

# OEZ Modeion New Generation

## Order code structure



### ORDER CODE STRUCTURE 3VA UP TO 1 000 A

Overview of order code structure of 3VA devices up to 1 000 A.  
 For complete and verified configuration of a circuit breaker use OEZ Configurator.

		4	5	6	7	8	9	10	11	12					
		3VA	...	...	...	-	...	...	...	...					
		- OAAO													
Design of device	Circuit breaker with thermomagnetic trip unit or switch-disconnector	1													
	Circuit breaker with electronic trip unit	2													
Size	100 A	0													
	160 A	1													
	250 A	2													
	400 A	3													
	630 A	4													
	1 000 A	5													
Rated current I <sub>n</sub>		3VA10	3VA11	3VA12	3VA13	3VA14	3VA15	3VA20	3VA21	3VA22	3VA23	3VA24	3VA25		
	1 A	-	■	-	-	-	-	-	-	-	-	-	-	8	1
	2 A	-	■	-	-	-	-	-	-	-	-	-	-	0	2
	4 A	-	■	-	-	-	-	-	-	-	-	-	-	0	4
	8 A	-	■	-	-	-	-	-	-	-	-	-	-	0	8
	12.5 A	-	■	-	-	-	-	-	-	-	-	-	-	9	2
	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	-	■	■	-	-	-	-	■	■	-	-	-	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
1 000 A	-	-	-	-	-	■	-	-	-	-	-	■	1	0	
Rated short-circuit ultimate breaking capacity I <sub>cu</sub> at AC 380 ÷ 415 V	Switch-disconnector	-	■	■	■	■	-	-	-	-	-	-	-	1	
	16 kA (B)	■	-	-	-	-	-	-	-	-	-	-	-	2	
	25 kA (N)	■	■	-	-	-	-	-	-	-	-	-	-	3	
	36 kA (S)	■	■	■	■	■	-	-	-	-	-	-	-	4	
	55 kA (M)	-	■	■	■	■	■	■	■	■	■	■	■	5	
	70 kA (H)	-	■	■	■	■	-	-	-	-	-	-	-	6	
	85 kA (H)	-	-	-	-	-	■	■	■	■	■	■	■	6	
	110 kA (C)	-	-	-	■	■	■	■	■	■	■	■	■	7	
150 kA (L)	-	-	-	-	-	-	■	■	■	-	-	-	8		

		3VA										- OAA0				
		4	5	6	7	8	9	10	11	12						
		...	...	...	...	-	...	...	...	...						
		3VA10	3VA11	3VA12	3VA13	3VA14	3VA15	3VA20	3VA21	3VA22	3VA23	3VA24	3VA25	Trip unit type		
Thermomagnetic trip unit	Without electronic trip unit (switch-disconnector)	-	■	■	■	■	-	-	-	-	-	-	-	SD100	A	A
	Line protection	■	■	-	-	-	-	-	-	-	-	-	-	TM210 (FTFM)	E	D
	- without N conductor protection	-	■	■	■	■	■	-	-	-	-	-	-	TM220 (ATFM)	E	E
	Line protection	-	■	■	■	■	■	-	-	-	-	-	-	TM240 (ATAM)	E	F
	- N conductor protection	-	■	-	-	-	-	-	-	-	-	-	-	TM210 (FTFM)	F	D
	50 % I <sub>n</sub>	-	■	■	■	■	■	-	-	-	-	-	-	TM220 (ATFM)	F	E
Line protection	-	■	■	■	■	■	-	-	-	-	-	-	TM240 (ATAM)	F	F	
- N conductor protection	■	■	-	-	-	-	-	-	-	-	-	-	-	TM210 (FTFM)	G	D
100 % I <sub>n</sub>	-	■	■	■	■	■	-	-	-	-	-	-	-	TM220 (ATFM)	G	E
		-	■	■	■	■	■	-	-	-	-	-	-	TM240 (ATAM)	G	F
Electronic trip unit	Line protection	-	-	-	-	-	-	■	■	■	■	■	■	ETU320 (LI)	H	L
		-	-	-	-	-	-	■	■	■	■	■	■	ETU330 (LIG)	H	M
		-	-	-	-	-	-	■	■	■	■	■	■	ETU340 (ELISA LI)	H	K
	Line and generator protection	-	-	-	-	-	-	■	■	■	■	■	■	ETU350 (LSI)	H	N
	Line and generator protection with data communication	-	-	-	-	-	-	■	■	■	■	■	■	ETU550 (LSI)	J	P
		-	-	-	-	-	-	■	■	■	■	■	-	ETU560 (LSIG)	J	Q
	Line and generator protection with data communication and measuring	-	-	-	-	-	-	■	■	■	■	■	■	ETU850 (LSI)	K	P
		-	-	-	-	-	-	■	■	■	■	■	■	ETU860 (LSIG)	K	Q
	Motor protection	-	-	-	-	-	-	-	■	■	■	■	■	ETU350M (LSI)	M	N
	Motor protection with data communication	-	-	-	-	-	-	-	■	■	■	■	■	ETU550M (LSI)	M	P
Motor protection with data communication and measuring	-	-	-	-	-	-	-	■	■	■	■	■	ETU860M (LSIG)	M	Q	
Only short-circuit release	Motor protection	-	■	■	■	■	■	-	-	-	-	-	-	TM110M (FM)	M	G
		-	■	■	■	■	■	-	-	-	-	-	-	TM120M (AM)	M	H
		-	-	-	-	-	-	■	■	■	■	■	■	ETU310M (I)	M	S
Design	1-pole	-	■	-	-	-	-	-	-	-	-	-	-			1
	2-pole	-	■	-	-	-	-	-	-	-	-	-	-			2
	3-pole	■	■	■	■	■	■	■	■	■	■	■	■			3
	4-pole	■	■	■	■	■	■	■	■	■	■	■	■			4
Connections	Busbars or cable lugs	■	■	■	■	■	■	■	■	■	■	■	■			2
	Cu cables	■	■	-	-	-	-	■	■	-	-	-	-			6

## ORDER CODE STRUCTURE 3VA27 UP TO 1 600 A

Overview of order code structure of 3VA27 devices. For complete and verified configuration of a circuit breaker use OEZ Configurator.

### Design with stored energy operator

		6	7	8	9	10	11	12	13	14	15	16	
		...	...	-	...	...	...	...	-	...	...	...	
<b>3VA27</b>		...	...	-	...	...	...	...	-	...	...	...	
Rated current	800 A	8	0										
	1 000 A	1	0										
	1 250 A	1	2										
	1 600 A	1	6										
Rated short-circuit ultimate breaking capacity $I_{cu}$ at AC 380 ÷ 415 V	55 kA (M)			1									
	85 kA (H)			2									
	110 kA (C)			3									
Electronic trip units	Without electronic trip unit (switch-disconnector)				A	A							
	ETU320 (LI)				A	B							
	ETU350 (LSI)				A	C							
	ETU360 (LSIG)				A	D							
	ETU650 (LSI)	without communication	without measuring			A	E						
			with data communication	without measuring			B	E					
		with measuring MF Basic		voltage measuring on lower terminals			C	E					
			voltage measuring on upper terminals			D	E						
		with measuring MF Advanced	voltage measuring on lower terminals			E	E						
			voltage measuring on upper terminals			F	E						
	ETU660 (LSIG)	without communication	without measuring			A	F						
			with data communication	without measuring			B	F					
		with measuring MF Basic		voltage measuring on lower terminals			C	F					
			voltage measuring on upper terminals			D	F						
with measuring MF Advanced		voltage measuring on lower terminals			E	F							
		voltage measuring on upper terminals			F	F							
Design and number of poles	fixed design	3-pole						0					
		4-pole	N-pole left						1				
			N-pole right						2				
	withdrawable design	3-pole						3					
		4-pole	N-pole left						4				
N-pole right							5						
Connection	withdrawable design only a circuit breaker in withdrawable design without withdrawable device (withdrawable device must be ordered separately)							0					
	fixed/withdrawable design	rear vertical connections							1				
		rear horizontal connections							2				
		front connections							3				
		front connections extended							5				
		front connections broadened							6				
		rear connections broadened							7				

		6	7	8	9	10	11	12	13	14	15	16			
		...	...	-	...	...	...	...	...	...	...	...			
<b>Method of storage device loading</b>	manually											0			
	automatically by motor operator	AC/DC 24 ÷ 30 V											1		
		AC/DC 48 ÷ 60 V											2		
		AC/DC 100 ÷ 130 V											3		
		AC/DC 220 ÷ 250 V											4		
<b>Closing coil (CC), remote reset magnet (RR)</b>	without closing coil, without remote reset magnet											A			
	closing coil (CC)	AC/DC 24 V											B		
		AC/DC 30 V											C		
		AC/DC 48 V											D		
		AC/DC 60 V											E		
		AC/DC 110 ÷ 120 V											F		
		AC/DC 120 ÷ 127 V											G		
		AC/DC 220 ÷ 240 V											H		
		AC/DC 240 ÷ 250 V											J		
	closing coil (CC) and remote reset magnet (RR)	AC/DC 24 V											K		
		AC/DC 110 V											L		
		AC/DC 220 V											M		
	<b>2nd auxiliary release</b>	without 2nd auxiliary release											A		
undervoltage release (UVR)		AC/DC 24 V											B		
		AC/DC 30 V											C		
		AC/DC 48 V											D		
		AC/DC 60 V											E		
		AC/DC 110 ÷ 120 V											F		
		AC/DC 120 ÷ 127 V											G		
		AC/DC 220 ÷ 240 V											H		
		AC/DC 240 ÷ 250 V											J		
			AC 380 ÷ 400 V											K	
			AC 415 ÷ 440 V											L	
undervoltage release (UVR) with delay unit		AC/DC 24 ÷ 30 V											M		
		AC/DC 110 ÷ 127 V											N		
		AC/DC 220 ÷ 250 V											P		
2nd shunt trip (ST2)		AC/DC 24 V											Q		
		AC/DC 30 V											R		
		AC/DC 48 V											S		
		AC/DC 60 V											T		
		AC/DC 110 ÷ 120 V											U		
		AC/DC 120 ÷ 127 V											V		
		AC/DC 220 ÷ 240 V											W		
		AC/DC 240 ÷ 250 V											X		
<b>1st auxiliary release</b>		without 1st auxiliary release											0		
	shunt trip (ST)	AC/DC 24 V											1		
		AC/DC 30 V											2		
		AC/DC 48 V											3		
		AC/DC 60 V											4		
		AC/DC 110 ÷ 120 V											5		
		AC/DC 120 ÷ 127 V											6		
		AC/DC 220 ÷ 240 V											7		
		AC/DC 240 ÷ 250 V											8		

**Option codes for accessories of moulded case circuit breakers 3VA27**

- Add „Z“ sign behind the order code of a circuit breaker 3VA27..-.....-....., additional accessories can be added behind by using option codes.
- Individual option codes are separated by „+“ sign.

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

**Mounting possibilities of fixed design**

- In basic configuration circuit-breaker in fixed design is intended for mounting on a mounting plate. Circuit breaker can be mounted on a horizontal mounting grid after completion by relevant mounting supports.
- Circuit breaker must be additionally adjusted to be complemented by external auxiliary switches or mechanical blocking.<sup>1)</sup>

Mounting possibilities	on horizontal mounting grid	standard mounting supports	A	0	7
		additional mounting supports <sup>2)3)</sup>	S	5	6
	on mounting plate	side wall mounting set <sup>2)3)</sup>	S	5	7

**Accessories for trip unit ETU**

**Rated current modules**

- Electronic trip units are equipped with rated current module with rated current  $I_n$  equal to maximum rated current of a circuit breaker  $I_{n,max}$ .
- Rated current of a module must be lower or equal to  $I_{n,max}$ .
- For reduction of rated current of a circuit breaker select rated current of a module lower than  $I_{n,max}$ .

Additional protective functions (L = OFF or protection Rc) of a circuit breaker can be activated by rated current module.

Rated current modules	for setting of rated current $I_n$	for all ETU types	400 A	B	0	4
			630 A	B	0	6
			800 A	B	0	8
			1 000 A	B	1	0
			1 250 A	B	1	2
	for setting of rated current $I_n$ with thermal release switched off (L = OFF)	for ETU6xx	400 A	L	0	4
			630 A	L	0	6
			800 A	L	0	8
			1 000 A	L	1	1
			1 250 A	L	1	2
	for setting of rated current $I_n$ with activated protection against residual currents (Rc). Function Rc is active only with measuring function MF Advanced	for ETU660	1 600 A	L	1	6
			400 A	G	0	4
			630 A	G	0	6
			800 A	G	0	8
			1 250 A	G	1	2

**Communication modules**

- Two communication modules can be installed in a circuit breaker at the same time. Therefore it is possible to transmit data simultaneously over two different communication protocols.
- In use of digital I/O module IOM040 (accessory K56) only 1 communication module can be used.

Communication modules	COM043	Modbus TCP	F	1	1
	COM042	Modbus RTU	F	1	2

**Power supply modules**

- Power supply module DC 24 V is a part of a circuit breaker, only if a circuit breaker with a communication interface is ordered.

Power supply module	AC/DC 110 ÷ 240 V	F	2	6
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**Digital I/O modules**

Digital modules	IOM040	2 inputs, 2 outputs	K	5	6
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<sup>1)</sup> These accessories can be mounted directly on a frame of a withdrawable device.  
<sup>2)</sup> Not possible in connection with or as an alternative to standard mounting support (A07).  
<sup>3)</sup> Intended for mounting of external auxiliary switches or mechanical interlocking.

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

Accessories for motor operators

Mechanical operating counter	C 0 1
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Auxiliary and signal switches

- Auxiliary and signal switches for current > 100 mA and up to AC 400 V are installed in a circuit breaker.
- For currents < 100 mA for connection to PLC these auxiliary and signal switches can be replaced.
- Auxiliary and signal switches for digital signals DC 24 V are designed for:
  - minimum load above 1 mA at DC 5 V
  - maximum load 100 mA at DC 24 V.

Auxiliary switches	AUX	4x digital design DC 24 V	K 5 1
		2x standard design AC 250 V and 2x digital design DC 24 V	K 5 2
Signal switches	ready to close signaling switch (RTC)	digital design DC 24 V	K 5 0
	electrical alarm switch (S24)	digital design DC 24 V	K 5 3
	signal switches of storage device state (S21)	digital design DC 24 V	K 5 4
Position signal switch in withdrawable device PSS	6x digital design DC 24 V (2x signalling of position disconnected, 2x signalling of inspection position, 2x signalling of position connected)		K 5 5

Lockings and mechanical interlockings

Withdrawable device locking	against circuit breaker shifting in a withdrawable device	cylinder lock type Ronis	R 7 8
		for 3 padlocks with clamp diameter 8 mm	R 6 5
		in position disconnected only in combination with R78 or R65	R 7 9
Lockings	against unauthorized closing	cylinder lock type Ronis	S 0 8
		for 3 padlocks with clamp diameter 4 mm	S 2 2
		for 1 padlock with clamp diameter 7 mm	S 2 3
		for 2 padlocks with clamp diameter 8 mm	S 0 7
Protective covers	for circuit breaker control by means of push-buttons for switching on and off	for 3 padlocks with clamp diameter 4 mm	S 4 2
		for 1 padlock with clamp diameter 7 mm	S 4 3
	against unintentional circuit breaker switching on and off	for 2 padlocks with clamp diameter 8 mm	S 4 4
			S 4 1
Front shield	degree of protection IP30		T 3 0

Example of moulded case circuit breaker 3VA27 order code

3VA2716-1AE03-4HH0-Z A07+K52

Order code meaning:

Position	Code	Description
<b>Order code</b>		
1 ÷ 5	3VA27	moulded case circuit breaker 3VA27
6 ÷ 7	16	rated current I <sub>n</sub> 1 600 A
8	1	rated short-circuit ultimate breaking capacity I <sub>cu</sub> 55 kA at AC 380 ÷ 415 V
9 ÷ 10	AE	electronic trip unit ETU650 (LSI) without communication and without measuring
11	0	fixed design, 3-pole
12	3	front connections
13	4	automatic loading up of storage device by motor operator AC/DC 220 ÷ 250 V
14	H	closing coil AC/DC 220 ÷ 240 V for remote circuit breaker switching on
15	H	undervoltage release AC/DC 220 ÷ 240 V for remote circuit breaker switching off
16	0	without shunt trip
<b>Option codes (3VA27..-.....-Z)</b>		
1.	A07	mounting on horizontal mounting grid
2.	K52	auxiliary switches AUX (2x standard design AC 250 V and 2x digital design DC 24 V)

# OEZ Modeion New Generation

## New line of moulded case circuit breakers 3VA

combines the latest technologies of our **parent company** Siemens with skills of Letohrad R&D professionals and with indelible mark of the original line. What more? It is inspired by needs of our customers.

Sophisticated system of protective elements offers solutions for various types of applications in industry and energetics. 3VA products are characterized by a wide range of accessories and its variability. This means, above all, a wide range of connecting sets for most possible installations, universality of internal accessories for all sizes up to 1 000 A, configurability and almost unlimited possibilities of advanced functions.

## New line of moulded case circuit breakers 3VA

enables standard use complemented by key benefits:

- possibility of data communication
- Integrated measuring function
- fast and simple replacement of formerly manufactured devices by means of special sets

You will also appreciate a significant increase in safety of people and property thanks to the combination of a circuit breaker with a residual current device. Full selectivity is guaranteed to ensure reliable operation. Value added of the products is a complete technical and software support, service, production and development in Letohrad with the greatest emphasis on availability, security and protection of installation.

