9277-0HA20	3VA9447-0HA20	
Rated control supply voltage	**With communication**				
24 V DC	–	–	3VA9277-0HC10	3VA9447-0HC10 [1]	
42 ... 60 V AC/DC	–	–	3VA9277-0HC20	3VA9447-0HC20 [1]	
110 ... 230 V AC/ 110 ... 250 V DC	–	–	3VA9277-0HC30	3VA9447-0HC30 [1]	
24 V DC	Yes	–	3VA9277-0HC15	–	3VA9447-0HC15 [1]
110 ... 230 V AC/ 110 ... 250 V DC	Yes	–	3VA9277-0HC35	–	3VA9447-0HC35 [1]

[1] For 3VA53 and 3VA54 (UL/IEC) product versions < *E04* as well as for 3VA63 and 3VA64 (UL/IEC) product versions < *E03*, the SEO520 cannot be used. It may be necessary to upgrade to a circuit breaker with a higher product version.

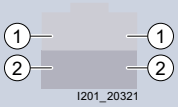
Reset mode

All motor operators have the following reset modes:
Reset mode 1: Automatic reset
Reset mode 2: Reset via OFF-signal

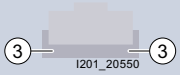
The motor operator with SEO520 stored energy mechanism additionally has:
Reset mode 3: Reset via OFF-signal with additional acknowledge signal

System overview, page 2/20

Connection technology



① For mounting onto the circuit breaker
② For mounting on plug-in and withdrawable units



③ Mounting base

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

2

Box terminals

	Number of poles	Connection options			Scope of supply	Cable cross-section, Cu stranded, class B		Terminal short designation
						Min.	Max.	
	3P	①	②	–	3 single terminals	AWG 14	3/0	TS1.1
						AWG 10	3/0	TS1.2
						AWG 4	350 kcmil	TS1.4
						1/0	500 kcmil	TS1.5
	4P	①	②	–	4 single terminals	AWG 14	3/0	TS1.1
						AWG 10	3/0	TS1.2
						AWG 4	350 kcmil	TS1.4
						1/0	500 kcmil	TS1.5

Box terminal with control wire tap

	Number of poles	Connection options			Scope of supply	Cable cross-section, Cu stranded, class B		Terminal short designation
						Min.	Max.	
	3P	①	②	–	3 single terminals	AWG 10	3/0	TS1.2
						AWG 4	350 kcmil	TS1.4
						1/0	500 kcmil	TS1.5
	4P	①	②	–	4 single terminals	AWG 10	3/0	TS1.2
						AWG 4	350 kcmil	TS1.4
						1/0	500 kcmil	TS1.5

Nut keeper kits

	Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness	
	3P	①	②	–	3 terminals	17 mm	0.66 inch	6.5 mm	0.25 inch
						25 mm	0.98 inch	8 mm	0.31 inch
						35 mm	1.37 inch	10 mm	0.39 inch
						50 mm	1.96 inch	28 mm	1.11 inch
	4P	①	②	–	4 terminals	17 mm	0.66 inch	6.5 mm	0.25 inch
						25 mm	0.98 inch	8 mm	0.31 inch
						35 mm	1.37 inch	10 mm	0.39 inch
						50 mm	1.96 inch	28 mm	1.11 inch

Nut keeper kits, with inch thread

	Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness
	3P	①	②	–	3 terminals	50.8 mm	2.0 inch	0.6" ... 0.8"/15 ... 20 mm

Nut keeper kits, with metric thread

	Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness
	3P	①	②	–	3 terminals	50 mm	1.96 inch	0.6" ... 0.8"/15 ... 20 mm

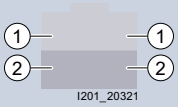
[1] Maximum current-carrying capacity of cable connection 400 A
Flexible copper bar: No restrictions

System overview, page 2/20

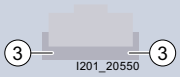
3VA51	3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
3VA9133-0JA11	–	–	–	–	–	–	–
–	3VA9233-0JA11	3VA9143-0JA12	–	–	–	–	–
–	3VA9233-0JA12	3VA9243-0JA12	–	–	–	–	–
–	–	–	3VA9473-0JA13 [1]	–	–	–	–
3VA9134-0JA11	–	–	–	–	–	–	–
–	3VA9234-0JA11	3VA9144-0JA12	–	–	–	–	–
–	3VA9234-0JA12	3VA9244-0JA12	–	–	–	–	–
–	–	–	3VA9474-0JA13 [1]	–	–	–	–
–	3VA9233-0JH11	3VA9143-0JH12	–	–	–	–	–
–	3VA9233-0JH12	3VA9243-0JH12	–	–	–	–	–
–	–	–	3VA9473-0JH13 [1]	–	–	–	–
–	3VA9234-0JH11	3VA9144-0JH12	–	–	–	–	–
–	3VA9234-0JH12	3VA9244-0JH12	–	–	–	–	–
–	–	–	3VA9474-0JH13 [1]	–	–	–	–
3VA9133-0QA00	–	–	–	–	–	–	–
–	3VA9233-0QA00	3VA9243-0QA00	–	–	–	–	–
–	–	–	3VA9473-0QA00	–	–	–	–
–	–	–	–	3VA9673-0QA00	–	–	–
3VA9134-0QA00	–	–	–	–	–	–	–
–	3VA9234-0QA00	3VA9244-0QA00	–	–	–	–	–
–	–	–	3VA9474-0QA00	–	–	–	–
–	–	–	–	3VA9674-0QA00	–	–	–
–	–	–	–	–	3VA9873-0QA00		–
–	–	–	–	–	3VA9803-0QA00		–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units

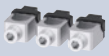


3 Mounting base

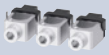
For a complete and valid configuration of your molded case circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3va-ul-configurator

2

Circular conductor terminals, 1 cable

	Number of poles	Connection options			Scope of supply	Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
						Min.	Max.	Cu	Al [2]	
	3P	①	②	–	3 single terminals	AWG 14	AWG 8	■	–	TA1.0
						AWG 14	1/0	■	–	TA1.3
						AWG 8	3/0	■	■	TA1.1
						AWG 6	350 kcmil	■	■ [3]	TA1.4
						AWG 1	600 kcmil	■	■	TA1.5
	4P	①	②	–	4 single terminals	AWG 14	AWG 8	■	–	TA1.0
						AWG 14	1/0	■	–	TA1.3
						AWG 8	3/0	■	■	TA1.1
						AWG 6	350 kcmil	■	■ [3]	TA1.4
						AWG 1	600 kcmil	■	■	TA1.5

Circular conductor terminals with control wire taps, 1 cable

	Number of poles	Connection options			Scope of supply	Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
						Min.	Max.	Cu	Al [2]	
	3P	①	②	–	3 single terminals	AWG 14	AWG 8	■	–	TA1.0
						AWG 14	1/0	■	–	TA1.3
						AWG 8	3/0	■	■	TA1.1
						AWG 6	350 kcmil	■	■ [3]	TA1.4
						AWG 1	600 kcmil	■	■	TA1.5
	4P	①	②	–	4 single terminals	AWG 14	AWG 8	■	–	TA1.0
						AWG 14	1/0	■	–	TA1.3
						AWG 8	3/0	■	■	TA1.1
						AWG 6	350 kcmil	■	■ [3]	TA1.4
						AWG 1	600 kcmil	■	■	TA1.5

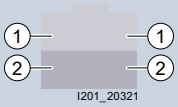
[1] All circular conductor terminals tested according to UL 486 A/B for Cu and Al cables
[2] Al cable tested according to IEC 60947-2 annex D
[3] Use antioxidants
[4] Maximum current-carrying capacity of copper cables 380 A
Maximum current-carrying capacity of aluminum cables 310 A

System overview, page 2/20

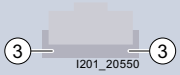
3VA51	3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
3VA9133-0JB10	–	–	–	–	–	–	–
–	3VA9233-0JB11	3VA9143-0JB11	–	–	–	–	–
3VA9133-0JB11	–	–	–	–	–	–	–
–	3VA9233-0JB12	3VA9243-0JB12	–	–	–	–	–
–	–	–	3VA9373-0JB13 [4]	–	–	–	–
3VA9134-0JB10	–	–	–	–	–	–	–
–	3VA9234-0JB11	3VA9144-0JB11	–	–	–	–	–
3VA9134-0JB11	–	–	–	–	–	–	–
–	3VA9234-0JB12	3VA9244-0JB12	–	–	–	–	–
–	–	–	3VA9374-0JB13 [4]	–	–	–	–
3VA9133-0JG10	–	–	–	–	–	–	–
–	3VA9233-0JG11	3VA9143-0JG11	–	–	–	–	–
3VA9133-0JG11	–	–	–	–	–	–	–
–	3VA9233-0JG12	3VA9243-0JG12	–	–	–	–	–
–	–	–	3VA9373-0JG13 [4]	–	–	–	–
3VA9134-0JG10	–	–	–	–	–	–	–
–	3VA9234-0JG11	3VA9144-0JG11	–	–	–	–	–
3VA9134-0JG11	–	–	–	–	–	–	–
–	3VA9234-0JG12	3VA9244-0JG12	–	–	–	–	–
–	–	–	3VA9374-0JG13 [4]	–	–	–	–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units

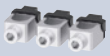


3 Mounting base

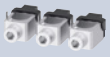
For a complete and valid configuration of your molded case circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3va-ul-configurator

2

Copper circular conductor terminals, 1 cable

	Number of poles	Connection options			Scope of supply	Cable cross-section, Cu stranded, class B		Terminal short designation
						Min.	Max.	
	3P	①	②	–	3 single terminals	AWG 14	AWG 8	TC1.0
						AWG 14	2/0	TC1.1
						AWG 14	1/0	TC1.3
						AWG 6	350 kcmil	TC1.4
						AWG 1	600 kcmil	TC1.5
	4P	①	②	–	4 single terminals	AWG 14	AWG 8	TC1.0
						AWG 14	2/0	TC1.1
						AWG 14	1/0	TC1.3
						AWG 6	350 kcmil	TC1.4
						AWG 1	600 kcmil	TC1.5

Copper circular conductor terminals with control wire taps, 1 cable

	Number of poles	Connection options			Scope of supply	Cable cross-section, Cu stranded, class B		Terminal short designation
						Min.	Max.	
	3P	①	②	–	3 single terminals	AWG 14	AWG 8	TC1.0
						AWG 14	2/0	TC1.1
						AWG 14	1/0	TC1.3
						AWG 6	350 kcmil	TC1.4
						AWG 1	600 kcmil	TC1.5
	4P	①	②	–	4 single terminals	AWG 14	AWG 8	TC1.0
						AWG 14	2/0	TC1.1
						AWG 14	1/0	TC1.3
						AWG 6	350 kcmil	TC1.4
						AWG 1	600 kcmil	TC1.5

Copper circular conductor terminals, 4 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section, Cu stranded, class B		Terminal short designation
						Min.	Max.	
	3P	①	②	–	3 single terminals Terminal cover long	1/0 50	500 kcmil 240 mm²	TC6.2

Control wire taps for busbars

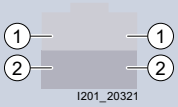
	Connection options			
	①	–	–	
				

System overview, page 2/20

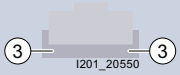
3VA51	3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
3VA9133-0JD10	–	–	–	–	–	–	–
3VA9133-0JD11	–	–	–	–	–	–	–
–	3VA9233-0JD11	3VA9143-0JD11	–	–	–	–	–
–	3VA9233-0JD12	3VA9243-0JD12	–	–	–	–	–
–	–	–	3VA9373-0JD13	–	–	–	–
3VA9134-0JD10	–	–	–	–	–	–	–
3VA9134-0JD11	–	–	–	–	–	–	–
–	3VA9234-0JD11	3VA9144-0JD11	–	–	–	–	–
–	3VA9234-0JD12	3VA9244-0JD12	–	–	–	–	–
–	–	–	3VA9374-0JD13	–	–	–	–
3VA9133-0JK10	–	–	–	–	–	–	–
3VA9133-0JK11	–	–	–	–	–	–	–
–	3VA9233-0JK11	3VA9143-0JK11	–	–	–	–	–
–	3VA9233-0JK12	3VA9243-0JK12	–	–	–	–	–
–	–	–	3VA9373-0JK13	–	–	–	–
3VA9134-0JK10	–	–	–	–	–	–	–
3VA9134-0JK11	–	–	–	–	–	–	–
–	3VA9234-0JK11	3VA9144-0JK11	–	–	–	–	–
–	3VA9234-0JK12	3VA9244-0JK12	–	–	–	–	–
–	–	–	3VA9374-0JK13	–	–	–	–
–	–	–	–	–	3VA9773-0JE43	–	–
–	3VA9270-0WC00		3VA9470-0WC00	–	–	–	–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



3 Mounting base

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

Note:
All bus connectors, bus connectors broadened and rear connections are Cu/Sn 6 r plated according to ISO 2093

2

Front bus connectors, with insulating plate, with phase barriers

- 3-pole and 4-pole bus connectors only permitted if used with phase barriers and insulating plate!
- Insulating plate is included in the connection technology scope of supply or can be ordered as a spare part (3VA9...-0W..0).
- Phase barriers are included in the connection technology scope of supply or can be ordered as a spare part (3VA9...-.WA00).

	Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness	
	3P	①	②	–	3 terminals, 2 phase barriers, 1 insulating plate	22 mm	0.9 inch	8 mm	0.3 inch
	4P	①	②	–	4 terminals, 3 phase barriers, 1 insulating plate	22 mm	0.9 inch	8 mm	0.3 inch

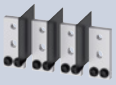
Front bus connectors, with insulating plate

- 3-pole and 4-pole bus connectors only permitted if used with phase barriers!
- Insulating plate is included in the connection technology scope of supply or can be ordered as a spare part (3VA9...-0W..0).

	Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness	
	1P	①	–	–	1 terminal	22 mm	0.9 inch	8 mm	0.3 inch
	3P	①	②	–	3 terminals, 1 insulating plate	32 mm 40 mm	1.3 inch 1.6 inch	10 mm 12.5 mm	0.4 inch 0.5 inch
	4P	①	②	–	4 terminals, 1 insulating plate	32 mm 40 mm	1.3 inch 1.6 inch	10 mm 12.5 mm	0.4 inch 0.5 inch

Front bus connectors, with phase barriers

- 3-pole and 4-pole bus connectors only permitted if used with phase barriers!
- Phase barriers are included in the connection technology scope of supply or can be ordered as a spare part (3VA9...-.WA00).

	Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness	
	3P	①	②	–	3 terminals, 2 phase barriers	50.8 mm	2.0 inch	15.9 mm	0.63 inch
	4P	①	②	–	4 terminals, 3 phase barriers	50.8 mm	2.0 inch	15.9 mm	0.63 inch

Front bus connectors

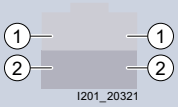
	Number of poles	Connection options			Scope of supply
	3P	①	–	–	6 terminals, 2 terminal cover **Note:** The bent connection brackets shown in the picture must be provided by the customer
					

System overview, page 2/20

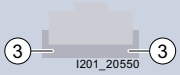
3VA51	3VA52	3VA53 3VA54	3VA61 3VA62	3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
3VA9133-0QB00	–	–	–	–	–	–	–	–
3VA9134-0QB00	–	–	–	–	–	–	–	–
3VA9131-0QB00	–	–	–	–	–	–	–	–
–	3VA9273-0QB00	–	3VA9273-0QB00	–	–	–	–	–
–	–	3VA9473-0QB00	–	3VA9473-0QB00	–	–	–	–
–	3VA9274-0QB00	–	3VA9274-0QB00	–	–	–	–	–
–	–	3VA9474-0QB00	–	3VA9474-0QB00	–	–	–	–
–	–	–	–	–	3VA9673-0QB00	–	–	–
–	–	–	–	–	3VA9674-0QB00	–	–	–
–	–	–	–	–	–	3VA9873-0QB00		–

System overview, page 2/20

Connection technology



① For mounting onto the circuit breaker
② For mounting on plug-in and withdrawable units



③ Mounting base

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

Note:
All bus connectors, bus connectors broadened and rear connections are Cu/Sn 6 r plated according to ISO 2093

2

Front bus connectors, for 100% rated MCCB

Number of poles	Connection options			Scope of supply
3P	①	–	–	3 terminals, 1 terminal cover **Note:** The bent connection brackets shown in the picture must be provided by the customer

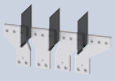
Front bus connectors broadened, with insulating plate

- 3-pole and 4-pole bus connectors broadened only permitted if used with insulating plate!
- Insulating plate is included in the connection technology scope of supply or can be ordered as a spare part (3VA9...-0W..0).

Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness	
3P	①	②	–	3 terminals, 1 insulating plate	60 mm	2.4 inch	12.5 mm	0.5 inch
4P	①	②	–	4 terminals, 1 insulating plate	60 mm	2.4 inch	12.5 mm	0.5 inch

Front bus connectors broadened, with phase barriers

- 3-pole and 4-pole bus connectors broadened only permitted if used with phase barriers!
- Phase barriers are included in the connection technology scope of supply or can be ordered as a spare part (3VA9...-.WA00).



Number of poles	Connection options			Scope of supply	Max. tap width		Max. tap thickness	
3P	①	②	–	3 terminals, 2 phase barriers	60 mm	2.4 inch	12.5 mm	0.5 inch
4P	①	②	–	4 terminals, 3 phase barriers	60 mm	2.4 inch	12.5 mm	0.5 inch

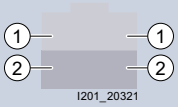
[1] For IEC applications up to 1000 A only. In addition, 3VA9872-0WA00 phase barriers and 3VA9803-0QA00 nut keeper kits are required.

System overview, page 2/20

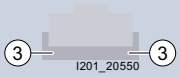
3VA51	3VA52	3VA53 3VA54	3VA61 3VA62	3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
–	–	–	–	–	–	3VA9873-0QH00		–
–	–	3VA9473-0QC00	–	3VA9473-0QC00	–	–	–	–
–	–	3VA9474-0QC00	–	3VA9474-0QC00	–	–	–	–
–	–	–	–	–	3VA9673-0QC00	3VA9603-0QC00 [1]	–	–
–	–	–	–	–	3VA9674-0QC00	–	–	–

System overview, page 2/20

Connection technology



① For mounting onto the circuit breaker
② For mounting on plug-in and withdrawable units



③ Mounting base

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

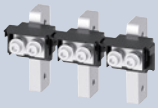
Note:
All bus connectors, bus connectors broadened and rear connections are Cu/Sn 6 r plated according to ISO 2093

2

Rear connection studs flat

	Number of poles	Connection options			Scope of supply
	1P	①	②	–	1 short connection stud flat 1 long connection stud flat
	3P	①	②	–	2 short connection studs flat, 1 long connection stud flat
	4P	①	②	–	2 short connection studs flat, 2 long connection studs flat

Rear connectors vertical

	Number of poles	Connection options			Scope of supply
	1P	①	–	–	1 rear connector
	3P	①	–	–	3 rear connectors
	4P	①	–	–	4 rear connectors

Rear connectors horizontal

	Number of poles	Connection options			Scope of supply
	3P	①	–	–	3 rear connectors
	4P	①	–	–	4 rear connectors

Rear connection studs round

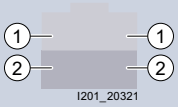
	Number of poles	Connection options			Scope of supply
	1P	①	②	–	1 short connection stud round 1 long connection stud round
	3P	①	②	–	1 long connection stud round, 2 short connection studs round
	4P	①	②	–	2 long connection studs round, 2 short connection studs round

System overview, page 2/20

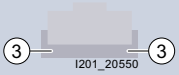
3VA51	3VA52	3VA53 3VA54	3VA61 3VA62	3VA63 3VA64	3VA65 3VA66	3VA57 3VA67	3VA55 3VA58 3VA68	3VA59 3VA69
3VA9131-0QE10	3VA9231-0QE10	3VA9471-0QE10	3VA9241-0QE10	3VA9471-0QE10	–	–	–	–
3VA9131-0QE20	3VA9231-0QE20	3VA9471-0QE20	3VA9241-0QE20	3VA9471-0QE20	–	–	–	–
3VA9133-0QE00	3VA9233-0QE00	3VA9473-0QE00	3VA9243-0QE00	3VA9473-0QE00	–	–	–	–
3VA9134-0QE00	3VA9234-0QE00	3VA9474-0QE00	3VA9244-0QE00	3VA9474-0QE00	–	–	–	–
–	–	–	–	–	–	3VA9773-0QE10	–	–
–	–	–	–	–	3VA9673-0QE00	3VA9773-0QE00	–	–
–	–	–	–	–	3VA9674-0QE00	–	–	–
–	–	–	–	–	3VA9673-0QE60	–	–	–
–	–	–	–	–	3VA9674-0QE60	–	–	–
3VA9131-0QF10	3VA9231-0QF10	3VA9471-0QF10	3VA9241-0QF10	3VA9471-0QF10	–	–	–	–
3VA9131-0QF20	3VA9231-0QF20	3VA9471-0QF20	3VA9241-0QF20	3VA9471-0QF20	–	–	–	–
3VA9133-0QF00	3VA9233-0QF00	3VA9473-0QF00	3VA9243-0QF00	3VA9473-0QF00	–	–	–	–
3VA9134-0QF00	3VA9234-0QF00	3VA9474-0QF00	3VA9244-0QF00	3VA9474-0QF00	–	–	–	–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



3 Mounting base

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

2

Circular conductor terminals, large, 1 cable

	Number of poles	Connection options			Scope of supply	Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
						Min.	Max.	Cu	Al [2]	
	2P	①	–	–	2 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.1
	3P	①	–	–	3 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.1
						AWG 2	350 kcmil	■	■	TA2.2
	4P	①	–	–	4 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.1
						AWG 2	350 kcmil	■	■	TA2.2

Circular conductor terminals, large with control wire taps, 1 cable

	Number of poles	Connection options			Scope of supply	Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
						Min.	Max.	Cu	Al [2]	
	2P	①	–	–	2 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.1
	3P	①	–	–	3 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.1
						AWG 2	350 kcmil	■	■	TA2.2
	4P	①	–	–	4 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.1
						AWG 2	350 kcmil	■	■	TA2.2

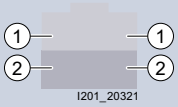
[1] All circular conductor terminals tested according to UL 486 A/B for Cu and Al cables
[2] Al cable tested according to IEC 60947-2 annex D

System overview, page 2/20

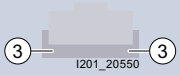
3VA51	3VA52	3VA53 3VA54	3VA61 3VA62	3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
3VA9132-0JJ12	–	–	–	–	–	–	–	–
3VA9133-0JJ12	–	–	–	–	–	–	–	–
–	3VA9233-0JJ13	–	3VA9243-0JJ13	–	–	–	–	–
3VA9134-0JJ12	–	–	–	–	–	–	–	–
–	3VA9234-0JJ13	–	3VA9244-0JJ13	–	–	–	–	–
3VA9132-0JC12	–	–	–	–	–	–	–	–
3VA9133-0JC12	–	–	–	–	–	–	–	–
–	3VA9233-0JC13	–	3VA9243-0JC13	–	–	–	–	–
3VA9134-0JC12	–	–	–	–	–	–	–	–
–	3VA9234-0JC13	–	3VA9244-0JC13	–	–	–	–	–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



3 Mounting base

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

2

Circular conductor terminals with control wire taps, 2 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
						Min.	Max.	Cu	Al [2]	
	3P	①	–	–	3 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.3
						2/0	600 kcmil	■	■	TA2.4
					3 single terminals, 1 terminal cover intermediate	400 kcmil	750 kcmil	■	–	TA4.1
						250 kcmil or 2 × 250 kcmil	750 kcmil	■	■	TA2.8
	3P	①	–	–	3 single terminals, 1 terminal cover short	4/0	600 kcmil	■	■	TA3.1
	4P	①	–	–	4 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.3
						2/0	600 kcmil	■	■	TA2.4
					4 single terminals, 1 terminal cover intermediate	400 kcmil	750 kcmil	■	–	TA4.1
						250 kcmil or 2 × 250 kcmil	750 kcmil	■	■	TA2.8
	4P	①	–	–	4 single terminals, 1 terminal cover short	4/0	600 kcmil	■	■	TA3.1

Circular conductor terminals with control wire taps, 2 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
						Min.	Max.	Cu	Al [2]	
	3P	①	–	–	3 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.3
						2/0	600 kcmil	■	■	TA2.4
					3 single terminals, 1 terminal cover intermediate	400 kcmil	750 kcmil	■	–	TA4.1
						250 kcmil or 2 × 250 kcmil	750 kcmil	■	–	TA2.8
	3P	①	–	–	3 single terminals, 1 terminal cover short	4/0	600 kcmil	■	■	TA3.1
	4P	①	–	–	4 single terminals, 1 terminal cover extended	AWG 4	300 kcmil	■	■	TA2.3
						2/0	600 kcmil	■	■	TA2.4
					4 single terminals, 1 terminal cover intermediate	400 kcmil	750 kcmil	■	–	TA4.1
						250 kcmil or 2 × 250 kcmil	750 kcmil	■	–	TA2.8
	4P	①	–	–	4 single terminals, 1 terminal cover short	4/0	600 kcmil	■	■	TA3.1

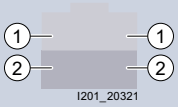
[1] All circular conductor terminals tested according to UL 486 A/B for Cu and Al cables
[2] Al cable tested according to IEC 60947-2 annex D
[3] Up to rated current 400 A

System overview, page 2/20

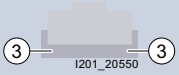
3VA51	3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
–	3VA9233-0JJ22	3VA9243-0JJ22	–	–	–	–	–
–	–	–	3VA9473-0JJ23	–	–	–	–
–	–	–	–	3VA9673-0JJ24	–	–	–
–	–	–	3VA9373-0JJ24 [3]	–	–	–	–
–	–	–	–	3VA9573-0JB23	–	–	–
–	3VA9234-0JJ22	3VA9244-0JJ22	–	–	–	–	–
–	–	–	3VA9474-0JJ23	–	–	–	–
–	–	–	–	3VA9674-0JJ24	–	–	–
–	–	–	3VA9374-0JJ24 [3]	–	–	–	–
–	–	–	–	3VA9574-0JB23	–	–	–
–	3VA9233-0JC22	3VA9243-0JC22	–	–	–	–	–
–	–	–	3VA9473-0JC23	–	–	–	–
–	–	–	–	3VA9673-0JC24	–	–	–
–	–	–	3VA9373-0JC24 [3]	–	–	–	–
–	–	–	–	3VA9573-0JG23	–	–	–
–	3VA9234-0JC22	3VA9244-0JC22	–	–	–	–	–
–	–	–	3VA9474-0JC23	–	–	–	–
–	–	–	–	3VA9674-0JC24	–	–	–
–	–	–	3VA9374-0JC24 [3]	–	–	–	–
–	–	–	–	3VA9574-0JG23	–	–	–

System overview, page 2/20

Connection technology



① For mounting onto the circuit breaker
② For mounting on plug-in and withdrawable units



③ Mounting base

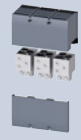
For a complete and valid configuration of your molded case circuit breaker, please use our online configurator at www.siemens.com/lowvoltage/3va-ul-configurator

2

Circular conductor terminals with control wire taps, 3 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section Min.	Cable cross-section Max.	Cu/AL stranded, class B [1] Cu	Cu/AL stranded, class B [1] Al [2]	Terminal short designation
	2P	①	–	–	3 single terminals, 1 terminal cover long	500 kcmil	750 kcmil	■	■	TA6.1
	3P	①	–	–	3 single terminals, 1 terminal cover short	4/0 120 mm²	400 kcmil 185 mm²	■	■	TA3.2
					3 single terminals, 1 terminal cover extended	500 kcmil	750 kcmil	■	■	TA4.2
					3 single terminals, 1 terminal cover long	500 kcmil	750 kcmil	■	■	TA6.1
	4P	①	–	–	4 single terminals, 1 terminal cover short	4/0 120 mm²	400 kcmil 185 mm²	■	■	TA3.2
					4 single terminals, 1 terminal cover extended	500 kcmil	750 kcmil	■	■	TA4.2

Circular conductor terminals with control wire taps, 3 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section Min.	Cable cross-section Max.	Cu/AL stranded, class B [1] Cu	Cu/AL stranded, class B [1] Al [2]	Terminal short designation
	3P	①	–	–	3 single terminals, 1 terminal cover short	4/0 120 mm²	400 kcmil 185 mm²	■	■	TA3.2
	3P	①	–	–	3 single terminals, 1 terminal cover extended	500 kcmil	750 kcmil	■	■	TA4.2
	4P	①	–	–	4 single terminals, 1 terminal cover short	4/0 120 mm²	400 kcmil 185 mm²	■	■	TA3.2
	4P	①	–	–	4 single terminals, 1 terminal cover extended	500 kcmil	750 kcmil	■	■	TA4.2

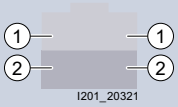
[1] All circular conductor terminals tested according to UL 486 A/B for Cu and Al cables
[2] Al cable tested according to IEC 60947-2 annex D

System overview, page 2/20

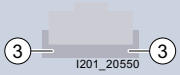
3VA51	3VA52	3VA53 3VA54	3VA61 3VA62	3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
–	–	–	–	–	–	3VA9772-0JJ34	–	–
–	–	–	–	–	3VA9673-0JB32	–	–	–
–	–	–	–	–	3VA9673-0JJ34	–	–	–
–	–	–	–	–	–	3VA9773-0JJ34	–	–
–	–	–	–	–	3VA9674-0JB32	–	–	–
–	–	–	–	–	3VA9674-0JJ34	–	–	–
–	–	–	–	–	3VA9673-0JG32	–	–	–
–	–	–	–	–	3VA9673-0JC34	–	–	–
–	–	–	–	–	3VA9674-0JG32	–	–	–
–	–	–	–	–	3VA9674-0JC34	–	–	–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



3 Mounting base

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

2

Circular conductor terminals, 4 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section Min.	Cable cross-section Max.	Cu/AL stranded, class B [1] Cu	Cu/AL stranded, class B [1] Al [2]	Terminal short designation
	2P	①	–	–	2 single terminals, 1 terminal cover long	1/0	500 kcmil	■	■	TA6.2
	3P	①	–	–	3 single terminals, 1 terminal cover intermediate	4/0 120 mm²	500 kcmil 240 mm²	■	■	TA4.3
					3 single terminals, 1 terminal cover extended	4/0 120 mm²	600 kcmil 300 mm²	■	■	TA4.4
					3 single terminals, 1 terminal cover long	1/0	500 kcmil	■	■	TA6.2
	4P	①	–	–	4 single terminals, 1 terminal cover intermediate	4/0 120 mm²	500 kcmil 240 mm²	■	■	TA4.3
					4 single terminals, 1 terminal cover extended	4/0 120 mm²	600 kcmil 300 mm²	■	■	TA4.4

Circular conductor terminals with control wire taps, 4 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section Min.	Cable cross-section Max.	Cu/AL stranded, class B [1] Cu	Cu/AL stranded, class B [1] Al [2]	Terminal short designation
	3P	①	–	–	3 single terminals, 1 terminal cover intermediate	4/0 120 mm²	500 kcmil 240 mm²	■	■	TA4.3
					3 single terminals, 1 terminal cover extended	4/0 120 mm²	600 kcmil 300 mm²	■	■	TA4.4
					3 single terminals, 1 terminal cover long	1/0	500 kcmil	■	■	TA6.2
	4P	①	–	–	4 single terminals, 1 terminal cover intermediate	4/0 120 mm²	500 kcmil 240 mm²	■	■	TA4.3
					4 single terminals, 1 terminal cover extended	4/0 120 mm²	600 kcmil 300 mm²	■	■	TA4.4

Circular conductor terminals with control wire taps, 4 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section Min.	Cable cross-section Max.	Cu/AL stranded, class B [1] Cu	Cu/AL stranded, class B [1] Al [2]	Terminal short designation
	3P	①	–	–	3 single terminals, 1 terminal cover long	1/0 50 mm²	500 kcmil 240 mm²	■	■	TA6.3

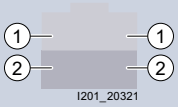
[1] All circular conductor terminals tested according to UL 486 A/B for Cu and Al cables
[2] Al cable tested according to IEC 60947-2 annex D

System overview, page 2/20

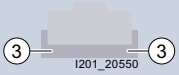
3VA51	3VA52	3VA53 3VA54	3VA61 3VA62	3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
–	–	–	–	–	–	3VA9772-0JJ43	–	–
–	–	–	–	–	3VA9673-0JJ43	–	–	–
–	–	–	–	–	3VA9673-0JJ44	–	–	–
–	–	–	–	–	–	3VA9773-0JJ43	–	–
–	–	–	–	–	3VA9674-0JJ43	–	–	–
–	–	–	–	–	3VA9674-0JJ44	–	–	–
–	–	–	–	–	3VA9673-0JC43	–	–	–
–	–	–	–	–	3VA9673-0JC44	–	–	–
–	–	–	–	–	–	3VA9773-0JC43	–	–
–	–	–	–	–	3VA9674-0JC43	–	–	–
–	–	–	–	–	3VA9674-0JC44	–	–	–
–	–	–	–	–	–	3VA9773-0JM43	–	–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



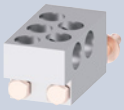
3 Mounting base

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

2

Circular conductor terminals for mounting base, for UL applications only

- **Note:**
  For more information, see operating instructions L1V30821788001 at www.siemens.com/lowvoltage/manuals
- Scope of supply:
  - 1 single terminal
  - 1 mounting screw kit
  - Individually packed

	Connection	Connection options			Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
					Min.	Max.	Cu	Al	
	4 cables	–	–	③	600 kcmil	750 kcmil	■	■	TA7.2
	5 cables	–	–	③	300 kcmil	600 kcmil	■	■	TA7.3
	6 cables	–	–	③	300 kcmil	600 kcmil	■	■	TA7.4

Circular conductor terminals for assembly kit

	Number of poles	Connection options			Scope of supply	Cable cross-section		Cu/AL stranded, class B [1]		Terminal short designation
						Min.	Max.	Cu	Al	
	3P	①	–	–	3 single terminals, 3 mounting screws	1/0	750 kcmil	■	■	TA7.1

Assembly kit for multiple feed-in terminals

	Use	Number of poles
	For multiple feed-in terminals TA7.1 (3VA9773-0JJ64)	3P

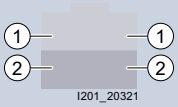
[1] Al cable only tested according to UL 486 A/B

System overview, page 2/20

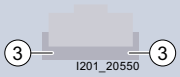
3VA51	3VA52	3VA53 3VA54	3VA61 3VA62	3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
–	–	–	–	–	–	–	3VA9771-0JJ44	–
–	–	–	–	–	–	–	3VA9771-0JJ53	–
–	–	–	–	–	–	–	3VA9871-0JJ63	
–	–	–	–	–	–	3VA9773-0JJ64		–
–	–	–	–	–	–	3VA9873-0WL00		–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



3 Mounting base

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

2

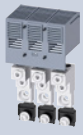
Circular conductor terminals, 6 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section Min.	Cable cross-section Max.	Cu/AL stranded, class B [1] Cu	Cu/AL stranded, class B [1] Al	Terminal short designation
	2P	①	–	–	2 single terminals, 1 terminal cover extended	AWG 14	AWG 2	■	■	TA2.5
	3P	①	–	–	3 single terminals, 1 terminal cover extended	AWG 14	AWG 2	■	■	TA2.5 TA2.6 TA2.7
	4P	①	–	–	4 single terminals, 1 terminal cover extended	AWG 14	AWG 2	■	■	TA2.5 TA2.6 TA2.7

Copper circular conductor terminals, 2 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section, Cu stranded, class B Min.	Cable cross-section, Cu stranded, class B Max.	Terminal short designation
	3P	①	–	–	3 single terminals, 1 terminal cover extended	2/0	600 kcmil	TC2.4
	4P	①	–	–	4 single terminals, 1 terminal cover extended	2/0	600 kcmil	TC2.4

Copper circular conductor terminals with control wire taps, 2 cables

	Number of poles	Connection options			Scope of supply	Cable cross-section, Cu stranded, class B Min.	Cable cross-section, Cu stranded, class B Max.	Terminal short designation
	3P	①	–	–	3 single terminals, 1 terminal cover extended	2/0	600 kcmil	TC2.4
	4P	①	–	–	4 single terminals, 1 terminal cover extended	2/0	600 kcmil	TC2.4

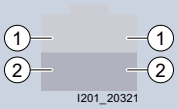
[1] Al cable only tested according to UL 486 A/B

System overview, page 2/20

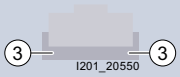
3VA51	3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
3VA9132-0JF60	–	–	–	–	–	–	–
3VA9133-0JF60				–	–	–	–
	3VA9233-0JF60	3VA9243-0JF60					
			3VA9373-0JF60				
3VA9134-0JF60				–	–	–	–
	3VA9234-0JF60	3VA9244-0JF60					
			3VA9374-0JF60				
–	–	–	3VA9473-0JE23	–	–	–	–
–	–	–	3VA9474-0JE23	–	–	–	–
–	–	–	3VA9473-0JL23	–	–	–	–
–	–	–	3VA9474-0JL23	–	–	–	–

System overview, page 2/20

Connection technology



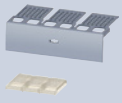
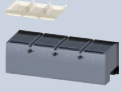
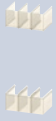
1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



3 Mounting base

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

2

							3VA51
Copper circular conductor terminals with auxiliary conductor connection, 3 cables							
	Number of poles	Connection options		Scope of supply	Cable cross-section, Cu stranded, class B Min.	Cable cross-section, Cu stranded, class B Max.	Terminal short designation	
	3P	① – –		3 single terminals, 1 terminal cover short	250 kcmil	400 kcmil	TC3.2	–
	4P	① – –		4 single terminals, 1 terminal cover short	250 kcmil	400 kcmil	TC3.2	–
Copper circular conductor terminals with auxiliary conductor connection, 4 cables								
	Number of poles	Connection options		Scope of supply	Cable cross-section, Cu stranded, class B Min.	Cable cross-section, Cu stranded, class B Max.	Terminal short designation	
	3P	① – –		3 single terminals, 1 terminal cover intermediate	1/0	500 kcmil	TC6.2	–
					4/0	500 kcmil	TC4.3	–
	4P	① – –		4 single terminals, 1 terminal cover intermediate	4/0	500 kcmil	TC4.3	–
Copper circular conductor terminals for mounting base, for UL only								
	Connection	Connection options		Scope of supply	Cable cross-section, Cu stranded, class B Min.	Cable cross-section, Cu stranded, class B Max.	Terminal short designation	
	5 cables	– – ③		1 single terminal, 1 mounting screw kit	300 kcmil	600 kcmil	TC7.3	–
Terminal covers for fixed-mounted, plug-in and withdrawable units								
	Version	Number of poles	Mounting location					
	Short	1P	①	–	–			3VA9131-0WD10
		3P	①	–	–			3VA9131-0WD30
		4P	①	–	–			3VA9131-0WD40
	Intermediate	3P	①	–	–			–
		4P	①	–	–			–
	Extended	2P	①	–	–			3VA9131-0WF20
		3P	①	–	–			3VA9131-0WF30
		4P	①	–	–			3VA9131-0WF40
	Broadened	3P	①	–	–			–
		4P	①	–	–			–
	Long	3P	①	–	–			–
								–
								–

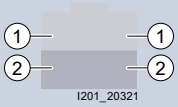
[1] Suitable for circular conductor terminals 2/3/4 cables

System overview, page 2/20

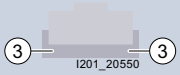
3VA52	3VA61 3VA62	3VA53 3VA54	3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
–	–	–	–	3VA9673-0JK32	–	–	–
–	–	–	–	3VA9674-0JK32	–	–	–
–	–	–	–	–	3VA9773-0JE43	–	–
–	–	–	–	3VA9673-0JL43	–	–	–
–	–	–	–	3VA9674-0JL43	–	–	–
–	–	–	–	–	–	3VA9871-0JE53	
–	–	–	–	–	–	–	–
3VA9271-0WD30		3VA9471-0WD30		3VA9671-0WD30		3VA9871-0WD30	
3VA9271-0WD40		3VA9471-0WD40		3VA9671-0WD40	–	–	–
–	–	–	–	3VA9671-0WE30 [1]	–	–	–
–	–	–	–	3VA9671-0WE40 [1]	–	–	–
–	–	–	–	–	–	–	–
3VA9271-0WF30		3VA9471-0WF30		3VA9671-0WF30 [1]	–	–	–
3VA9271-0WF40		3VA9471-0WF40		3VA9671-0WF40 [1]	–	–	–
–	–	3VA9471-0WG30		–	–	–	–
–	–	3VA9471-0WG40		–	–	–	–
–	–	–	–	–	3VA9771-0WP30	–	–
–	–	–	–	–	3VA9871-0WP30		–
–	–	–	–	–	3VA9871-0WF30		–

System overview, page 2/20

Connection technology



1 For mounting onto the circuit breaker
2 For mounting on plug-in and withdrawable units



3 Mounting base

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

2

					3VA51
Terminal covers for plug-in and withdrawable units (spare part)					
• To provide circuit breaker touch protection • For mounting to the molded case circuit breaker					
	Number of poles	Mounting location			
	3P	①	–	–	–
	4P	①	–	–	–
Insulating plates specially for fixed-mounted versions					
	Version	Number of poles	Mounting location		
	Standard	2P	①	–	3VA9131-0WJ20
		3P	①	–	3VA9131-0WJ30
		4P	①	–	3VA9131-0WJ40
	Broadened	3P	①	–	–
		4P	①	–	–
Phase barriers					
	Scope of supply	Mounting location			
	2 phase barriers	①	②	–	3VA9132-0WA00

System overview, page 2/20

	3VA61	3VA53	3VA63	3VA55 3VA65	3VA57	3VA58	3VA59
3VA52	3VA62	3VA54	3VA64	3VA66	3VA67	3VA68	3VA69
–	3VA9143-0KB01	–	3VA9343-0KB01	–	–	–	–
–	3VA9144-0KB01	–	3VA9344-0KB01	–	–	–	–
–	–	–	–	–	–	–	–
3VA9271-0WJ30		3VA9471-0WJ30		–	–	–	–
3VA9271-0WJ40		3VA9471-0WJ40		–	–	–	–
–	–	3VA9471-0WJ30		–	–	–	–
–	–	3VA9471-0WJ40		–	–	–	–
3VA9272-0WA00		3VA9472-0WA00		3VA9672-0WA00	3VA9872-0WA00		

System overview, page 2/20

Plug-in and withdrawable technology

The main differences between plug-in units and withdrawable units are convenience of operation and the potential for functional expansion.

Thanks to plug-in and withdrawable technology:

- Molded case circuit breakers can be replaced quickly and easily for overhauls or servicing
- Electrical isolation and clearly visible isolating distance
- The socket can be interlocked to prevent the 3VA molded case circuit breaker from being plugged in or moved in
- Identical connection technology for all molded case circuit breakers, whether they are plug-in, withdrawable or fixed-mounted units

In addition, withdrawable technology offers:

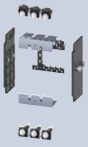
- Transmission of the position of the molded case circuit breaker via communication (CONNECT, TEST, DISCONNECT)
- The ability to test the auxiliary and control circuit connections in the test position of the withdrawable unit, without contacted main conducting paths
- Transmission of the state of the molded case circuit breaker (ON, OFF, TRIP) via the COM060 communication module

Note:

Plug-in and withdrawable technology are only available for the 3VA6 molded case circuit breaker with electronic trip units. The plug-in and draw-out sockets of circuit breaker sizes 250 A to 400 A (3VA61, 3VA62 and 3VA63) can be equipped with all available terminal types.

For circuit breaker size 600 A (3VA64), special plug-in and withdrawable bases are available. Broadened connecting bars are supplied for this purpose. For temperature reasons, only this connection technology can be used for this size of circuit breaker. 100% rated breakers can never be used with plug-in or withdrawable technology for temperature reasons.

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

		3VA61 3VA62	3VA63	3VA64
Withdrawable units, complete kits				
	• **Scope of supply:** – Draw-out socket – Withdrawable unit, conversion kit – Mounting screw kit • **Note:** The crank for the withdrawable unit must be ordered separately.			
	Number of poles			
	3P	3VA9143-0KD00	3VA9343-0KD00	3VA9443-0KD00
	4P	3VA9144-0KD00	3VA9344-0KD00	3VA9444-0KD00
Withdrawable units, conversion kits				
	• **Scope of supply:** – Screw-fastened terminal covers for molded case circuit breakers – Side panels – Plug-in contacts – Cable cages – Autotrip plunger			
	Number of poles			
	3P	3VA9143-0KD10	3VA9343-0KD10	
	4P	3VA9144-0KD10	3VA9344-0KD10	
Plug-in units, complete kits				
	• **Scope of supply:** – Plug-in base – Plug-in unit, conversion kit – Mounting screw kit			
	Number of poles			
	3P	3VA9143-0KP00	3VA9343-0KP00	3VA9443-0KP00
	4P	3VA9144-0KP00	3VA9344-0KP00	3VA9444-0KP00

System overview, page 2/20

	3VA61		
	3VA62	3VA63	3VA64
Plug-in units, conversion kits			
 • **Scope of supply:** – Screw-fastened terminal covers for molded case circuit breakers – Plug-in contacts – Cable cages – Autotrip plunger			
Number of poles			
3P	3VA9143-0KP10	3VA9343-0KP10	
4P	3VA9144-0KP10	3VA9344-0KP10	
Cable cages for plug-in/withdrawable units			
 • Cable duct for routing of the required cables from the internal accessories on the back of the circuit breaker			
Number of poles			
3P/4P	3VA9167-0KB02	–	–
Door feedthroughs			
			
Number of poles			
3P/4P	3VA9147-0KT00	3VA9347-0KT00	
Spare part autotrip plunger			
			
Version			
Plug-in unit	3VA9267-0KP81	3VA9457-0KP81	
Withdrawable unit	3VA9267-0KD81	3VA9457-0KD81	

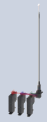
System overview, page 2/20

Plug-in and withdrawable technology

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

Accessories

Communication links for withdrawable unit



Scope of supply	Article No.
Set of cables with three special position signaling switches, 3VA9987-0KC10 connecting cables	3VA9977-0KC00

Position signaling switches for withdrawable unit and plug-in unit

	Article No.
	3VA9977-0KB00

Connecting cables

Use	Article No.
Connection of position signaling switches for communication with COM060	3VA9987-0KC10

Cranks for withdrawable units

Version	Scope of supply	Article No.
Insulated	Including crank holder	3VA9987-0KD81

Auxiliary circuit connectors

- Each auxiliary circuit connector is designed for 4 cables.

Version	Article No.
For all withdrawable units	3VA9977-0KD80
For all plug-in units	3VA9977-0KP80

Cylinder locks

- **Scope of supply:** 1 lock with 2 keys
- For locking or interlocking
- For installation in all rotary operators with a shaft stub
- For mounting in the adapter kit for the accessories compartment

Key	Lock number	Article No.
1	1	3VA9980-0VL10
3	3	3VA9980-0VL30
4	4	3VA9980-0VL40

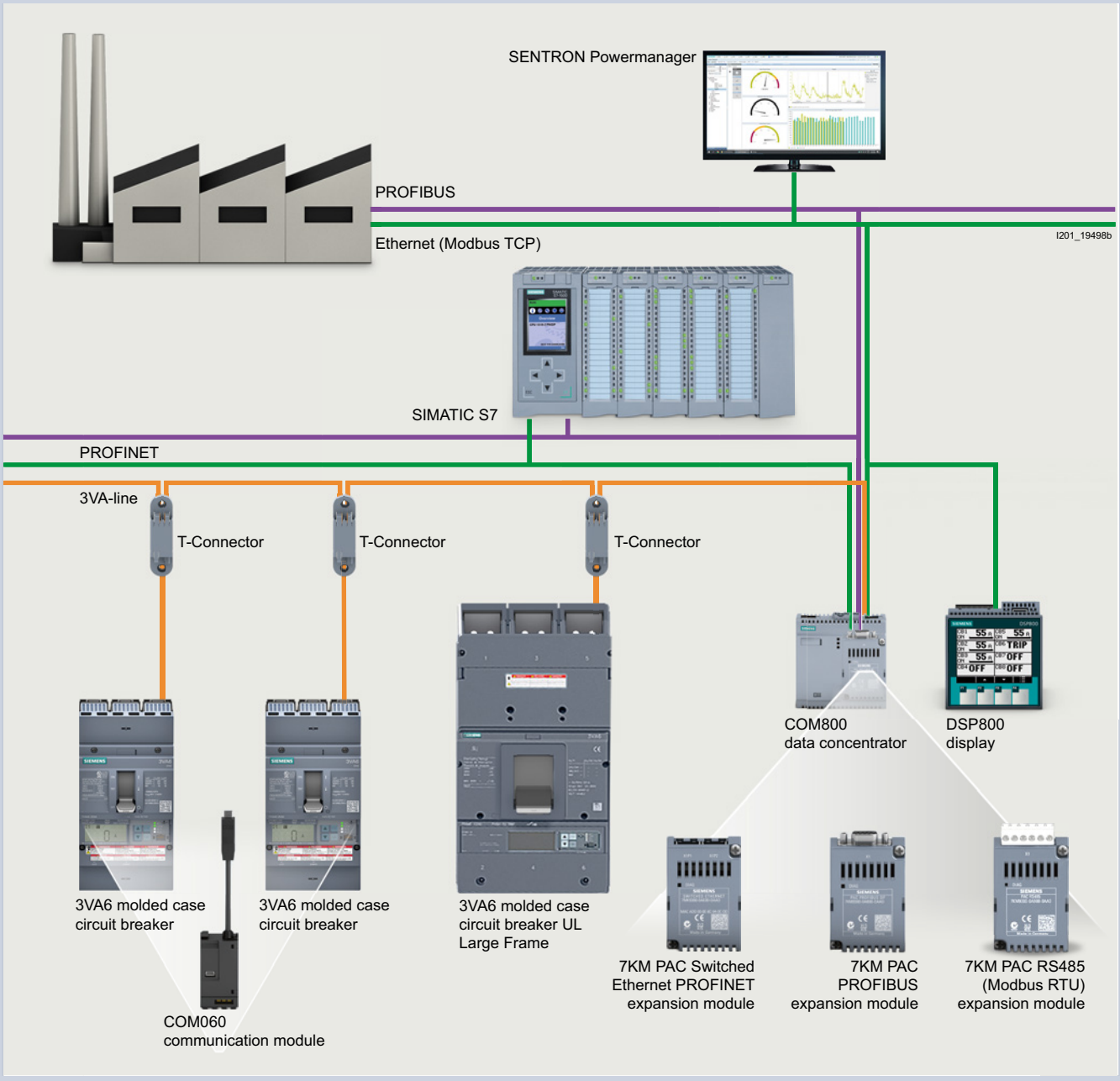
Cylinder lock adapters for withdrawable units

- To prevent unauthorized withdrawal or insertion of the circuit breaker into the withdrawable unit
- Circuit breaker can be locked in the CONNECT, TEST and DISCONNECT positions

Use	Article No.
For fitting a cylinder lock in the right-hand side wall of the withdrawable unit	3VA9970-0LF40

System overview, page 2/20

Communication



System overview, page 2/20

Communication

Metering function [1]			ETU 5-series	ETU 8-series	Display in ETU	Display DSP800	Communication COM800/ COM100
Current							
Phase and neutral conductor currents	I_1, I_2, I_3, I_N	A	■	■	□	□	■
Residual current to ground	I_g	A	■	■	□	□	■
Phase with highest load		A	■	■	□	□	■
Average value over the three phase currents	$I_{LAVG} = (I_1 + I_2 + I_3)/3$	A	–	■	–	□	■
Asymmetry of the phase currents	I_{nba}	%	–	■	–	□	■
THD of the 3 phases	$THDI_1$, $THDI_2$, $THDI_3$	%	–	■	–	□	■
Voltage							
Phase voltages incl. average value	U_{12}, U_{23}, U_{31}, U_{phavg}	V	–	■	□	□	■
Voltages to N conductor incl. average value	U_{1N}, U_{2N}, U_{3N}, U_{Navg}	V	–	■	–	□	■
Voltage unbalance		%	–	■	–	□	■
THD phase/phase and phase/N	$THDI_1$, $THDI_2$, $THDI_3$	%	–	■	–	□	■
Power							
Active power, total and per phase	P_1, P_2, P_3, P_{tot}	kW	–	■	□ (P_{tot})	□	■
Apparent power, total and per phase	S_1, S_2, S_3, S_{tot}	kVA	–	■	–	□	■
Reactive power, total and per phase	Q_1, Q_2, Q_3, Q_{tot}	kVAr	–	■	□	□	■
Power factor of the fundamental	P_{F1}, P_{F2}, P_{F3}, P_{Favg}		–	■	□ (P_{Favg})	□	■
Energy							
Active energy, infeed and feedback	E_p	kWh	–	■	□	□	■
Reactive energy, infeed and feedback	E_q	kVArh	–	■	–	□	■
Apparent energy	E_s	kVAh	–	■	–	□	■
Frequency							
Present frequency	f	Hz	–	■	□	□	■
Min/max pointer function							
Min./max. current, voltage, power	With time stamp	–	–	–	–	–	■
Condition monitoring [2]							
Operating cycles counter	ON/OFF cycle		■	■	–	–	■
Operating hours		h	■	■	–	–	■
Trip counter	Differentiated in trip reasons		■	■	–	–	■
Health indicator [3]	Incl. contact state	%	■	■	■	–	■
Remaining life time [3]		Time	■	■	–	–	■

■ Available □ Displayable – Not available

[1] Depending on ETU version
[2] Only available with continuous external power supply and COM060 and COM800/100 communication interfaces
[3] Firmware 4.4 or higher of ETU, COM060 and COM800/100 required. Not for the 3VA57, 3VA58, 3VA59, 3VA67, 3VA68 and 3VA69

		3VA61 3VA62	3VA63 3VA64 3VA65 3VA66	3VA67 3VA68 3VA69
COM060 communication modules				
	• For mounting in the right-hand accessories compartment of the 3VA6 molded case circuit breaker (including ETU power supply) • Including a T-connector			
	Use			
	Communication to the COM800/COM100 data concentrator via 3VA line	3VA9177-0TB10	3VA9377-0TB10	Already integrated
24 V modules				
	• 24 V DC • For mounting in the right-hand accessories compartment of the 3VA6			
	Use			
	Optional energy supply for the ETU, also includes continuous operation of the ETU display and the metering function of the ETU 8-series	3VA9177-0TB50	3VA9377-0TB50	Already integrated

System overview, page 2/20

Data concentrators

COM800 data concentrators

Version	Article No.
Central communication module for connection of up to eight 3VA6 molded case circuit breakers via the 3VA line, Ethernet 10/100 Mbps interface, module slot for inserting an optional PROFIBUS DP, PROFINET or RS485 module, 2 terminating resistors	3VA9977-0TA10

COM100 data concentrators

Version	Article No.
Central communication module for connection of a 3VA6 molded case circuit breaker via the 3VA line, Ethernet 10/100 Mbps interface, module slot for inserting an optional PROFIBUS DP, PROFINET or RS485 module, 2 terminating resistors	3VA9977-0TA20

7KM PAC PROFIBUS DP expansion modules

Use	Article No.
Used for connecting the COM800/COM100 data concentrator, and the 3VA molded case circuit breakers connected to it, to PROFIBUS DPV1. Supplies the state and measured variables of the 3VA molded case circuit breaker for the PROFIBUS DP master. Receives information (e.g. commands) from the PROFIBUS DP master and transmits them to the 3VA molded case circuit breaker.	7KM9300-0AB01-0AA0

7KM PAC Switched Ethernet PROFINET expansion modules

Use	Article No.
Used for connecting the COM800/COM100 data concentrator, and the connected 3VA molded case circuit breakers, to PROFINET via two Ethernet interfaces. Supplies the state and measured variables of the 3VA molded case circuit breakers to PROFINET via the PROFINET IO, PROFIenergy and Modbus TCP protocols.	7KM9300-0AE02-0AA0

7KM PAC RS485 Modbus RTU expansion modules

Use	Article No.
Used for connecting the COM800/COM100 data concentrator, and the 3VA molded case circuit breakers connected to it, to Modbus RTU. Supplies the state and measured variables of the 3VA molded case circuit breaker for the Modbus RTU master. Receives information (e.g. commands) from the Modbus RTU master and transmits them to the 3VA molded case circuit breaker.	7KM9300-0AM00-0AA0

System overview, page 2/20

Communication

Interfaces

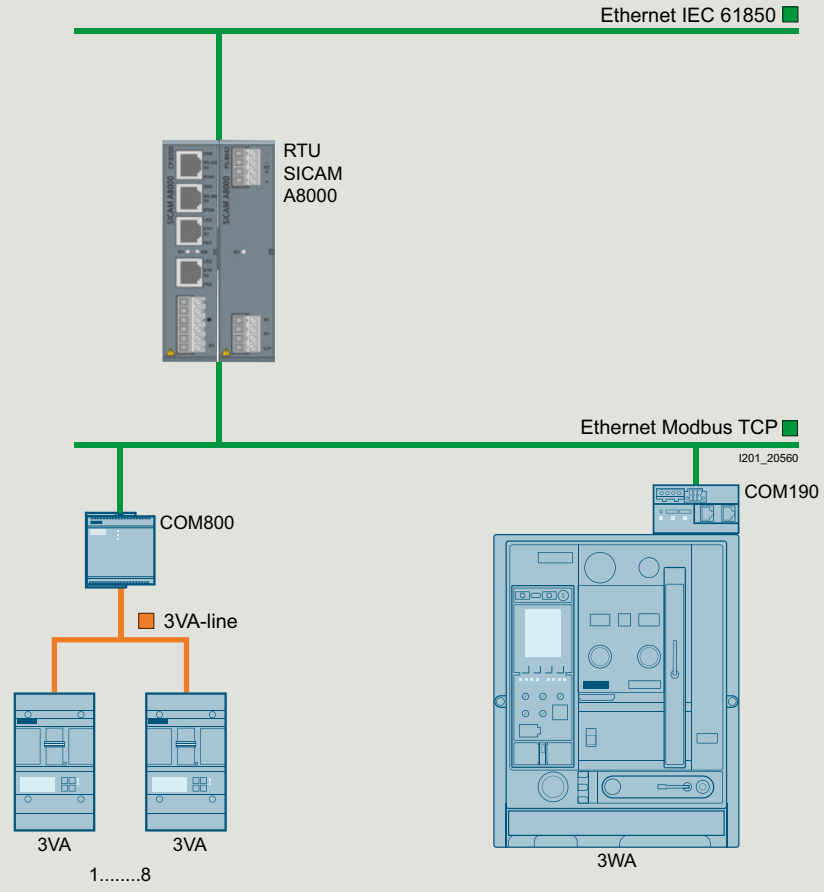
Interfaces to IEC 61850

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

Type	Processor assembly	Article No.
SICAM CP-8021 [1]	–	6MF2802-1AA00
SICAM CP-8031 [2]	–	6MF2803-1AA00
SICAM CP-8050 [3]	–	6MF2805-0AA00
SICAM PS-8620	24 ... 60 V DC (12 W)	6MF2862-0AA00
SICAM PS-8622	110 ... 220 V DC (12 W)	6MF2862-2AA00

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

You will find further information at:
www.siemens.com/sicam-a8000
For the SICAM CP-8021, SICAM CP-8031 and SICAM CP-8050, predefined modules were created to reduce commissioning work to a minimum.
The modules can be obtained free of charge via SiePortal www.siemens.com/lowvoltage/product-support (109816057).



System overview, page 2/20

Accessories for communication

T-connectors (spare part)

Use	Article No.
Provides a stub connection to the COM060 and loops through to the next circuit breaker. Including connection adapter for mounting on the 3VA6 circuit breaker enclosure	3VA9987-0TG10

DIN-rail adapters

Use	Article No.
For snapping the T-connector onto a DIN rail	3VA9987-0TG11

Prefabricated connecting cables, T-connector – T-connector or T-connector – COM800/COM100

Length	Article No.
0.4 m	3VA9987-0TC10
1 m	3VA9987-0TC20
2 m	3VA9987-0TC30
4 m	3VA9987-0TC40

Prefabricated connecting cables for extending the COM060 – T-connector stub connection

Length	Article No.
0.4 m	3VA9987-0TF20
0.8 m	3VA9987-0TF10

Additional bus terminating resistors

Article No.
3VA9987-0TE10

Voltage tap to external N conductors

Use	Article No.
Cable for connection of the neutral point for the metering function of the 8-series ETU, length 1.5 m	3VA9987-0UC10

External current transformers as straight-through transformers

Use	Rated current I_n	Article No.
Connection of an external current transformer for the N conductor for 3-pole 3VA6 molded case circuit breakers for 5-series and 8-series ETUs (ETU850, ETU856, ETU860), including connecting cables	25 ... 150 A	3VA9077-0NA10
	160 ... 350 A	3VA9177-0NA10
	400 ... 600 A	3VA9377-0NA10
	600 ... 1000 A	3VA9677-0NA10
	1600/2000 A	3VA9877-0NA10

Display

Display DSP800 for connection to COM800/COM100

Use	Article No.
For displaying status, measured values and parameters of up to 8 3VA6 molded case circuit breakers. Connection to the COM800/COM100 via Ethernet for displaying the information of the COM800/COM100 and the connected 3VA6 molded case circuit breakers.	3VA9977-0TD10

System overview, page 2/20

Communication

External function box

EFB300 external function boxes

- 4 digital outputs for information output
- 1 digital input
- ZSI functionality
- S0 interface
- Including cable 1.5 m in length

Use	Article No.
For connection to the ETU of 3VA6 molded case circuit breakers	3VA9977-0UA10

Connecting cables for EFB300

Length	Article No.
1.5 m	3VA9987-0UB10
3.0 m	3VA9987-0UB20

Maintenance mode box

MMB300 maintenance mode boxes

- 2 digital outputs
- 1 digital input
- 1 3VA-line interface
- Including cable 1.5 m in length

Use	Article No.
Series connection of up to eight 3VA6 molded case circuit breakers to one MMB300 maintenance mode box for activating the Dynamic Arc Sentry Mode (DAS Mode) of the molded case circuit breaker	3VA9977-0UF10

Test devices

TD300 test devices

Use	Connection	Article No.
For activation of the ETU and initiation of a test tripping operation	On the front interface of the ETU	3VA9977-0MA10

TD400 test devices [1)]

- Energy supply via batteries or the USB-C interface
- USB-C interface for connecting a PC with SENTRON Powerconfig
- Bluetooth interface for connection to a PC, smartphone or tablet
- ETU parameterization
- Including adapter and connecting cable to 3VA2 molded case circuit breaker and IEC 3WL (ETU Release 2)
- Including case

Connection	Article No.
On the front interface of the ETU (3VA and IEC 3WL ETU Release 2)	3VW9011-0AT40

TD500 test devices

- USB interface for connecting a PC with SENTRON Powerconfig
- Including external power supply
- Including connecting cable to 3VA2 molded case circuit breaker

Use	Connection	Article No.
Initiation of various test tripping operations (LSING), ETU parameterization	On the front interface of the ETU	3VA9977-0MB10

External power supplies for TD500 (spare part)

Voltage	Article No.
110 ... 240 V AC	3VA9987-0MX10

Connecting cables for connecting TD500 to 3VA6 molded case circuit breakers (spare part)

	Article No.
	3VA9977-0MY10

[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

System overview, page 2/20

System overview, page 2/20

Locking, blocking and interlocking

		3VA51	3VA52	3VA61 / 3VA62	3VA53 / 3VA54 / 3VA63 / 3VA64
Locking					
• The locking provisions make it possible to lock the 3VA molded case circuit breakers in either the OFF or the ON operating position.					
Version					
 Cylinder lock	Key 1 (lock number 1)	3VA9980-0VL10			
	Key 3 (lock number 3)	3VA9980-0VL30			
	Key 4 (lock number 4)	3VA9980-0VL40			
 Adapter kit for mounting the cylinder lock (type RONIS) in the accessories compartment of the molded case circuit breaker		3VA9137-0LF10	3VA9237-0LF10	3VA9147-0LF10	3VA9347-0LF10
 Blocking device for handle		3VA9038-0LB10		3VA9378-0LB10	
 Locking provision for handle		3VA9037-0LB11	–		–

System overview, page 2/20

	3VA57 3VA58 3VA59
3VA55 3VA65 3VA66	3VA67 3VA68 3VA69

Locking

		Use in	Locking in OFF position	Locking in ON position	Front mounting	Rear mounting	Interlocked breakers
3VA9980-0VL10	–	Breakers, motor operators, manual operators, withdrawable technology	■	■	■	–	–
3VA9980-0VL30	–						
3VA9980-0VL40	–						
3VA9577-0LF10	–	Circuit breaker	■	■	■	–	–
3VA9578-0LB10	3VA9877-0LB10	Circuit breaker	■	■	■	–	–
–	3VA9877-0LB11	Circuit breaker	■	■	■	–	–

System overview, page 2/20

Locking, blocking and interlocking

Interlocking

- Using interlocking technology, it is possible to mutually interlock two or more molded case circuit breakers.
- The interlock system is designed to ensure that no more than one molded case circuit breaker can be operated at a time.
- The following methods of interlocking can be used on 3VA molded case circuit breakers:
  - Front interlock
  - Rear interlock

Version

		3VA51	3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3VA64
Cylinder lock	Key 1 (lock number 1)	3VA9980-0VL10			
	Key 3 (lock number 3)	3VA9980-0VL30			
	Key 4 (lock number 4)	3VA9980-0VL40			
Sliding bar interlock for interlocking 2 circuit breakers		3VA9138-0VF30	3VA9238-0VF30	3VA9148-0VF30	3VA9348-0VF30
Handle interlocking module with Bowden cable	One handle interlocking module is required for each circuit breaker. A Bowden cable must be ordered separately.	3VA9137-0VF10	3VA9237-0VF10	3VA9147-0VF10	3VA9347-0VF10
Bowden cable	Length 0.6 m	3VA9980-0VC10			
	Length 1.0 m	3VA9980-0VC20			
	Length 1.5 m	3VA9980-0VC30			
Rear interlock with rod	Circuit breaker, fixed-mounted	3VA9078-0VM10			
	Plug-in/withdrawable technology	3VA9078-0VM30			
	Circuit breaker, fixed-mounted	–	–	–	–
Mounting frame for rear interlock with rod for fixed-mounted version	Profile rails (2 units)	3VA9078-0VK10			
	Mounting plate	3VA9138-0VK20	3VA9238-0VK20	3VA9248-0VK20	3VA9448-0VK20

[1] Contains mounting plate and profile rails

System overview, page 2/20

	3VA57 3VA58 3VA59	**Interlocking**					
3VA55 3VA65 3VA66	3VA67 3VA68 3VA69						
		Use in	**Locking in OFF position**	**Locking in ON position**	**Front mounting**	**Rear mounting**	**Interlocked breakers**
3VA9980-0VL10 3VA9980-0VL30 3VA9980-0VL40	–	Breakers, motor operators, manual operators, withdrawable technology	■	■	■	–	Unlimited
–	–	Circuit breaker	–	–	■	–	3
3VA9577-0VF10	3VA9877-0VF10	Circuit breaker	–	–	■	–	3
3VA9980-0VC10 3VA9980-0VC20 3VA9980-0VC30	–						
3VA9578-0VM10 [1]	3VA9873-0VM10	Circuit breaker, fixed-mounted, Plug-in/withdrawable technology	–	–	–	■	2
–	–						
–	3VA9873-0VM10	Circuit breaker, fixed-mounted	–	–	–	■	2
–	–	Fixed-mounted	–	–	–	■	
–	–						

System overview, page 2/20

Cover frame and mounting

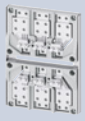
		3VA51
Cover frames for door cut-outs for molded case circuit breakers, with access to TMTU/ETU		
	**Number of poles**	
	3P	3VA9033-0SB20
	4P	3VA9034-0SB20
Cover frames for door cut-outs for molded case circuit breakers, with access to TMTU/ETU and connection area		
	**Number of poles**	
	3P	–
Cover frames for door cut-outs for molded case circuit breakers, without access to TMTU/ETU		
	**Number of poles**	
	3P	3VA9033-0SB10
	4P	3VA9034-0SB10
Cover frames for door cutout for circuit breaker handle only, without access to TMTU/ETU		
	**Number of poles**	
	3P	–
Cover frames for MO320 motor operators		
	**Use**	
	MO320 motor operator	3VA9033-0SB10
	Motor operator with SEO520 stored energy mechanism	–
Cover frames for front mounted rotary operators		
		3VA9033-0SB10
		–
Cover frames for door feedthroughs		
		–

System overview, page 2/20

3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3AV64	3VA55 3VA65 3VA66	3VA57 3VA58 3VA59	3VA67 3AV68 3VA69
3VA9233-0SB20	3VA9143-0SB20	3VA9343-0SB20	3VA9583-0SB20	3VA9877-0SB20	
3VA9234-0SB20	3VA9144-0SB20	3VA9344-0SB20	3VA9584-0SB20	–	–
–	–	–	–	3VA9877-0SB60	
3VA9143-0SB10		3VA9373-0SB10	3VA9583-0SB10	–	–
3VA9144-0SB10		3VA9374-0SB10	3VA9584-0SB10	–	–
–	–	–	–	3VA9877-0SB10	
3VA9237-0SB30		3VA9377-0SB30	–	–	–
3VA9147-0SB30		–	–	–	–
3VA9143-0SB10		3VA9373-0SB10	3VA9583-0SB50	–	–
–	–	–	–	3VA9877-0SB30	
3VA9233-0SB20		3VA9333-0SB20	–	–	–

System overview, page 2/20

Cover frames and mounting

			3VA51
Labeling plates for cover frame, not for 3VA9877-0SB10 and 3VA9877-0SB30			
			3VA9087-0SX10
Adapters for 60 mm busbar system (8US)			
	• Busbar adapter systems with 60-mm spacing between busbars • For mounting on the busbar adapter, box terminals for the line side must be ordered separately. • The connection technology for the outgoing side can be chosen freely		
	Number of poles		
	3P		8US1211-4SS00
	4P		–
Mounting screw kits with metric thread			
	**Use**	**Number of poles**	
	For fixed-mounted breakers	1P	3VA9151-0SS10
		3P	3VA9126-0SS10
		4P	3VA9124-0SS10
		3P and 4P	–
	For plug-in and withdrawable technology	–	–
Mounting screw kits with inch thread			
	**Version**	**Scope of supply**	
	1/4-20 UNC × 4.0	4 screws and 4 nuts, inch thread	–
Mounting base			
	**Use**		
	For front connection		–
	For rear connection		–

System overview, page 2/20

3VA52	3VA61 3VA62	3VA53 3VA54 3VA63 3VA64	3VA55 3VA65 3VA66	3VA57 3VA67	3VA58 3VA68	3VA59 3VA69
			3VA9087-0SX10			
8US1213-4AP03		8US1213-4AH04	–	–		–
8US1313-4AH03		8US1313-4AM04	–	–		–
–	–	–	–	–		–
3VA9126-0SS10		–	–		3VA9874-0SS10	
3VA9124-0SS10		–	–	–		–
–	–	3VA9328-0SS10	–	–		–
–	3VA9124-0SS10	3VA9328-0SS10	–	–		–
–	–	–	–		3VA9874-0SS00	
–	–	–	–	–	3VA9873-0WM00	
–	–	–	–	–	3VA9873-0WN00	

System overview, page 2/20

3VL up to 1600 A, according to UL 489

3VL molded case circuit breakers

Product Discontinuation

The 3VL molded case circuit breaker up to 1600 A UL can only be ordered as a spare part since 10/2021 and will be removed from the order portfolio from 10/2025 onwards.

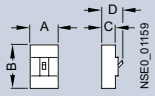
Documents available for downloading:
You can find comprehensive information on the 3VL molded case circuit breaker in the catalog extract

3VL molded case circuit breakers according to UL 489
www.siemens.com/lowvoltage/catalogs (109778213)

VL150X UL, CG frame

VL150 UL, DG frame

VL250 UL, FG frame

Number of poles			3-pole			3-pole			3-pole		
Rated current I_n [1]			20 A ... 150 A			50 A ... 150 A			100 A ... 250 A		
Frequency			50/60 Hz			50/60 Hz			50/60 Hz		
Electrical characteristics according to UL 489											
Rated operational voltage U_e	50/60 Hz AC		480 V, 600 Y/347 V			480 V, 600 Y/347 V			480 V, 600 Y/347 V		
	DC [2]		250 V			500 V			500 V		
Breaking capacity			**N**	**H**	**L**	**N**	**H**	**L**	**N**	**H**	**L**
Breaking capacity	Up to 240 V AC	kA	65	100	–	65	100	200	65	100	200
	Up to 480 V AC	kA	35	65	–	35	65	100	35	65	100
	Up to 600 V AC	kA	–	–	–	–	–	–	–	–	–
	Up to 600 Y/347 V AC	kA	10	10	–	18	18	18	18	18	18
	Up to 250 V DC [3]	kA	30	30	–	30	30	30	30	30	30
	Up to 500 V DC [3] [4]	kA	–	–	–	18	18	18	18	25	30
Breaking capacity I_{cu}/I_{cs} rms value according to IEC 60947-2	Up to 240 V AC	kA	65/65	10/75	–	65/65	100/75	200/150	65/65	100/75	200/150
	Up to 415 V AC	kA	40/40	70/70	–	40/40	70/70	100/75	40/40	70/70	100/75
	Up to 690 V AC	kA	8/4 [5]	10/5 [5]	–	12/6	12/6	12/6	12/6	12/6	12/6
	Up to 250 V DC [3]	kA	30/30	30/30	–	30/30	30/30	30/30	30/30	30/30	30/30
Dimensions											
	A	mm	105			105			105		
	B	mm	157			175			175		
	C	mm	81			81			81		
	D	mm	107			107			107		

[1] 80% rated current applications acc. to UL 489,
100% rated current applications acc. to IEC 60947-2.
[2] Rated operational DC voltage applies only to molded case circuit breakers with a thermal-magnetic trip unit.
[3] For switching DC, the maximum permissible direct voltage per conducting path must be considered.
[4] 500 V DC nominal/600 V DC max. for use in ungrounded UPS DC applications (acc. to UL 489, Supplement SC)
[5] Rated current $I_n \geq 25$ A.

VL400 UL, JG frame

VL400X UL, LG frame

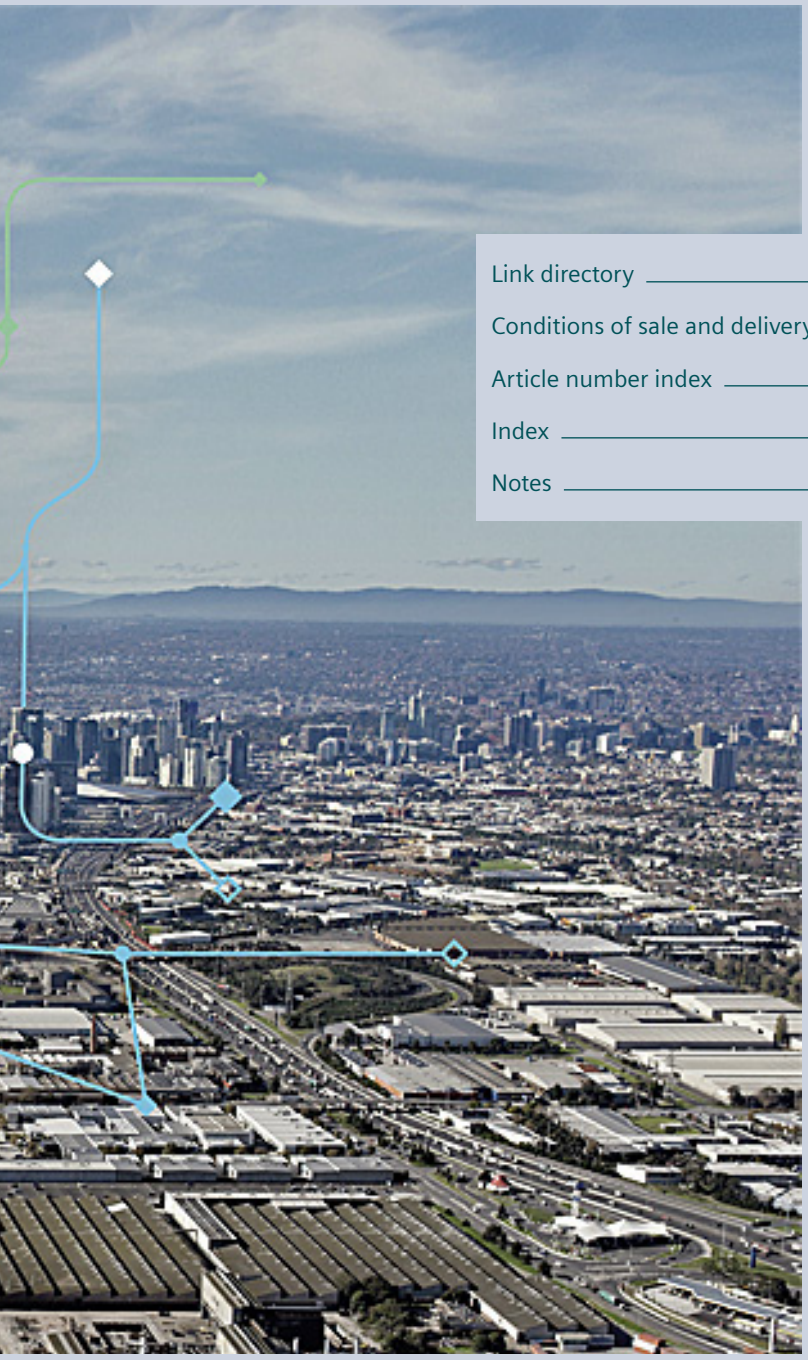
VL800 UL, MG frame

VL1200 UL, NG frame

VL1600 UL, PG frame

3-pole			3-pole			3-pole			3-pole			3-pole		
250 A ... 400 A			400 A ... 600 A			600 A ... 800 A			800 A ... 1200 A			1200 A ... 1600 A		
50/60 Hz			50/60 Hz			50/60 Hz			50/60 Hz			50/60 Hz		
600 V			600 V			600 V			600 V			600 V		
500 V			500 V			500 V			500 V			500 V		
N	**H**	**L**	**N**	**H**	**L**	**N**	**H**	**L**	**N**	**H**	**L**	**N**	**H**	**L**
65	100	200	65	100	200	65	100	200	65	100	200	65	100	200
35	65	100	35	65	100	35	65	100	35	65	100	35	65	100
25	25	25	18	18	18	25	35	50	25	35	65	25	35	65
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
30	30	30	30	30	30	22	25	42	22	25	42	22	25	42
25	35	35	25	35	35	35	50	65	35	50	65	35	50	65
65/65	100/75	200/150	65/65	100/75	200/150	65/65	100/75	200/150	65/35	100/50	200/100	65/35	100/50	200/100
45/45	70/70	100/75	45/45	70/70	100/75	50/50	70/70	100/75	50/25	70/35	100/50	50/25	70/35	100/50
12/6	15/8	15/8	12/6	15/8	15/8	20/10	20/10	20/10	20/10	30/15	35/17	20/10	30/15	35/17
30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30	30/30
139			139			190			229			229		
279			279			406			406			406		
102			102			118			157			157		
138			138			151			209			209		

Appendix



Link directory

Catalog LV 18

General information

Information on low-voltage power distribution and electrical installation technology	www.siemens.com/lowvoltage
Tender specifications	www.siemens.com/tenderspecifications
Conversion tool	www.siemens.com/conversion-tool
Image database	www.siemens.com/lowvoltage/picturedb
CAx download manager	www.siemens.com/cax
Newsletter system	www.siemens.com/lowvoltage/newsletter
Siemens YouTube channel	www.youtube.com/Siemens
Catalog LV 10	www.siemens.com/lv10
Catalog LV 13	www.siemens.com/lv13
Catalog LV 18	www.siemens.com/lv18
Brochures/catalogs	www.siemens.com/lowvoltage/catalogs
Operating instructions/manuals	www.siemens.com/lowvoltage/manuals
SiePortal	www.siemens.com/sieportal
SiePortal (knowledge base)	www.siemens.com/lowvoltage/product-support
SiePortal (product catalog)	www.siemens.com/lowvoltage/product-catalog
Online Support App	www.siemens.com/support-app
My Documentation Manager (MDM)	www.siemens.com/lowvoltage/mdm
Configurators	www.siemens.com/lowvoltage/configurators
Direct forwarding to SiePortal	www.siemens.com/product_catalog_SIEP?Article No.
Training	www.siemens.com/sitrain-lowvoltage
Local contacts	www.siemens.com/lowvoltage/contact www.siemens.com/lowvoltage/components/contact www.siemens.com/lowvoltage/systems/contact www.siemens.com/lowvoltage/software/contact
Technical Support	www.siemens.com/support-request
Information on services	www.siemens.com/service-offers
Control panels for the North American market	www.siemens.com/northamerican-standards
Integrated Control Panels	www.siemens.com/controlpanel
Smart Control Panel Design	www.siemens.com/controlpanel/cpd
Energy savings and amortization	www.automation.siemens.com/sinasave
SIMATIC Energy Suite	www.siemens.com/energysuite
SITOP power supplies	www.siemens.com/sitop
Power distribution with Totally Integrated Power	www.siemens.com/tip
TIA Selection Tool	www.siemens.com/tst
Electrical Product Finder	www.siemens.com/electrical-product-finder
Sustainability	www.siemens.com/sustainability
Siemens EcoTech	www.siemens.com/SiemensEcoTech www.siemens.com/lowvoltage/SiemensEcoTech
SENTRON product phase-out	www.siemens.com/info-sentron

Information + ordering

Technical overviews	
Air circuit breakers	www.siemens.com/lowvoltage/product-support (109781188)
Molded case circuit breakers	www.siemens.com/lowvoltage/product-support (109767421)
All the important things at a glance	
Air circuit breakers	www.siemens.com/sentron-3wa
Molded case circuit breakers	www.siemens.com/sentron-3va
Your product in detail	
Brochure 3WA air circuit breakers	www.siemens.com/lowvoltage/product-support (109800077)
Siemens YouTube channel	
3WA air circuit breaker – Teaserfilm	sie.ag/2Myvit
3WA air circuit breaker – Highlightfilm	sie.ag/3dy65A
3VA molded case circuit breakers (general)	sie.ag/2gSX4K
3VA UL Large Frame molded case circuit breakers	sie.ag/23vHbX
Everything you need for your order	
Air circuit breakers	sie.ag/2lXiZjB
Molded case circuit breakers	sie.ag/2mmLcAk
Configurators	
3WL air circuit breakers	www.siemens.com/lowvoltage/3wl-configurator
3WA air circuit breakers	www.siemens.com/lowvoltage/3wa-ul-configurator
3VA molded case circuit breakers	www.siemens.com/lowvoltage/3va-ul-configurator

Commissioning + operation

Tools/software	
SENTRON Powerconfig	www.siemens.com/powerconfig
Manuals	
Communication Manual – 3VA molded case circuit breakers with IEC and UL certification	www.siemens.com/lowvoltage/manuals (98746267)
Communication Manual – 3WL air circuit breakers via COM35 – PROFINET IO, Modbus TCP	www.siemens.com/lowvoltage/manuals (109757987)
Configuration Manual – 3VA selectivity	www.siemens.com/lowvoltage/manuals (109743975)
Configuration Manual – 3WL5 air circuit breakers/non-automatic air circuit breakers	www.siemens.com/lowvoltage/manuals (109775570)
Equipment Manual – 3WA3 air circuit breakers	www.siemens.com/lowvoltage/manuals (109811114)
Equipment Manual – 3VA molded case circuit breakers with UL and IEC certification	www.siemens.com/lowvoltage/manuals (109758561)
System Manual – 3WL/3VL circuit breakers with communication capability – Modbus	www.siemens.com/lowvoltage/manuals (39850157)
System Manual – 3WL/3VL circuit breakers with communication capability – PROFIBUS	www.siemens.com/lowvoltage/manuals (12560390)
Face-to-face or online training	
Protection systems in low-voltage power distribution	www.siemens.com/sitrain-lowvoltage (WT-LVAPS)
Video tutorial on the 3WL air circuit breaker	www.lowvoltage.siemens.com/wcms/3wl-tutorial
3WA air circuit breakers	www.siemens.com/sitrain-lowvoltage (WT-LV3WA)
3WL air circuit breakers, sizes 1-3	www.siemens.com/sitrain-lowvoltage (WT-LVA3WL)
Certification: Maintenance and operation of 3WL and 3WA circuit breakers	www.siemens.com/sitrain-lowvoltage (LV-CBCERT)
3WL and 3WA air circuit breakers protection technology and communication	www.siemens.com/sitrain-lowvoltage (LV-COPR)
Maintenance and operation of 3WA circuit breakers	www.siemens.de/sitrain-lowvoltage (LV-3WAMAIN)
Maintenance and operation of 3WL circuit breakers	www.siemens.de/sitrain-lowvoltage (LV-3WLMAIN)
Maintenance and operation of 3WL and 3WA circuit breakers	www.siemens.com/sitrain-lowvoltage (LV-CBMAIN)
3VA molded case circuit breakers	www.siemens.com/sitrain-lowvoltage (WT-LVA3VA)

Conditions of sale and delivery

1. General Provisions

By using this catalog you can purchase hard- and software products as well as services (together hereinafter referred to as "products") described therein from Siemens Aktiengesellschaft subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as "T&C"). Note, for products purchased from any Siemens entity having a registered office outside of Germany, the respective terms and conditions of sale and delivery of the respective Siemens entity apply exclusively. 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 text of the product description, 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 Conditions for Software Products for Infrastructure & Industry Business (German law)"[1)] and/or
- for consulting services the "Allgemeine Geschäftsbedingungen für Beratungsleistungen für Infrastructure & Industry Geschäft (Deutsches Recht)"[1)] (available only in German) and/or
- for other services, the "Supplementary Terms and Conditions for Services for Infrastructure & Industry Business (German Law) ("BL")"[1)] and/or
- for other products the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"[1)].
  In case such products 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)], the Product will be given a note as to which special conditions apply to this open source software. 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 for Infrastructure & Industry Business (Swiss Law)"[1)] and/or
- for other services the "International Terms & Conditions for Services"[1)] supplemented by "Software Licensing Conditions"[1)] and/or
- for other products 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 products 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.

[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

3. Export Control and Sanctions Compliance

3.1 General

Customer shall comply with all applicable sanctions, embargoes and (re-)export control laws and regulations, and, in any event, with those of the European Union, the United States of America and any locally applicable jurisdiction (collectively "Export Regulations").

3.2 Checks for Products

Prior to any transaction by customer concerning products (including hardware, documentation and technology) delivered by Siemens, or products (including maintenance and technical support) performed by Siemens with a third party, customer shall check and certify by appropriate measures that

- (i) the customer's use, transfer, or distribution of such products, the brokering of contracts or the provision of other economic resources in connection with products will not be in violation of any Export Regulations, also taking into account any prohibitions to circumvent these (e.g., by undue diversion)
- (ii) the products are not intended or provided for prohibited or unauthorized non-civilian purposes (e.g. armaments, nuclear technology, weapons, or any other usage in the field of defense and military);
- (iii) customer has screened all direct and indirect parties involved in the receipt, use, transfer, or distribution of the products against all applicable restricted party lists of the Export Regulations concerning trading with entities, persons and organizations listed therein and
- (iv) products within the scope of items-related restrictions, as specified in the respective annexes to the Export Regulations, will not, unless permitted by the Export Regulations, be
  (a) exported, directly or indirectly (e.g., via Eurasian Economic Union (EAEU) countries), to Russia or Belarus, or
  (b) resold to any third party business partner that does not take a prior commitment not to export such products to Russia or Belarus.

3.3 Non-Acceptable Use of Software and Cloud Services

Customer shall not, unless permitted by the Export Regulations or respective governmental licenses or approvals,

- (i) download, install, access or use the products from or in any location prohibited by or subject to comprehensive sanctions or subject or to license requirements according to the Export Regulations;
- (ii) grant access to, transfer, (re-)export (including any "deemed (re-)exports"), or otherwise make available the products to any entity, person, or organization identified on a restricted party list of the Export Regulations;
- (iii) use the products for any purpose prohibited by the Export Regulations (e.g. use in connection with armaments, nuclear technology or weapons);
- (iv) upload to a products platform any customer content unless it is non-controlled (e.g. in the EU: AL = N; in the U.S.: ECCN = N or EAR99);
- (v) facilitate any of the afore mentioned activities by any user. Customer shall provide all users with all information necessary to ensure compliance with the Export Regulations.

3.4 Semiconductor Development

Customer will not, without advance written authorization from Siemens, use offerings for the development or production of integrated circuits at any semiconductor fabrication facility located in China meeting the criteria specified in the U.S. Export Administration Regulations, 15 C.F.R. 744.23.

3.5 Information

Upon request by Siemens, customer shall promptly provide Siemens with all information pertaining to users, the intended use and the location of use or the final destination (in the case of hardware, documentation and technology) of the products. Customer will notify Siemens prior to customer disclosing any information to Siemens that is defense-related or requires controlled or special data handling pursuant to applicable government regulations, and will use the disclosure tools and methods specified by Siemens.

3.6 Reservation

Siemens shall not be obligated to fulfill this agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes or other sanctions. Customer acknowledges that Siemens may be obliged under the Export Regulations to limit or suspend access by customer and/or users to products.

4. Miscellaneous

Errors excepted and subject to change without prior notice.

Article number index

Index

Notes

Notes

Catalogs and further information

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

PDF (E86060-K8280-A101-B9-7600)

ET D1
Switches and Socket Outlets
DELTA

PDF (SIEP-C10409-00-7600)

LV 13
3WA Air Circuit Breakers
SENTRON

PDF (E86060-K8280-B101-A4-7600)

SiePortal
Information and Ordering Platform on the Internet:

sieportal.siemens.com

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

PDF (E86060-K8280-E347-B2-7600)

SITRAIN
Digital Industry Academy

www.siemens.com/sitrain

IC 10
Industrial Controls
SIRIUS

PDF (E86060-K1010-A101-B7-7600)

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

www.siemens.com/tst

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

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

Cybersecurity information

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

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

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

For additional information on industrial cybersecurity measures that may be implemented, please visit **www.siemens.com/cybersecurity-industry.**

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

To stay informed about product updates, subscribe to the Siemens Industrial Cybersecurity RSS Feed under **www.siemens.com/cert.**

Get more information

www.siemens.com/lowvoltage

Published by
Siemens AG

Smart Infrastructure
Electrical Products
Siemensstraße 10
93055 Regensburg, Germany

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

3617 Parkway Lane
Peachtree Corners, GA 30092
United States

PDF (E86060-K8280-E347-B2-7600)
KG 1224 216 En
Produced in Germany

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

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