

**SIEMENS**

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Extract  
LV 10

Edition  
04/2022

SENTRON • SIVACON • ALPHA

# Low-Voltage Power Distribution and Electrical Installation Technology

Molded Case Circuit Breakers

[siemens.com/lowvoltage](https://www.siemens.com/lowvoltage)

# Innovative solutions for industrial controls and power distribution

In ensuring smooth operation of digital production environments and in the construction and operation of industrial or commercial buildings, the underlying power distribution and industrial controls are decisive:

SIRIUS, SENTRON, SIVACON and ALPHA provide a broad portfolio of systems and components for this purpose that can be used for standard-compliant, requirement-based electrification.

Efficient engineering tools and cloud-based solutions are part of the portfolio, which you can flexibly adapt to your specific requirements over the entire value-added process.



## We are there when you need us

Your personal contact can be found at [www.siemens.de/lowvoltage/kontakt](http://www.siemens.de/lowvoltage/kontakt)

## Catalog LV 10 · 04/2022

You will find the latest edition and all future editions in the Siemens Industry Online Support at [www.siemens.com/lowvoltage/catalogs](http://www.siemens.com/lowvoltage/catalogs)

Refer to the Industry Mall for current prices [www.siemens.de/lowvoltage/mall](http://www.siemens.de/lowvoltage/mall)



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](http://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.

# Low-Voltage Power Distribution and Electrical Installation Technology

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## 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.



# Molded Case Circuit Breakers



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# 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/3VA](http://www.siemens.com/3VA)

### Your product in detail

The Siemens Industry Online Support (SIOS) provides comprehensive information  
[www.siemens.com/lowvoltage/product-support](http://www.siemens.com/lowvoltage/product-support)

- Technical basic information
  - 3VA molded case circuit breakers (109766672)

The relevant tender specifications can be found at  
[www.siemens.com/lowvoltage/tenderspecifications](http://www.siemens.com/lowvoltage/tenderspecifications)

Use our conversion tool for quick and easy conversion to Siemens products [www.siemens.com/conversion-tool](http://www.siemens.com/conversion-tool)

### Siemens YouTube channel

- 3VA molded case circuit breakers (general)  
[bit.ly/2xNxIFA](https://bit.ly/2xNxIFA)

### Everything you need for your order

Refer to the Industry Mall for an overview of your products

- Molded case circuit breakers [sie.ag/2mmLcAk](http://sie.ag/2mmLcAk)

Direct forwarding to the individual products in the Industry Mall by clicking on the article number in the catalog or by entering this web address incl. article number [www.siemens.com/product?Article No.](http://www.siemens.com/product?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-configurator](http://www.siemens.com/lowvoltage/3va-configurator)  
[www.siemens.com/lowvoltage/3va27-configurator](http://www.siemens.com/lowvoltage/3va27-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](http://www.siemens.com/lowvoltage/components/contact)

You can find further information on services at  
[www.siemens.com/service-catalog](http://www.siemens.com/service-catalog)

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

Assistance with technical queries is provided at  
[www.siemens.com/support-request](http://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 via [www.siemens.com/powerconfig](http://www.siemens.com/powerconfig)

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

### Your product in detail

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

- Operating instructions
- Characteristic curves
- Certificates

Comprehensive mobile support via the Siemens Industry Online Support app available for download from the [App Store](#) and [Play Store](#)

You will find further information under: [www.siemens.com/support-app](http://www.siemens.com/support-app)

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

- Siemens Industry Mall [www.siemens.com/lowvoltage/mall](http://www.siemens.com/lowvoltage/mall)
- Image database [www.siemens.com/lowvoltage/picturedb](http://www.siemens.com/lowvoltage/picturedb)

Engineering data for CAD or CAE systems are available in the CAx Download Manager at [www.siemens.com/cax](http://www.siemens.com/cax)

### Manuals

Manuals are available for downloading in Siemens Industry Online Support (SIOS) at [www.siemens.com/lowvoltage/manuals](http://www.siemens.com/lowvoltage/manuals)

- Configuration manual
  - 3VA selectivity ([109743975](#))
- Communication manual
  - 3VA molded case circuit breakers with IEC and UL certification ([98746267](#))
  - 3WL10 air circuit breakers & 3VA27 molded case circuit breakers ([109760220](#))
- Equipment manual
  - 3VA molded case circuit breakers with IEC certificate ([90318775](#))
  - 3VA27 molded case circuit breakers & 3WL10 air circuit breakers ([109753821](#))

### Face-to-face or online training

Our training courses can be found at [www.siemens.com/sitrain-lowvoltage](http://www.siemens.com/sitrain-lowvoltage)

- 3VA molded case circuit breaker (WT-LVA3VA)
- Protection systems in low-voltage power distribution (WT-LVAPS)
- Communication with SENTRON components (LV-COM)
- Project planning and selection of SENTRON circuit breakers (LV-CBPROJ)

## 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](http://www.siemens.com/lowvoltage/product-support) ([109767421](#))

# Molded case circuit breakers and switch disconnectors for all applications

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3VA10 ... 3VA15 molded case circuit breakers

## Setting standards for standard applications

The 3VA1 molded case circuit breaker is ideally suited for your standard applications in infrastructure and industrial facilities. It is equipped with a thermal-magnetic trip unit, and offers reliable protection for plants and generators.

With its compact dimensions and depth of just 70 mm, the 3VA1 molded case circuit breaker can even fit into locations where space is limited. Thanks to its cover size of 45 mm, it is also ideally suited for use in distribution boards up to 250 A.

### Special features

- Compact design
- AC/DC applications
- No derating up to +50 °C
- Optimized for distribution boards (45 mm cover size)
- Universal platform of accessories
- 1, 2, 3 or 4-pole versions
- Rated current range of 1 to 1000 A



## The power to deliver in demanding applications

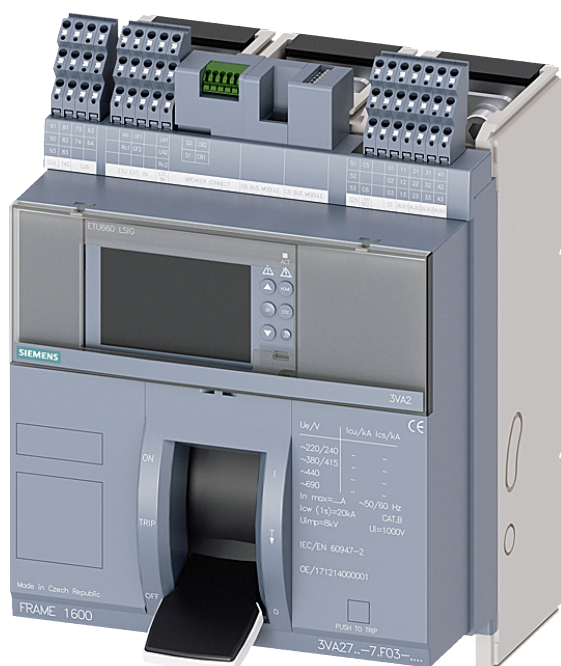
If you are looking for a solution that lets you handle your most technically demanding projects in industrial and infrastructure applications with ease, the 3VA2 molded case circuit breaker has the special capabilities you need. It combines high breaking capacity, a range of electronic trip units (ETUs), very good selectivity properties, and various additional functionalities.

### Special features

- Very good selective protection response
- AC applications
- No derating up to +50 °C
- Integrated measurement function
- Connection to a communication system
- Rated current range of 25 to 1250 A



3VA20 ... 3VA26 molded case circuit breakers



3VA27 molded case circuit breaker

Depending on the application, the 3VA27 molded case circuit breaker handles line/motor and starter protection for low-voltage electrical power distribution, and supplements the existing IEC portfolio with a rated current of 1600 A.

### Special features

- Choice between two ranges of electronic trip units with a number of equipment versions
- Variable and versatile connections
- Connection to a communication system
- Can be used as a platform circuit breaker with the 3WL10 ACB, with an extensive range of common accessories
- Rated current range of 800 to 1600 A

# Molded case circuit breakers, switch disconnectors and accessories

2



## Protective functions

	3VA10	3VA11	3VA12	3VA13	3VA14	3VA15
<b>Size</b>	100 A	160 A	250 A	400 A	630 A	1000 A
<b>Switch disconnectors</b>						
No protection	–	■	■	■	■	–
<b>Thermal-magnetic</b>						
Line protection	■	■	■	■	■	■
Starter protection	–	■	■	■	■	■
<b>Electronic</b>						
Line protection	–	–	–	–	–	–
Line and generator protection	–	–	–	–	–	–
Line and generator protection, with display	–	–	–	–	–	–
Line and generator protection, with display, with measurement function	–	–	–	–	–	–
Motor protection	–	–	–	–	–	–
Motor protection, with display	–	–	–	–	–	–
Motor protection, with display, with measurement function	–	–	–	–	–	–
Starter protection	–	–	–	–	–	–

## Accessories

	100 A	160 A	250 A	400 A	630 A	1000 A
<b>Accessories</b>						
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	■	■	■	■	■	–
MO310 motor operator (mounted onto the side)	–	■	–	–	–	–
MO320 motor operator (mounted onto the front)	–	■	■	■	■	–
Motor operator with SEO520 stored energy operator	–	–	–	–	–	–
Motor operator (MO), integrable	–	–	–	–	–	–
Locking, blocking and interlocking	■	■	■	■	■	■
Residual current device (mounted onto the side)	–	■	■	–	–	–
Residual current device (mounted underneath)	–	■	■	–	–	–
Communication link	–	–	–	–	–	–
EFB300	–	–	–	–	–	–
Testing and commissioning devices	–	–	–	–	–	–
Cover frame	■	■	■	■	■	■
DIN-rail adapter	■	■	–	–	–	–
Busbar adapter	■	■	■	■	■	–

■ Available – Not available/not present



3VA20	3VA21	3VA22	3VA23	3VA24	3VA25	3VA26	3VA27
100 A	160 A	250 A	400 A	630 A	1000 A	1250 A	1600 A
-	-	-	-	-	-	-	■
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
-	■	■	■	■	■	-	■
-	■	■	■	■	■	-	■
-	■	■	■	■	■	-	■
-	■	■	■	■	■	-	■

100 A	160 A	250 A	400 A	630 A	1000 A	1250 A	1600 A
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	-
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
-	-	-	-	-	-	-	-
■	■	■	■	■	■	■	■
-	-	-	-	-	-	-	■
■	■	■	■	■	■	■	■
-	-	-	-	-	-	-	-
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
■	■	■	■	■	■	■	■
-	-	-	-	-	-	-	-
■	■	■	■	■	■	■	-

# 3VA1 molded case circuit breakers, switch disconnectors up to 1000 A

## Technical specifications

2



			3VA10			3VA11			3VA11		
<b>Electrical characteristics according to IEC 60947-2</b>											
Number of poles			3/4-pole			1-pole			2-pole		
Size	A		100			160			160		
Rated current $I_n$ at 50 °C ambient temperature	A		16 ... 100			16 ... 160			16 ... 160		
Rated operational voltage $U_e$ 50/60 Hz AC	V		690			415			415		
Rated insulation voltage $U_i$	V		800			500			500		
Rated impulse withstand voltage $U_{pulse}$	kV		8			8			8		
Use in IT networks (breaking capacity acc. to IEC 60947-2, Annex H)	V		■			■			■		
Frequency	Hz		0 ... 400			0 ... 400			0 ... 400		
<b>Breaking capacity (line protection)</b>											
			<b>B</b>	<b>N</b>	<b>S</b>	<b>N</b>	<b>S</b>	<b>M</b>	<b>N</b>	<b>S</b>	<b>M</b>
<b>Rated ultimate short-circuit breaking capacity <math>I_{cu}</math></b>											
50/60 Hz AC	220 ... 240 V	kA	25	36	55	25	36	55	36	55	85
	380 ... 415 V	kA	16	25	36	5	6	6	25	36	55
	440 V	kA	8	16	25	–	–	–	–	–	–
	500 V	kA	5	5	7	–	–	–	–	–	–
	690 V	kA	5	5	7	–	–	–	–	–	–
DC <sup>1)</sup>	125 V	kA	16	25	30	16	25	30	16	25	30
	250 V	kA	25	36	55	–	–	–	36	55	85
	500 V	kA	25	36	55	–	–	–	–	–	–
	600 V	kA	8	16	25	–	–	–	–	–	–
	750 V	kA	–	–	–	–	–	–	–	–	–
1000 V <sup>2)</sup>	kA	–	–	–	–	–	–	–	–	–	
<b>Rated service short-circuit breaking capacity <math>I_{cs}</math></b>											
50/60 Hz AC	220 ... 240 V	kA	25	36	55	25	35	55	36	55	85
	380 ... 415 V	kA	16	25	36	5	6	6	25	36	55
	440 V	kA	8	16	25	–	–	–	–	–	–
	500 V	kA	5	5	5	–	–	–	–	–	–
	690 V	kA	5	5	5	–	–	–	–	–	–
DC	125 V	kA	16	25	30	16	25	30	16	25	30
	250 V	kA	25	36	55	–	–	–	36	55	85
	500 V	kA	25	36	55	–	–	–	–	–	–
	600 V	kA	8	16	25	–	–	–	–	–	–
	750 V	kA	–	–	–	–	–	–	–	–	–
1000 V <sup>2)</sup>	kA	–	–	–	–	–	–	–	–	–	
<b>Dimensions</b>											
	A	mm	76.2 (3P)   101.6 (4P)			25.4			50.8		
	B	mm	130			130			130		
	C	mm	70			70			70		
	D	mm	88			88			88		

<sup>1)</sup> For detailed data on DC breaking capacity, number of interrupter poles and circuit diagrams, see FAQ [www.siemens.com/lowvoltage/product-support](http://www.siemens.com/lowvoltage/product-support) (109779932)

<sup>2)</sup> For  $I_n = 630$  A/800 A

<sup>3)</sup>  $I_n$  125 A, 160 A:  $I_{cu}/I_{cs} = 36$  kA/36 kA

■ Available – Not available/not present



2

3VA11				3VA12			3VA13				3VA14				3VA15		
3/4-pole				3/4-pole			3/4-pole				3/4-pole				3/4-pole		
160				250			400				630				1000		
16 ... 160				160 ... 250			320 ... 400				500 ... 630				630 ... 1000		
690				690			690				690				690		
800				800			800				800				800		
8				8			8				8				8		
■				■			■				■				≤500		
0 ... 400				0 ... 400			0 ... 400				0 ... 400				0 ... 400		
N	S	M	H	S	M	H	S	M	H	C	S	M	H	C	M	H	C
36	55	85	100	55	85	100	55	85	100	200	55	85	100	200	85	110	200
25	36	55	70	36	55	70	36	55	70	110	36	55	70	110	55	70	110
16	25	36	55 <sup>3)</sup>	25	36	36	36	55	70	110	36	55	70	110	55	70	110
7	7	10	10	10	15	15	25	36	55	70	25	36	55	70	36	55	70
7	7	10	10	7	10	10	7	7	10	10	7	7	10	10	25	35	35
16	25	30	30	55	85	100	8	16	25	25	8	16	25	25	–	–	–
36	55	85	100	55	85	100	8	16	25	25	8	16	25	25	35	50	100
36	55	85	100	55	85	100	8	16	25	25	8	16	25	25	35	50	100
16	25	36	55	25	36	55	8	16	25	25	8	16	25	25	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	35	50	100
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25	35	50
36	55	85	100	55	85	100	55	85	100	200	55	85	100	200	85	110	150
25	36	55	70	36	55	70	36	55	70	110	36	55	70	110	55	70	110
16	25	36	40 <sup>3)</sup>	25	36	36	36	55	70	110	36	55	70	110	55	70	70
5	5	5	5	10	10	10	25	36	55	70	25	36	55	70	36	55	65
5	5	5	5	5	5	5	5	5	6	6	5	5	6	6	19	19	19
16	25	30	30	55	85	100	8	16	25	25	8	16	25	25	–	–	–
36	55	85	100	55	85	100	8	16	25	25	8	16	25	25	35	50	100
36	55	85	100	55	85	100	8	16	25	25	8	16	25	25	35	50	100
16	25	36	55	25	36	55	8	16	25	25	8	16	25	25	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	35	50	100
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	25	35	50
76.2 (3P)   101.6 (4P)				105 (3P)   140 (4P)			138 (3P)   184 (4P)				138 (3P)   184 (4P)				210 (3P)   280 (4P)		
130				158			248				248				320		
70				70			110				110				120		
88				88			137				137				253		

# 3VA1 molded case circuit breakers, switch disconnectors up to 1000 A

## Application

2



		3VA10	3VA11	3VA11
<b>Electrical characteristics according to IEC 60947-2</b>				
Number of poles		3/4-pole	1-pole	2-pole
Size	A	100	160	160
Rated current $I_n$ at 50 °C ambient temperature	A	16 ... 100	16 ... 160	16 ... 160
<b>3VA1 molded case circuit breakers for line protection, standard applications (IEC 60947-2)</b>				
<b>Service life/endurance (operating cycles)</b>				
Mechanical (CLOSE-OPEN cycles)		20000	20000	20000
Electrical	380 ... 415 V	$I_n$ 9000	9000	9000
		$I_n/2$ 15000	15000	15000
	690 V	6300	6300	6300
<b>Trip Units</b>				
TM210	FTFM	■	■	■
TM220	ATFM	–	–	–
TM240	ATAM	–	–	–
<b>3VA1 molded case circuit breakers for starter protection (IEC 60947-4-1 standards and specifications acc. to AC-1)</b>				
Rated current $I_n$ at 50 °C ambient temperature	A	–	–	–
<b>Service life/endurance (operating cycles)</b>				
Mechanical (CLOSE-OPEN cycles)		–	–	–
Electrical	380 ... 415 V	–	–	–
<b>Trip Units</b>				
TM120M	AM	–	–	–
<b>Switch disconnectors (IEC 60947-3)</b>				
<b>Electrical characteristics according to IEC 60947-3</b>				
Rated uninterrupted current $I_u$ at 50 °C ambient temperature	A	–	–	–
Rated operational voltage $U_e$ 50/60 Hz AC	V	–	–	–
Rated operational voltage $U_e$ DC	V	–	–	–
Rated conditional short-circuit current $I_q$ with upstream 3VA1 circuit breaker	kA	–	–	–
Permissible rated short-time current $I_{cw}$ (1 s)	kA	–	–	–

■ Available    – Not available/not present

**3VA11****3VA12****3VA13****3VA14****3VA15**

2

3VA11	3VA12	3VA13	3VA14	3VA15
3/4-pole	3/4-pole	3/4-pole	3/4-pole	3/4-pole
160	250	400	630	1000
16 ... 160	160 ... 250	320 ... 400	500 ... 630	630 ... 1000
20000	20000	20000	20000	10000
9000	8000	6000	4000	4600
15000	14000	12000	8000	7000
6300	5400	4200	3000	3200
■	–	–	–	–
■	–	–	–	–
■	■	■	■	■
1 ... 125	160, 200	250	400 ... 500	630 ... 800
20000	20000	20000	20000	10000
9000	8000	6000	4000	4600
■	■	■	■	■
63 ... 160	250	400	630 (3P), 500 (4P)	–
690	690	690	690	–
500 (3P), 600 (4P)	500 (3P), 600 (4P)	500 (3P), 600 (4P)	500 (3P), 600 (4P)	–
70 at 415 V	70 at 415 V	110 at 415 V 10 at 690 V	110 at 415 V 10 at 690 V	–
2	3	6	7.6 (3P), 6 (4P)	–

# 3VA2 molded case circuit breakers up to 1600 A

## Technical specifications

2



		3VA20				3VA21				3VA22						
<b>Electrical characteristics according to IEC 60947-2</b>																
Number of poles		3/4-pole				3/4-pole				3/4-pole						
Size	A	100				160				250						
Rated current $I_n$ at 50 °C ambient temperature	A	25 ... 100				25 ... 160				160 ... 250						
Rated operational voltage $U_e$ 50/60 Hz AC	V	690				690				690						
Rated insulation voltage $U_i$	V	800				800				800						
Rated impulse withstand voltage $U_{pulse}$	kV	8				8				8						
Use in IT networks (breaking capacity acc. to IEC 60947-2, Annex H)	V	■				■				■						
Frequency	Hz	50/60				50/60				50/60						
<b>Breaking capacity (line protection)</b>		M	H	C	L	M	H	C	L	E	M	H	C	L	E	
<b>Rated ultimate short-circuit breaking capacity <math>I_{cu}</math></b>																
50/60 Hz AC	220 ... 240 V	kA	85	110	150	200	85	110	150	200	–	85	110	150	200	–
	380 ... 415 V	kA	55	85	110	150	55	85	110	150	200	55	85	110	150	200
	440 V	kA	55	85	110	150	55	85	110	150	–	55	85	110	150	–
	500 V	kA	36	55	85	100	36	55	85	100	–	36	55	85	100	–
	690 V	kA	2	2	2	25	2.5	2.5	2.5	25	85	3	3	3	25	85
DC	125 V (1 switching pole)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	250 V (2 switching poles)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	500 V (3 switching poles)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	600 V (4 switching poles)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<b>Rated service short-circuit breaking capacity <math>I_{cs}</math></b>																
50/60 Hz AC	220 ... 240 V	kA	85	110	150	200	85	110	150	200	–	85	110	150	200	–
	380 ... 415 V	kA	55	85	110	150	55	85	110	150	200	55	85	110	150	200
	440 V	kA	55	85	110	150	55	85	110	150	–	55	85	110	150	–
	500 V	kA	36	55	85	100	36	55	85	100	–	36	55	85	100	–
	690 V	kA	2	2	2	18	2.5	2.5	2.5	18	65	3	3	3	18	65
DC	125 V (1 switching pole)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	250 V (2 switching poles)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	500 V (3 switching poles)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	600 V (4 switching poles)	kA	–	–	–	–	–	–	–	–	–	–	–	–	–	–
<b>Dimensions</b>																
	A	mm	105 (3P)   140 (4P)				105 (3P)   140 (4P)				105 (3P)   140 (4P)					
	B	mm	181				181				181					
	C	mm	86				86				86					
	D	mm	107				107				107					

■ Available    – Not available/not present





3VA23					3VA24					3VA25			3VA26			3VA27		
3/4-pole					3/4-pole					3/4-pole			3/4-pole			3/4-pole		
400					630					1000			1250			1600		
250 ... 400					400 ... 630					630 ... 1000			1250			800 ... 1600		
690					690					690			690			690		
800					800					800			800			1000		
8					8					8			8			8		
■					■					≤500			≤500			■		
50/60					50/60					50/60			50/60			50/60		
M	H	C	L	E	M	H	C	L	E	M	H	C	M	H	C	M	H	C
85	110	150	200	–	85	110	150	200	–	85	110	200	85	110	200	100	150	200
55	85	110	150	200	55	85	110	150	200	55	85	110	55	85	110	55	85	110
55	85	110	–	–	55	85	110	–	–	55	85	110	55	85	110	55	85	100
36	55	85	–	–	36	55	85	–	–	36	55	85	36	55	85	36	55	85
5	5	5	25	85	6	6	6	25	85	25	35	35	25	35	35	25	36	50
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
85	110	150	200	–	85	110	150	200	–	85	110	150	85	110	150	100	150	200
55	85	110	150	200	55	85	110	150	200	55	85	85	55	85	85	55	85	110
55	85	110	–	–	55	85	110	–	–	55	70	70	55	70	70	55	85	100
36	55	65	–	–	36	55	85	–	–	36	55	65	36	55	65	36	55	63
5	5	5	18	65	6	6	6	18	65	19	19	19	19	19	19	25	36	36
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
138 (3P)   184 (4P)					138 (3P)   184 (4P)					210 (3P)   280 (4P)			210 (3P)   280 (4P)			210 (3P)   280 (4P)		
248					248					320			320			291		
110					110					120			120			171 (handle operating mechanism)   183 (stored energy operating mechanism)		
137					137					253			253			225		

# 3VA2 molded case circuit breakers up to 1600 A

## Application

2



		3VA20	3VA21	3VA22
<b>Electrical characteristics according to IEC 60947-2</b>				
Number of poles		3/4-pole	3/4-pole	3/4-pole
Size	A	100	160	250
Rated current $I_n$ at 50 °C ambient temperature	A	25 ... 100	25 ... 160	160 ... 250
<b>Service life/endurance (operating cycles)</b>				
Mechanical (OPEN-CLOSE cycles)		25000	25000	25000
Electrical	380 ... 415 V $I_n$	15000	14000	12000
	$I_n/2$	20000	20000	17000
	690 V	10500	9800	8400
<b>Trip units</b>				
ETU320	LI	■	■	■
ETU330	LIG	■	■	■
ETU340	ELISA LI	–	■	■
ETU350	LSI	■	■	■
ETU550/ETU850	LSI	■	■	■
ETU560/ETU860	LSIG	■	■	■
ETU650	LSI	–	–	–
ETU360	LSIG	–	–	–
ETU660	LSIG	–	–	–
<b>3VA2 molded case circuit breakers for motor/starter protection (IEC 60947-4-1 standards and specifications acc. to AC-1)</b>				
Rated current $I_n$ at 50 °C ambient temperature	A	–	25 ... 100	160 ... 200
<b>Service life/endurance (operating cycles)</b>				
Mechanical (CLOSE-OPEN cycles)		–	25000	25000
Electrical	380 ... 415 V	–	14000	12000
<b>Trip units</b>				
ETU310M	I	–	■	■
ETU350M	LSI	–	■	■
ETU550M	LSI	–	■	■
ETU860M	LSIG	–	■	■
ETU320	LI	–	–	–
ETU350	LSI	–	–	–
ETU360	LSIG	–	–	–
ETU650	LSIG	–	–	–
ETU660	LSIG	–	–	–










■ Available – Not available/not present



3VA23	3VA24	3VA25	3VA26	3VA27
3/4-pole	3/4-pole	3/4-pole	3/4-pole	3/4-pole
400	630	1000	1250	1600
250 ... 400	400 ... 630	630 ... 1000	1250	800 ... 1600
20000	20000	10000	10000	10000
6000	5000	4600	4600	2000
12000	10000	7000	7000	–
4200	3500	3200	3200	–
■	■	■	■	■
■	■	■	■	–
■	■	■	■	–
■	■	■	■	■
■	■	■	■	–
■	■	■	■	–
–	–	–	–	■
–	–	–	–	■
–	–	–	–	■
250	400 ... 500	630 ... 800	–	800 ... 1600
20000	20000	10000	–	10000
6000	5000 (400 A) 3000 (500 A)	4600	–	2000
■	■	–	–	–
■	■	■	–	–
■	■	■	–	–
■	■	■	–	–
–	–	–	–	■
–	–	–	–	■
–	–	–	–	■
–	–	–	–	■

# Trip units

## Protection system for 3VA molded case circuit breakers up to 1000 A

Trip units	Thermal-magnetic	Electronic	Electronic with display	Electronic with display and measurement function
				
	<b>TM 2-series</b>	<b>ETU 3-series</b>	<b>ETU 5-series</b>	<b>ETU 8-series</b>
<b>Protective function</b>				
Line protection	TM210, TM220, TM240	ETU320, ETU330, ETU340, ETU350	ETU550, ETU560	ETU850, ETU860
Starter protection	TM120M	ETU310M	–	–
Motor protection	–	ETU350M	ETU550M	ETU860M
<b>Integrated functions</b>				
Parameterizing	Setting and reading the parameters • Current values	Setting and reading the parameters • Current values • Delay times	Setting and reading the parameters • Via display and communication • 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
Measurement function	–	–	–	Measurement function integrated
<b>Optional expansions</b>				
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
Communication module	–	–	 COM060 communication module	 COM060 communication module
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

## Protective functions of the 3VA1 with thermal-magnetic trip unit

	TM120M AM	TM210 FTFM	TM220 ATFM	TM240 ATAM
<b>Protections</b>				
Starter protection	■	–	–	–
Line protection	–	■	■	■
<b>Version available with</b>				
1-pole and 2-pole breakers	–	■	–	–
3-pole breaker	■	■	■	■
4-pole breaker	–	■	■	■
<b>Available protection parameters</b>				
$I_r$ adjustable	–	–	■	■
$I_i$ adjustable	■	–	–	■
$I_r$ fixed	–	■	–	–
$I_i$ fixed	–	■	■	–
$I_N$ <sup>1)</sup>	–	■	■	■

<sup>1)</sup> 3VA10 only without N protection  
 3VA11, 3VA12, 3VA13, 3VA14 without, 50% or 100% N protection  
 50% N protection from  $I_n \geq 100$  A

## Protective functions of the 3VA2 with electronic trip unit

	ETU310M I	ETU320 LI	ETU330 LIG	ETU340 ELISA®	ETU350 LSI	ETU350M LSI	ETU550 LSI	ETU550M LSI	ETU560 LSIG	ETU850 LSI	ETU860 LSIG	ETU860M LSIG
<b>Protection</b>												
Starter protection	■	–	–	–	–	–	–	–	–	–	–	–
Motor protection	–	–	–	–	–	■	–	■	–	–	–	■
Line protection	–	■	■	■	■	–	–	–	■	■	■	–
Generator protection	–	■	■	–	■	–	■	–	■	■	■	–
<b>Version available with</b>												
3-pole without external neutral conductor transformer	■	■	■	■	■	■	–	■	–	–	–	■
3-pole with external neutral conductor transformer	–	–	–	–	–	–	■	–	■	■	■	–
4-pole with protected neutral conductor transformer	–	■	■	■	■	–	■	–	■	■	■	–
<b>Available protection parameters</b>												
Characteristic in L range	$I^2t$	$I^2t$	$I^2t$	$I^4t$	$I^2t$	$I^2t$	$I^2t$	$I^2t$	$I^2t$	$I^2t$	$I^2t$	$I^2t$
$I_r$	–	■	■	■	■	■	■	■	■	■	■	■
$t_r$ at $6 \times I_r$	–	■	■	–	■	–	■	–	■	■	■	–
$t_c$	–	–	–	–	–	■	–	■	–	–	–	■
$t_p$	–	–	–	–	–	–	–	■	–	–	–	■
Thermal image	■	■	■	■	■	■	■	■	■	■	■	■
Thermal image can be switched on/off	–	–	–	–	–	–	■	–	■	■	■	–
$I_{sd}$	–	–	–	–	■	■	■	■	■	■	■	■
$t_{sd}$ at $8 \times I_r$	–	–	–	–	■	■	■	■	■	■	■	■
Characteristic in S range: $I^2t_{sd}$	–	–	–	–	■	–	■	–	■	■	■	–
Characteristic in S range: selectable $I^2t_{sd}/t_{sd}$	–	–	–	–	–	–	■	–	■	■	■	–
$I_i$	■	■	■	■	■	■	■	■	■	■	■	■
$I_N$ <sup>1)</sup>	–	■	■	■	■	–	■	–	■	■	■	–
$I_g$	–	–	■	–	–	–	–	–	■	–	■	■
$t_g$ at $2 \times I_g$	–	–	■	–	–	–	–	–	■	–	■	■
Characteristic in G range: $I^2t_g$	–	–	–	–	–	–	–	–	■	–	■	■
Characteristic in G range: selectable $I^2t_g/t_g$	–	–	–	–	–	–	–	–	■	–	■	■
Ground-fault alarm function	–	–	–	–	–	–	–	–	■	–	■	■
Blocking protection	–	–	–	–	–	–	–	–	–	–	–	■
ZSI in combination with an EFB external function box	–	■	■	■	■	■	■	■	■	■	■	■

<sup>1)</sup> Available in a version with external current transformer for N conductor or 4-pole breaker

### Available for:

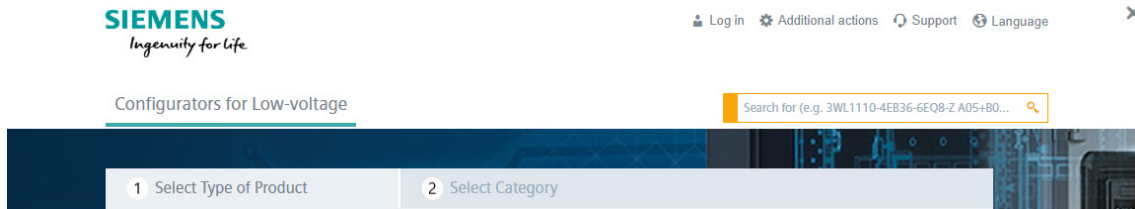
- Circuit breakers with ETU (4-pole)
- Circuit breakers with ETU5/ETU8 3-pole with external neutral conductor transformer or 4-pole

# Online configurator highlights

[www.siemens.com/lowvoltage/configurators](http://www.siemens.com/lowvoltage/configurators)

## Search function with global direct input

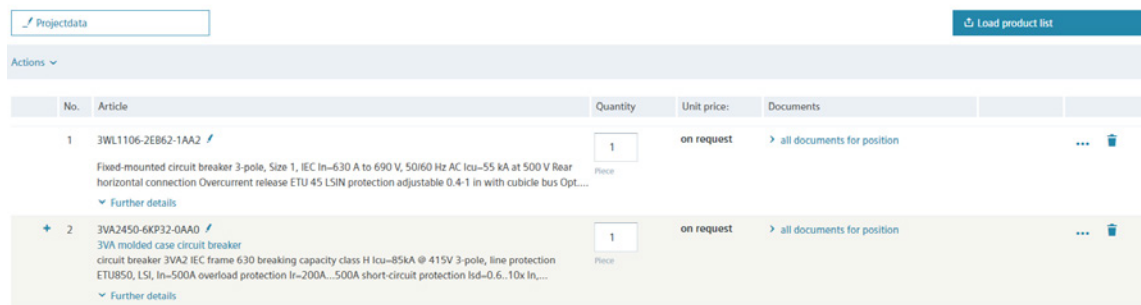
Searches for specific terms and jumps to the article number based on input to the correct configurator



2

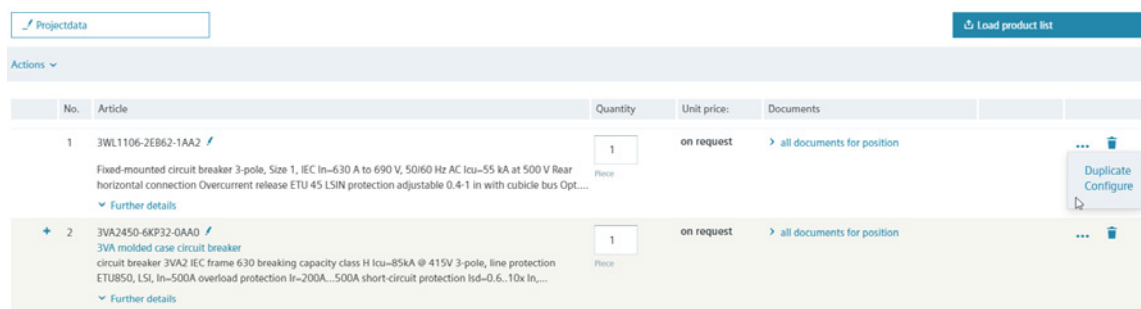
## Product list stores multiple configurations and can transfer them collectively to the shopping cart

List of products

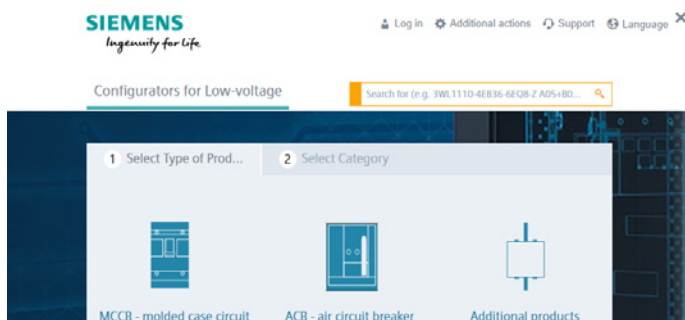


## Recall of completed configurations for modification or additional configuration

List of products



## Responsive Design



[www.siemens.com/lowvoltage/3va-configurator](http://www.siemens.com/lowvoltage/3va-configurator) and  
[www.siemens.com/lowvoltage/3va27-configurator](http://www.siemens.com/lowvoltage/3va27-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-configurator](http://www.siemens.com/lowvoltage/3va-configurator)

2

## Molded case circuit breakers and switch disconnectors



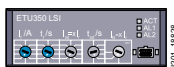
3VA1 for standard applications

3VA2 for selective applications

### Trip units



Thermal-magnetic trip unit (TMTU)



Electronic trip unit (ETU)



Electronic trip unit (ETU) with display, and optionally with measurement 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 connection



Bus connectors



Bus connectors broadened



Circular conductor terminal



Box terminal



Nut keeper kits, right-angled

### Connection accessories



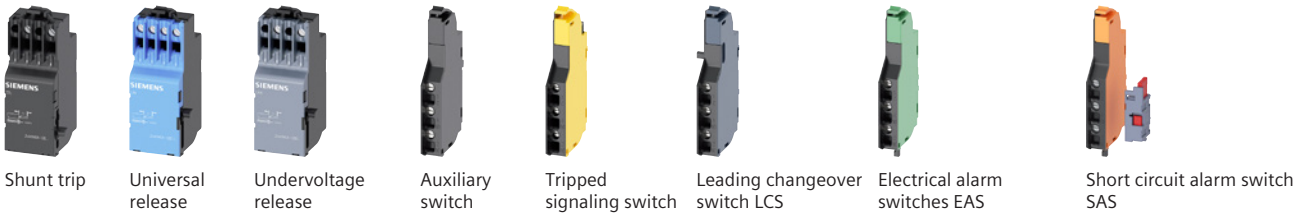
Insulation accessories

**Note:**

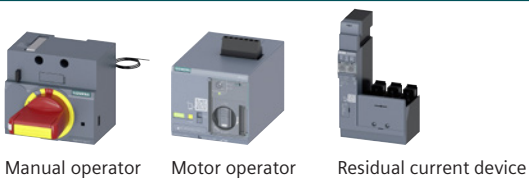
You will find a detailed range of accessories in the Accessories and spare parts section.



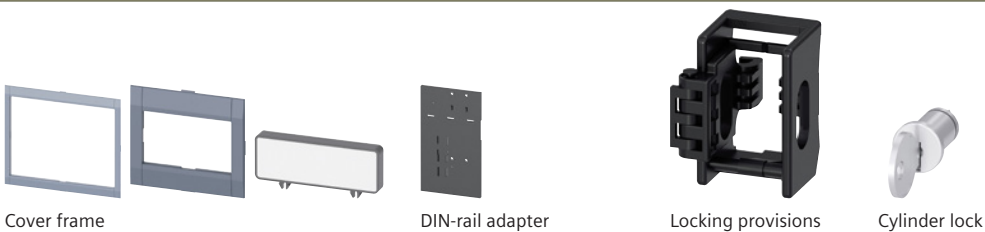
## Auxiliary releases/auxiliary switches



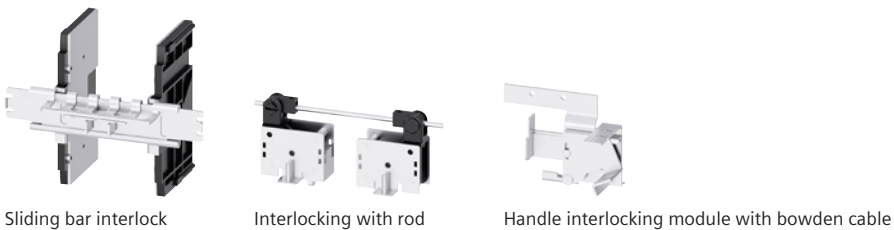
## Mountable accessories



## Additional circuit breaker accessories



## Mechanical interlocking mechanisms



**Note:**

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

# Structure of the article numbers

## Basic configuration for line and generator 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-configurator](http://www.siemens.com/lowvoltage/3va-configurator)

		3VA												4	5	6	7	8	9	10	11	12	- 0AA0	
Trip units		Thermal-magnetic												1										
		Electronic												2										
		3VA10	3VA11	3VA12	3VA13	3VA14	3VA15	3VA20	3VA21	3VA22	3VA23	3VA24	3VA25	3VA26										
Size (SZ)	100 A	■	-	-	-	-	-	■	-	-	-	-	-	-	0									
	160 A	-	■	-	-	-	-	-	■	-	-	-	-	-	1									
	250 A	-	-	■	-	-	-	-	-	■	-	-	-	-	2									
	400 A	-	-	-	■	-	-	-	-	-	■	-	-	-	3									
	630 A	-	-	-	-	■	-	-	-	-	-	■	-	-	4									
	1000 A	-	-	-	-	-	■	-	-	-	-	-	■	-	5									
	1250 A	-	-	-	-	-	-	-	-	-	-	-	-	■	6									
Max. rated current $I_{n,max}$	Line protection	16 A	■	■	-	-	-	-	-	-	-	-	-	-	9	6								
		20 A	■	■	-	-	-	-	-	-	-	-	-	-	2	0								
		25 A	■	■	-	-	-	-	■	■	-	-	-	-	2	5								
		32 A	■	■	-	-	-	-	-	-	-	-	-	-	3	2								
		40 A	■	■	-	-	-	-	■	■	-	-	-	-	4	0								
		50 A	■	■	-	-	-	-	-	-	-	-	-	-	5	0								
		63 A	■	■	-	-	-	-	■	■	-	-	-	-	6	3								
		80 A	■	■	-	-	-	-	-	-	-	-	-	-	8	0								
		100 A	■	■	-	-	-	-	■	■	-	-	-	-	1	0								
		125 A	-	■	-	-	-	-	-	-	-	-	-	-	1	2								
		160 A	-	■	■	-	-	-	-	■ <sup>1)</sup>	■	-	-	-	1	6								
		200 A	-	-	■	-	-	-	-	-	-	-	-	-	2	0								
	250 A	-	-	■	-	-	-	-	-	■ <sup>1)</sup>	■	-	-	2	5									
	320 A	-	-	-	■	-	-	-	-	-	■	-	-	3	2									
	400 A	-	-	-	■	-	-	-	-	-	■ <sup>1)</sup>	■	-	4	0									
	500 A	-	-	-	-	■	-	-	-	-	-	■ <sup>2)</sup>	-	5	0									
	630 A	-	-	-	-	■	■	-	-	-	-	■	■	6	3									
	800 A	-	-	-	-	-	■	-	-	-	-	-	■	8	0									
	1000 A	-	-	-	-	-	■	-	-	-	-	-	■	1	0									
	1250 A	-	-	-	-	-	-	-	-	-	-	-	■	1	2									
	Generator protection	25 A	-	-	-	-	-	-	■	■	-	-	-	-	2	5								
		40 A	-	-	-	-	-	-	■	■	-	-	-	-	4	0								
		63 A	-	-	-	-	-	-	■	■	-	-	-	-	6	3								
100 A		-	-	-	-	-	-	■	■	-	-	-	-	1	0									
160 A		-	-	-	-	-	-	■	■	-	-	-	-	1	6									
250 A		-	-	-	-	-	-	-	■	■	-	-	-	2	5									
400 A		-	-	-	-	-	-	-	-	■	■	-	-	4	0									
500 A		-	-	-	-	-	-	-	-	-	■ <sup>2)</sup>	■	-	5	0									
630 A		-	-	-	-	-	-	-	-	-	■	■	-	6	3									
800 A		-	-	-	-	-	-	-	-	-	-	■	■	8	0									
1000 A		-	-	-	-	-	-	-	-	-	-	■	■	1	0									
Switch disconnecter	63 A	-	■	-	-	-	-	-	-	-	-	-	-	6	3									
	100 A	-	■	-	-	-	-	-	-	-	-	-	-	1	0									
	125 A	-	■	-	-	-	-	-	-	-	-	-	-	1	2									
	160 A	-	■	-	-	-	-	-	-	-	-	-	-	1	6									
	250 A	-	-	■	-	-	-	-	-	-	-	-	-	2	5									
	400 A	-	-	-	■	-	-	-	-	-	-	-	-	4	0									
	500 A	-	-	-	-	■	-	-	-	-	-	-	-	5	0									
630 A	-	-	-	-	■	-	-	-	-	-	-	-	6	3										

<sup>1)</sup> Rated current not available with ETU340 ELISA LI  
<sup>2)</sup> With ETU 5-series and 8-series, utilization category B and ETU340 ELISA LI only

		3VA												- 0AA0					
		4	5	6	7	8	9	10	11	12									
		3VA10	3VA11	3VA12	3VA13	3VA14	3VA15	3VA20	3VA21	3VA22	3VA23	3VA24	3VA25	3VA26					
Short-circuit breaking capacity $I_{cu} = I_{cs}$ at 415 V	Without overload protection	-	■	-	■	-	■	-	-	-	-	-	-	-	1				
	Without short-circuit protection	-	■	■	■	■	-	-	-	-	-	-	-	-	1				
	16 kA	■	-	-	-	-	-	-	-	-	-	-	-	-	2				
	25 kA	■	■	-	-	-	-	-	-	-	-	-	-	-	3				
	36 kA	■	■	■	■	■	-	-	-	-	-	-	-	-	4				
	55 kA	-	■	■	■	■	■	-	-	-	-	-	-	-	5				
	70 kA	-	■	■	■	■	■	-	-	-	-	-	-	-	6				
	85 kA	-	-	-	-	-	-	■	■	■	■	■	■	■	6				
	110 kA	-	-	-	-	-	-	■	■	■	■	■	■	■	7				
	150 kA	-	-	-	-	-	-	■	■	■	■	■	■	■	8				
200 kA <sup>1)</sup>	-	-	-	-	-	-	■	■	■	■	■	■	■	0					
<sup>1)</sup> Available for 3 and 8-series ETUs																			
Protective function thermal-magnetic	No protection	-	■	■	■	■	-	-	-	-	-	-	-	-	SD100	-	A		
	Line protection	■	■	-	-	-	-	-	-	-	-	-	-	-	TM210	FTFM	D		
		-	■	■	■	■	■	-	-	-	-	-	-	-	TM220	ATFM	E		
		-	■	■	■	■	■	-	-	-	-	-	-	-	TM240	ATAM	F		
Protective function thermal-magnetic, neutral conductor protection	No protection															A			
	Line protection	Without neutral conductor protection														E			
		50% neutral conductor protection														F			
		100% neutral conductor protection														G			
Protective function electronic	Line protection	-	-	-	-	-	-	■	■	■	■	■	■	■	ETU320	LI	(N) <sup>2)</sup>	H	L
		-	-	-	-	-	-	-	■	■	■	■	■	■	ETU330	LIG	(N) <sup>2)</sup>	H	M
		-	-	-	-	-	-	-	■	■	■	■	■	■	ETU340	ELISA LI	(N) <sup>2)</sup>	H	K
	Line and generator protection	-	-	-	-	-	-	-	■	■	■	■	■	■	ETU350	LSI	(N) <sup>2)</sup>	H	N
		-	-	-	-	-	-	-	■	■	■	■	■	■	ETU550	LSI	(N) <sup>3)</sup>	J	P
	Line and generator protection, with display	-	-	-	-	-	-	-	■	■	■	■	■	-	ETU560	LSIG	(N) <sup>3)</sup>	J	Q
		-	-	-	-	-	-	-	■	■	■	■	■	-	ETU850	LSI	(N) <sup>3)</sup>	K	P
	Line and generator protection, with display, with measurement function	-	-	-	-	-	-	-	■	■	■	■	■	■	ETU860	LSIG	(N) <sup>3)</sup>	K	Q
<sup>2)</sup> Neutral conductor protection for 4-pole breakers																			
<sup>3)</sup> Neutral conductor protection for 3-pole breakers with an external neutral conductor transformer or for 4-pole breakers																			
Number of poles	1-pole	Line protection	-	■ <sup>4)</sup>	-	-	-	-	-	-	-	-	-	-	-	-		1	
		Generator protection	-	-	-	-	-	-	-	-	-	-	-	-	-	-		2	
	3-pole	Line protection	■	■	■	■	■	■	■	■	■	■	■	■	■	■		3	
		Generator protection	-	-	-	-	-	-	■	■	■	■	■	■	■	■		3	
	4-pole	Line protection	■	■	■	■	■	■	■	■	■	■	■	■	■	■		4	
		Generator protection	-	-	-	-	-	-	■	■	■	■	■	■	■	■		4	
<sup>4)</sup> For TM210 only																			
Connection technology	Nut keeper kit	Line protection	■	■	■	■	■	■	■	■	■	■	■	■	■	■		2	
		Generator protection	-	-	-	-	-	-	■	■	■	■	■	■	■	■		2	
	Box terminal	Line protection	■	■	-	-	-	-	■	■	-	-	-	-	-	-		6	
		Generator protection	-	-	-	-	-	-	■	■	-	-	-	-	-	-		6	

# Structure of the article numbers

## Basic configuration for starter and motor 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-configurator](http://www.siemens.com/lowvoltage/3va-configurator)

2

		3VA										4	5	6	7	8	9	10	11	12	-	OAA0					
Trip units	Thermal-magnetic											1															
	Electronic											2															
Size (SZ)	160 A	■	-	-	-	-	-	-	-	-	-	1															
	250 A	-	■	-	-	-	-	-	-	-	-	2															
	400 A	-	-	■	-	-	-	-	-	-	-	3															
	630 A	-	-	-	■	-	-	-	-	-	-	4															
	1000 A	-	-	-	-	■	-	-	-	-	-	5															
Max. rated current $I_{n\ max}$	Starter protection	1 A	■	-	-	-	-	-	-	-	-	-	8	1													
		2 A	■	-	-	-	-	-	-	-	-	-	-	0	2												
		4 A	■	-	-	-	-	-	-	-	-	-	-	0	4												
		8 A	■	-	-	-	-	-	-	-	-	-	-	0	8												
		12.5 A	■	-	-	-	-	-	-	-	-	-	-	9	2												
		20 A	■	-	-	-	-	-	-	-	-	-	-	2	0												
		25 A	-	-	-	-	-	■	-	-	-	-	-	2	5												
		32 A	■	-	-	-	-	-	-	-	-	-	-	3	2												
		40 A	■	-	-	-	-	-	■	-	-	-	-	4	0												
		50 A	■	-	-	-	-	-	-	-	-	-	-	5	0												
		63 A	■	-	-	-	-	-	■	-	-	-	-	6	3												
		80 A	■	-	-	-	-	-	-	-	-	-	-	8	0												
		100 A	■	-	-	-	-	■	-	-	-	-	-	1	0												
		125 A	■	-	-	-	-	-	-	-	-	-	-	1	2												
	160 A	-	■	-	-	-	-	-	■	-	-	-	1	6													
	200 A	-	■	-	-	-	-	-	■	-	-	-	2	0													
	250 A	-	-	■	-	-	-	-	-	■	-	-	2	5													
	320 A	-	-	■	-	-	-	-	-	-	-	-	3	2													
	400 A	-	-	-	■	-	-	-	-	-	■	-	4	0													
	500 A	-	-	-	■	-	-	-	-	-	■	-	5	0													
	630 A	-	-	-	-	■	-	-	-	-	-	■	6	3													
	800 A	-	-	-	-	-	■	-	-	-	-	-	8	0													
	Motor protection	25 A	-	-	-	-	-	■	-	-	-	-	2	5													
		40 A	-	-	-	-	-	■	-	-	-	-	4	0													
		63 A	-	-	-	-	-	■	-	-	-	-	6	3													
		100 A	-	-	-	-	-	■	-	-	-	-	1	0													
		160 A	-	-	-	-	-	-	■	-	-	-	1	6													
		200 A	-	-	-	-	-	-	■	-	-	-	2	0													
250 A		-	-	-	-	-	-	-	■	-	-	2	5														
400 A		-	-	-	-	-	-	-	-	■	-	4	0														
500 A		-	-	-	-	-	-	-	-	■	-	5	0														
630 A		-	-	-	-	-	-	-	-	-	■	6	3														
800 A		-	-	-	-	-	-	-	-	-	■	8	0														
Short-circuit breaking capacity $I_{cu} = I_{cs}$ at 415 V		55 kA	■	■	■	■	■	■	■	■	■	■	5														
		70 kA	■	■	■	■	■	-	-	-	-	-	6														
		85 kA	-	-	-	-	-	■	■	■	■	■	6														
	110 kA	-	-	■	■	■	■	■	■	■	■	7															
	200 kA	-	-	-	-	-	■	■	■	■	-	0															

		3VA										- 0AA0					
		4	5	6	7	8	9	10	11	12							
		3VA11	3VA12	3VA13	3VA14	3VA15	3VA21	3VA22	3VA23	3VA24	3VA25						
Protective function thermal-magnetic	Starter protection	■	-	-	-	-	-	-	-	-	-	TM110M	FM	M	G		
		■	■	■	■	■	-	-	-	-	-	TM120M	AM	M	H		
Protective function electronic	Motor protection	-	-	-	-	-	■	■	■	■	■	ETU350M	LSI	M	N		
	Motor protection, with display	-	-	-	-	-	■	■	■	■	■	ETU550M	LSI	M	P		
	Motor protection, with display, with measurement function	-	-	-	-	-	■	■	■	■	■	ETU860M	LSIG	M	Q		
	Starter protection	-	-	-	-	-	■	■	■	■	-	ETU310M	I	M	S		
Number of poles	3-pole	Starter protection	■	■	■	■	■	■	■	■	-					3	
		Motor protection	-	-	-	-	■	■	■	■	■					3	
Connection technology	Nut keeper kit	Starter protection	■	■	■	■	■	■	■	■	-					2	
		Motor protection	-	-	-	-	-	■	■	■	■	■					2
	Box terminal	Starter protection	■	-	-	-	-	■	-	-	-	-					6
		Motor protection	-	-	-	-	-	■	-	-	-	-					6

2

# Internal accessories

## Auxiliary switches and alarm switches

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

2

3VA20  
3VA21  
3VA22  
3VA23  
3VA24  
3VA25  
3VA26

3VA10

3VA11

3VA12

3VA13

3VA14

3VA15

### 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	$I_e$	$U_e$ AC/DC	Version					
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard					3VA9988-0AA12
		<1 A	24 V/24 V	Electronic-compatible					3VA9988-0AA13
HP	14 mm (2 slots)	10 A	600 V/250 V	Standard	–				3VA9988-0AA11

### 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 circuit breaker trips



Type	Width	$I_e$	$U_e$ AC/DC	Version					
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard	–				3VA9988-0AA22
		<1 A	24 V/24 V	Electronic-compatible	–				3VA9988-0AA23
HP	14 mm (2 slots)	10 A	600 V/250 V	Standard	–				3VA9988-0AA21

### Trip alarm switches TAS

- Signal every circuit breaker tripping operation
- Are actuated whenever the molded case circuit breaker switches to the TRIP position



Type	Width	$I_e$	$U_e$ AC/DC	Version					
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard					3VA9988-0AB12
		<1 A	24 V/24 V	Electronic-compatible					3VA9988-0AB13
HP	14 mm (2 slots)	10 A	600 V/250 V	Standard	–				3VA9988-0AB11

### Short circuit alarm switches SAS

- Signal tripping operations only if they have been initiated by a short circuit
- The tripping operation must be reset by deliberate acknowledgement of the fault before the molded case circuit breaker can be switched to ON again



Type	Width	$I_e$	$U_e$ AC/DC	Version					
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard	3VA9988-0AB32	3VA9988-0AB32	3VA9988-0AB34	–	–
		<1 A	24 V/24 V	Electronic-compatible	3VA9988-0AB33	3VA9988-0AB33	3VA9988-0AB35	–	–

### 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	$I_e$	$U_e$ AC/DC	Version					
HQ	7 mm (1 slot)	6 A	240 V/250 V	Standard	–	–	–	–	3VA9988-0AB22
		<1 A	24 V/24 V	Electronic-compatible	–	–	–	–	3VA9988-0AB23

## Auxiliary releases

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2

			3VA10	3VA11	3VA12	3VA13	3VA14	3VA15	3VA20	3VA21	3VA22	3VA23	3VA24	3VA25	3VA26		
<b>Shunt trips left STL</b>																	
	<ul style="list-style-type: none"> <li>Used for remote-controlled tripping of the molded case circuit breaker</li> <li>Have particularly low power consumption</li> <li>Especially suitable for electrical interlocking in the EI variant<sup>1)</sup></li> </ul>																
	Version	$U_e$ 50/60 Hz AC	$U_e$ DC														
	Standard	–	12 V		3VA9988-OBL10												
		24 V	24 ... 30 V		3VA9988-OBL30												
		48 ... 60 V	48 ... 60 V		3VA9988-OBL31												
		110 ... 127 V	110 ... 127 V		3VA9988-OBL32												
		208 ... 277 V	220 ... 250 V		3VA9988-OBL33												
		380 ... 600 V	–		3VA9988-OBL20												
	Electrical (EI)	–	24 V		3VA9988-OBM10												
<b>Shunt trips flexible STF</b>																	
	<ul style="list-style-type: none"> <li>Used for remote-controlled tripping of the molded case circuit breaker</li> <li>Flexible installation</li> </ul>																
	$U_e$ 50/60 Hz AC	$U_e$ DC															
	24 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-OBA20	–
	48 ... 60 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-OBA21	–
	110 ... 127 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-OBA22	–
	208 ... 277 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-OBA23	–
	380 ... 500 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-OBA24	–
	600 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-OBA25	–
<b>Universal releases UNI</b>																	
	<ul style="list-style-type: none"> <li>Combination of shunt trip and undervoltage release</li> </ul>																
	$U_e$ 50/60 Hz AC	$U_e$ DC															
	–	–	12 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BD11
			24 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BD12
			48 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BD13
<b>Undervoltage releases UVR</b>																	
	<ul style="list-style-type: none"> <li>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</li> </ul>																
	$U_e$ 50/60 Hz AC	$U_e$ DC															
	–	–	12 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB10
			24 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB11
			48 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB12
			60 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB13
			125 ... 127 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB14
			220 ... 230 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB15
			250 V	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB16
	24 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB20
	48 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB21
	60 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB22
	110 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB23
	120 ... 127 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB24
	208 ... 230 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB25
	380 ... 400 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB26
	440 ... 480 V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3VA9908-0BB27
<b>Time-delay devices for undervoltage releases</b>																	
	$U_e$ 50/60 Hz AC	$U_e$ DC															
	110 V	–	–	110 V	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-0BF21
	230 V	–	–	230 V	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-0BF22
	–	–	–	24 V	–	–	–	–	–	–	–	–	–	–	–	–	3VA9988-0BF23

<sup>1)</sup> In combination with TAS and AUX. For circuit diagrams, see the operating Instructions






# Manual operators

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2

			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Front mounted rotary operators</b>								
<ul style="list-style-type: none"> <li>Handle</li> <li>For IEC</li> <li>Degree of protection IP30</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Front mounted rotary operators</b>								
<ul style="list-style-type: none"> <li>Handle</li> <li>For IEC</li> <li>Degree of protection IP30</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Front mounted rotary operators</b>								
<ul style="list-style-type: none"> <li>Handle</li> <li>For IEC</li> <li>Degree of protection IP30</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Front mounted rotary operators</b>								
<ul style="list-style-type: none"> <li>Handle</li> <li>For IEC</li> <li>Degree of protection IP30</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Door mounted rotary operators with tolerance compensation</b>								
<ul style="list-style-type: none"> <li>Shaft 300 mm (325 mm for 3VA15/3VA25/3VA26)</li> <li>With mounting tolerance compensation</li> <li>Handle with masking plate 75 × 75 mm (100 × 100 mm for 3VA15/3VA25/3VA26)</li> <li>Degree of protection IP65</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Door mounted rotary operators with tolerance compensation</b>								
<ul style="list-style-type: none"> <li>Shaft 300 mm (325 mm for 3VA15/3VA25/3VA26)</li> <li>With mounting tolerance compensation</li> <li>Handle with masking plate 75 × 75 mm (100 × 100 mm for 3VA15/3VA25/3VA26)</li> <li>Degree of protection IP65</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Door mounted rotary operators without tolerance compensation</b>								
<ul style="list-style-type: none"> <li>Shaft 300 mm (325 mm for 3VA15/3VA25/3VA26)</li> <li>Handle with masking plate 75 × 75 mm (100 × 100 mm for 3VA15/3VA25/3VA26)</li> <li>Degree of protection IP65</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
<b>Door mounted rotary operators without handle</b>								
<ul style="list-style-type: none"> <li>For IEC</li> <li>Degree of protection IP30</li> <li>For 3-pole and 4-pole breakers</li> </ul>								
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	
			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26	











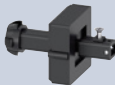

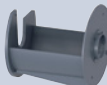

			3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26
<b>Side wall mounted rotary operators</b>							
	<ul style="list-style-type: none"> <li>Rotary operator with shaft 300 mm</li> <li>Handle with masking plate 75 × 75 mm</li> <li>Degree of protection IP65</li> <li>For 3-pole and 4-pole breakers</li> </ul>						
Version	Mounting bracket	Illumination kit					
Standard (gray)	Without	Without	3VA9157-0PK11	3VA9257-0PK11	3VA9267-0PK11	3VA9467-0PK11	–
		With	3VA9157-0PK13	3VA9257-0PK13	3VA9267-0PK13	3VA9467-0PK13	–
EMERGENCY-OFF (red/yellow)	Without	Without	3VA9157-0PK15	3VA9257-0PK15	3VA9267-0PK15	3VA9467-0PK15	–
		With	3VA9157-0PK17	3VA9257-0PK17	3VA9267-0PK17	3VA9467-0PK17	–
<b>Side wall mounted rotary operators with mounting bracket</b>							
	<ul style="list-style-type: none"> <li>Rotary operator with short shaft and mounting bracket for mounting directly on the side wall</li> <li>Handle with masking plate 75 × 75 mm</li> <li>Degree of protection IP65</li> <li>For 3-pole and 4-pole breakers</li> </ul>						
Version	Mounting bracket	Illumination kit					
Standard (gray)	With	Without	3VA9157-0PK51	3VA9257-0PK51	3VA9267-0PK51	–	–
		With	3VA9157-0PK53	3VA9257-0PK53	3VA9267-0PK53	–	–
EMERGENCY-OFF (red/yellow)	With	Without	3VA9157-0PK55	3VA9257-0PK55	3VA9267-0PK55	–	–
		With	3VA9157-0PK57	3VA9257-0PK57	3VA9267-0PK57	–	–
<b>Extended DIN rail for N/PE terminals</b>							
	Version	Rated current					
	For mounting bracket	≤250 A	3VA9987-0GL30	3VA9987-0GL30	3VA9987-0GL30	–	–
<b>Auxiliary switch modules for rotary operator</b>							
	Version						
	2× leading to "ON"		3VA9257-0GX10	3VA9257-0GX10	3VA9467-0GX10	3VA9467-0GX10	–
	2× leading to "ON" and 1× leading to "OFF"		–	–	3VA9467-0GX20	3VA9467-0GX20	–
<b>Mounting adapters for side wall mounted rotary operators</b>							
	Version						
	Necessary accessories for 3VA side wall mounted rotary operators, if 3VA9...-0GX.0 auxiliary switch modules are used		3VA9257-0GX01	3VA9257-0GX01	3VA9467-0GX01	–	–

# Manual operators

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	3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26
<b>Supplementary handles for door mounted rotary operators</b>					
	<ul style="list-style-type: none"> <li>For operation when cabinet door is open</li> </ul>				
<b>Version</b>					
Standard (gray)	3VA9287-0GC01	3VA9287-0GC01	3VA9487-0GC01	3VA9487-0GC11	3VA9687-0GC01
EMERGENCY-OFF (red/yellow)	3VA9287-0GC05	3VA9287-0GC05	3VA9487-0GC05	3VA9487-0GC15	3VA9687-0GC05
<b>Handles</b>					
	<ul style="list-style-type: none"> <li>With masking plate</li> </ul>				
<b>Version</b>					
Standard (gray)	<b>Tolerance compensation</b>				
	With		8UD1721-0AB21	8UD1731-0AB21	8UD1741-0AB21
	Without		8UD1721-0AB11	8UD1731-0AB11	8UD1741-0AB11
EMERGENCY-OFF (red/yellow)	With		8UD1721-0AB25	8UD1731-0AB25	8UD1741-0AB25
	Without		8UD1721-0AB15	8UD1731-0AB15	8UD1741-0AB15
<b>Handle lever extensions</b>					
	<ul style="list-style-type: none"> <li><b>Note:</b> The handle lever extension is already included in the scope of supply of the breakers.</li> </ul>				
				3VA9487-0SC10	3VA9987-0SC10
<b>Shafts</b>					
	<b>Type</b>	<b>Length</b>			
	8 × 8 mm	300 mm	8UD1900-2WA00		–
		600 mm	8UD1900-2WB00		–
	12 × 12 mm	300 mm	–	–	–
600 mm		–	–	–	8UD1900-4WB00
<b>Adapters for shafts</b>					
	<b>Type</b>	<b>Use</b>			
	8 × 8 mm	With door mounted rotary operator and side wall mounted rotary operator	8UD1900-2DA00		–
	12 × 12 mm	For door mounted rotary operator	–	–	8UD1900-4DA00
<b>Door couplings</b>					
	<b>Type</b>				
	8 × 8 mm		8UD1900-2HA00		–
	12 × 12 mm		–	–	8UD1900-4HA00

		3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26
<b>Mounting tolerance compensations</b>						
	Type					
	8 × 8 mm	8UD1900-2GA00				–
	Type					
	12 × 12 mm	–	–	–	–	8UD1900-4GA00
<b>Fixing brackets for shafts</b>						
	Type					
		3VA9287-0GA80		3VA9487-0GA80		3VA9687-0GA80
<b>Variable depth adapters</b>						
	Type					
	8 × 8 mm	3VA9487-0GB10				–

# Manual operators

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					3VA20	
					3VA21	
					3VA22	
	3VA10	3VA13			3VA23	3VA25
	3VA11	3VA14			3VA24	3VA26
	3VA12		3VA15			

## Labeling plates for manual operators



3VA9087-05X10

## Illumination kits for manual operators



- 24 V DC voltage

Version	Rated current					
Front mounted rotary operator	100 ... 250 A	8UD1900-0KA10	–	–	–	–
	100 ... 630 A	–	8UD1900-0KA20	–	8UD1900-0KA20	–
	630 ... 1000 A	–	–	8UD1900-0KA30	–	8UD1900-0KA30
Door mounted rotary operator and side wall mounted rotary operator	100 ... 630 A	8UD1900-0KA20	8UD1900-0KA20	8UD1900-0KA20	8UD1900-0KA20	–
	630 ... 1000 A	–	–	–	–	8UD1900-0KA30

## Cylinder locks (type Kaba), standard masking plates



Use	Key					
For door mounted rotary operator and side wall mounted rotary operator (in the masking plate), only for locking, not for interlocking	1	8UD1900-0MB01	8UD1900-0MB01	–	8UD1900-0MB01	–
	2	8UD1900-0NB01	8UD1900-0NB01	–	8UD1900-0NB01	–
	3	8UD1900-0PB01	8UD1900-0PB01	–	8UD1900-0PB01	–
	4	8UD1900-0QB01	8UD1900-0QB01	–	8UD1900-0QB01	–

## Cylinder locks (type Kaba), EMERGENCY-OFF masking plates



Use	Key					
For door mounted rotary operator and side wall mounted rotary operator (in the masking plate), only for locking, not for interlocking	1	8UD1900-0MB05	8UD1900-0MB05	–	8UD1900-0MB05	–
	2	8UD1900-0NB05	8UD1900-0NB05	–	8UD1900-0NB05	–
	3	8UD1900-0PB05	8UD1900-0PB05	–	8UD1900-0PB05	–
	4	8UD1900-0QB05	8UD1900-0QB05	–	8UD1900-0QB05	–

## 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 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

Rated current					
100 ... 630 A	3VA9980-0LF20	3VA9980-0LF20	–	3VA9980-0LF20	–
1000 A	–	–	3VA9680-0LF20	–	3VA9680-0LF20



# Motor operators

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## Side mounted motor operators without stored energy operators (MO310)



- Cover size 45 mm

Addressable via control signals	Isolating features in accordance with IEC/EN 60947-1	Make time, typically		Break time, typically		Rated operational power
		For 3VA1	For 3VA2	For 3VA1	For 3VA2	
■	■	<300 ms	–	<300 ms	–	250 W, max. 500 W (60 ms)

## Motor operators without stored energy operators (MO320)



Addressable via control signals	Isolating features in accordance with IEC/EN 60947-1	Make time, typically		Break time, typically		Rated operational power
		For 3VA1	For 3VA2	For 3VA1	For 3VA2	
■	■	<800 ms (160 A, 250A)	<1000 ms (250 A), <1700 ms (630 A)	<800 ms (160 A, 250A)	<1000 ms (250 A), <1400 ms (630 A)	250 W, max. 500 W (60 ms)

## Spare parts kit for MO320 **new**

Scope of supply  
Mounting plate, plug

## Motor operators with stored energy operators (SEO520)



- Synchronizable motor operator with optional communication link
- Has two spring assemblies that are used to switch the 3VA2 molded case circuit breaker on and off quickly. This new principle in the MCCB area ensures fast, reliable and easily controllable switching sequences, especially in load transfer switching applications.
- The connection with the COM060 communication module, via a plug-in connection, integrates the SEO520 into the communication environment of the 3VA molded case circuit breakers and ensures that the molded case circuit breaker can also be switched via the supported communication networks and the SENTRON powerconfig and SENTRON powermanager software packages.
- **Note:** On account of the fast switching times, the SEO520 cannot be used with a leading changeover switch LCS.

Addressable via control signals	Isolating features in accordance with IEC/EN 60947-1	Make time, typically		Break time, typically		Rated operational power
		For 3VA1	For 3VA2	For 3VA1	For 3VA2	
■	■	–	<80 ms	–	<80 ms	300 W, max. 500 W (60 ms)

## Spare parts kit for SEO520 **new**

Scope of supply  
Mounting plate, plug

## Spare parts kit for SEO520 with communication **new**

Scope of supply  
Mounting plate, plug, SLC adapter

## Mechanical operating cycles counters (for installation in the SEO520)



Mounting	Article No.
For installation in the SEO520	3VA9987-OHX10

## Cylinder lock adapters for SEO520



Mounting	Article No.
For installation of cylinder locks in the SEO520	3VA9980-OLF30

## Cylinder locks (type RONIS)



- Includes a lock with 2 keys
- For locking the operating mode (Manual/Auto/Lock) of the SEO520

Key	Article No.
1	3VA9980-OVL10
3	3VA9980-OVL30
4	3VA9980-OVL40

		3VA10	3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14	3VA23 3VA24
Rated control supply voltage	With communication						
42 ... 60 V AC, 24 ... 60 V DC	–	–	3VA9117-0HB10	–	–	–	–
110 ... 230 V AC, 110 ... 250 V DC	–	–	3VA9117-0HB20	–	–	–	–
Rated control supply voltage	With communication						
24 ... 60 V DC	–	–	3VA9157-0HA10	3VA9257-0HA10	3VA9267-0HA10	3VA9467-0HA10	3VA9467-0HA10
110 ... 230 V AC, 110 ... 250 V DC	–	–	3VA9157-0HA20	3VA9257-0HA20	3VA9267-0HA20	3VA9467-0HA20	3VA9467-0HA20
		–	3VA9157-0HA00	3VA9257-0HA00	3VA9267-0HA00	3VA9467-0HA00	3VA9467-0HA00
Rated control supply voltage	With communication						
24 V DC	–	–	–	–	3VA9267-0HC10	–	3VA9467-0HC10 <sup>1)</sup> <b>new</b>
42 ... 60 V AC/DC	–	–	–	–	3VA9267-0HC20	–	3VA9467-0HC20 <sup>1)</sup> <b>new</b>
110 ... 230 V AC, 110 ... 250 V DC	–	–	–	–	3VA9267-0HC30	–	3VA9467-0HC30 <sup>1)</sup> <b>new</b>
24 V DC	Yes	–	–	–	3VA9267-0HC15	–	3VA9467-0HC15 <sup>1)</sup> <b>new</b>
110 ... 230 V AC, 110 ... 250 V DC	Yes	–	–	–	3VA9267-0HC35	–	3VA9467-0HC35 <sup>1)</sup> <b>new</b>
		–	–	–	3VA9267-0HC00	–	–
		–	–	–	3VA9267-0HC05	–	–

<sup>1)</sup> Circuit breakers should be of product version  $\geq$  \*E06\*. Product versions  $<$  \*E06\* may be subject to a reduced service life (mechanical operating cycles). We recommend upgrading the circuit breaker to a higher product version, if necessary.



## 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 SE0520 stored energy operator additionally has:**  
Reset mode 3: Reset via OFF-signal with additional acknowledge signal

# Connection technology





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



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## Box terminals

	Connection options	Scope of supply	Cable cross-section, copper stranded
	1 2	3 single terminals	1.5 ... 70 mm <sup>2</sup>
			6 ... 120 mm <sup>2</sup>
			25 ... 185 mm <sup>2</sup>
			50 ... 185 mm <sup>2</sup>
			35 ... 300 mm <sup>2</sup>
	1 2	4 single terminals	1.5 ... 70 mm <sup>2</sup>
			6 ... 120 mm <sup>2</sup>
			25 ... 185 mm <sup>2</sup>
			50 ... 185 mm <sup>2</sup>
			35 ... 300 mm <sup>2</sup>

## Nut keeper kits

	Connection options	Scope of supply	Max. tap width	Max. tap thickness
	1 2	3 terminals	17 mm	6.5 mm
			25 mm	8 mm
			35 mm	10 mm
			Nut keeper kit for 3-pole breakers, 1 terminal cover	50 mm
	1 2	4 terminals	17 mm	6.5 mm
			25 mm	8 mm
			35 mm	10 mm
			Nut keeper kit for 4-pole breakers, 1 terminal cover	50 mm

## Circular conductor terminals, 1 cable

	Connection options	Scope of supply	Cable cross-section	Copper/aluminum stranded <sup>3)</sup>	
				Cu	Al
	1 2	3 single terminals	1.5 ... 10 mm <sup>2</sup>	■	–
			1.5 ... 50 mm <sup>2</sup>	■	–
			10 ... 95 mm <sup>2</sup>	■	■
			16 ... 185 mm <sup>2</sup>	■	■
			35 ... 185 mm <sup>2</sup>	■	■
	1 2	4 single terminals	1.5 ... 10 mm <sup>2</sup>	■	–
			1.5 ... 50 mm <sup>2</sup>	■	–
			10 ... 95 mm <sup>2</sup>	■	■
			16 ... 185 mm <sup>2</sup>	■	■
			35 ... 185 mm <sup>2</sup>	■	■
			50 ... 300 mm <sup>2</sup>	■	■

<sup>1)</sup> Maximum current-carrying capacity of cable connection 400 A  
Flexible copper bar: No restrictions

<sup>2)</sup> Maximum current-carrying capacity of cable connection 400 A

<sup>3)</sup> Al cable only tested according to UL486 A/B



3VA10 3VA11		3VA12	3VA20 3VA21	3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25
3VA9153-OJA11	–	–	–	–	–	–
–	3VA9253-OJA11	3VA9163-OJA12	3VA9163-OJA12	–	–	–
–	–	3VA9263-OJA12	3VA9263-OJA12	–	–	–
–	3VA9253-OJA12	–	–	–	–	–
–	–	–	–	3VA9483-OJA13 <sup>1)</sup>	–	–
3VA9154-OJA11	–	–	–	–	–	–
–	3VA9254-OJA11	3VA9164-OJA12	3VA9164-OJA12	–	–	–
–	–	3VA9264-OJA12	3VA9264-OJA12	–	–	–
–	3VA9254-OJA12	–	–	–	–	–
–	–	–	–	3VA9484-OJA13 <sup>1)</sup>	–	–
3VA9113-OQA00	–	–	–	–	–	–
–	3VA9213-OQA00	3VA9203-OQA00	3VA9203-OQA00	–	–	–
–	–	–	–	3VA9403-OQA00	–	–
–	–	–	–	–	3VA9603-OQA00	–
3VA9114-OQA00	–	–	–	–	–	–
–	3VA9214-OQA00	3VA9204-OQA00	3VA9204-OQA00	–	–	–
–	–	–	–	3VA9404-OQA00	–	–
–	–	–	–	–	3VA9604-OQA00	–
3VA9113-OJB10	–	–	–	–	–	–
–	–	3VA9103-OJB11	3VA9103-OJB11	–	–	–
3VA9113-OJB11	–	–	–	–	–	–
–	–	3VA9263-OJB12	3VA9263-OJB12	–	–	–
–	3VA9253-OJB12	–	–	–	–	–
–	–	–	–	3VA9383-OJB13 <sup>2)</sup>	–	–
3VA9114-OJB10	–	–	–	–	–	–
–	–	3VA9104-OJB11	3VA9104-OJB11	–	–	–
3VA9114-OJB11	–	–	–	–	–	–
–	–	3VA9264-OJB12	3VA9264-OJB12	–	–	–
–	3VA9254-OJB12	–	–	–	–	–
–	–	–	–	3VA9384-OJB13 <sup>2)</sup>	–	–

# Connection technology



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

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## Circular conductor terminals with control wire taps, 1 cable<sup>2)</sup>

	Connection options		Scope of supply	Cable cross-section	Copper/aluminum stranded <sup>3)</sup>	
	①	②			Cu	Al
	①	②	3 single terminals	1.5 ... 10 mm <sup>2</sup>	■	–
				1.5 ... 50 mm <sup>2</sup>	■	–
				10 ... 95 mm <sup>2</sup>	■	■
				16 ... 185 mm <sup>2</sup>	■	■
				50 ... 185 mm <sup>2</sup>	■	■
				50 ... 300 mm <sup>2</sup>	■	■
	①	②	4 single terminals	1.5 ... 10 mm <sup>2</sup>	■	–
				1.5 ... 50 mm <sup>2</sup>	■	–
				10 ... 95 mm <sup>2</sup>	■	■
				16 ... 185 mm <sup>2</sup>	■	■
				50 ... 185 mm <sup>2</sup>	■	■
				50 ... 300 mm <sup>2</sup>	■	■

## Circular conductor terminals, 2 cables

	Connection options		Scope of supply	Cable cross-section	Copper/aluminum stranded <sup>3)</sup>		Control wire tap
	①	②			Cu	Al	
	①	②	3 single terminals, 1 short terminal cover	120 ... 300 mm <sup>2</sup>	■	■	No
							Yes <sup>2)</sup>
	①	②	4 single terminals, 1 short terminal cover	120 ... 300 mm <sup>2</sup>	■	■	No
							Yes <sup>2)</sup>

## Circular conductor terminals, 3 cables

	Connection options		Scope of supply	Cable cross-section	Copper/aluminum stranded <sup>3)</sup>		Control wire tap
	①	②			Cu	Al	
	①	②	3 single terminals, 1 short terminal cover	120 ... 185 mm <sup>2</sup>	■	■	No
							Yes <sup>2)</sup>
	①	②	4 single terminals, 1 short terminal cover	120 ... 185 mm <sup>2</sup>	■	■	No
							Yes <sup>2)</sup>

## Control wire taps for box terminals<sup>2)</sup>

Connection options
①
②

## Control wire taps for busbars<sup>2)</sup>

Connection options
①
②

<sup>1)</sup> Maximum current-carrying capacity of copper cables 380 A  
Maximum current-carrying capacity of aluminum cables 310 A

<sup>2)</sup> Maximum current-carrying capacity 15 A  
Maximum cable connection up to 2.5 mm<sup>2</sup>

<sup>3)</sup> Al cable only tested according to UL 486 A/B

3VA10 3VA11		3VA12	3VA20 3VA21	3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25
3VA9113-0JG10	–	–	–	–	–	–
–	–	–	3VA9103-0JG11	3VA9103-0JG11	–	–
3VA9113-0JG11	–	–	–	–	–	–
–	–	–	3VA9263-0JG12	3VA9263-0JG12	–	–
–	3VA9253-0JG12	–	–	–	–	–
–	–	–	–	–	3VA9383-0JG13 <sup>1)</sup>	–
3VA9114-0JG10	–	–	–	–	–	–
–	–	–	3VA9104-0JG11	3VA9104-0JG11	–	–
3VA9114-0JG11	–	–	–	–	–	–
–	–	–	3VA9264-0JG12	3VA9264-0JG12	–	–
–	3VA9254-0JG12	–	–	–	–	–
–	–	–	–	–	3VA9384-0JG13 <sup>1)</sup>	–
–	–	–	–	–	–	3VA9503-0JB23
–	–	–	–	–	–	3VA9503-0JG23
–	–	–	–	–	–	3VA9504-0JB23
–	–	–	–	–	–	3VA9504-0JG23
–	–	–	–	–	–	3VA9503-0JB32
–	–	–	–	–	–	3VA9503-0JG32
–	–	–	–	–	–	3VA9504-0JB32
–	–	–	–	–	–	3VA9504-0JG32
3VA9110-0WB00	3VA9200-0WB00	3VA9200-0WB00	3VA9200-0WB00	3VA9480-0WB00	–	
3VA9150-0WB00	3VA9280-0WB00	3VA9280-0WB00	3VA9280-0WB00	3VA9480-0WB00	–	
3VA9110-0WC00	3VA9200-0WC00	3VA9200-0WC00	3VA9200-0WC00	3VA9480-0WC00	–	
3VA9150-0WC00	3VA9280-0WC00	3VA9280-0WC00	3VA9280-0WC00	3VA9480-0WC00	–	

# Connection technology



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

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## Note:

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

### Front bus connectors



Number of poles	Connection options	Scope of supply	Max. tap width	Max. tap thickness
1P	1 –	1 terminal	22 mm	8 mm
3P	– 2	3 terminals	6 × 50 mm	8 mm

### Front bus connectors, with phase barriers



- 3-pole and 4-pole bus connectors extended 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,	22 mm	8 mm
		2 phase barriers	32 mm	10 mm
			40 mm	12.5 mm
			50 mm	28 mm
4P	1 2	4 terminals,	22 mm	8 mm
		3 phase barriers	32 mm	10 mm
			40 mm	12.5 mm
			50 mm	28 mm

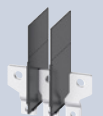
### Bus connectors edgewise, with phase barriers



- 3-pole and 4-pole bus connectors extended 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,	20 mm	6 mm
		2 phase barriers	25 mm	7 mm
			40 mm	8 mm
4P	1 2	4 terminals,	20 mm	6 mm
		3 phase barriers	25 mm	7 mm
			40 mm	8 mm

### 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).
- Distance between pole centers:
  - 100/160 A = 35 mm
  - 250 A = 45 mm
  - 400/630 A = 70 mm

Number of poles	Connection options	Scope of supply	Max. tap width	Max. tap thickness
3P	1 2	3 terminals,	30 mm	8 mm
		2 phase barriers	35 mm	10 mm
			60 mm	12.5 mm
			80 mm	10 mm
	– 2	3 terminals,	80 mm	15 mm
4P	1 2	4 terminals,	30 mm	8 mm
		3 phase barriers	35 mm	10 mm
			60 mm	12.5 mm
			80 mm	10 mm
	– 2	3 terminals,	80 mm	15 mm

3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25	3VA26
3VA9151-QQB00	–	–	–	–	–
–	–	–	–	3VA9603-QQB01	–
3VA9153-QQB00	–	–	–	–	–
–	3VA9253-QQB00	3VA9263-QQB00	–	–	–
–	–	–	3VA9483-QQB00	–	–
–	–	–	–	3VA9603-QQB00	–
3VA9154-QQB00	–	–	–	–	–
–	3VA9254-QQB00	3VA9264-QQB00	–	–	–
–	–	–	3VA9484-QQB00	–	–
–	–	–	–	3VA9604-QQB00	–
3VA9153-QQD00	–	–	–	–	–
–	3VA9253-QQD00	3VA9263-QQD00	–	–	–
–	–	–	3VA9483-QQD00	–	–
3VA9154-QQD00	–	–	–	–	–
–	3VA9254-QQD00	3VA9264-QQD00	–	–	–
–	–	–	3VA9484-QQD00	–	–
3VA9153-QQC00	–	–	–	–	–
–	3VA9253-QQC00	3VA9263-QQC00	–	–	–
–	–	–	3VA9483-QQC00	–	–
–	–	–	–	3VA9603-QQC00	–
–	–	–	–	3VA9603-QQC01	3VA9603-QQC01
3VA9154-QQC00	–	–	–	–	–
–	3VA9254-QQC00	3VA9264-QQC00	–	–	–
–	–	–	3VA9484-QQC00	–	–
–	–	–	–	3VA9604-QQC00	–

# Connection technology



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



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## Note:




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

2



### Nut keeper kits, right-angled <sup>1)</sup>

	Number of poles	Connection options	Scope of supply	Max. tap width	Max. tap thickness
	3P	① ②	3 terminals, 2 phase barriers	22 mm	8 mm
				32 mm	10 mm
				40 mm	12.5 mm
	4P	① ②	4 terminals, 3 phase barriers	22 mm	8 mm
				32 mm	10 mm
				40 mm	12.5 mm

### 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
			– ②
	4P	① ②	2 short connection studs flat, 2 long connection stud flat

### 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
			① ②

<sup>1)</sup> Can only be connected to breaker side N, 1, 3, 5

3VA10 3VA11		3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25
3VA9113-0QG00	–	–	–	–	–
–	3VA9213-0QG00	3VA9223-0QG00	–	–	–
–	–	–	3VA9403-0QG00	–	–
3VA9114-0QG00	–	–	–	–	–
–	3VA9214-0QG00	3VA9224-0QG00	–	–	–
–	–	–	3VA9404-0QG00	–	–
3VA9111-0QE10	3VA9211-0QE10	3VA9201-0QE10	3VA9401-0QE10	–	–
3VA9111-0QE20	3VA9211-0QE20	3VA9201-0QE20	3VA9401-0QE20	–	–
3VA9113-0QE00	3VA9213-0QE00	3VA9203-0QE00	3VA9403-0QE00	–	–
–	–	–	–	3VA9603-0QE01	–
3VA9114-0QE00	3VA9214-0QE00	3VA9204-0QE00	3VA9404-0QE00	–	–
3VA9111-0QF10	3VA9211-0QF10	3VA9201-0QF10	3VA9401-0QF10	–	–
3VA9111-0QF20	3VA9211-0QF20	3VA9201-0QF20	3VA9401-0QF20	–	–
3VA9113-0QF00	3VA9213-0QF00	3VA9203-0QF00	3VA9403-0QF00	–	–
3VA9114-0QF00	3VA9214-0QF00	3VA9204-0QF00	3VA9404-0QF00	–	–

# Connection technology



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2

## Circular conductor terminals, 2P



Connection options	Scope of supply	Number of cables	Cable cross-section	Cu/Al stranded <sup>2)</sup>		Control wire tap
				Cu	Al	
① –	2 single terminals, 1 extended terminal cover, 1 insulation plate	1	25 ... 150 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No
		6	1.5 ... 35 mm <sup>2</sup>	■	■	No

## Circular conductor terminals, 3P



- Note on 3VA9603-0JJ25, 3VA9603-0JJ35 and 3VA9603-0JJ45: 1 set of front bus connectors 3VA9603-0QB01 is required for installing circular conductor terminals on the load side.

Connection options	Scope of supply	Number of cables	Cable cross-section	Cu/Al stranded <sup>2)</sup>		Control wire tap			
				Cu	Al				
① –	3 single terminals, 1 extended terminal cover, 1 insulation plate	1	25 ... 150 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
			50 ... 240 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
		2	25 ... 150 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
			70 ... 300 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
		4	120 ... 240 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
			120 ... 300 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
		6	1.5 ... 35 mm <sup>2</sup>	■	■	No			
			–	② –	3 single terminals, 1 extended terminal cover, 1 insulation plate	1	25 ... 150 mm <sup>2</sup>	■	■
		2	50 ... 240 mm <sup>2</sup>		■	■	Yes <sup>1)</sup>		
		2	25 ... 150 mm <sup>2</sup>		■	■	Yes <sup>1)</sup>		
			70 ... 300 mm <sup>2</sup>		■	■	Yes <sup>1)</sup>		
		3	150 ... 300 mm <sup>2</sup>		■	■	Yes <sup>1)</sup>		
150 ... 300 mm <sup>2</sup>	■		■		Yes <sup>1)</sup>				
6	1.5 ... 35 mm <sup>2</sup>	■	■	No					

## Circular conductor terminals, 4P



Connection options	Scope of supply	Number of cables	Cable cross-section	Cu/Al stranded <sup>2)</sup>		Control wire tap			
				Cu	Al				
① –	4 single terminals, 1 extended terminal cover, 1 insulation plate	1	25 ... 150 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
			50 ... 240 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
		2	25 ... 150 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
			70 ... 300 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
		4	120 ... 240 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
			120 ... 300 mm <sup>2</sup>	■	■	Yes <sup>1)</sup> No			
		6	1.5 ... 35 mm <sup>2</sup>	■	■	No			
			–	② –	4 single terminals, 1 extended terminal cover, 1 insulation plate	1	25 ... 150 mm <sup>2</sup>	■	■
		2	50 ... 240 mm <sup>2</sup>		■	■	Yes <sup>1)</sup>		
		2	25 ... 150 mm <sup>2</sup>		■	■	Yes <sup>1)</sup>		
			70 ... 300 mm <sup>2</sup>		■	■	Yes <sup>1)</sup>		
		6	1.5 ... 35 mm <sup>2</sup>		■	■	No		

<sup>1)</sup> Maximum current-carrying capacity 15 A  
Maximum cable connection up to 2.5 mm<sup>2</sup>

<sup>2)</sup> Al cable only tested according to UL 486 A/B



3VA10 3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25
3VA9112-0JC12	–	–	–	–
3VA9112-0JJ12	–	–	–	–
3VA9112-0JF60	–	–	–	–
3VA9113-0JC12	–	–	–	–
3VA9113-0JJ12	–	–	–	–
–	3VA9213-0JC13	3VA9223-0JC13	–	–
–	3VA9213-0JJ13	3VA9223-0JJ13	–	–
–	3VA9213-0JC22	3VA9223-0JC22	–	–
–	3VA9213-0JJ22	3VA9223-0JJ22	–	–
–	–	–	3VA9403-0JC23	–
–	–	–	3VA9403-0JJ23	–
–	–	–	–	3VA9603-0JC43
–	–	–	–	3VA9603-0JJ43
–	–	–	–	3VA9603-0JC44
–	–	–	–	3VA9603-0JJ44
3VA9113-0JF60	3VA9213-0JF60	3VA9223-0JF60	3VA9303-0JF60	–
3VA9153-0JC12	–	–	–	–
–	3VA9253-0JC13	3VA9263-0JC13	–	–
–	3VA9253-0JC22	3VA9263-0JC22	–	–
–	–	–	3VA9483-0JC23	–
–	–	–	–	3VA9603-0JJ25
–	–	–	–	3VA9603-0JJ35
–	–	–	–	3VA9603-0JJ45
3VA9153-0JF60	3VA9253-0JF60	3VA9263-0JF60	3VA9383-0JF60	–
3VA9114-0JC12	–	–	–	–
3VA9114-0JJ12	–	–	–	–
–	3VA9214-0JC13	3VA9224-0JC13	–	–
–	3VA9214-0JJ13	3VA9224-0JJ13	–	–
–	3VA9214-0JC22	3VA9224-0JC22	–	–
–	3VA9214-0JJ22	3VA9224-0JJ22	–	–
–	–	–	3VA9404-0JC23	–
–	–	–	3VA9404-0JJ23	–
–	–	–	–	3VA9604-0JC43
–	–	–	–	3VA9604-0JJ43
–	–	–	–	3VA9604-0JC44
–	–	–	–	3VA9604-0JJ44
3VA9114-0JF60	3VA9214-0JF60	3VA9224-0JF60	3VA9304-0JF60	–
3VA9154-0JC12	–	–	–	–
–	3VA9254-0JC13	3VA9264-0JC13	–	–
–	3VA9254-0JC22	3VA9264-0JC22	–	–
–	–	–	3VA9484-0JC23	–
3VA9154-0JF60	3VA9254-0JF60	3VA9264-0JF60	3VA9384-0JF60	–

# Connection technology



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2

				3VA10	3VA11	
<b>Terminal covers specially for fixed-mounted units</b>						
	Short	1P	①	–	3VA9111-OWD10	
		2P	①	–	3VA9111-OWD20	
	Intermediate	3P	①	–	3VA9111-OWD30	3VA9111-OWD30
		4P	①	–	3VA9111-OWD40	3VA9111-OWD40
		3P	①	–	–	–
		4P	①	–	–	–
	Extended <sup>1)</sup>	2P	①	–	–	3VA9111-OWF20
		3P	①	–	3VA9111-OWF30	3VA9111-OWF30
		4P	①	–	3VA9111-OWF40	3VA9111-OWF40
	Broadened <sup>1)</sup>	3P	①	–	3VA9111-OWG30	3VA9111-OWG30
		4P	①	–	3VA9111-OWG40	3VA9111-OWG40
	<b>Terminal covers specially for plug-in and withdrawable units (spare part)</b>					
	Short	3P	①	–	3VA9113-OKB01	3VA9113-OKB01
		4P	①	–	3VA9114-OKB01	3VA9114-OKB01
	<ul style="list-style-type: none"> <li>To provide circuit breaker touch protection</li> <li>For mounting to the molded case circuit breaker</li> <li>Included in scope of supply: Cover for the infeed and outgoing terminal</li> </ul>					
<b>Terminal covers for plug-in or withdrawable sockets</b>						
	Short	3P	–	②	–	3VA9153-OKB03
		4P	–	②	–	3VA9154-OKB03
	Extended <sup>1)</sup>	3P	–	②	–	3VA9153-OKB04
			–	②	–	3VA9154-OKB04
	Broadened <sup>1)</sup>	3P	–	②	–	3VA9153-OKB05
		4P	–	②	–	3VA9154-OKB05

<sup>1)</sup> Including insulating plate

<sup>2)</sup> Suitable for circular conductor terminals 2/4 cables

	3VA20	3VA13	
	3VA21	3VA14	3VA15
3VA12	3VA22	3VA23	3VA25
		3VA24	
–	–	–	–
–	–	–	–
3VA9211-0WD30	3VA9221-0WD30	3VA9481-0WD30	3VA9601-0WD30
3VA9211-0WD40	3VA9221-0WD40	3VA9481-0WD40	3VA9601-0WD40
–	–	–	3VA9601-0WE30 <sup>2)</sup>
–	–	–	3VA9601-0WE40 <sup>2)</sup>
–	–	–	–
3VA9211-0WF30	3VA9221-0WF30	3VA9481-0WF30	3VA9601-0WF30
3VA9211-0WF40	3VA9221-0WF40	3VA9481-0WF40	3VA9601-0WF40
3VA9211-0WG30	3VA9221-0WG30	3VA9401-0WG30	–
3VA9211-0WG40	3VA9221-0WG40	3VA9401-0WG40	–
3VA9213-0KB01	3VA9123-0KB01	3VA9353-0KB01	–
3VA9214-0KB01	3VA9124-0KB01	3VA9354-0KB01	–
3VA9253-0KB03	3VA9163-0KB03	3VA9353-0KB03	3VA9603-0KB03
3VA9254-0KB03	3VA9164-0KB03	3VA9354-0KB03	–
3VA9253-0KB04	3VA9163-0KB04	3VA9353-0KB04	–
3VA9254-0KB04	3VA9164-0KB04	3VA9354-0KB04	–
3VA9253-0KB05	3VA9163-0KB05	3VA9353-0KB05	–
3VA9254-0KB05	3VA9164-0KB05	3VA9354-0KB05	–

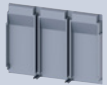





# Connection technology



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

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2

				3VA10	3VA11	
<b>Insulating plates</b>						
 	<b>Version</b>	<b>Number of poles</b>	<b>Mounting location</b>			
	Standard	2P	1	–	–	3VA9111-0WJ20
		3P	1	–	3VA9111-0WJ30	3VA9111-0WJ30
		4P	1	–	3VA9111-0WJ40	3VA9111-0WJ40
	Broadened	3P	1	–	3VA9111-0WK30	3VA9111-0WK30
		4P	1	–	3VA9111-0WK40	3VA9111-0WK40
<b>Phase barrier</b>						
	<b>Mounting location</b>	<b>Scope of supply</b>				
	1 2	2 phase barriers		3VA9152-0WA00		
	2	2 phase barriers		–		
<b>Protective sleeve for insulation of rear connections</b>						
	<b>Mounting location</b>	<b>Scope of supply</b>				
	2	3 protective sleeves		–		
<b>DC insulation plates for 3VA1 for fixed-mounted molded case circuit breakers</b>						
	<b>Number of poles</b>					
	3P			3VA9113-0SG10		
	4P			3VA9114-0SG10		
<b>Side plates for 3VA1 for fixed-mounted molded case circuit breakers</b>						
	<b>Number of poles</b>	<b>Mounting</b>				
	2P	On 2-pole molded case circuit breakers		–	3VA9112-0SG20	

	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25	3VA26
3VA12				
–	–	–	–	–
3VA9211-0WJ30	3VA9221-0WJ30	3VA9481-0WJ30	–	–
3VA9211-0WJ40	3VA9221-0WJ40	3VA9481-0WJ40	–	–
3VA9211-0WK30	3VA9221-0WK30	3VA9481-0WK30	–	–
3VA9211-0WK40	3VA9221-0WK40	3VA9481-0WK40	–	–
3VA9252-0WA00	3VA9262-0WA00	3VA9482-0WA00	3VA9602-0WA00 3VA9602-0WA05	3VA9602-0WA00 3VA9602-0WA05
–	–	–	3VA9603-0WH05	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–

# Plug-in and withdrawable technology

2



## 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 current paths
- Transmission of the state of the molded case circuit breaker (ON, OFF, TRIP) via the COM060 communication module

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




	3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26
<b>Withdrawable units, complete kits</b>					
	<ul style="list-style-type: none"> <li>• <b>Scope of supply:</b> <ul style="list-style-type: none"> <li>– Withdrawable socket</li> <li>– Withdrawable unit, conversion kit</li> <li>– Mounting screw kit</li> </ul> </li> <li>• <b>Note:</b> The crank for the withdrawable unit must be ordered separately.</li> </ul>				
<b>Number of poles</b>					
3P	–	3VA9213-0KD00	3VA9123-0KD00	3VA9323-0KD00	–
4P	–	3VA9214-0KD00	3VA9124-0KD00	3VA9324-0KD00	–
<b>Withdrawable units, conversion kits</b>					
	<ul style="list-style-type: none"> <li>• <b>Scope of supply:</b> <ul style="list-style-type: none"> <li>– Screw-fastened terminal covers for molded case circuit breakers</li> <li>– Side panels</li> <li>– Plug-in contacts</li> <li>– Cable cages</li> <li>– Autotrip plunger</li> </ul> </li> <li>• <b>Note:</b> The crank for the withdrawable unit must be ordered separately.</li> </ul>				
<b>Number of poles</b>					
3P	–	3VA9213-0KD10	3VA9123-0KD10	3VA9323-0KD10	–
4P	–	3VA9214-0KD10	3VA9124-0KD10	3VA9324-0KD10	–

	3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26
<b>Plug-in units, complete kits</b>					
 <ul style="list-style-type: none"> <li>• <b>Scope of supply:</b> <ul style="list-style-type: none"> <li>– Plug-in base</li> <li>– Plug-in unit, conversion kit</li> <li>– Mounting screw kit</li> </ul> </li> <li>• <b>Note on 3VA9603-OKP00:</b> <ul style="list-style-type: none"> <li>– The circuit breaker must be equipped with additional threaded holes for installing the components of the plug-in unit. When ordering the circuit breaker, specify „with plug-in“ accordingly.</li> <li>– An undervoltage release (UVR) (article number 3VA9908-0BB..) is required in the circuit breaker in order to provide the protection trip specified in the standard for unplugging the circuit breaker under load. The required UVR voltage version must be ordered in addition.</li> </ul> </li> </ul>					
	<b>Number of poles</b> 3P 3VA9113-OKP00 3VA9213-OKP00 3VA9123-OKP00 3VA9323-OKP00 3VA9603-OKP00 4P 3VA9114-OKP00 3VA9214-OKP00 3VA9124-OKP00 3VA9324-OKP00 –				
<b>Plug-in units, conversion kits</b>					
 <ul style="list-style-type: none"> <li>• <b>Scope of supply:</b> <ul style="list-style-type: none"> <li>– Screw-fastened terminal covers for molded case circuit breakers</li> <li>– Plug-in contacts</li> <li>– Cable cages</li> <li>– Autotrip plunger</li> </ul> </li> </ul>					
	<b>Number of poles</b> 3P 3VA9113-OKP10 3VA9213-OKP10 3VA9123-OKP10 3VA9323-OKP10 – 4P 3VA9114-OKP10 3VA9214-OKP10 3VA9124-OKP10 3VA9324-OKP10 –				
<b>Plug-in units, conversion kits with blade contacts</b>					
 <ul style="list-style-type: none"> <li>• <b>Scope of supply:</b> <ul style="list-style-type: none"> <li>– 6× blade contacts</li> <li>– Guide frame for circuit breaker</li> <li>– 2× cover for blade contacts</li> <li>– Position signaling switch</li> <li>– Connecting cable for auxiliary circuits</li> </ul> </li> <li>• <b>Note:</b> The circuit breaker must be equipped with additional threaded holes for installing the components of the plug-in unit. When ordering the circuit breaker, specify „with plug-in“ accordingly.</li> </ul>					
	<b>Number of poles</b> 3P – – – – 3VA9603-OKP10				

# Plug-in and withdrawable technology

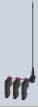






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2

	3VA11	3VA12	3VA20 3VA21 3VA22	3VA13 3VA14 3VA23 3VA24	3VA15 3VA25 3VA26
<b>Cable cages for plug-in/withdrawable units (spare part)</b>					
	<ul style="list-style-type: none"> <li>For routing of the required cables from the internal accessories on the back of the circuit breaker</li> </ul>				
<b>Number of poles</b>					
3P/4P	3VA9157-OKB02	3VA9257-OKB02	3VA9167-OKB02	3VA9367-OKB02	–
<b>Door feedthroughs</b>					
	–	3VA9257-OKT00	3VA9167-OKT00	3VA9367-OKT00	–
<b>Autotrip plungers (spare part)</b>					
<b>Version</b>					
	3VA9157-OKP81	3VA9257-OKP81	3VA9267-OKP81	3VA9457-OKP81	–
Plug-in unit	–	3VA9257-OKD81	3VA9267-OKD81	3VA9457-OKD81	–
Withdrawable unit	–	–	–	–	–



## Accessories

		3VA11	3VA12	3VA20	3VA21	3VA22	3VA13	3VA14	3VA15	
				3VA20	3VA21	3VA22	3VA23	3VA24	3VA25	
									3VA26	
<b>Communication links for withdrawable unit</b>										
	<b>Scope of supply</b>	Set of cables with three special position signaling switches, 3VA9987-0KC10 connecting cables								
		3VA9987-0KC00	3VA9987-0KC00	3VA9987-0KC00	3VA9987-0KC00	3VA9987-0KC00	3VA9987-0KC00	3VA9987-0KC00	3VA9987-0KC00	–
<b>Position signaling switches for withdrawable unit and plug-in unit</b>										
	<ul style="list-style-type: none"> <li><b>Note on 3VA9603-0KB00:</b> 4 position signaling switches can be installed in the plug-in base.</li> </ul>									
		3VA9987-0KB00	3VA9987-0KB00	3VA9987-0KB00	3VA9987-0KB00	3VA9987-0KB00	3VA9987-0KB00	3VA9987-0KB00	3VA9987-0KB00	3VA9603-0KB00
<b>Connecting cables</b>										
	<b>Use</b>	Connection of position signaling switches for communication with COM060								
		3VA9987-0KC10	3VA9987-0KC10	3VA9987-0KC10	3VA9987-0KC10	3VA9987-0KC10	3VA9987-0KC10	3VA9987-0KC10	3VA9987-0KC10	–
	For auxiliary circuits	–	–	–	–	–	–	–	–	3VA9603-0KP80
<b>Cranks for withdrawable units</b>										
	<b>Version</b>	Insulated								
	<b>Scope of supply</b>	Including crank holder								
		3VA9987-0KD81	3VA9987-0KD81	3VA9987-0KD81	3VA9987-0KD81	3VA9987-0KD81	3VA9987-0KD81	3VA9987-0KD81	3VA9987-0KD81	–
<b>Auxiliary circuit connectors</b>										
	<ul style="list-style-type: none"> <li>Each auxiliary circuit connector is designed for 4 cables.</li> </ul>									
	<b>Version</b>	For all withdrawable units								
		3VA9987-0KD80	3VA9987-0KD80	3VA9987-0KD80	3VA9987-0KD80	3VA9987-0KD80	3VA9987-0KD80	3VA9987-0KD80	3VA9987-0KD80	–
	For all plug-in units	3VA9987-0KP80	3VA9987-0KP80	3VA9987-0KP80	3VA9987-0KP80	3VA9987-0KP80	3VA9987-0KP80	3VA9987-0KP80	3VA9987-0KP80	–
<b>Cylinder locks</b>										
	<ul style="list-style-type: none"> <li><b>Scope of supply:</b> – 1 lock with 2 keys</li> <li>For locking or interlocking</li> <li><b>Note:</b> Not for 3VA15/3VA25!</li> </ul>									
	<b>Key</b>	<b>Lock number</b>								
	1	1	3VA9980-0VL10	3VA9980-0VL10	3VA9980-0VL10	3VA9980-0VL10	3VA9980-0VL10	3VA9980-0VL10	3VA9980-0VL10	–
	3	3	3VA9980-0VL30	3VA9980-0VL30	3VA9980-0VL30	3VA9980-0VL30	3VA9980-0VL30	3VA9980-0VL30	3VA9980-0VL30	–
	4	4	3VA9980-0VL40	3VA9980-0VL40	3VA9980-0VL40	3VA9980-0VL40	3VA9980-0VL40	3VA9980-0VL40	3VA9980-0VL40	–
<b>Cylinder lock adapters for withdrawable units</b>										
	<ul style="list-style-type: none"> <li>To prevent unauthorized withdrawal or insertion of the circuit breaker into the withdrawable unit</li> <li>Circuit breaker can be locked in the CONNECT, TEST and DISCONNECT positions</li> </ul>									
	<b>Use</b>	For fitting a cylinder lock in the right-hand side wall of the withdrawable unit								
		3VA9980-0LF40	3VA9980-0LF40	3VA9980-0LF40	3VA9980-0LF40	3VA9980-0LF40	3VA9980-0LF40	3VA9980-0LF40	3VA9980-0LF40	–

2

# Residual current devices RCD

According to IEC 60947-2 Annex B (Type A, Type B) and according to DIN VDE 0664-400 (Type B+)

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2

## Residual current devices (RCD) for switch disconnectors and molded case circuit breakers

- Mounted onto the side (left)



Number of poles	Type	Sensitivity <sup>3)</sup>	Rated residual response current $I_{\Delta n}$	Limit value of non-tripping time $\Delta t$	Rated operational voltage $U_e$	Fault current frequency	Pre-alarm		Trip alarm			
							Pre-alarm	COM	TRIP	COM	COM	
3-pole	RCD510	Type A	0.03 ... 5 A	0 ... 3 s	127 ... 480 V AC	50/60 Hz	1	–	–	■	■	–
4-pole	RCD310	Type A	0.03 ... 5 A	Instantaneous	127 ... 480 V AC	50/60 Hz	1	–	–	■	■	–
	RCD510	Type A	0.03 ... 5 A	0 ... 3 s	127 ... 480 V AC	50/60 Hz	1	–	–	■	■	–

## Residual current devices (RCD) for molded case circuit breakers

- Mounted below (under trip unit)



Number of poles	Type	Sensitivity <sup>3)</sup>	Rated residual response current $I_{\Delta n}$	Limit value of non-tripping time $\Delta t$	Rated operational voltage $U_e$	Fault current frequency	Pre-alarm		Trip alarm			
							Pre-alarm	COM	TRIP	COM	COM	
3-pole	RCD520	Type A	0.03 ... 5 A	0 ... 3 s	127 ... 480 V AC	50/60 Hz	1	–	–	■	■	–
	RCD520B <sup>1)4)</sup>	Type B	0.03 ... 5 A	0 ... 10 s	127 ... 690 V AC	0 ... 100 kHz	1	■	–	■	■	–
		Type B+	0.03 ... 0.3 A									
	RCD820 <sup>2)</sup>	Type A	0.03 ... 30 A <sup>5)</sup>	0 ... 10 s	127 ... 690 V AC	50/60 Hz	2	■	■	■	■	■
4-pole	RCD320	Type A	0.03 ... 5 A	Instantaneous	127 ... 480 V AC	50/60 Hz	1	–	–	■	■	–
	RCD520	Type A	0.03 ... 5 A	0 ... 3 s	127 ... 480 V AC	50/60 Hz	1	–	–	■	■	–
	RCD520B <sup>4)</sup>	Type B	0.03 ... 5 A	0 ... 10 s	127 ... 690 V AC	0 ... 100 kHz	1	■	–	■	■	–
		Type B+	0.03 ... 0.3 A									
	RCD820 <sup>2)</sup>	Type A	0.03 ... 30 A <sup>5)</sup>	0 ... 10 s	127 ... 690 V AC	50/60 Hz	2	■	■	■	■	■

## Residual current releases (spare part)



Version	Scope of supply
For RCD310 or RCD510	RCR, RCR-RCD cables

## RCD820 - 3VA2 ETU connecting cables (spare part)

- Connecting cable between the RCD820 and the electronic trip unit (ETU) of a 3VA2



Version	Scope of supply
For RCD820	1× RCD-ETU cable

<sup>1)</sup> 3-pole version in 4-pole enclosure

<sup>2)</sup> With energy infeed from below, the required auxiliary switch (AUX) must be ordered separately

<sup>3)</sup> Type A: pulse current sensitive, type B/B+: universal current sensitive

<sup>4)</sup> Sensitivity selectable for type B/B+

<sup>5)</sup>  $I_{\Delta n} = 30A$ : type AC

<sup>6)</sup> If the molded case circuit breaker has no box terminals as connections, a set of box terminals must be ordered additionally for the taps below the thermal-magnetic trip units.

<sup>7)</sup> 1 set of box terminals is included in scope of supply of the RCD510 (3VA921..-ORS20).

Modular residual current devices type A/B (according to IEC 60947-2 Annex M), see monitoring devices, from page 11/1 onwards

			3VA11	3VA12	3VA20 3VA21	3VA22	3VA23	3VA24	3VA10 3VA13 3VA14 3VA15 3VA25 3VA26
Monitoring mode (tripping can be disabled as an option)	Remote test/remote reset	Communication-capable							
■	–	–	3VA9113-ORS20 <sup>6)</sup>	3VA9213-ORS20 <sup>7)</sup>	–	–	–	–	–
■	–	–	3VA9114-ORS10 <sup>6)</sup>	–	–	–	–	–	–
■	–	–	3VA9114-ORS20 <sup>6)</sup>	3VA9214-ORS20 <sup>7)</sup>	–	–	–	–	–
Monitoring mode (tripping can be disabled as an option)	Remote test/remote reset	Communication-capable							
–	–	–	3VA9113-ORL20	3VA9213-ORL20	–	–	–	–	–
■	–	–	3VA9113-ORL21	–	–	–	–	–	–
■	■	■	–	–	3VA9123-ORL30	3VA9223-ORL30	3VA9323-ORL30	3VA9423-ORL30	–
–	–	–	3VA9114-ORL10	–	–	–	–	–	–
–	–	–	3VA9114-ORL20	3VA9214-ORL20	–	–	–	–	–
■	–	–	3VA9114-ORL21	–	–	–	–	–	–
■	■	■	–	–	3VA9124-ORL30	3VA9224-ORL30	3VA9324-ORL30	3VA9424-ORL30	–
			3VA9988-0BR10	3VA9988-0BR10	–	–	–	–	–
			–	–	3VA9927-ORC00	3VA9927-ORC00	3VA9927-ORC00	3VA9927-ORC00	–

# Communication

2

Measurement function <sup>1)</sup>			ETU 5-series	ETU 8-series	Display in ETU	Display DSP800	Communication COM800/COM100
<b>Current</b>							
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	$I_{\text{leading axis}} = (I_1 + I_2 + I_3)/3$	A	–	■	–	□	■
Asymmetry of the phase currents	$I_{\text{nba}}$	%	–	■	–	□	■
THD of the 3 phases	$THDI_1, THDI_2, THDI_3$	%	–	■	–	□	■
<b>Voltage</b>							
Phase voltages incl. average value	$U_{12}, U_{23}, U_{31}, U_{\text{phavg}}$	V	–	■	□	□	■
Voltages to N conductor incl. average value	$U_{1N}, U_{2N}, U_{3N}, U_{\text{Navg}}$	V	–	■	–	□	■
Voltage unbalance		%	–	■	–	□	■
THD phase/phase and phase/N	$THDI_1, THDI_2, THDI_3$	%	–	■	–	□	■
<b>Power</b>							
Active power, total and per phase	$P_1, P_2, P_3, P_{\text{tot}}$	kW	–	■	□ ( $P_{\text{tot}}$ )	□	■
Apparent power, total and per phase	$S_1, S_2, S_3, S_{\text{tot}}$	kVA	–	■	–	□	■
Reactive power, total and per phase	$Q_1, Q_2, Q_3, Q_{\text{tot}}$	kVAr	–	■	□	□	■
Power factor of the fundamental	$P_{F1}, P_{F2}, P_{F3}, P_{\text{Favg}}$		–	■	□ ( $PF_{\text{avg}}$ )	□	■
<b>Energy</b>							
Active energy, infeed and feedback	$E_p$	kWh	–	■	□	□	■
Reactive energy, infeed and feedback	$E_q$	kVArh	–	■	–	□	■
Apparent energy	$E_s$	kVAh	–	■	–	□	■
<b>Frequency</b>							
Present frequency	$f$	Hz	–	■	□	□	■
<b>Maximum pointer function</b>							
Min./max. current, voltage, power	With time stamp	–	–	–	–	–	■
<b>Condition Monitoring <sup>2)</sup></b>							
Operating cycles counter	CLOSE-OPEN cycle		■	■	–	–	■
Operating hours		h	■	■	–	–	■
Trip counter	Differentiated by trip causes		■	■	–	–	■
Health indicator <sup>3)</sup>	Incl. contact state	%	■	■	■	–	■
Remaining life time <sup>3)</sup>		Time	■	■	–	–	■

■ Available    □ Displayable    – Not available

<sup>1)</sup> Depending on ETU version

<sup>2)</sup> Only available with continuous external power supply and COM060 and COM800/100 communication interfaces

<sup>3)</sup> Firmware 4.4 or higher of ETU, COM060, COM800/100 required

		3VA23
	3VA20	3VA24
	3VA21	3VA25
	3VA22	3VA26

## COM060 communication modules



- For mounting in the right-hand accessories compartment of the 3VA2 molded case circuit breaker (including ETU power supply)
- Including a T-Connector

### Use

Communication to the COM800/COM100 data concentrator via 3VA line

3VA9187-0TB10

3VA9387-0TB10

## SLC adapters (spare part)



### Scope of supply

5 units

3VA9187-0TB60

3VA9387-0TB60

## 24 V modules



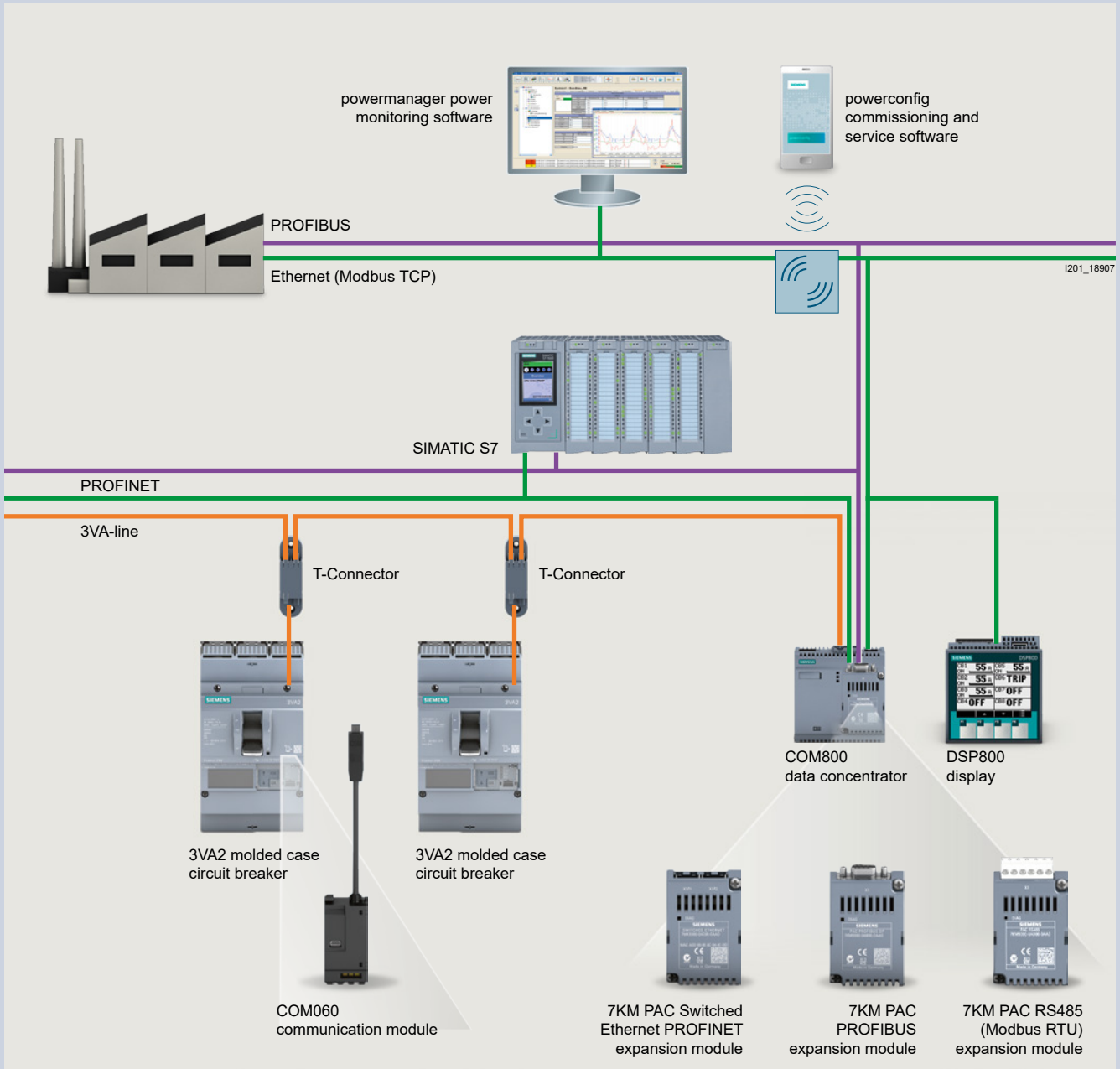
- 24 V DC
- For mounting in the right-hand accessories compartment of the 3VA2

### Use

Optional energy supply for the ETU, also includes continuous operation of the ETU display and the measurement function of the ETU 8-series

3VA9187-0TB50

3VA9387-0TB50



# Communication

## Data concentrator

### COM800 data concentrators



#### Version

Central communication module for connection of up to eight 3VA2 molded case circuit breakers via the 3VA line, Ethernet 10/100 Mbps interface module socket for inserting an optional PROFIBUS DP or PROFINET module, 2 terminating resistors

#### Article No.

3VA9987-0TA10

### COM100 data concentrators



#### Version

Central communication module for connection of a 3VA2 molded case circuit breaker via the 3VA line, Ethernet 10/100 Mbps interface module socket for inserting an optional PROFIBUS DP or PROFINET module, 2 terminating resistors

#### Article No.

3VA9987-0TA20

### 7KM PAC PROFIBUS DP expansion modules



#### Use

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.

#### Article No.

7KM9300-0AB01-0AA0

### 7KM PAC Switched Ethernet PROFINET expansion modules



#### Use

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, PROFINenergy and Modbus TCP protocols.

#### Article No.

7KM9300-0AE02-0AA0

### 7KM PAC RS485 Modbus RTU expansion modules



#### Use

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.

#### Article No.

7KM9300-0AM00-0AA0

### Interfaces to IEC 61850

Purpose: 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

SICAM CP-8021 <sup>1)</sup>

#### Processor assembly

4 interfaces

#### Operating voltage

SICAM PS-8620

–

24 ... 60 V DC (12 W)

SICAM PS-8622

–

110 ... 220 V DC (12 W)

#### Article No.

6MF2802-1AA00

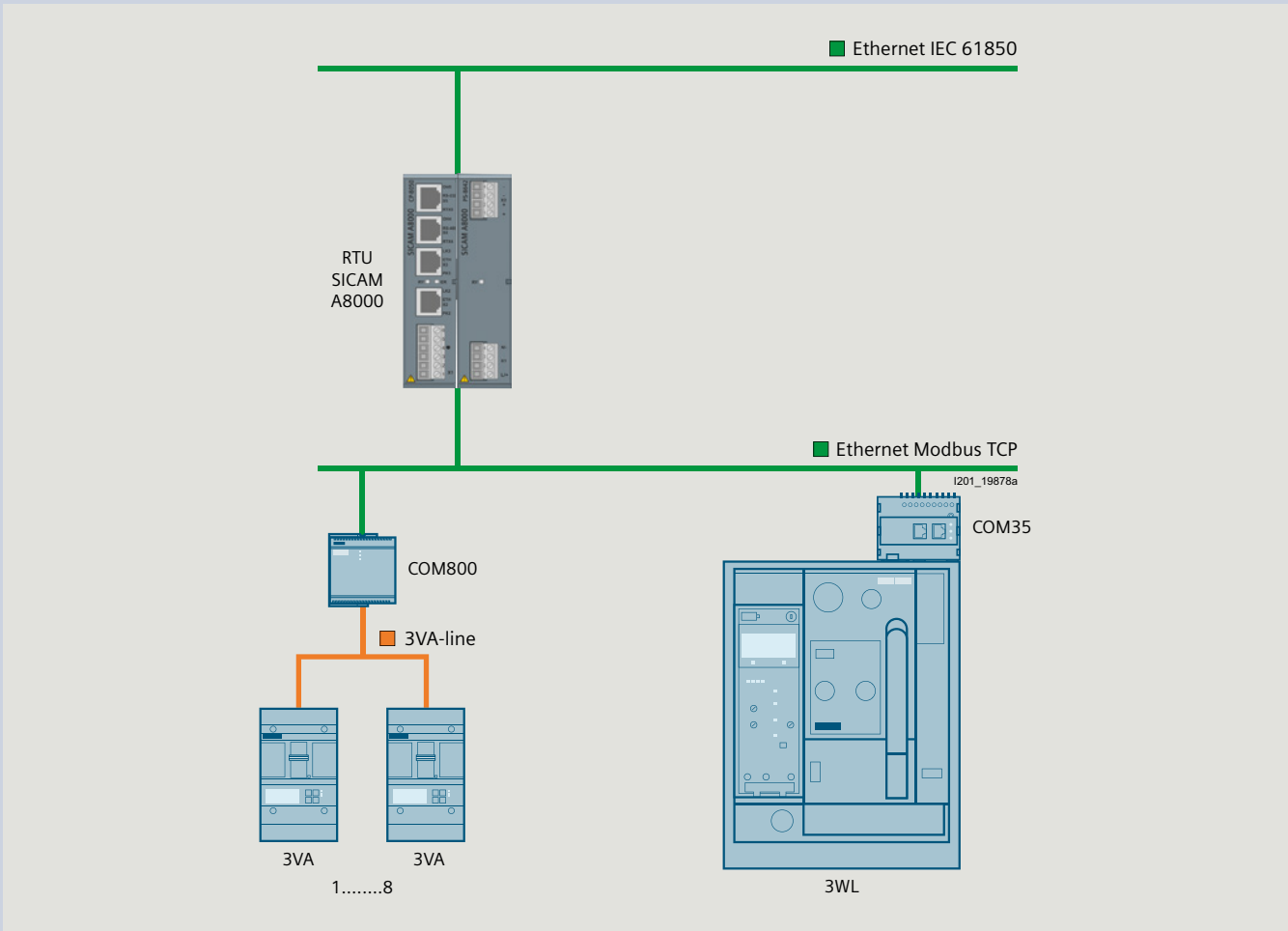
6MF2862-0AA00

6MF2862-2AA00

<sup>1)</sup> Dimensioned for device quantities of 8× 3VA and 1× 3W










You will find further information at:

[www.siemens.com/sicam-a8000](http://www.siemens.com/sicam-a8000)




# Communication

## Accessories for communication

T-connectors (spare part)			
	<b>Use</b>		<b>Article No.</b>
	Provides a stub connection to the COM060 and loops through to the next circuit breaker.		3VA9987-0TG10
DIN-rail adapters			
	<b>Use</b>		<b>Article No.</b>
	For snapping the T-Connector onto a DIN rail.		3VA9987-0TG11
Prefabricated connecting cables, T-connector – T-connector or T-connector – COM800/COM100			
	<b>Length</b>		<b>Article No.</b>
	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			
	<b>Length</b>		<b>Article No.</b>
	0.4 m		3VA9987-0TF20
	0.8 m		3VA9987-0TF10
Additional bus terminating resistors (spare part)			
	<b>Use</b>		<b>Article No.</b>
	For COM800 and COM060		3VA9987-0TE10
Voltage tap to external N conductors (spare part)			
	<b>Use</b>		<b>Article No.</b>
	Cable for connection of the star point for the measurement function of the 8-series ETU, length 1.5 m		3VA9987-0UC10
External current transformer for N conductors			
	<b>Use</b>	<b>Rated current</b>	<b>Article No.</b>
	For 3VA2 3-pole molded case circuit breakers, for 5 and 8-series ETUs, including connecting cables	25 ... 150 A	3VA9007-0NA10
		160 ... 350 A	3VA9107-0NA10
		400 ... 630 A	3VA9307-0NA10
External current transformers as straight-through transformers			
	<b>Rated current</b>		<b>Article No.</b>
	25 ... 150 A		3VA9077-0NA10
	160 ... 350 A		3VA9177-0NA10
	400 ... 630 A		3VA9377-0NA10
	600 ... 1250 A		3VA9677-0NA10
Connecting cables for external current transformers for N conductors (spare part)			
			<b>Article No.</b>
			3VA9907-0NB10

## Display

DSP800 displays		
	<b>Use</b>	<b>Article No.</b>
	For displaying the status and measured values of up to eight devices <ul style="list-style-type: none"> <li>• 3VA2 via COM800/100</li> <li>• 3VA27</li> <li>• 3WL10</li> <li>• 3WL11-13</li> <li>• PAC3200T</li> </ul>	3VA9987-0TD10



## 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 3VA2 molded case circuit breakers	3VA9987-0UA10

### Connecting cables for EFB300



Length	Use	Article No.
1.5 m	For 3VA2 with EFB	3VA9987-0UB10
3.0 m	For 3VA2 with EFB	3VA9987-0UB20
	For 3VA2 with EFB and RCD820	3VA9987-0UB30

## 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	3VA9987-0MA10

### TD400 test devices <sup>1)</sup>



- 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

Use	Connection	Article No.
Initiation of a test tripping operation	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	3VA9987-0MB10

### External power supplies for TD500 (spare part)



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

### Connecting cables for connecting TD500 to 3VA2 molded case circuit breakers (spare part)



Article No.
3VA9987-0MY10

<sup>1)</sup> 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](http://www.siemens.com/lowvoltage/certificates)

# Locking, blocking and interlocking

3VA20

3VA21

3VA22

3VA11

3VA12

## 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-OVL10
	Key 3 (lock number 3)			3VA9980-OVL30
	Key 4 (lock number 4)			3VA9980-OVL40
Adapter kit for mounting the cylinder lock (type RONIS) in the accessories compartment of the molded case circuit breaker		3VA9157-0LF10	3VA9257-0LF10	3VA9167-0LF10
Locking provision for handle operating mechanism			3VA9088-0LB10	3VA9388-0LB10

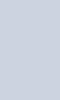
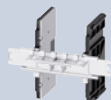


## Interlocking

- 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

Cylinder lock	Key 1 (lock number 1)			3VA9980-OVL10
	Key 3 (lock number 3)			3VA9980-OVL30
	Key 4 (lock number 4)			3VA9980-OVL40
Sliding bar interlock		3VA9158-0VF30	3VA9258-0VF30	3VA9168-0VF30
Module for handle interlocking module with bowden cable		3VA9157-0VF10	3VA9257-0VF10	3VA9167-0VF10
Bowden cable	Length 0.6 m			3VA9980-OVC10
	Length 1.0 m			3VA9980-OVC20
	Length 1.5 m			3VA9980-OVC30
Rear interlock with rod	Circuit breaker, fixed-mounted			3VA9088-OVM10
	Plug-in/withdrawable technology			3VA9088-OVM30
Mounting frame for rear interlock with rod	Profile rails			3VA9088-OVK10
	Mounting plate	3VA9158-OVK20	3VA9258-OVK20	3VA9268-OVK20



<sup>1)</sup> With mounting frame for rear interlock.  
Can be used with breaker 3VA15 from "E02" and 3VA25 from "E05" (Line protection CB with TMTU, 3-Series ETU and 5-Series ETU)

3VA13	
3VA14	3VA15
3VA23	3VA25
3VA24	3VA26

## Locking

Use in	Locking in OFF position	Locking in ON position	Front mounting	Rear mounting	Interlocked breakers
3VA9980-0VL10 3VA9980-0VL30 3VA9980-0VL40	■	■	■	–	–
3VA9367-0LF10      3VA9587-0LF10	■	■	■	–	–
3VA9388-0LB10      3VA9588-0LB10	■	■	■	–	–

## Interlocking

Use in	Locking in OFF position	Locking in ON position	Front mounting	Rear mounting	Interlocked breakers
3VA9980-0VL10 3VA9980-0VL30 3VA9980-0VL40	■	■	■	–	Unlimited
3VA9368-0VF30	–	–	■	–	3
3VA9367-0VF10      3VA9587-0VF10	–	–	■	–	3
3VA9980-0VC10 3VA9980-0VC20 3VA9980-0VC30					
3VA9088-0VM10      3VA9588-0VM10 <sup>1)</sup>	–	–	–	■	2
3VA9088-0VM30	–	–	–	■	
3VA9088-0VK10	–	–	–	■	
3VA9468-0VK20	–	–	–	■	

# Cover frames and mounting


2

3VA10


3VA11

3VA12


## Cover frames for door cut-outs for molded case circuit breakers

	Number of poles	Door cut-out with trip unit	3VA10	3VA12
	3P	No		3VA9053-OSB10
Yes			3VA9053-OSB20	3VA9253-OSB20
4P	No		3VA9054-OSB10	3VA9254-OSB10
	Yes		3VA9054-OSB20	3VA9254-OSB20

## Cover frames for MO320 motor operators

	Use	3VA10	3VA12
	MO320 motor operator		3VA9053-OSB20
Motor operator with SEO520 stored energy operator		–	–


## Cover frames for RCD320, RCD520 and RCD820 residual current devices

	Number of poles	3VA10	3VA12
	3P		3VA9053-OSB10
4P		3VA9054-OSB10	3VA9254-OSB10

## Cover frames for front mounted rotary operators

	3VA10	3VA12
	3VA9053-OSB10	3VA9253-OSB10


## Cover frames for door feedthroughs

	3VA10	3VA12
	–	3VA9253-OSB20


## Labeling plates for cover frame

	3VA10	3VA12
	–	3VA9087-OSX10

## DIN-rail adapter for 3VA1 molded case circuit breakers

	Number of poles	3VA10	3VA12
	1P	3VA9181-OSH10 <sup>1)</sup>	–
	2P	3VA9182-OSH10	–
	3P and 4P	3VA9187-OSH10	–
	3P and 4P in connection with RCD310 or RCD510	3VA9187-OSH20	–

## Mounting screw kits

	Use	Number of poles	3VA10	3VA12
	For fixed-mounted breakers		1P	3VA9111-OSS10
2P and 3P (apart from 125 A/160 A with 55 kA and 70 kA)			3VA9116-OSS10	–
3P (125 A/160 A with 55 kA and 70 kA) and 4P			3VA9114-OSS10	–
3P			–	–
4P			–	–
For plug-in units		3P and 4P	–	–
		–	3VA9114-OSS10	–
		–	–	3VA9114-OSS10
For plug-in and withdrawable technology	–	–	–	3VA9114-OSS10

<sup>1)</sup> For 1-pole 3VA11 molded case circuit breakers up to 25 kA

Adapter for 60 mm busbar system (8US), see page 13/26

	3VA13	
3VA20	3VA14	3VA15
3VA21	3VA23	3VA25
3VA22	3VA24	3VA26
3VA9163-0SB10	3VA9383-0SB10	3VA9503-0SB10
3VA9163-0SB20	3VA9363-0SB20	3VA9503-0SB20
3VA9164-0SB10	3VA9384-0SB10	3VA9504-0SB10
3VA9164-0SB20	3VA9364-0SB20	3VA9504-0SB20
3VA9257-0SB30	3VA9387-0SB30	–
3VA9167-0SB30	–	–
3VA9253-0SB10	3VA9303-0SB40	–
3VA9254-0SB10	3VA9304-0SB40	–
3VA9163-0SB10	3VA9383-0SB10	3VA9503-0SB50
3VA9253-0SB20	3VA9353-0SB20	–
3VA9087-0SX10		
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
–	–	–
3VA9126-0SS10	–	–
3VA9124-0SS10	–	–
–	3VA9328-0SS10	3VA9517-0SS10
–	–	3VA9603-0SS10
3VA9124-0SS10	3VA9328-0SS10	–

# System overview

For a complete and valid configuration of your molded case circuit breaker, please use our online configurator at [www.siemens.com/lowvoltage/3va27-configurator](http://www.siemens.com/lowvoltage/3va27-configurator)

2

## Molded case circuit breakers

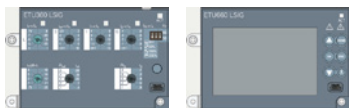


Handle



Stored energy operator

## Trip units



Electronic trip unit (ETU)

## Accessories



Communication module



Rating plug



Breaker Connect module



Test devices and breaker data adapters

## Main conductor connections



Rear vertical/horizontal

Rear broadened

Front extended

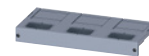
Front broadened

Cable lug

## Accessories



Phase barriers



Terminal cover

## Motors



Spring charging motor

## Accessories



Mechanical operating cycles counter (MOC)

## Auxiliary releases/closing coils



Undervoltage release (UVR)/  
Shunt trip (ST)



Closing coil (CC)/  
Remote reset magnet (RR)

**Note:**

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

## Auxiliary switches



Tripped signaling switch



Ready-to-close signaling switch (RTC)



Auxiliary switch ON/OFF (AUX)



Tripped signaling switch (S24)



Trip alarm switch (TAS)

## Other accessories



Interlocking sets



Locking provision



Locking mechanism



Door sealing frame



Protective cover



Mechanical interlock



Manual operator

### Note:

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

# Structure of the article numbers

## Basic configuration with handle operating mechanism

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/3va27-configurator](http://www.siemens.com/lowvoltage/3va27-configurator)

3VA27 6 7 8 9 10 11 12 13 14 15 16

### Molded case circuit breakers and ETUs

Max. rated current $I_{n \max}$	800 A	8	0														
	1000 A	1	0														
	1250 A	1	2														
	1600 A	1	6														
Short-circuit breaking capacity $I_{cu} = I_{cs}$ at 415 V	Handle operating mechanism	55 kA		5													
		85 kA		6													
		110 kA		7													
Non-automatic air circuit breakers	Without measurement function, without a communication link	Without trip unit			A	A											
Circuit breakers, ETU 3-series	Without measurement function, without a communication link	With trip unit	ETU320 LI (N) <sup>1)</sup>		A	B											
			ETU350 LSI (N) <sup>1)</sup>		A	C											
			ETU360 LSI (N) <sup>1)</sup>		A	D											
Circuit breakers, ETU 6-series		With trip unit	ETU650 LSI (N) <sup>1)</sup>			E											
			ETU660 LSI (N) <sup>1)</sup>			F											
	Without a communication link	Without measurement function			A												
	With a communication link	Without measurement function			B												
		Measurement function Basic	Voltage tap on bottom			C											
			Voltage tap on top			D											
Measurement function Advanced		Voltage tap on bottom			E												
	Voltage tap on top			F													

<sup>1)</sup> Neutral conductor protection for 3-pole breakers with an external neutral conductor transformer or 4-pole breakers

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

### Connections

Type of mounting	Withdrawable	Withdrawable circuit breaker without guide frame (guide frame must be ordered separately)	0
	Fixed-mounted breaker/ withdrawable breaker	Rear vertical connection	1
		Rear horizontal connection	2
		Front terminal for main circuit connection	3
		Front-accessible, extended terminal for main circuit connection	5
		Front-accessible, broadened terminal for main circuit connection	6
		Rear broadened bus connectors	7



3VA27 6 7 8 9 10 11 12 13 14 15 16

## Alarm switch combinations

Alarm switches	Without	0
	With tripped signaling switch TAS and tripped signaling switch S25	1
	With two leading changeover switches S26	2
	With tripped signaling switch TAS and tripped signaling switch S25 and two leading changeover switches S26	3

## Auxiliary releases, closing coils

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

# Structure of the article numbers

## Basic configuration with stored energy mechanism

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/3va27-configurator](http://www.siemens.com/lowvoltage/3va27-configurator)

				6	7	8	9	10	11	12	13	14	15	16		
				3VA27		-										
<b>Molded case circuit breakers and ETUs</b>																
<b>Max. rated current</b>	800 A			8	0											
<b><math>I_{n\max}</math></b>	1000 A			1	0											
	1250 A			1	2											
	1600 A			1	6											
<b>Short-circuit breaking capacity</b> $I_{cu} = I_{cs}$ at 415 V	Stored energy mechanism	55 kA				1										
		85 kA				2										
		110 kA				3										
<b>Non-automatic air circuit breakers</b>	Without measurement function, without a communication link	Without trip unit					A	A								
<b>Circuit breakers, ETU 3-series</b>	Without measurement function, without a communication link	With trip unit	ETU320 LI (N) <sup>1)</sup>				A	B								
			ETU350 LSI (N) <sup>1)</sup>				A	C								
			ETU360 LSI (N) <sup>1)</sup>				A	D								
<b>Circuit breakers, ETU 6-series</b>	Without a communication link	With trip unit	ETU650 LSI (N) <sup>1)</sup>					E								
			ETU660 LSI (N) <sup>1)</sup>					F								
	With a communication link	Without measurement function						A								
								B								
			Measurement function Basic	Voltage tap on bottom				C								
				Voltage tap on top				D								
Measurement function Advanced	Voltage tap on bottom						E									
		Voltage tap on top					F									
<b>Number of poles</b>	Fixed-mounted versions	3-pole									0					
		4-pole	Neutral left								1					
			Neutral right									2				
	Withdrawable	3-pole									3					
		4-pole	Neutral left									4				
	Neutral right										5					
<b>Connections</b>																
<b>Type of mounting</b>	Withdrawable	Withdrawable circuit breaker without guide frame (guide frame must be ordered separately)													0	
		Fixed-mounted breaker/withdrawable breaker		Rear vertical connection												1
			Rear horizontal connection												2	
			Front terminal for main circuit connection												3	
			Front-accessible, extended terminal for main circuit connection												5	
			Front-accessible, broadened terminal for main circuit connection												6	
			Rear broadened bus connectors												7	
<b>Motor</b>																
<b>Operating mechanisms</b>	Manual operator														0	
	Spring charging motor	24 ... 30 V AC/DC													1	
		48 ... 60 V AC/DC													2	
		110 V AC/DC													3	
		230 V AC/DC													4	

3VA27 6 7 8 9 10 11 12 13 14 15 16

2

## Auxiliary releases, closing coils, remote reset magnets

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

# Accessory options

For a complete and valid configuration of your molded case circuit breaker, please use our online configurator at [www.siemens.com/lowvoltage/3va27-configurator](http://www.siemens.com/lowvoltage/3va27-configurator)

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

3VA27..-.....-.... -Z

Order code

## Accessories for basic configuration

### Mounting options for fixed-mounted circuit breakers

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

Mounting options for fixed-mounted circuit breakers <sup>1)</sup>						Order code
Mounting options for fixed-mounted circuit breakers <sup>1)</sup>	Floor mounting	Mounting support standard	☒	☒		A07
		Mounting support extended <sup>2)</sup>	☒	☒		S56
	Rear panel mounting onto mounting plate	Side wall extended <sup>2)</sup>	☒	☒		S57

## Accessories for electronic trip units ETU

### Rating plugs

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

Rating plug						Order code
Rating plug	For setting the rated current $I_n$	For all ETUs	400 A	☒	☒	B04
			630 A	☒	☒	B06
			800 A	☒	☒	B08
			1000 A	☒	☒	B10
			1200 A	☒	☒	B12
			For setting the rated current $I_n$ with overload protection L = OFF	For 6-series ETUs	400 A	☒
	630 A	☒			☒	L06
	800 A	☒			☒	L08
	1000 A	☒			☒	L10
	1250 A	☒			☒	L12
	1600 A	☒			☒	L16
	For setting the rated current $I_n$ . For enabling the residual current protective function. The residual current function is only possible with the MF Advanced measurement function.	For ETU660 only	400 A	☒	☒	G04
630 A			☒	☒	G06	
800 A			☒	☒	G08	
1250 A			☒	☒	G12	

### Communication modules

- Up to 2 different communication modules can be used at the same time.
- When using an IOM040 digital I/O module (Z option K56), only 1 communication module can be used.

Communication modules						Order code
Communication modules	COM040	Modbus TCP	☒	☒		F02
	COM041	Modbus RTU	☒	☒		F03
	COM043	Modbus TCP	☒	☒		F11
	COM042	Modbus RTU	☒	☒		F12

### Breaker Connect modules

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

Breaker Connect module	110 ... 240 V AC/DC	☒	☒		F26
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### I/O modules internal

I/O modules internal	IOM040 digital I/O module	2 inputs, 2 outputs	☒	☒	K56
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☒ For molded case circuit breakers with stored energy mechanism

☒ For molded case circuit breakers with handle operating mechanism

<sup>1)</sup> These functionalities can be applied directly to the frame of the withdrawable circuit breaker, without any modification of the side wall.

<sup>2)</sup> Not possible in connection with or as an alternative to the mounting support, standard (A07).

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

3VA27..-.....-.... -Z

Order code

2

## Accessories for motors

5-digit mechanical operating cycles counter

WM - C01

## Auxiliary switches and signaling switches

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

Position signaling switches for guide frames<sup>1)</sup> 2 CO | 2 CO | 2 CO (connected | test | disconnected position) WM  K55

Signaling switch Ready-to-close signaling 1 CO digital 24 V DC WM - K50


Tripped signaling switch (S24) 1 CO digital 24 V DC WM  K53

Spring charge signaling switch (S21) 1 CO digital 24 V DC WM - K54

Auxiliary switch On/Off AUX 4 CO digital 24 V DC WM  K51

2 CO 400 V AC, and 2 CO digital 24 V DC WM  K52

## Locking, blocking and interlocking

Locking provisions<sup>1)</sup> To prevent movement of withdrawable circuit breaker Cylinder lock Made by RONIS WM  R78

For no more than 3 padlocks, 8 mm WM  R65

Locking mechanism To prevent movement to disconnected position WM  R79

Locking provision Against unauthorized closing in the operator panel (safe OFF) Cylinder lock, made by RONIS WM - S08

For no more than 3 padlocks, plastic 4 mm WM - S22

For no more than 1 padlock, metal 7 mm WM - S23

For no more than 2 padlocks, metal 8 mm WM - S07


Interlocking sets For mechanical ON and/or OFF on the operator panel For no more than 3 padlocks, plastic 4 mm WM - S42


For no more than 1 padlock, metal 7 mm WM - S43

For no more than 2 padlocks, metal 8 mm WM - S44

Protective cover For mechanical ON/OFF, not lockable WM - S41

Door sealing frame IP30 IP3x WM  T30

 For molded case circuit breakers with stored energy mechanism

 For molded case circuit breakers with handle operating mechanism

<sup>1)</sup> Can be used both for individual orders of the guide frame and complete orders (circuit breaker + guide frame).

# Guide frames

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## Guide frames for ordering separately without circuit breakers



- Guide frames without breakers up to 1600 A
- **Note:** All CB bus modules for communication COM04x/IOM300/Breaker Connect module, as well as COMPSS signaling switches are configured without frames in the withdrawable circuit breaker and defined there by means of Z options, and are included with the breaker. PSS Standard is always included in the frame and can be changed to an electronics-capable signal by means of a Z option.

Number of poles	Connection type	Article No.
3-pole	Rear vertical	3VW8116-7AA01
	Rear horizontal	3VW8116-7AB01
	Front straight bus connectors extended	3VW8116-7AE01
	Broadened bus connectors	3VW8116-7AF01
	Rear broadened bus connectors	3VW8116-7AG01
4-pole	Rear vertical	3VW8116-7BA01
	Rear horizontal	3VW8116-7BB01
	Front straight bus connectors extended	3VW8116-7BE01
	Broadened bus connectors	3VW8116-7BF01
	Rear broadened bus connectors	3VW8116-7BG01

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

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

Order code

## Locking, blocking and interlocking

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

## Auxiliary/signaling switches

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

Auxiliary and signaling switches for currents >100 mA and up to 400 V AC are installed as standard.

For currents <100 mA for PLC connections, these auxiliary and signaling switches can be modified.

The auxiliary/signaling switches for 24 V DC digital signals are designed for

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

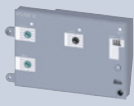











☒ For molded case circuit breakers with stored energy mechanism

☒ For molded case circuit breakers with handle operating mechanism
















# Electronic trip unit ETU and accessories

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## Electronic trip units (ETU)

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

## Measurement functions for ETU650 or ETU660

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

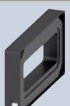


## External current transformers for N conductors

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





## External current transformers for grounded transformer star points

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


## Summation current transformers external Rc-CT for residual current measurement


Accessory for	Use	Article No.
	<ul style="list-style-type: none"> <li>Only with MF Advanced measurement function and Rc rating plug</li> </ul>	
	ETU660	For external residual current measurement   3VW9011-0RC30


## Remote reset magnets RR for the circuit breakers including tripped signaling

Accessory for	Voltage	Article No.
	<ul style="list-style-type: none"> <li>Remote reset magnet (RR) for resetting the circuit breaker after tripping as a result of overcurrent conditions</li> </ul>	
	ETU320, ETU350, ETU360, ETU650, ETU660	24 V DC  – 3VW9011-0AK03
		110 V AC/DC  – 3VW9011-0AK05
	250 V AC/DC  – 3VW9011-0AK06	

## Spare part batteries for electronic trip unit ETU

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

 For molded case circuit breakers with stored energy mechanism

 For molded case circuit breakers with handle operating mechanism

# Electronic trip unit ETU and accessories

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## Rating plugs



- Only one module is possible per circuit breaker.

Accessory for	Version	Rated current $I_n$	Article No.
ETU320, ETU350, ETU360, ETU650, ETU660	Rating plugs for setting ( $< I_{n\max}$ ) the rated current $I_n$	400 A	3VW9011-0AA53
		630 A	3VW9011-0AA55
		800 A	3VW9011-0AA56
		1000 A	3VW9011-0AA57
		1250 A	3VW9011-0AA58
		1600 A	3VW9011-0AA61
ETU 6-series	Rating plug without overload protection (L = OFF) and for setting ( $< I_{n\max}$ ) the rated current $I_n$	400 A	3VW9011-0LF53
		630 A	3VW9011-0LF55
		800 A	3VW9011-0LF56
		1000 A	3VW9011-0LF57
		1250 A	3VW9011-0LF58
		1600 A	3VW9011-0LF61
ETU660	Rating plug Rc for ETU660 for enabling the residual current protective function and setting ( $< I_{n\max}$ ) the rated current $I_n$ . The residual current function is only possible with the MF Advanced measurement function.	400 A	3VW9011-ORC53
		630 A	3VW9011-ORC55
		800 A	3VW9011-ORC56
		1250 A	3VW9011-ORC58

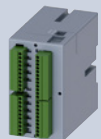
## CB bus modules - communication modules



- Contains the communication module
- Up to 2 different communication modules can be used at the same time.
- When using a digital I/O module IOM040 (Z option K56), only 1 communication module can be used.
- Can only be used with ETU of the 6-series and require a Breaker Connect module for connection to the circuit breaker. This can also be configured directly on the device by means of a Z option if the communication link to the ETU 6-series is selected.

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

## CB bus modules - I/O modules external IOM300



- For snapping onto DIN rail

Accessory for	Maximum switching current per contact	Inputs	Outputs	Article No.
ETU 6-series	<ul style="list-style-type: none"> <li>2 A at <math>\leq 30</math> V DC</li> <li>0.8 A at 50 V DC</li> <li>0.2 A at 150 V DC</li> <li>4 A at 250 V AC</li> </ul>	11	10	3VW9011-0AT20

## CB bus modules - I/O modules internal IOM040



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

Accessory for	Maximum switching current per contact	Inputs	Outputs	Article No.
ETU 6-series	<ul style="list-style-type: none"> <li>2 A at <math>\leq 30</math> V DC</li> <li>0.8 A at 50 V DC</li> <li>0.2 A at 150 V DC</li> <li>4 A at 250 V AC</li> </ul>	2	2	3VW9011-0AT30

For molded case circuit breakers with stored energy mechanism

For molded case circuit breakers with handle operating mechanism



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## Actuator modules COM ACT



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

## Accessory for

ETU 6-series



–

## Article No.

3VW9011-0AT10

## Breaker Connect modules



- For external power supply for the electronics components

## Voltage

110 ... 240 V AC/DC



↙

## Article No.

3VW9011-0AT06

24 ... 48 V DC



↙

3VW9011-0AT07

## Auxiliary contact signals for communication link



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

## Function

Ready-to-close signaling switch for communication (COM RTC)



–

## Article No.

3VW9011-0AT11

Position signaling switch COM PSS (for withdrawable breaker only)



↙

3VW9011-0AT12

## Test devices and breaker data adapters



- Usable for all ETU 3-series and 6-series

## Description

Test device

## Type

TD310



↙

## Article No.

3VW9011-0AT32

- For the trip test via ETU and tripping solenoid including release
- Activation of the ETU and the tripping solenoid by means of a battery built into the test device
- On activation in the ETU 6-series, the parameters can be configured on the display

Breaker data adapter

TD410



↙

3VW9011-0AT34

- As gateway for parameterization of the ETU with SENTRON powerconfig
- For generation of a report of the set parameters with powerservice

Test device and breaker data adapter

TD420



↙

3VW9011-0AT33

- As gateway for parameterization of the ETU with SENTRON powerconfig
  - Testing a tripping operation using SENTRON powerconfig
- For use with the powerservice software
  - Testing of the basic protective functions LSING
  - Testing of the enhanced protective functions
  - Test data storage
  - Readout of ETU buffer
  - Generation of a report of the set parameters

For molded case circuit breakers with stored energy mechanism

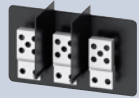
For molded case circuit breakers with handle operating mechanism

# Accessories for connection and insulation

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## Front terminals for main circuit connections acc. to IEC 60947-2

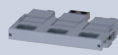
- Acc. to IEC 60947-2 for 3VA27 up to 1600 A (depending on application conditions)
- To be ordered separately for top and bottom



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

## Rear terminals for main circuit connections acc. to IEC 60947-2

- Acc. to IEC 60947-2 for 3VA27 up to 1600 A (depending on application conditions)
- To be ordered separately for top and bottom



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

## Cu/Al cable connections acc. to IEC 60947-2

- Acc. to IEC 60947-2 for 3VA27 up to 1600 A (depending on application conditions)
- To be ordered separately for top and bottom



Mounting	Version	Mounting onto	Number of poles/quantity		Article No.
Fixed-mounted	Circular conductor terminals 4 x 240 mm <sup>2</sup> for front cable connection <sup>1)</sup> , including insulation plate and high, extended terminal cover	Front terminals for main circuit connection	3-pole/3 units		3VW9011-0AL71
			4-pole/4 units		3VW9011-0AL72
Withdrawable	Set of circular conductor connection pieces 4 x 240 mm <sup>2</sup> for cable lugs for rear cable connection	Rear vertical main connections	3-pole/3 units		3VW9011-0AN71
			4-pole/4 units		3VW9011-0AN72

## Auxiliary supply connectors in push-in version

<sup>1)</sup> For connecting Al cables up to 1000 A

For molded case circuit breakers with stored energy mechanism

For molded case circuit breakers with handle operating mechanism

3VA27

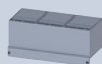
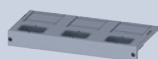


- Control wire tap in push-in version for upgrading fixed-mounted breakers and guide frames.
- The device is always fitted at the factory with the exact number of control wire taps required.

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

#### Terminal covers for fixed-mounted circuit breakers

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



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

#### Phase barriers for fixed-mounted breakers

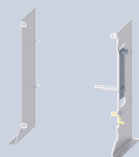


- Necessary isolation measures are always supplied with the corresponding connection technology and do not need to be ordered separately.
- For operating voltages >440 V AC the use of phase barriers is mandatory; up to 440 V AC their use is optional.

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

#### Supports for mounting the fixed-mounted breakers on the floor

- For fixed-mounted versions only



Version	Use	Article No.
Mounting support standard (circuit breaker feet) (= Z option A07)		3VW9011-0BB51
Mounting support extended (circuit breaker feet) including mechanical transmission of switch position on circuit breaker side panel (= Z option S56)	<ul style="list-style-type: none"> <li>• Fixation for external auxiliary switches AUX 15 CO (3VW9011-0AG15)</li> <li>• Locking mechanism for control cabinet door, direct (for 3VW9011-0BB10)</li> <li>• Locking mechanism for control cabinet door, Bowden cable (for 3VW9011-0BB16),</li> <li>• Mechanical interlock to 3WA/3WL/3VA (for 3VW9011-0BB21)</li> </ul>	3VW9011-0BB52

#### Extension kits for modification of the side wall of the fixed-mounted breakers

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



Version	Use	Article No.
Extension kit for side wall	<ul style="list-style-type: none"> <li>• Fixation for external auxiliary switches AUX 15 CO (3VW9011-0AG15)</li> <li>• Locking mechanism for control cabinet door, direct (for 3VW9011-0BB10)</li> <li>• Locking mechanism for control cabinet door, Bowden cable (for 3VW9011-0BB16),</li> <li>• Mechanical interlock to 3WA/3WL/3VA (for 3VW9011-0BB21)</li> </ul>	3VW9011-0BB53

#### Spring charging motor (MO)

☒ For molded case circuit breakers with stored energy mechanism

☒ For molded case circuit breakers with handle operating mechanism

# Motor operators and manual operators



					3VA27
Description	Voltage			Article No.	
For automatic charging of the stored energy mechanism	24 ... 30 V AC/DC		–	3VW9011-0AF01	
	48 ... 60 V AC/DC		–	3VW9011-0AF02	
	100 ... 130 V AC/DC		–	3VW9011-0AF03	
	220 ... 250 V AC/DC		–	3VW9011-0AF04	

## Mechanical operating cycles counter MOC



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

## Manual operators for handle operating mechanism



Description	Version	Color	Degree of protection		Article No.
Front mounted rotary operator incl. door sealing frame	Standard	Gray	IP30	–	3VW9727-0EK11
	EMERGENCY-OFF	Yellow-red	IP30	–	3VW9727-0EK15



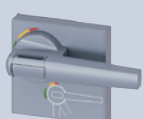
Door mounted rotary operator	Standard	Gray	IP30	–	3VW9727-0FK21
	EMERGENCY-OFF	Yellow-red	IP30	–	3VW9727-0FK25



Basic without handle			IP30	–	3VW9727-0GK00
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Shaft stub			IP30	–	8UD1900-3WD00
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Handle	Gray	IP30	–	8UD1861-0AB11
	Yellow-red	IP30	–	8UD1861-0AB15

For molded case circuit breakers with stored energy mechanism

For molded case circuit breakers with handle operating mechanism

# Auxiliary release, closing coil

3VA27

## Closing coils CC/shunt trips ST

- **Note:**
  - For molded case circuit breakers with handle operating mechanism, the products can only be used as closing shunt trips ST.
  - For molded case circuit breakers with stored energy mechanism, the products can be used as closing coils CC and shunt trips ST.



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

## TD320 function test units for closing coils/shunt trips



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

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

## Auxiliary/signaling switches



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

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

☒ For molded case circuit breakers with stored energy mechanism

☒ For molded case circuit breakers with handle operating mechanism

# Auxiliary release, closing coil

3VA27

## Auxiliary/signaling switches for handle operating mechanism



- Auxiliary and signaling switches are each offered in two versions:
  - Standard version for currents >100 mA and up to 400/250 V AC, minimum load above 100 mA at 24 V DC, and maximum breaking capacity 5 A at 250 V AC
  - Digital version for currents <100 mA for PLC connections, minimum load above 1 mA at 5 V DC, and maximum breaking capacity 100 mA at 24 V DC
- For external auxiliary switches ON/OFF AUX 15 CO, a 3VW9011-0AG1x fixation must be ordered in addition, and for fixed-mounted breakers a 3VW9011-0BB5x side wall modification.

Description	Contacts		Article No.
Trip alarm switch TAS signals the trip position irrespective of the tripping reason	1 CO standard	–	3VW9727-0AB11
	1 CO digital	–	3VW9727-0AB13
Tripped signaling switch via auxiliary release S25 signals tripping operations via auxiliary releases (UVR, ST) in UVR/ST2 pocket	1 CO standard	–	3VW9727-0AB41
	1 CO digital	–	3VW9727-0AB43
Leading auxiliary switch S26 (2 units)	1 NO standard, 250 V AC	–	3VW9727-0AA21

## Fixation for external auxiliary switches AUX 15 CO



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

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

## Undervoltage releases UVR



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

## External time-delay devices for undervoltage releases



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

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

WM For molded case circuit breakers with stored energy mechanism

WM For molded case circuit breakers with handle operating mechanism

# Locking provisions and interlocks

3VA27

## Locking provision to prevent movement of the withdrawable circuit breaker



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

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



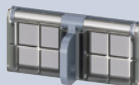
Description	Article No.
Locking mechanism (spare part for R79)	3VW9011-0BA84

## Locking provisions in OFF position



Description	Article No.
<ul style="list-style-type: none"> <li>For fixed-mounted versions and withdrawable versions</li> <li>Against unauthorized closing in the operator panel (safe OFF)</li> <li>The disconnecter unit fulfills the conditions for a supply disconnecting (isolating) device acc. to EN 60204-1.</li> </ul>	
Cylinder lock, made by RONIS (spare part for S08)	3VW9011-0BA33

## Locking provisions in OFF position



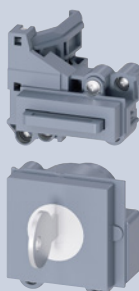
Description	Version	Article No.
Padlock 4 mm (spare part for S22)	Plastic for no more than 3 locks	3VW9011-0BA41
Padlock 7 mm (spare part for S23)	Metal for no more than 1 lock	3VW9011-0BA42
Padlock 8 mm (spare part for S07)	Metal for no more than 2 locks	3VW9011-0BA44

## Locking provision in OFF position for handle operating mechanism with rotary operators



Description	Article No.
<ul style="list-style-type: none"> <li>Against unauthorized activation in the case of molded case circuit breakers with rotary operator</li> </ul>	
For RONIS	3VW9727-0VL10

## Locking provision in OFF position for handle operating mechanism without rotary operators



Description	Article No.
<ul style="list-style-type: none"> <li>Against unauthorized closing in the operator panel in the case of molded case circuit breakers without rotary operator</li> </ul>	
For padlocks	3VW9727-0LB10
For RONIS	3VW9727-0LF10

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



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

For molded case circuit breakers with stored energy mechanism

For molded case circuit breakers with handle operating mechanism

# Locking provisions and interlocks

3VA27

## Protective covers for mechanical ON/OFF



- Mechanical ON/OFF to protect against unintentional actuation on the operator panel.
- Not lockable.

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

## Mechanical interlock



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

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

## Bowden cables, separate

- One required for each circuit breaker

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

## Locking mechanisms to prevent opening of the control cabinet doors in ON position



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

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

## Door sealing frames IP30



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

Description	Mounting	Version	Article No.
Spare part for Z option T30.	Fixed-mounted	IP3x	3VW9011-0AP01
		IP3x	3VW9011-0AP02
	Withdrawable	IP3x	3VW9011-0AP04

## Protective covers IP54



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

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

☒ For molded case circuit breakers with stored energy mechanism

☒ For molded case circuit breakers with handle operating mechanism



# 3VL up to 1600 A, IEC



3VL molded case circuit breaker



## Product Discontinuation

The 3VL molded case circuit breaker up to 1600 A IEC can only be ordered as a spare part (since 10/2020), and will be removed from the order portfolio from 10/2025.

### Documents available for downloading:

You can find comprehensive information on the 3VL molded case circuit breaker in the catalog extract.

3VL molded case circuit breaker  
[www.siemens.com/lowvoltage/catalogs](http://www.siemens.com/lowvoltage/catalogs) (109769073)



# Appendix



Conditions of sale and delivery \_\_\_\_\_ A/2

Link directory \_\_\_\_\_ A/4

# Conditions of sale and delivery

## 1. General Provisions

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

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- for stand-alone software products and software products forming a part of a product or project, the „General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany“<sup>1)</sup> and/or
- for consulting services the „Allgemeine Geschäftsbedingungen für Beratungsleistungen der Division DF – Deutschland“ (available only in German) and/or
- for other services, the „Supplementary Terms and Conditions for Services (‘BL’)<sup>1)</sup> and/or
- for other supplies the „General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry“<sup>1)</sup>.

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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,
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- for other services the „International Terms & Conditions for Services“<sup>1)</sup> supplemented by „Software Licensing Conditions“<sup>1)</sup> and/or
- for other supplies of hard- and software the „International Terms & Conditions for Products“<sup>1)</sup> supplemented by „Software Licensing Conditions“<sup>1)</sup>

### 1.3 For customers with master or framework agreement

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

## 2. Additional Terms and Conditions

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

Illustrations are not binding.

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

<sup>1)</sup> 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](https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf)

### 3. Export Regulations

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## Catalog LV 10

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Tender specifications	<a href="http://www.siemens.com/lowvoltage/tenderspecifications">www.siemens.com/lowvoltage/tenderspecifications</a>
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