

SIEMENS



3VA Molded Case Circuit Breakers with UL Certification

Edition
04/2017

usa.siemens.com/3VA

3VA Molded Case Circuit Breakers with UL Certification



3VA Molded Case Circuit Breakers with UL Certification · 04/2017

Refer to the Industry Mall for current updates of this catalog:
usa.siemens.com/industrymall

Please contact your local Siemens branch.

Introduction

1

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

2

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

3

Accessories and Spare Parts

4

Appendix

5

The products and systems listed in this catalog are developed and manufactured using a certified quality management system in accordance with EN ISO 9001:2008.



Our products lay the foundations for safe, reliable and efficient electrical infrastructure at medium and low-voltage levels in buildings and industrial applications.

Our portfolio includes, among other devices, distribution boards, communication-capable protection, switching, measuring and monitoring devices.

Our components allow consumers to utilize electrical power in a sustainable and responsible manner and support automated operation of buildings and industrial applications.

Software tools, comprehensive data provision and professional online support ensure efficient engineering.

Electrical power distribution – integrated and efficient

The increasing level of automation in buildings and industry introduces novel requirements for electrical power distribution and makes the underlying technologies ever more complex. Our components and systems are perfect for integration into networked environments and significantly increases the efficiency of your business processes: communication-capable, flexible and failsafe devices combine with digital engineering to enable optimized solutions - for any application.

Solutions for the future

We support you throughout the entire value chain with our end-to-end portfolio, from the planning stages right through to the operation, as well as when it comes to measures for modernizing and expanding your electrical energy distribution systems.

Our tested and certified components, systems and software packages allow for ever-suitable and efficient solutions in both centralized and distributed power systems the world over and can be perfectly integrated into building automation and industrial automation applications.

Comprehensive support

At the same time, you benefit from our broad portfolio of personalized and automated maintenance and support services.

Clear ordering channels, transparent product availability data and high delivery reliability coupled with swift global spare part provision, comprehensive online services, expert consulting and fast, efficient and reliable processes ensure that you are optimally covered throughout the entire product life cycle.

Planning Efficiency

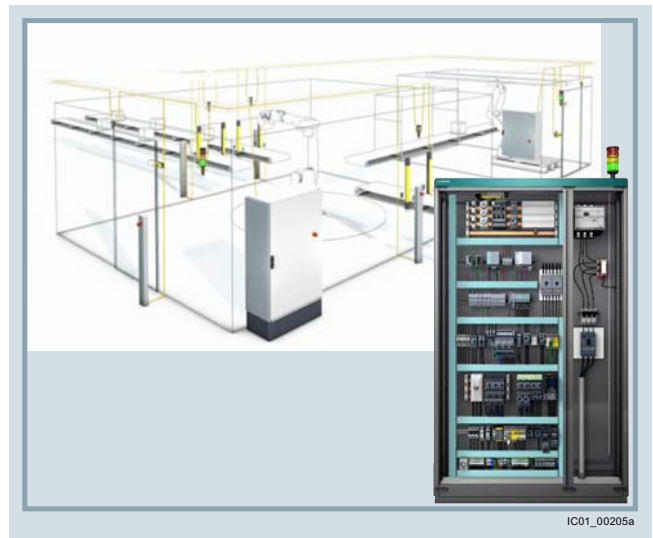
Overview

With Planning Efficiency, Siemens supplies answers to typical questions that often present themselves in electrical planning:

- What is the appropriate product for my application?
- Where can I find product data?
- How can I make processes more efficient and save more time?

The entire electronic support offered by Siemens is merged under Planning Efficiency. At each phase of the project, online functions make the everyday work of the planners easier and more efficient. Planning Efficiency focuses on optimizing the control cabinet configuration among other things.

Especially in this early phase, up to 80% of time and costs can be saved.



In order to supply the planners with all they need and to simplify the modern electrical planning of every aspect of the control cabinet configuration, the electrical support of Planning Efficiency focuses on four benefits:

- Finding the right product faster using intuitive product selection
- Time savings of up to 80% with universal product data for your CAE and CAD systems
- User-friendly compilation of project-specific documentation
- Comprehensive support – at any time, whatever your location



Process phases

At each phase of the process, Siemens provides comprehensive online functions free of charge.

This ensures that all the necessary information and product data are available around the clock at any location worldwide.



Configurators for products and systems

With just a few mouse clicks, you will find yourself guided by the configurator to a suitable product or system. Simply enter the relevant parameters and select your individual solution.

CAX Download Manager

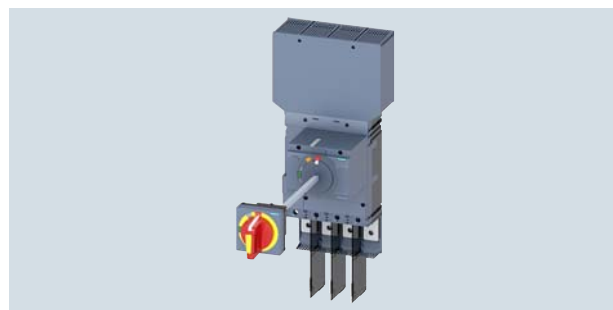
The CAX Download Manager can supply you with all the necessary CAX file types for the products of your choice for use in all common CAE and CAD systems. The data contained in the files is continuously updated. The whole process involves only four selection steps and is free of charge. All the files you select will then be compiled into a zip file and made available for you to download for further use. This results in a time saving of up to 80% because there is no need for manual data collection thanks to the universal manufacturer data for all commonly used CAE and CAD systems.

At a glance

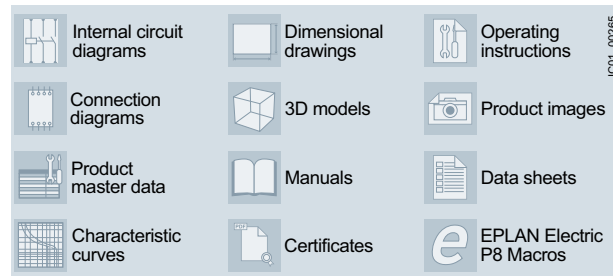
Without Planning Efficiency a lot of time would often be lost due to manual data transmission. Now you are able to concentrate on the essentials. All necessary information and product data is provided by Siemens for easy retrieval.

This makes the control cabinet configuration process more efficient and simplifies your everyday work.

For more information, go to www.siemens.com/planning-efficiency.



The configurator supplies the appropriate 3D models and dimension drawings for the control cabinet construction diagram.



The CAX Download Manager makes 11 universal data types available.



Find out more about Planning Efficiency in our informative videos

Technical Support

The Technical Support for low-voltage power distribution and electrical installation technology assists you with all your technical queries about our products and systems – both before and after delivery.

Still have questions?

Our experts will help you with competent specialist support



Competent and fast specialist advice on:

- Product selection
- Commissioning
- Issues during operation
- Possible special versions
- Special requirements
- Product features
- Device communication



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Get all the information you need – with just one click



Industry Online Support – get up-to-date information online fast

www.siemens.com/online-support

In the Product Support area, you will find FAQs, manuals, certificates, applications & tools etc.

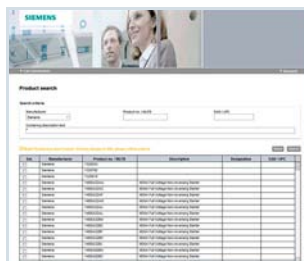
www.siemens.com/lowvoltage/product-support



Support Request – the quickest route to the experts

www.siemens.com/lowvoltage/technical-support

Using the Support Request form on the Industry Online Support portal, you can send your query directly to our Technical Support team.



Conversion tool – the easy and efficient way of finding successor products

www.siemens.com/conversion-tool

The benefits for you

- Response within 4 hours in 93% of cases
- Direct support from an experienced team of engineers and technicians

Siemens · 04/2017 SITRAIN –

With SITRAIN, you benefit from practical training directly from the manufacturer.

Our certified trainers are active in more than 60 countries and can help you and your employees develop their skills.



Competence through training



Information on our training courses can be found at

www.siemens.com/lowvoltage/training

Requirement for taking part in the courses:
Basic principles of electrical engineering and power distribution

I201_19565



Circuit breaker courses

LV-CBMAIN

Maintenance and operation of 3WL circuit breakers: 2 days

LV-CBPROJ

Basic principles of configuring and selecting circuit breakers: 1 day



LV-CBCOM

Communication with circuit protection components: 1 day



LV-SENER

Advanced course on circuit protection products: 1 day

Power monitoring courses

LV-EMSENTB

Energy management (Basic): 2 days



LV-EMSENTE

Energy management (Expert): 1 day

Switchboard courses

LV-ALPHAPB

ALPHA 3200
Switchboard installation: 1 day

LV-SIVAS4

SIVACON S4
Power distribution boards: 2 days

LV-ALPHATA

ALPHA 3200
Technology and software: 1 day

The benefits for you

- Flexible plant adaptation to market requirements
- Ensuring quality standards in production
- Reliable engineering and commissioning
- Shorter commissioning, maintenance and service times
- Exclude expensive faulty planning right from the outset
- Reduce downtimes and rectify faults more quickly

Siemens · 04/2017Still have questions? Get all the information you need – with just one click

Always here for you: our comprehensive support

			
Information	Planning/order	Operation/service	Training
– Website – Catalogs and brochures – Newsletters – Image database	– Industry Mall – Configuration – SIMARIS planning tools – CAX-Download Manager	– Siemens Industry Online Support (SIOS) – My Documentation Manager – Technical support – Support request	– SITRAIN Portal – Siemens Power Academy – BT Academy

I201_19079

We support you from the planning stages to commissioning to operation.

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

Notes

A complete system designed with you in mind

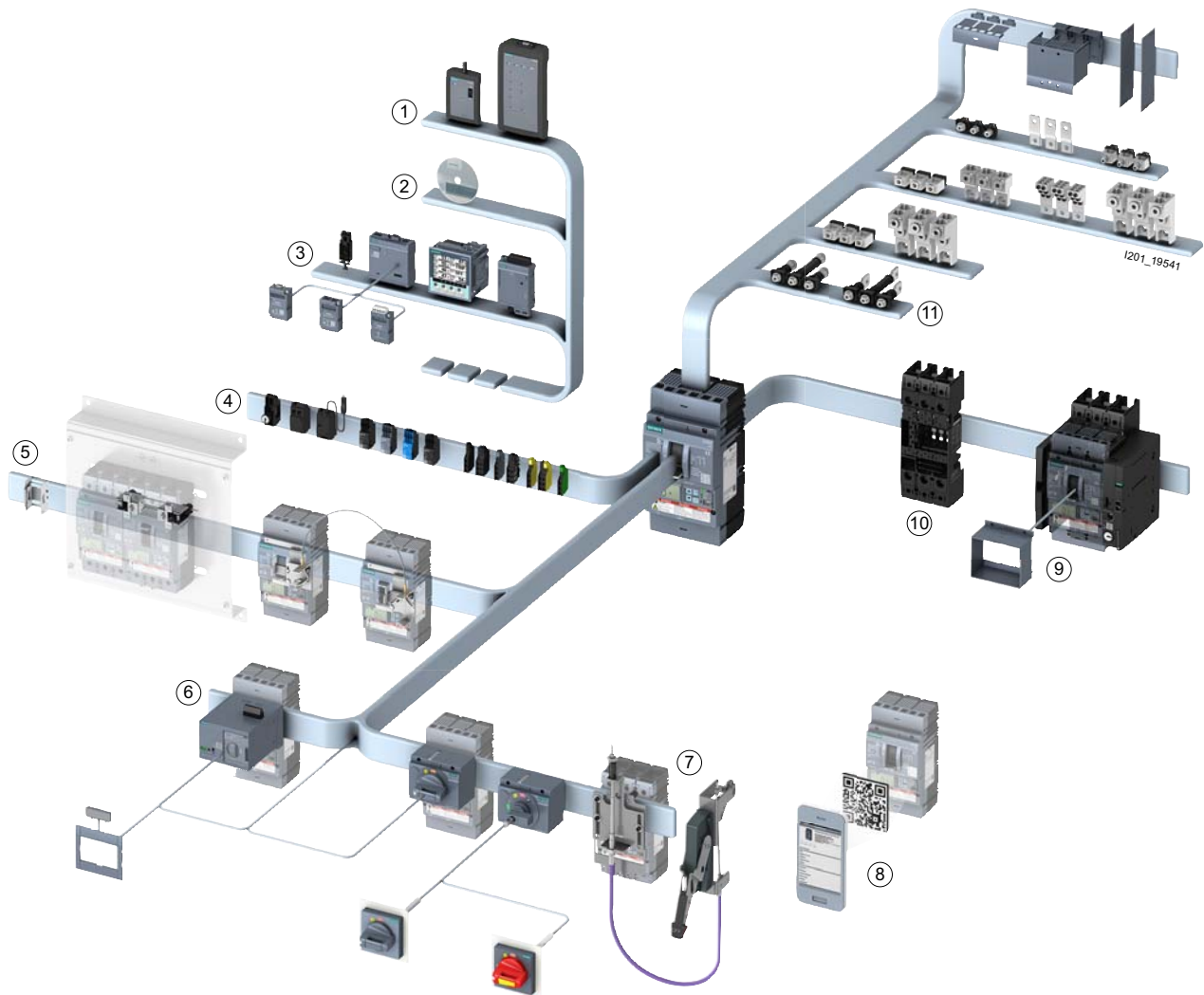


The 3VA molded case circuit breaker with certification in accordance with the American standard UL489 (3VA UL) is a well thought-out, modular and highly variable system that is rigorously designed to provide optimum support in every process step – from engineering to daily operation of the electrical power distribution system.

The 3VA UL molded case circuit breaker – a complete system designed with you in mind. It offers high flexibility and efficiency – and enables you to

- Find solutions – independently for individual requirements
- Minimize efforts – from planning to installation and maintenance
- Increase transparency – across all energy-relevant data
- Ensure system availability – preventively and reliably

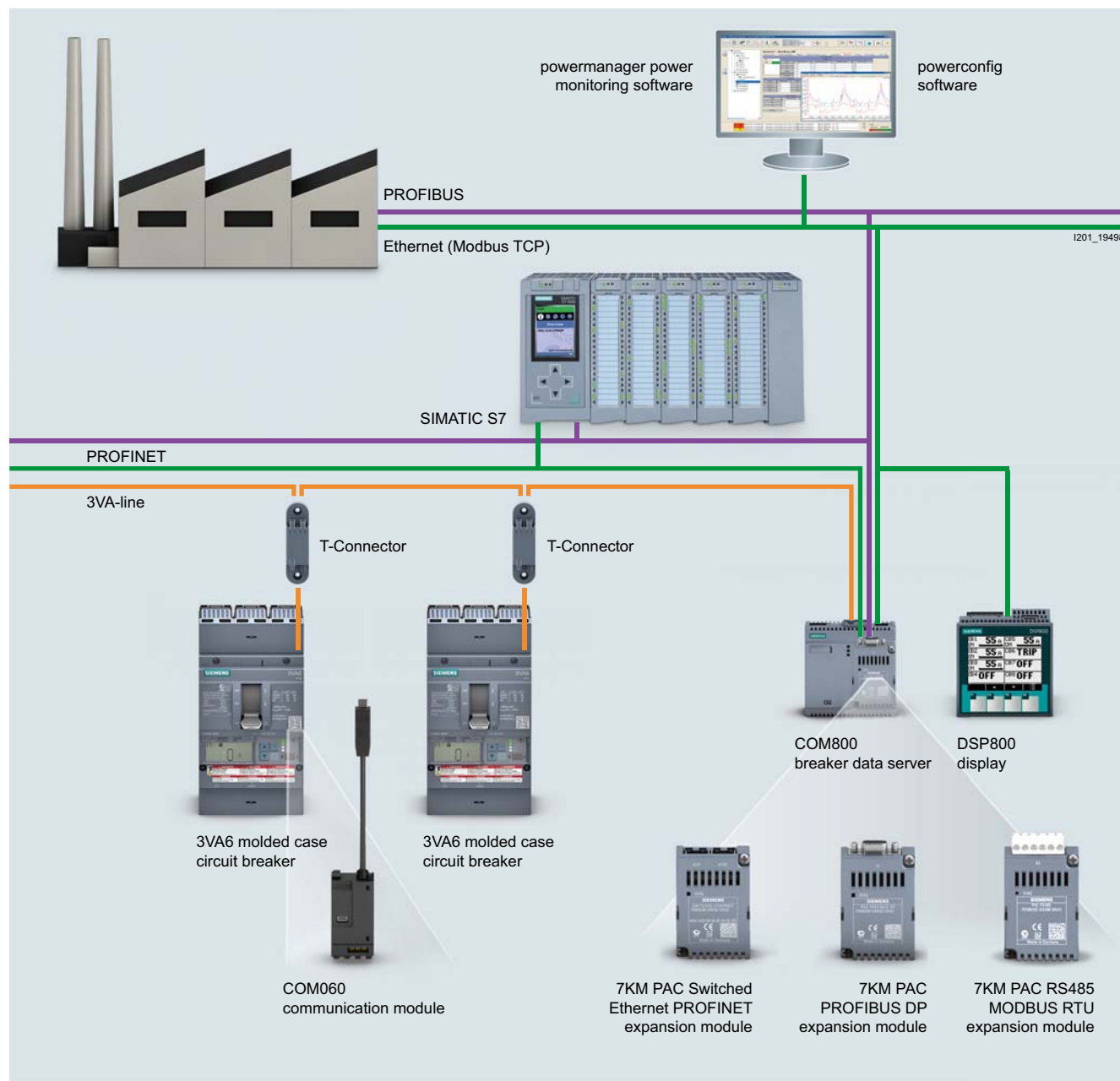
Wide range of accessories for flexible use



- | | | |
|------------------------|--|-------------------------|
| ① Test devices | ⑤ Accessories for locking, blocking and interlocking | ⑨ Draw-out technology |
| ② powerconfig software | ⑥ Motor operators | ⑩ Plug-in technology |
| ③ Communication | ⑦ Manual operators | ⑪ Connection technology |
| ④ Internal accessories | ⑧ Knowledge Manager | |

The 3VA UL molded case circuit breakers from the portfolio of protection, switching, measuring and monitoring devices ensure the reliable protection of people and property as integral components of efficient power distribution systems. With a wide range of accessories they can be adapted flexibly, quickly and easily to individual requirements.

High transparency thanks to flexible communication options



The communication-capable 3VA UL molded case circuit breakers can be connected to higher-level management systems by means of various bus systems.

Similarly, the communication of status, error and alarm messages is possible via internal auxiliary switches – for efficient operation and optimum system monitoring.

In addition, the Electronic Trip Unit (ETU) of the 8-series can measure current, voltage and also power and energy values and can forward the values by means of communication modules according to requirements.

Highlights



Integrated data collection

The ETUs of the 8-series collect and transmit energy data – similar to the 7KM PAC measuring devices.



Modern design

The elegant appearance and intuitive handling are immediately convincing.



More functionality through variable internal accessories

An extensive range of internal accessories is available for the 3VA UL molded case circuit breakers: many different functions are possible with the numerous auxiliary switches and alarm switches.



Elegant

As an option, the manual rotary operators can be equipped with an illumination kit – for clear indication of the switching position in all visibility conditions.



Clear indication

The circuit breaker position in the draw-out unit is colored and immediately recognizable.



Knowledge Manager

Technical information about installation, parameterization or maintenance can be called up directly from the system by QR code on a smartphone.

Notes



1/2

General data

Overview

For further technical product information:

Siemens Industry Online Support:
www.siemens.com/lowvoltage/product-support

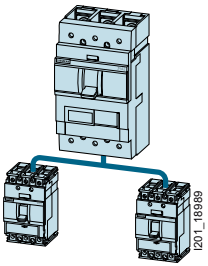
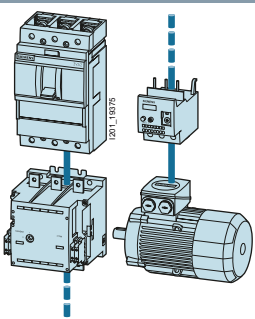
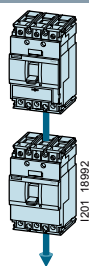
→ Entry type:
Application example
Certificate
Characteristic
Download
FAQ
Manual
Product note
Software archive
Technical data

3VA UL Molded Case Circuit Breakers

Introduction

General data

Overview

Application	3VA5	3VA6	Description	Standards
Molded Case Circuit Breakers				
	✓	✓	The trip units for circuit protection are designed to provide overload and short-circuit protection in AC and DC systems (DC only 3VA5): • Cables and lines • Non motorized loads	UL 489 IEC/EN 60947-1, IEC/EN 60947-2
Motor Circuit Protectors				
	✓	✓	Starter combinations consist of: Molded case circuit breaker + contactor + overload relay. The molded case circuit breaker handles short-circuit protection and the isolating function. The task of the contactor is to operationally switch the feeder. The overload relay handles overload protection, which can be specially matched to the motor. The molded case circuit breaker for the starter combination is therefore equipped with an adjustable and instantaneous short-circuit release.	UL 489 IEC/EN 60947-1, IEC/EN 60947-2, Appendix O ICB
Molded Case Switches				
	✓	✓	3VA Molded Case Switches in accordance with UL 489 possess an integrated instantaneous short-circuit release. They are used: • As main disconnecting means • For on/off switching • For disconnection of loads	UL 489 IEC/EN 60947-1, IEC/EN 60947-2, Appendix L CBI-X

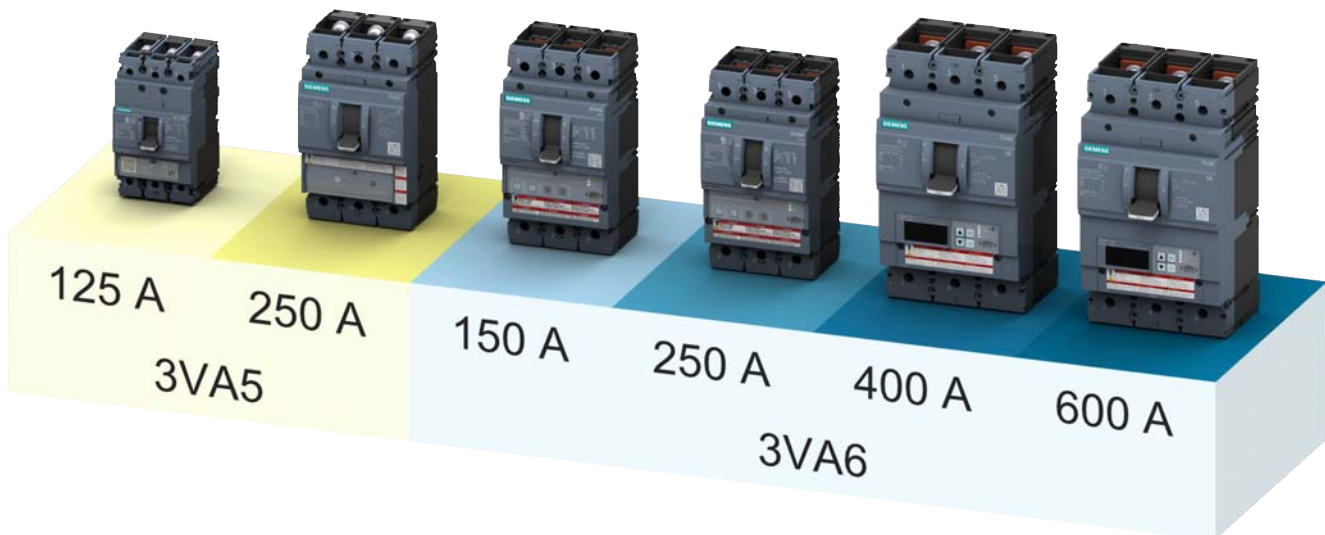
Sizes

The integrated 3VA UL portfolio consists of two different series of molded case circuit breakers in six different rated operational current versions (frame size).

The new 3VA UL molded case circuit breakers set new standards in flexibility and the variety of modular accessories available. Standardized accessories suitable for use with several sizes of circuit breaker from all the 3VA UL ranges help to cut costs and save time.

The new 3VA5 thermal magnetic molded case circuit breakers are available in 1 and 3-pole versions (3VA5 125 A) or in 2-pole versions in a 3-pole frame and in a 3-pole version (3VA5 250 A). The new 3VA6 ETU molded case circuit breakers are available in 3 and 4-pole versions.

The circuit breakers are available with rated operational currents ranging from 15 A to 600 A and rated voltages up to 600 V AC, depending on the series and frame size.



Integrated system

When it comes to operation, functionality and installation, the new 3VA UL series of molded case circuit breakers is a fully integrated system. This principle is embodied in the basic units and in all internal and external accessories.

The benefits offered by the internal and external accessories are:

- Standardized methods of operation
- Standardized scope of functions
- Standardized installation procedures
- Standardized accessories from 15 A ... 600 A (e.g. auxiliary switches, auxiliary releases, etc.)

3VA5 molded case circuit breakers

The new 3VA5 molded case circuit breakers reliably perform all the tasks required for circuit protection.

Features

The key features of the 3VA5 series are:

- Compact design
- Depending on size: 1-pole, 2(3) and 3-pole versions
- Depending on size:
 - Breaking capacity of 25 kA to 100 kA at 480 V and 18 kA to 35 kA at 600 V, 2(3) and 3-pole breakers
 - Breaking capacity of 25 kA to 50 kA at 277 V and 14 kA at 347 V, 1-pole breakers
- Thermal-magnetic trip units
- AC/DC applications
- Modular and easy-to-fit internal accessories with diverse functions
- Uniform accessories platform across all 3VA5/3VA6 molded case circuit breakers

Compact dimensions

Thanks to their compact dimensions, the 3VA5 molded case circuit breakers with sizes of 125 A and 250 A are designed to protect cables and plant equipment.

Thermal-magnetic trip unit

A thermal-magnetic principle trip unit is the basic trip unit for providing overload and short-circuit protection. This has been conceived for economical, cost-efficient installations up to 250 A. It is suitable for use in three-phase networks, AC networks, and with DC currents.

General data

3VA6 molded case circuit breakers

The new 3VA6 molded case circuit breakers reliably perform all the tasks required for circuit protection and protection of starter combinations.

This series is designed for applications with increased requirements:

- Increased breaking capacity
- Integrated metering function
- Connection to a communication system

Features

The most important features of the 3VA6 series are:

- Compact dimensions
- 3 and 4-pole versions
- Four breaking capacity classes of 35 kA ... 150 kA at 480 V and 18 kA ... 50 kA at 600 V
- Fixed-mounting, plug-in technology, draw-out technology
- Electronic Trip Units
- Retrofittable communication for ETU 5-series and 8-series
- Depending on the ETU: Integrated metering function
- AC applications
- No derating up to +50 °C
- Modular and easy-to-fit internal accessories with diverse functions
- Uniform accessories platform across all 3VA5/3VA6 molded case circuit breakers

Compact dimensions with function expansions

In addition to its expanded functionality, the 3VA6 molded case circuit breaker also comes with compact dimensions for fixed mounting, as a plug-in version and a draw-out version.

A cover size of 70 mm (up to 600 A) for the door cutout and a complete selection of breaking capacity classes from 35 kA to 150 kA at 480 V provide the necessary flexibility for planning.

Despite its compact size, the circuit breaker offers the following benefits:

- Very high short-circuit breaking capacity
- Electronic trip units, versions with and without integrated metering function and optional communication interface

Electronic Trip Units (ETUs)

The current sensors of the 3VA6 comprise iron-cored transformers for the internal power supply and Rogowski coils for precise current measurement. Each transformer can be optimized accordingly for its specific task. Thanks to the high accuracy of current measurement, the 3VA6 molded case circuit breaker is suitable for power/energy measurement. In addition, finer adjustment of ground fault current monitoring is possible.

The Electronic Trip Units (ETUs) provide the following protection functions:

- Overload protection L ("L" = Long-time delay)
- Short-time delayed short-circuit protection S ("S" = Short-time delay) for time-selective response in case of a short-circuit
- Instantaneous short-circuit protection I ("I" = Instantaneous)
- Protection of the neutral conductor N against overload and short-circuit ("N" = Neutral)
- Protection against residual currents to ground ("G" = Ground fault)
- Ground fault detection (G alarm = ground fault alarm) does not trip the circuit breaker, but an indication is shown on the display and/or is communicated to higher-level systems via the communication path or EFB/MMB.

Energy management and communication

The Electronic Trip Units (ETUs) provide the following energy management and communication functions:

- Metering function for current, voltage, power rating and energy
- Transfer of measured value data and breaker status information
- Remote parameter assignment of tripping thresholds and miscellaneous parameters
- Flexible use of digital inputs and outputs of the optionally available EFB300 external function box
- Commissioning/setting the plant topology and also individual breaker parameters with the "powerconfig" software package
- Testing and archiving with the TD300 and TD500 test devices (with powerconfig)

SIMATIC Energy Suite

Energy transparency – simple and integrated!

As an integrated option for the TIA Portal, SIMATIC Energy Suite efficiently links energy management with automation, thus introducing energy transparency to production.

Moreover, configuration effort is clearly reduced thanks to simplified configuration of energy-measuring components such as 7KM PAC or 3VA.

Thanks to consistent interfacing to higher-level energy management systems or to cloud-based services, recorded energy data can be expanded seamlessly into a cross-location energy management system.

The advantages at a glance:

- Automatic generation of energy management data
- Integration into TIA Portal and the automation system
- Easy configuration

For more information on SIMATIC Energy Suite:

www.siemens.com/energysuite

3VA UL Molded Case Circuit Breakers

Introduction

General data

1



Type	3VA51	3VA51	3VA52
Number of poles	1	3	2 in 3-pole, 3

3VA5 molded case circuit breakers

Size	125 A	125 A	250 A
Rated current I_n at 40 °C ambient temperature ⁴⁾	A 15 ... 125	15 ... 125	100 ... 250
Frequency	Hz 0 ... 400	0 ... 400	0 ... 400

Electrical characteristics according to UL 489

Rated operational voltage U_e 50/60 Hz AC	V 347	600Y/347	600
Rated operational voltage U_e DC	V 125	500	600

Electrical characteristics according to IEC 60947-2

Rated operational voltage U_e 50/60 Hz AC	V 415	690	690
Rated insulation voltage U_i	V 500	800	800
Rated impulse withstand voltage U_{imp}	kV 8	8	8

Short-circuit breaking capacity according to UL 489		(S)	(M)	(H)	(S)	(M)	(H)	(M)	(H)	(C)
120 V AC / 50/60 Hz	kA	65	85	100	--	--	--	--	--	--
240 V AC / 50/60 Hz	kA	--	--	--	65	85	100	85	100	200
277 V AC / 50/60 Hz	kA	25	35	50	--	--	--	--	--	--
347 V AC / 50/60 Hz	kA	14	14	14	--	--	--	--	--	--
480 Y/277 V AC / 50/60 Hz	kA	--	--	--	25	35	65	35	65	100
480 V AC / 50/60 Hz	kA	--	--	--	25 ¹⁾	35 ¹⁾	65 ¹⁾	35	65	100
600 Y/347 V AC / 50/60 Hz	kA	--	--	--	14	18 ²⁾	25 ³⁾	18	25	35
600 V AC / 50/60 Hz	kA	--	--	--	--	--	--	18	25	35
125 V DC	kA	14	25	30	--	--	--	--	--	--
250 V DC	kA	--	--	--	50	85	100	50	85	100
500 V DC	kA	--	--	--	50	85	100	50	85	100
600 V DC (3-pole only)	kA	--	--	--	--	--	--	50	85	100

Short-circuit breaking capacity according to IEC 60947-2		(S)	(M)	(H)	(S)	(M)	(H)	(M)	(H)	(C)
Rated ultimate short-circuit breaking capacity I_{cu} Rated service short-circuit breaking capacity I_{cs} rms value, according to IEC 60947-2										
240 V AC / 50/60 Hz	kA	25/25	36/36	55/55	55/55	85/85	150/150	85/85	100/100	200/200
415 V AC / 50/60 Hz	kA	5/5	5/5	5/5	36/36	55/55	70/70	55/55	70/70	110/110
690 V AC / 50/60 Hz	kA	--	--	--	5/5	7/5	10/5	7/7	10/10	10/10
125 V DC	kA	14	25	30	--	--	--	--	--	--
250 V DC	kA	--	--	--	50	85	100	50	85	100
500 V DC	kA	--	--	--	50	85	100	50	85	100
750 V DC (3-pole only)	kA	--	--	--	--	--	--	50	85	100

-- Not available

¹⁾ Applies to I_n 15 A to 90 A

²⁾ I_n 100 A to 125 A 14 kA

³⁾ I_n 40 A to 90 A 18 kA; 100 A to 125 A 14 kA

⁴⁾ 80 % rated current applications according to UL 489, 100 % rated current applications according to IEC 60947



3VA61

3, 4

3VA62

3, 4

3VA63

3, 4

3VA64

3, 4

3VA6 molded case circuit breakers

150 A

40 ... 150

50 ... 60

250 A

100, 250

50 ... 60

400 A

250, 400

50 ... 60

600 A

400, 600

50 ... 60

600

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600Y/347

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600

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600

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690

800

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3VA UL Molded Case Circuit Breakers

Introduction

General data

1



Type		3VA51	3VA51	3VA52
Number of poles		1	3	2 to 3-pole, 3
3VA5 molded case circuit breakers				
Rated current I_n at 40 °C ambient temperature	A	15 ... 125	15 ... 125	100 ... 250
Service life (make-break operations)				
Mechanical		15000	15000	15000
Electrical at U_e UL 489 480 V / IEC 60947 415 V		8000	8000	8000
Trip units	FTFM	TM210	✓	✓
	FTAM	TM230	--	✓
	LI	ETU320/ETU820	--	--
	LIG	ETU330/ETU830	--	--
	LSI	ETU350	--	--
	LSI	ETU550/ETU850	--	--
	LSI (G alarm) ³⁾	ETU556/ETU856	--	--
	LSIG	ETU560/ETU860	--	--
3VA5 motor circuit protectors				
Rated operational current I_n at 40 °C ambient temperature	A	--	15 ... 125	150 ... 200
Breaking capacity according to UL 489 without contactor at 480 V ⁴⁾			65	65/100
Approval in accordance with IEC 60947-2 Appendix O ICB		--	✓	✓
Trip units ¹⁾	AM	TM120 AM	✓	✓
	I	ETU310M	--	--
3VA5 molded case switches				
Electrical characteristics according to UL 489				
Short circuit current rating (SCCR) up to 65 kA at 480 V²⁾				
Rated uninterrupted current I_n at 40° ambient temperature	A	--	100	150, 250
Short circuit current rating (SCCR) up to 100 kA at 480 V²⁾				
Rated uninterrupted current I_n at 40° ambient temperature	A	--	--	100, 150, 250
Approval in accordance with IEC 60947-2 Appendix L CBI-X		--	✓	✓
Trip units ¹⁾	FM	MCS110	✓	✓
Dimensions				
	A	mm	25.4	105
	B	mm	140	185
	C	mm	76.5	83
	D	mm	96.8	107
General information				
Standards and specifications		UL 489/CSA22.2/ IEC 60947-2	UL 489/CSA22.2/ IEC 60947-2	UL 489/CSA22.2/ IEC 60947-2
Power and infeed direction		Top and bottom	Top and bottom	Top and bottom
Standard connection technology		Without connection technology	Without connection technology	Without connection technology

✓ Available

-- Not available

¹⁾ Integrated instantaneous short-circuit release for self-protection

²⁾ Breaking capacity (SCCR rating) is the maximum permissible short-circuit current at the installation location of the MCS in combination with an appropriate overload protection element

³⁾ G alarm, no G protection

⁴⁾ Breaking capacities in combination with contactors (SCCR ratings) may differ



3VA61	3VA62	3VA63	3VA64
3, 4	3, 4	3, 4	3, 4
3VA5 molded case circuit breakers, standard applications			
40 ... 150	100, 250	250, 400	400, 600
20000	20000	15000	15000
9000	6000	6000	4000
--	--	--	--
--	--	--	--
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
3VA6 motor circuit protectors			
25 ... 100	110 ... 200	200, 250	400, 500
100	100	100	100
✓	✓	✓	✓
--	--	--	--
✓	✓	✓	✓
3VA6 molded case switches			
--	--	--	--
--	--	400	600
--	--	✓	✓
--	--	✓	✓
Dimensions			
105 (3p)/140 (4p)	105 (3p)/140 (4p)	138 (3p)/184 (4p)	138 (3p)/184 (4p)
198	198	248	248
86	86	110	110
107	107	137	137
General information			
UL 489/CSA22.2/ IEC 60947-2	UL 489/CSA22.2/ IEC 60947-2	UL 489/CSA22.2/ IEC 60947-2	UL 489/CSA22.2/ IEC 60947-2
Top and bottom	Top and bottom	Top and bottom	Top and bottom
Without connection technology	Without connection technology	Without connection technology	Without connection technology

3VA UL Molded Case Circuit Breakers

Introduction

General data

Molded case circuit breakers and accessories in the system

The new 3VA UL molded case circuit breakers come with a large portfolio of internal and external accessories that can be installed flexibly in any size of circuit breaker (depending on the type of accessory).

The table below shows the molded case circuit breakers in or on which the accessories can be installed, and the sizes covered by the same accessory component:

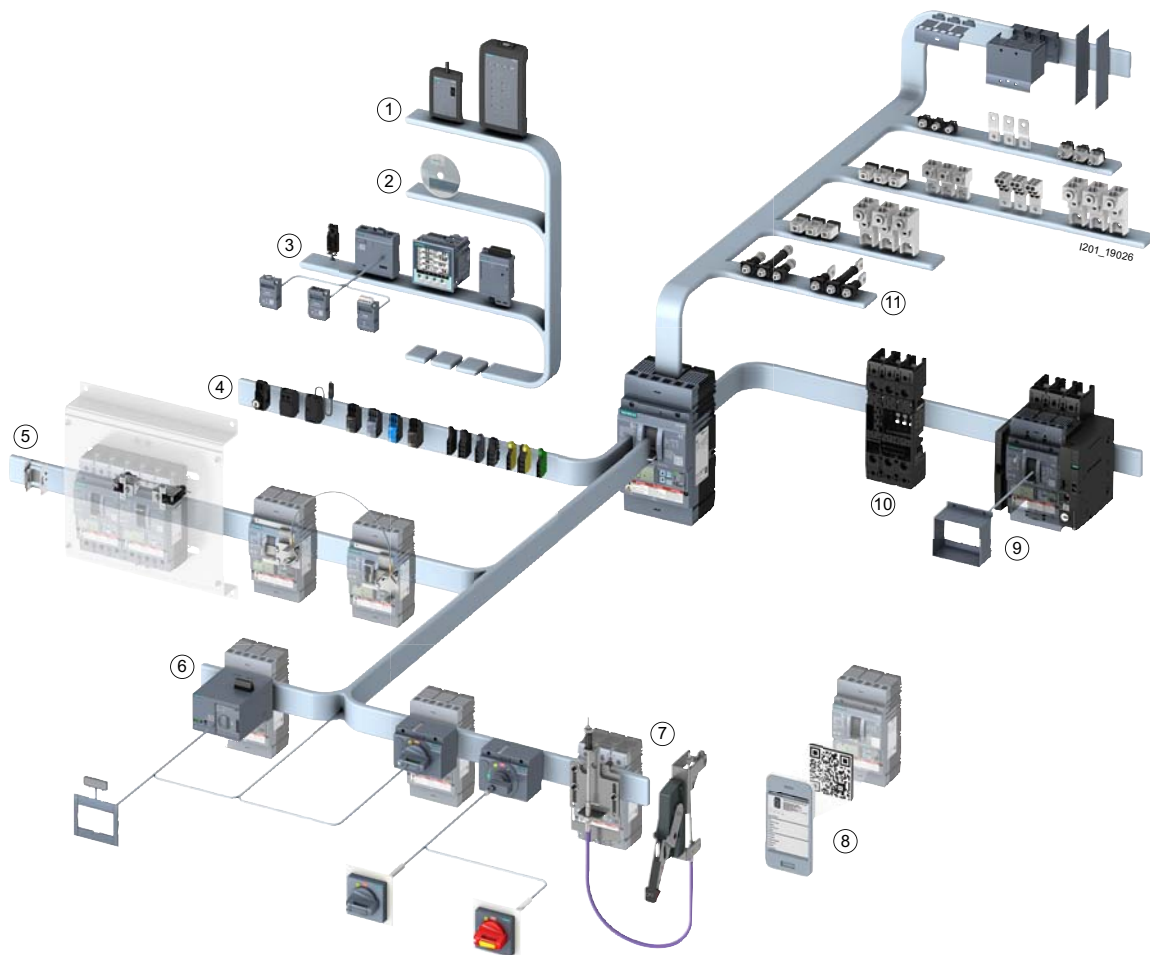
Accessories	3VA UL up to 600 A					
	3VA5	3VA5	3VA6			
	125	250	150	250	400	600
Auxiliary switches and alarm switches						
Auxiliary releases						
Connection technology						
Plug-in technology						
Draw-out technology						
Front mounted rotary operator						
Door mounted rotary operator						
Motor operator MO320 (mounted on the front)						
Accessories for locking, blocking and interlocking						
Communications interface						
EFB300						
TD300 and TD500						
Masking frame						
Max Flex operator						

Front terminals

The portfolio of connection components for the molded case circuit breakers includes a large selection of front cable and busbar terminals.

As standard, all 3VA UL molded case circuit breakers are supplied without connections.

The implementation of insulation measures (phase barriers or terminal covers) is required. With some accessory components, insulation measures are required (and these are included in the scope of supply of the relevant component). Additional insulation measures may be required to attain the listed UL ratings on some breakers.



Test devices ([page 4/42](#))

powerconfig software ([page 4/42](#))

Communication ([pages 4/36 to 4/42](#))

Internal accessories ([pages 4/2 to 4/11](#))

Accessories for locking, blocking and interlocking ([pages 4/43 to 4/46](#))

Motor operators ([page 4/19](#))

Manual operators ([pages 4/12 to 4/18](#))

Knowledge Manager ([page 1/12](#))

Draw-out technology ([pages 4/31 to 4/35](#))

Plug-in technology ([pages 4/31 to 4/35](#))

Connection technology ([pages 4/20 to 4/30](#))

3VA UL Molded Case Circuit Breakers

Introduction

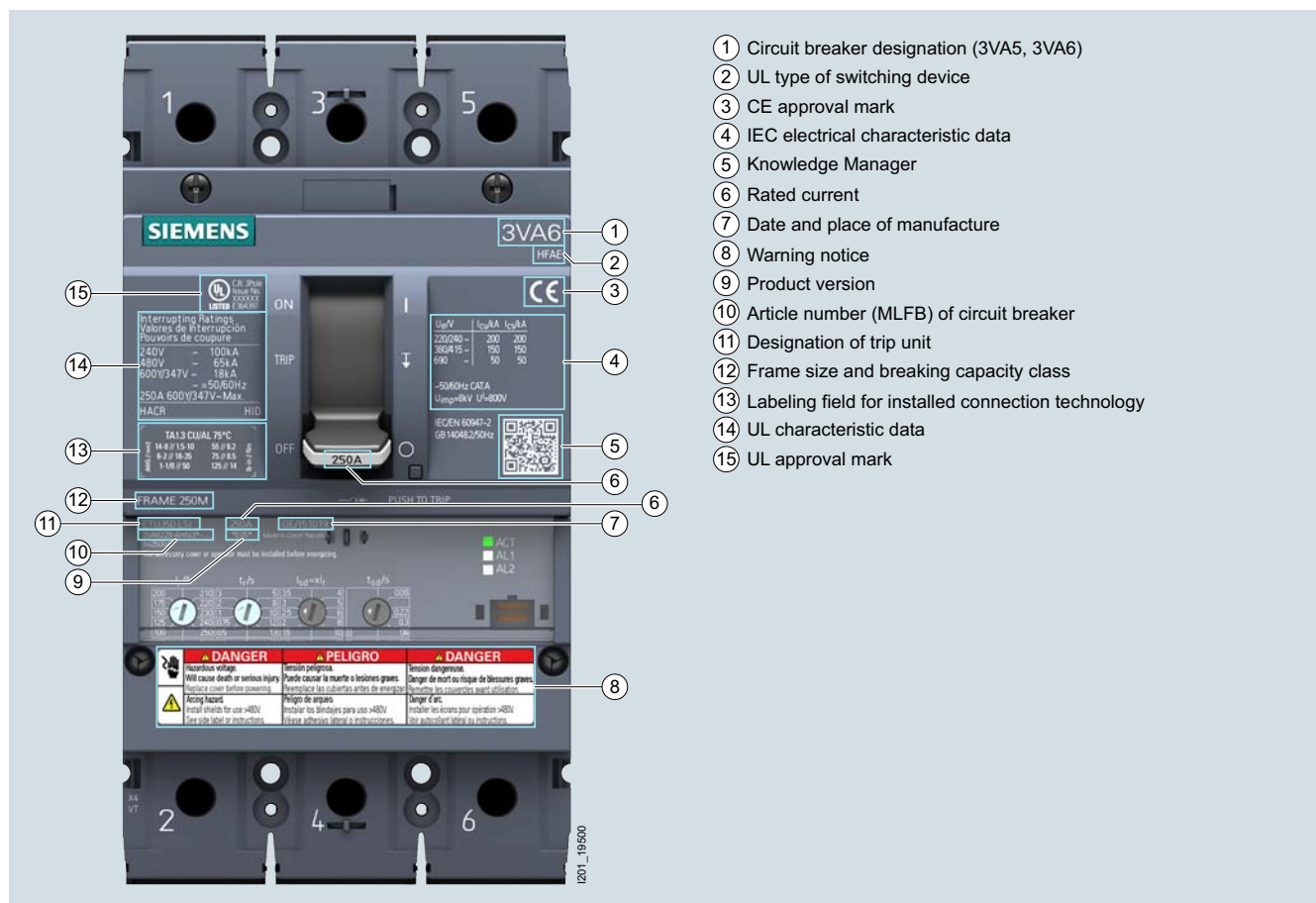
General data

Knowledge Manager

By reading out the QR code using a smartphone and the "Siemens Industry Online Support" app, it is possible to view key product information via the Internet at any time.

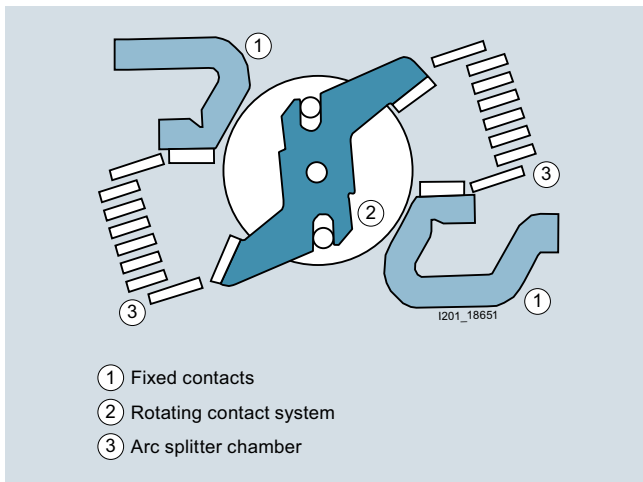
Siemens provides the app free of charge.

Technical information about installation, parameterization or maintenance can be called up directly from the system by QR code on a smartphone.



Current limiting

To achieve excellent current limiting, the 3VA molded case circuit breakers are equipped with a rotary double-contact system that opens dynamically on its own above the specified disengaging currents on the principle of magnetic repulsion before the expected peak value of the short-circuit current is reached. These limits have been coordinated and optimized to suit the overall device characteristics. This substantially reduces the thermal and mechanical loading on the molded case circuit breaker.



The switching pole cassettes of the 3VA molded case circuit breakers are optimized for high breaking capacity, and their rotary double-contact system design enables extremely good current limiting thanks to the very fast build-up of peak arc voltage generated at both contacts in the event of a short-circuit. This results in significant limitation of the let-through energy I^2t and the expected let-through current I_{SC} .

3VA UL Molded Case Circuit Breakers

Introduction

General data

Protection functions

Description of functions

	Thermal-magnetic TM 2-series	Electronic ETU 3-series	Electronic with display ETU 5-series	Electronic with display and metering function – ETU 8-series
Protection				
Trip units	 TM210, TM230 Motor circuit protector: TM120M I_{201_19496}	 ETU320, ETU330, ETU350 Motor circuit protector: ETU310M I_{201_18828}	 ETU550, ETU556, ETU560 I_{201_18480}	 ETU820, ETU830, ETU850, ETU856, ETU860 I_{201_18482}
Integrated functions				
Parameterizing	 Setting and reading the parameters in A	 Setting and reading the parameters in A and s	 - Setting and reading the parameters via display and 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
Metering function	--	--	--	Metering function integrated
Optional expansions				
--	--	--	 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)
--	 EFB300 external function box for connecting to the ETU	 EFB300 external function box for connecting to the ETU	 EFB300 external function box for connecting to the ETU	 EFB300 external function box for connecting to the ETU
--	--	--	 COM060 communication module	 COM060 communication module
--	--	--	 COM800/COM100 breaker data server Interface to • PROFIBUS • PROFINET • Modbus RTU • Ethernet (Modbus TCP)	 COM800/COM100 breaker data server Interface to • PROFIBUS • PROFINET • Modbus RTU • Ethernet (Modbus TCP)
--	--	--	 DSP800 external display for installing in the cubicle door	 DSP800 external display for installing in the cubicle door
--	 TD300/TD500 test device	 TD300/TD500 test device	 TD300/TD500 test device	 TD300/TD500 test device

Application cases and trip unit types

The table below illustrates the broad range of applications for which different types of thermal-magnetic trip units can be used:

	TM120M AM	TM210 FTFM	TM230 FTAM
Protection			
Motor circuit protector	✓	--	--
Circuit protection	--	✓	✓
Version available with			
1-pole breaker	--	✓	--
2-pole breaker in 3-pole enclosure	--	✓	✓
3-pole breaker	✓	✓	✓
Available protection parameters			
I_r adjustable	--	--	--
I_i adjustable	✓	--	✓
I_r non-adjustable	--	✓	✓
I_i non-adjustable	--	✓	--

3VA UL Molded Case Circuit Breakers

Introduction

General data

Protection functions

	ETU310M I	ETU320 LI	ETU330 LIG	ETU350 LSI	ETU550 LSI	ETU556 LSI (G alarm)	ETU560 LSIG	ETU820 LI	ETU830 LIG	ETU850 LSI	ETU856 LSI (G alarm)	ETU860 LSIG
Protection												
Motor circuit protector	✓	--	--	--	--	--	--	--	--	--	--	--
Circuit protection	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Version available with												
3-pole without external neutral conductor transformer	✓	✓	✓	✓	--	--	--	--	--	--	--	--
3-pole with external neutral conductor transformer	--	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓
4-pole with protected neutral conductor transformer	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Available protection parameters												
Characteristic in L range	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t	I^2t
I_r	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
t_r at $6 \times I_r$	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
$I_N^{1)}$	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	--	--	--	--	--	✓	--	--	--	--	✓	--
ZSI	--	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Features and options												
Setting by rotary switch	✓	✓	✓	✓	--	--	--	--	--	--	--	--
Setting by ETU display	--	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓
Data shown on ETU display	--	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓
Metering function	--	--	--	--	--	--	--	✓	✓	✓	✓	✓
Communication option	--	--	--	--	✓	✓	✓	✓	✓	✓	✓	✓
Front interface	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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

✓ Available

-- Not available

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA



NEW

Direct reference to the products in the Industry Mall from the selection and ordering data tables:

Article No.

[www.siemens.com/
product?Article No.](http://www.siemens.com/product?ArticleNo.)

3VA2025-5HL36-0AA0

Paper catalog:

To get more product information enter the Web address plus Article No.

PDF catalog:

Get more product information with just a mouse click.

2/2	Circuit protection
2/8	Motor circuit protectors
2/9	Molded case switches
2/10	Dimensional drawings

For further technical product information:

Siemens Industry Online Support:
[www.siemens.com/lowvoltage/
product-support](http://www.siemens.com/lowvoltage/product-support)

→ Entry type:
Application example
Certificate
Characteristic
Download
FAQ
Manual
Product note
Software archive
Technical data

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Circuit protection

Selection and ordering data

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

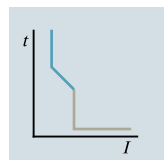
	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	DT	Standard breaking capacity S, up to 25 kA at 277 V See "Overview", p. 1/6 and 1/7 Article No. Basic price per PU
		A	A	A		

1-pole, fixed-mounted, attachment to DIN rail, 3VA51, up to 125 A
Thermal-magnetic trip unit



1-pole, TM210 FTFM

With fixed overload protection I_r and fixed short-circuit protection I_i



3VA51	15	15	300	3VA5195-4ED11-0AA0
	20	20	300	3VA5120-4ED11-0AA0
	25	25	300	3VA5125-4ED11-0AA0
	30	30	300	3VA5130-4ED11-0AA0
	35	35	350	3VA5135-4ED11-0AA0
	40	40	400	3VA5140-4ED11-0AA0
	45	45	450	3VA5145-4ED11-0AA0
	50	50	500	3VA5150-4ED11-0AA0
	60	60	600	3VA5160-4ED11-0AA0
	70	70	700	3VA5170-4ED11-0AA0
	80	80	800	3VA5180-4ED11-0AA0
	90	90	900	3VA5190-4ED11-0AA0
	100	100	1000	3VA5110-4ED11-0AA0
	110	110	1100	3VA5111-4ED11-0AA0
	125	125	1250	3VA5112-4ED11-0AA0

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	Medium breaking capacity M, up to 35 kA at 277 V See "Overview", p. 1/6 and 1/7		DT	High breaking capacity H, up to 50 kA at 277 V See "Overview", p. 1/6 and 1/7	
		Article No.	Basic price per PU		Article No.	Basic price per PU
A						

1-pole, TM210 FTFM

With fixed overload protection I_r and fixed short-circuit protection I_i

15	3VA5195-5ED11-0AA0	3VA5195-6ED11-0AA0
20	3VA5120-5ED11-0AA0	3VA5120-6ED11-0AA0
25	3VA5125-5ED11-0AA0	3VA5125-6ED11-0AA0
30	3VA5130-5ED11-0AA0	3VA5130-6ED11-0AA0
35	3VA5135-5ED11-0AA0	3VA5135-6ED11-0AA0
40	3VA5140-5ED11-0AA0	3VA5140-6ED11-0AA0
45	3VA5145-5ED11-0AA0	3VA5145-6ED11-0AA0
50	3VA5150-5ED11-0AA0	3VA5150-6ED11-0AA0
60	3VA5160-5ED11-0AA0	3VA5160-6ED11-0AA0
70	3VA5170-5ED11-0AA0	3VA5170-6ED11-0AA0
80	3VA5180-5ED11-0AA0	3VA5180-6ED11-0AA0
90	3VA5190-5ED11-0AA0	3VA5190-6ED11-0AA0
100	3VA5110-5ED11-0AA0	3VA5110-6ED11-0AA0
110	3VA5111-5ED11-0AA0	3VA5111-6ED11-0AA0
125	3VA5112-5ED11-0AA0	3VA5112-6ED11-0AA0

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

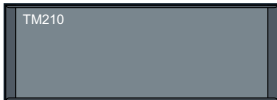
PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i
	A	A	A

DT	Standard breaking capacity S, up to 25 kA at 480 V See "Overview", p. 1/6 and 1/7
	Article No. Basic price per PU

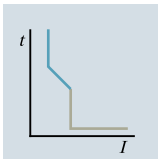
3-pole, fixed-mounted, attachment to DIN rail, 3VA51/3VA52, up to 125 A Thermal-magnetic trip unit



I201_19027

TM210 FTFM

With fixed overload protection I_r and fixed short-circuit protection I_i



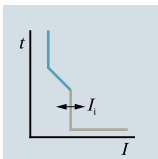
3VA51	15	15	300	3VA5195-4ED31-0AA0
	20	20	300	3VA5120-4ED31-0AA0
	25	25	300	3VA5125-4ED31-0AA0
	30	30	300	3VA5130-4ED31-0AA0
	35	35	350	3VA5135-4ED31-0AA0
	40	40	400	3VA5140-4ED31-0AA0
	45	45	450	3VA5145-4ED31-0AA0
	50	50	500	3VA5150-4ED31-0AA0
	60	60	600	3VA5160-4ED31-0AA0
	70	70	700	3VA5170-4ED31-0AA0
	80	80	800	3VA5180-4ED31-0AA0
	90	90	900	3VA5190-4ED31-0AA0
	100 ¹⁾	100	1000	3VA5110-4ED31-0AA0
	110 ¹⁾	110	1100	3VA5111-4ED31-0AA0
	125 ¹⁾	125	1250	3VA5112-4ED31-0AA0
3VA52	100	100	1000	---
	110	110	1100	---
	125	125	1250	---
	150	150	1500	---
	175	175	1750	---
	200	200	2000	---
	225	225	2250	---
	250	250	2500	---



I201_19496

TM230 FTAM

With fixed overload protection I_r and adjustable short-circuit protection I_i



3VA51	15	15	150 ... 300	3VA5195-4EC31-0AA0
	20	20	150 ... 300	3VA5120-4EC31-0AA0
	25	25	150 ... 300	3VA5125-4EC31-0AA0
	30	30	150 ... 300	3VA5130-4EC31-0AA0
	35	35	175 ... 350	3VA5135-4EC31-0AA0
	40	40	200 ... 400	3VA5140-4EC31-0AA0
	45	45	225 ... 450	3VA5145-4EC31-0AA0
	50	50	250 ... 500	3VA5150-4EC31-0AA0
	60	60	300 ... 600	3VA5160-4EC31-0AA0
	70	70	350 ... 700	3VA5170-4EC31-0AA0
	80	80	400 ... 800	3VA5180-4EC31-0AA0
	90	90	450 ... 900	3VA5190-4EC31-0AA0
	100 ¹⁾	100	500 ... 1000	3VA5110-4EC31-0AA0
	110 ¹⁾	110	550 ... 1100	3VA5111-4EC31-0AA0
	125 ¹⁾	125	625 ... 1250	3VA5112-4EC31-0AA0
3VA52	100	100	500 ... 1000	---
	110	110	550 ... 1100	---
	125	125	625 ... 1250	---
	150	150	750 ... 1500	---
	175	175	875 ... 1750	---
	200	200	1000 ... 2000	---
	225	225	1125 ... 2250	---
	250	250	1250 ... 2500	---

¹⁾ 480 Y/277 V

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7	DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7
A		Article No. Basic price per PU		Article No. Basic price per PU		Article No. Basic price per PU

TM210 FTFM

With fixed overload protection I_r and fixed short-circuit protection I_f

15	3VA5195-5ED31-0AA0	3VA5195-6ED31-0AA0	---
20	3VA5120-5ED31-0AA0	3VA5120-6ED31-0AA0	---
25	3VA5125-5ED31-0AA0	3VA5125-6ED31-0AA0	---
30	3VA5130-5ED31-0AA0	3VA5130-6ED31-0AA0	---
35	3VA5135-5ED31-0AA0	3VA5135-6ED31-0AA0	---
40	3VA5140-5ED31-0AA0	3VA5140-6ED31-0AA0	---
45	3VA5145-5ED31-0AA0	3VA5145-6ED31-0AA0	---
50	3VA5150-5ED31-0AA0	3VA5150-6ED31-0AA0	---
60	3VA5160-5ED31-0AA0	3VA5160-6ED31-0AA0	---
70	3VA5170-5ED31-0AA0	3VA5170-6ED31-0AA0	---
80	3VA5180-5ED31-0AA0	3VA5180-6ED31-0AA0	---
90	3VA5190-5ED31-0AA0	3VA5190-6ED31-0AA0	---
100	3VA5110-5ED31-0AA0	3VA5110-6ED31-0AA0	---
110	3VA5111-5ED31-0AA0	3VA5111-6ED31-0AA0	---
125	3VA5112-5ED31-0AA0	3VA5112-6ED31-0AA0	---
100	3VA5210-5ED31-0AA0	3VA5210-6ED31-0AA0	3VA5210-7ED31-0AA0
110	3VA5211-5ED31-0AA0	3VA5211-6ED31-0AA0	3VA5211-7ED31-0AA0
125	3VA5212-5ED31-0AA0	3VA5212-6ED31-0AA0	3VA5212-7ED31-0AA0
150	3VA5215-5ED31-0AA0	3VA5215-6ED31-0AA0	3VA5215-7ED31-0AA0
175	3VA5217-5ED31-0AA0	3VA5217-6ED31-0AA0	3VA5217-7ED31-0AA0
200	3VA5220-5ED31-0AA0	3VA5220-6ED31-0AA0	3VA5220-7ED31-0AA0
225	3VA5222-5ED31-0AA0	3VA5222-6ED31-0AA0	3VA5222-7ED31-0AA0
250	3VA5225-5ED31-0AA0	3VA5225-6ED31-0AA0	3VA5225-7ED31-0AA0

TM230 FTAM

With fixed overload protection I_r and adjustable short-circuit protection I_f

15	3VA5195-5EC31-0AA0	3VA5195-6EC31-0AA0	---
20	3VA5120-5EC31-0AA0	3VA5120-6EC31-0AA0	---
25	3VA5125-5EC31-0AA0	3VA5125-6EC31-0AA0	---
30	3VA5130-5EC31-0AA0	3VA5130-6EC31-0AA0	---
35	3VA5135-5EC31-0AA0	3VA5135-6EC31-0AA0	---
40	3VA5140-5EC31-0AA0	3VA5140-6EC31-0AA0	---
45	3VA5145-5EC31-0AA0	3VA5145-6EC31-0AA0	---
50	3VA5150-5EC31-0AA0	3VA5150-6EC31-0AA0	---
60	3VA5160-5EC31-0AA0	3VA5160-6EC31-0AA0	---
70	3VA5170-5EC31-0AA0	3VA5170-6EC31-0AA0	---
80	3VA5180-5EC31-0AA0	3VA5180-6EC31-0AA0	---
90	3VA5190-5EC31-0AA0	3VA5190-6EC31-0AA0	---
100	3VA5110-5EC31-0AA0	3VA5110-6EC31-0AA0	---
110	3VA5111-5EC31-0AA0	3VA5111-6EC31-0AA0	---
125	3VA5112-5EC31-0AA0	3VA5112-6EC31-0AA0	---
100	3VA5210-5EC31-0AA0	3VA5210-6EC31-0AA0	3VA5210-7EC31-0AA0
110	3VA5211-5EC31-0AA0	3VA5211-6EC31-0AA0	3VA5211-7EC31-0AA0
125	3VA5212-5EC31-0AA0	3VA5212-6EC31-0AA0	3VA5212-7EC31-0AA0
150	3VA5215-5EC31-0AA0	3VA5215-6EC31-0AA0	3VA5215-7EC31-0AA0
175	3VA5217-5EC31-0AA0	3VA5217-6EC31-0AA0	3VA5217-7EC31-0AA0
200	3VA5220-5EC31-0AA0	3VA5220-6EC31-0AA0	3VA5220-7EC31-0AA0
225	3VA5222-5EC31-0AA0	3VA5222-6EC31-0AA0	3VA5222-7EC31-0AA0
250	3VA5225-5EC31-0AA0	3VA5225-6EC31-0AA0	3VA5225-7EC31-0AA0

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i
	A	A	A

DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7
	Article No. Basic price per PU

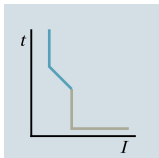
2-pole breaker in 3-pole enclosure, fixed-mounted, 3VA52, up to 250 A Thermal-magnetic trip unit



TM210 FTFM

With fixed overload protection I_r and fixed short-circuit protection I_i

3VA52	100	--	1000	3VA5210-5ED61-0AA0
	110	--	1100	3VA5211-5ED61-0AA0
	125	--	1250	3VA5212-5ED61-0AA0
	150	--	1500	3VA5215-5ED61-0AA0
	175	--	1750	3VA5217-5ED61-0AA0
	200	--	2000	3VA5220-5ED61-0AA0
	225	--	2250	3VA5222-5ED61-0AA0
	250	--	2500	3VA5225-5ED61-0AA0



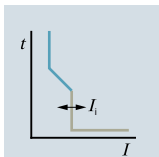
2-pole breaker in 3-pole enclosure, fixed-mounted, 3VA52, up to 250 A Thermal-magnetic trip unit



TM230 FTAM

With fixed overload protection I_r and adjustable short-circuit protection I_i

3VA52	100	--	500 ... 1000	3VA5210-5EC61-0AA0
	110	--	550 ... 1100	3VA5211-5EC61-0AA0
	125	--	625 ... 1250	3VA5212-5EC61-0AA0
	150	--	750 ... 1500	3VA5215-5EC61-0AA0
	175	--	875 ... 1750	3VA5217-5EC61-0AA0
	200	--	1000 ... 2000	3VA5220-5EC61-0AA0
	225	--	1125 ... 2250	3VA5222-5EC61-0AA0
	250	--	1250 ... 2500	3VA5225-5EC61-0AA0



3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7	
		Article No.	Basic price per PU		Article No.	Basic price per PU
A						

TM210 FTFM

With fixed overload protection I_r and fixed short-circuit protection I_s

100	3VA5210-6ED61-0AA0	3VA5210-7ED61-0AA0
110	3VA5211-6ED61-0AA0	3VA5211-7ED61-0AA0
125	3VA5212-6ED61-0AA0	3VA5212-7ED61-0AA0
150	3VA5215-6ED61-0AA0	3VA5215-7ED61-0AA0
175	3VA5217-6ED61-0AA0	3VA5217-7ED61-0AA0
200	3VA5220-6ED61-0AA0	3VA5220-7ED61-0AA0
225	3VA5222-6ED61-0AA0	3VA5222-7ED61-0AA0
250	3VA5225-6ED61-0AA0	3VA5225-7ED61-0AA0

TM230 FTAM

With fixed overload protection I_r and adjustable short-circuit protection I_s

100	3VA5210-6EC61-0AA0	3VA5210-7EC61-0AA0
110	3VA5211-6EC61-0AA0	3VA5211-7EC61-0AA0
125	3VA5212-6EC61-0AA0	3VA5212-7EC61-0AA0
150	3VA5215-6EC61-0AA0	3VA5215-7EC61-0AA0
175	3VA5217-6EC61-0AA0	3VA5217-7EC61-0AA0
200	3VA5220-6EC61-0AA0	3VA5220-7EC61-0AA0
225	3VA5222-6EC61-0AA0	3VA5222-7EC61-0AA0
250	3VA5225-6EC61-0AA0	3VA5225-7EC61-0AA0

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Motor circuit protectors

PU (UNIT, SET, M) = 1

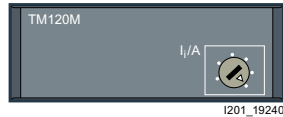
PS*/P. unit = 1 unit

PG = 1CB

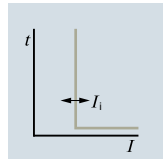


Type	Rated current I_n	Operating current of the instantaneous short-circuit protection "I" I_i	DT	SCCR without contactor, 65 kA ¹⁾ at 480 V See "Overview", p. 1/6 and 1/7	DT	SCCR without contactor, 100 kA ¹⁾ at 480 V See "Overview", p. 1/6 and 1/7
	A	A		Article No. Basic price per PU		Article No. Basic price per PU

3-pole, fixed-mounted, 3VA51/3VA52, up to 200 A
Magnetic trip unit



Motor circuit protector, TM120M AM
With adjustable short-circuit release I_i



3VA51	15	45 ... 105 75 ... 180	3VA5195-1MU31-0AA0 3VA5195-1MH31-0AA0	--
Fixed-mounted, attachment to DIN rail	25	75 ... 175 125 ... 300	3VA5125-1MU31-0AA0 3VA5125-1MH31-0AA0	--
	30	90 ... 210 150 ... 360	3VA5130-1MU31-0AA0 3VA5130-1MH31-0AA0	--
	40	120 ... 280 200 ... 480	3VA5140-1MU31-0AA0 3VA5140-1MH31-0AA0	--
	50	150 ... 350 250 ... 600	3VA5150-1MU31-0AA0 3VA5150-1MH31-0AA0	--
	70	210 ... 490 350 ... 840	3VA5170-1MU31-0AA0 3VA5170-1MH31-0AA0	--
	80	240 ... 560 400 ... 960	3VA5180-1MU31-0AA0 3VA5180-1MH31-0AA0	--
	90	270 ... 630 450 ... 1080	3VA5190-1MU31-0AA0 3VA5190-1MH31-0AA0	--
	100	300 ... 700 500 ... 1200	3VA5110-1MU31-0AA0 3VA5110-1MH31-0AA0	--
	110	330 ... 770 550 ... 1320	3VA5111-1MU31-0AA0 3VA5111-1MH31-0AA0	--
	125	375 ... 875 625 ... 1500	3VA5125-1MU31-0AA0 3VA5125-1MH31-0AA0	--
3VA52	150	450 ... 900 900 ... 1800	3VA5215-0MU31-0AA0 3VA5215-0MH31-0AA0	3VA5215-1MU31-0AA0 3VA5215-1MH31-0AA0
Fixed-mounted	200	600 ... 1200 1200 ... 2400	3VA5220-0MU31-0AA0 3VA5220-0MH31-0AA0	3VA5220-1MU31-0AA0 3VA5220-1MH31-0AA0

¹⁾ Breaking capacities in combination with contactors (SCCR ratings) may differ

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Molded case switches

Selection and ordering data

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

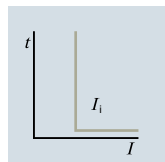


Type	Rated uninter- rupted current I_u	Operating current of the instantaneous short-circuit protection "I" I_i	DT	SCCR 65 kA ¹⁾ at 480 V See "Overview", p. 1/6 and 1/7	DT	SCCR 100 kA ¹⁾ at 480 V See "Overview", p. 1/6 and 1/7	
	A	A		Article No.	Basic price per PU	Article No.	Basic price per PU

3-pole, fixed-mounted, 3VA51/3VA52, up to 250 A
Without Electronic Trip Units

Molded case switches

With non-adjustable short-circuit release I_i , for self-protection



3VA51	100	1600	3VA5110-1BB31-0AA0	--
Fixed-mounted, attachment to DIN rail				
3VA52	100	2500	--	3VA5210-1BB31-0AA0
Fixed-mounted	150	2400	3VA5215-0BB31-0AA0	3VA5215-1BB31-0AA0
	250	2500	3VA5225-0BB31-0AA0	3VA5225-1BB31-0AA0

2-pole breaker in 3-pole enclosure, fixed-mounted, 3VA52, up to 250 A

Molded case switches

With non-adjustable short-circuit release I_i , for self-protection

3VA52	100	2500	--	3VA5210-1BB61-0AA0
	150	2400	3VA5215-0BB61-0AA0	3VA5215-1BB61-0AA0
	250	2500	3VA5225-0BB61-0AA0	3VA5225-1BB61-0AA0

¹⁾ Breaking capacity (the SCCR rating) is the maximum permissible short-circuit current at the installation location of the MCS in combination with an appropriate overload protection device

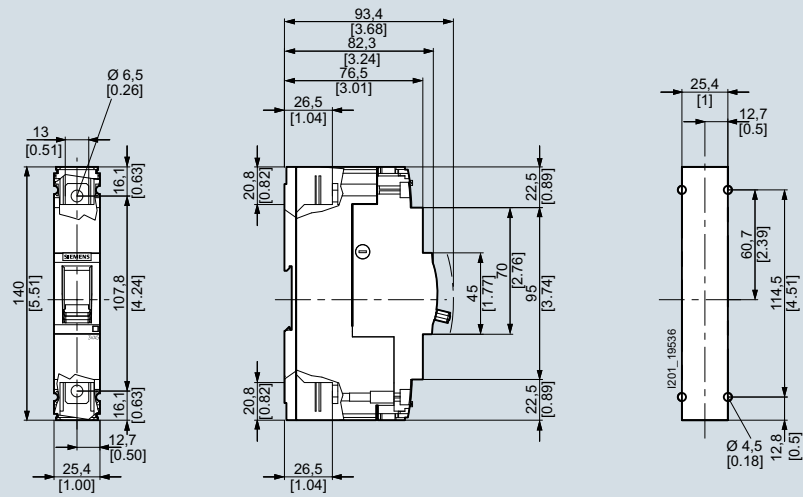
3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

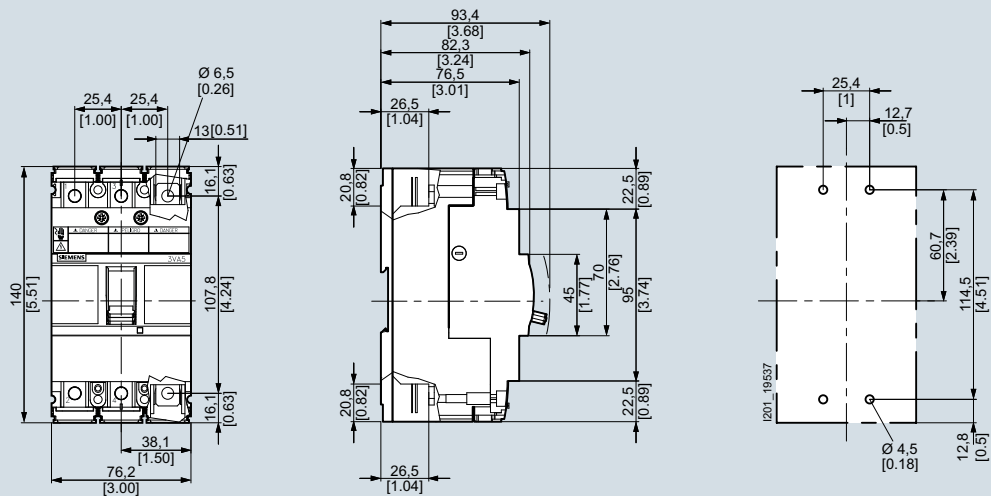
Dimensional drawings

Overview

2



3VA51, 1-pole

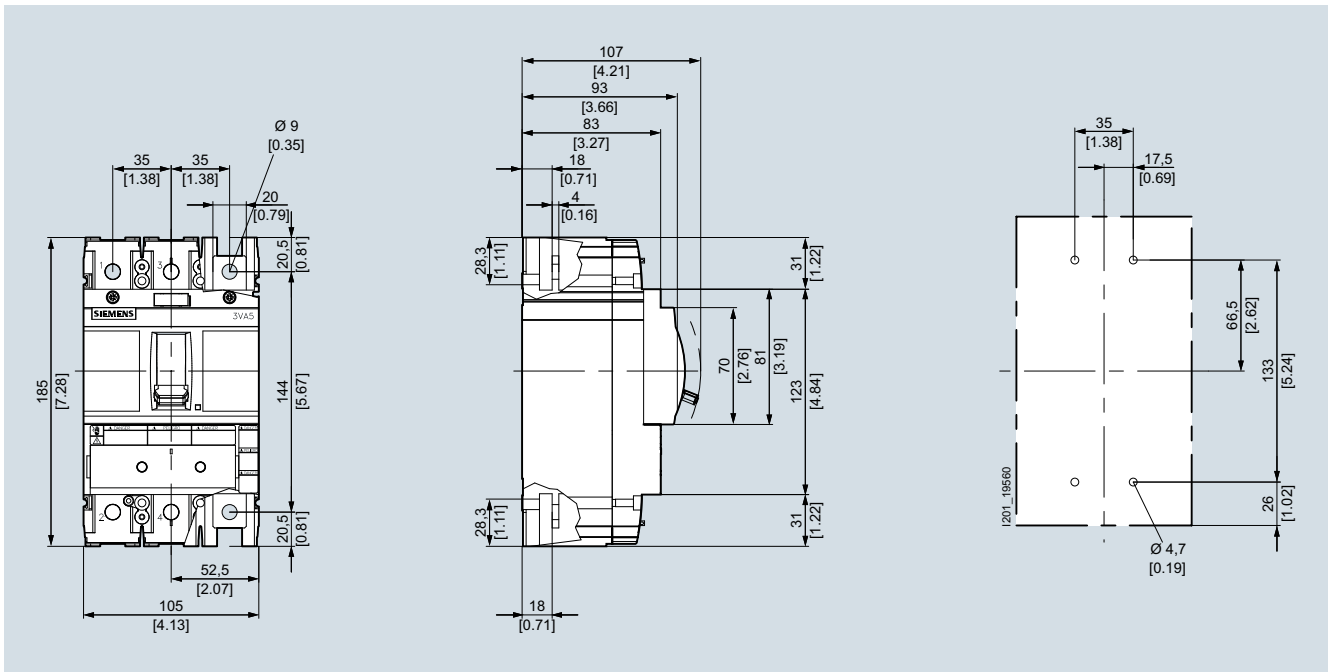


3VA51, 3-pole

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Dimensional drawings



3VA52, 3-pole

3VA UL Molded Case Circuit Breakers

3VA5 Molded Case Circuit Breakers up to 250 A, TM, 600 V, up to 100 kA

Notes

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA



3/2	Molded Case Circuit Breaker
3/18	Molded Case Circuit Breaker, 100 % rated breakers
3/34	Motor circuit protectors
3/34	Molded case switches
3/35	Dimensional drawings

NEW

Direct reference to the products in the Industry Mall from the selection and ordering data tables:

Article No.

[www.siemens.com/
product?Article No.](http://www.siemens.com/product?ArticleNo.)

3VA2025-5HL36-0AA0

Paper catalog:

To get more product information enter the Web address plus Article No.

PDF catalog:

Get more product information with just a mouse click.

For further technical product information:

Siemens Industry Online Support:
[www.siemens.com/lowvoltage/
product-support](http://www.siemens.com/lowvoltage/product-support)

→ Entry type:
Application example
Certificate
Characteristic
Download
FAQ
Manual
Product note
Software archive
Technical data

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

Selection and ordering data

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V
See "Overview", p. 1/6 and 1/7
Article No. Basic price per PU

3-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

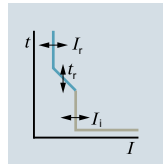
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	--
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	--
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	--
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	--

3VA6140-5HL31-0AA0
3VA6110-5HL31-0AA0
3VA6115-5HL31-0AA0

3VA6210-5HL31-0AA0
3VA6225-5HL31-0AA0

3VA6325-5HL31-0AA0
3VA6340-5HL31-0AA0

3VA6440-5HL31-0AA0
3VA6460-5HL31-0AA0



ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

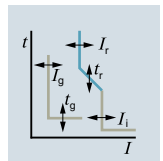
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	8 ... 40 20 ... 100 30 ... 150
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	20 ... 100 50 ... 250
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	50 ... 250 80 ... 400
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	80 ... 400 120 ... 600

3VA6140-5HM31-0AA0
3VA6110-5HM31-0AA0
3VA6115-5HM31-0AA0

3VA6210-5HM31-0AA0
3VA6225-5HM31-0AA0

3VA6325-5HM31-0AA0
3VA6340-5HM31-0AA0

3VA6440-5HM31-0AA0
3VA6460-5HM31-0AA0



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short- time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V
See "Overview", p. 1/6 and 1/7
Article No. Basic price per PU

3-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and fixed instantaneous short-circuit protection I_i

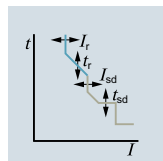
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	$I_r \times \dots$ 1.5 ... 10 1.5 ... 10 1.5 ... 10	480 1200 1500
3VA62	100 250	40 ... 100 100 ... 250	1.5 ... 10 1.5 ... 10	1200 2500
3VA63	250 400	100 ... 250 160 ... 400	1.5 ... 10 1.5 ... 10	3000 4000
3VA64	400 600	160 ... 400 240 ... 600	1.5 ... 10 1.5 ... 9	4800 5400

3VA6140-5HN31-0AA0
3VA6110-5HN31-0AA0
3VA6115-5HN31-0AA0

3VA6210-5HN31-0AA0
3VA6225-5HN31-0AA0

3VA6325-5HN31-0AA0
3VA6340-5HN31-0AA0

3VA6440-5HN31-0AA0
3VA6460-5HN31-0AA0



3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 Article No. Basic price per PU	DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 Article No. Basic price per PU	DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 Article No. Basic price per PU
A						

ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6HL31-0AA0	3VA6140-7HL31-0AA0	3VA6140-8HL31-0AA0
100	3VA6110-6HL31-0AA0	3VA6110-7HL31-0AA0	3VA6110-8HL31-0AA0
150	3VA6115-6HL31-0AA0	3VA6115-7HL31-0AA0	3VA6115-8HL31-0AA0
100	3VA6210-6HL31-0AA0	3VA6210-7HL31-0AA0	3VA6210-8HL31-0AA0
250	3VA6225-6HL31-0AA0	3VA6225-7HL31-0AA0	3VA6225-8HL31-0AA0
250	3VA6325-6HL31-0AA0	3VA6325-7HL31-0AA0	3VA6325-8HL31-0AA0
400	3VA6340-6HL31-0AA0	3VA6340-7HL31-0AA0	3VA6340-8HL31-0AA0
400	3VA6440-6HL31-0AA0	3VA6440-7HL31-0AA0	3VA6440-8HL31-0AA0
600	3VA6460-6HL31-0AA0	3VA6460-7HL31-0AA0	3VA6460-8HL31-0AA0

ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6HM31-0AA0	3VA6140-7HM31-0AA0	3VA6140-8HM31-0AA0
100	3VA6110-6HM31-0AA0	3VA6110-7HM31-0AA0	3VA6110-8HM31-0AA0
150	3VA6115-6HM31-0AA0	3VA6115-7HM31-0AA0	3VA6115-8HM31-0AA0
100	3VA6210-6HM31-0AA0	3VA6210-7HM31-0AA0	3VA6210-8HM31-0AA0
250	3VA6225-6HM31-0AA0	3VA6225-7HM31-0AA0	3VA6225-8HM31-0AA0
250	3VA6325-6HM31-0AA0	3VA6325-7HM31-0AA0	3VA6325-8HM31-0AA0
400	3VA6340-6HM31-0AA0	3VA6340-7HM31-0AA0	3VA6340-8HM31-0AA0
400	3VA6440-6HM31-0AA0	3VA6440-7HM31-0AA0	3VA6440-8HM31-0AA0
600	3VA6460-6HM31-0AA0	3VA6460-7HM31-0AA0	3VA6460-8HM31-0AA0

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 Article No. Basic price per PU	DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 Article No. Basic price per PU	DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 Article No. Basic price per PU
A						

ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and fixed instantaneous short-circuit protection I_i

40	3VA6140-6HN31-0AA0	3VA6140-7HN31-0AA0	3VA6140-8HN31-0AA0
100	3VA6110-6HN31-0AA0	3VA6110-7HN31-0AA0	3VA6110-8HN31-0AA0
150	3VA6115-6HN31-0AA0	3VA6115-7HN31-0AA0	3VA6115-8HN31-0AA0
100	3VA6210-6HN31-0AA0	3VA6210-7HN31-0AA0	3VA6210-8HN31-0AA0
250	3VA6225-6HN31-0AA0	3VA6225-7HN31-0AA0	3VA6225-8HN31-0AA0
250	3VA6325-6HN31-0AA0	3VA6325-7HN31-0AA0	3VA6325-8HN31-0AA0
400	3VA6340-6HN31-0AA0	3VA6340-7HN31-0AA0	3VA6340-8HN31-0AA0
400	3VA6440-6HN31-0AA0	3VA6440-7HN31-0AA0	3VA6440-8HN31-0AA0
600	3VA6460-6HN31-0AA0	3VA6460-7HN31-0AA0	3VA6460-8HN31-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse- time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7
	A	A	A	A		Article No. Basic price per PU

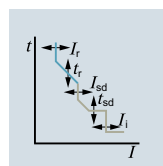
3-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

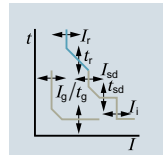
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JP31-0AA0 3VA6110-5JP31-0AA0 3VA6115-5JP31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JP31-0AA0 3VA6225-5JP31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5JP31-0AA0 3VA6340-5JP31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5JP31-0AA0 3VA6460-5JP31-0AA0



ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

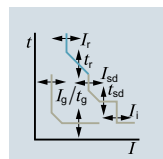
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JT31-0AA0 3VA6110-5JT31-0AA0 3VA6115-5JT31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JT31-0AA0 3VA6225-5JT31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5JT31-0AA0 3VA6340-5JT31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5JT31-0AA0 3VA6460-5JT31-0AA0



ETU560 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JQ31-0AA0 3VA6110-5JQ31-0AA0 3VA6115-5JQ31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JQ31-0AA0 3VA6225-5JQ31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5JQ31-0AA0 3VA6340-5JQ31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5JQ31-0AA0 3VA6460-5JQ31-0AA0



3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6JP31-0AA0	3VA6140-7JP31-0AA0	3VA6140-8JP31-0AA0
100	3VA6110-6JP31-0AA0	3VA6110-7JP31-0AA0	3VA6110-8JP31-0AA0
150	3VA6115-6JP31-0AA0	3VA6115-7JP31-0AA0	3VA6115-8JP31-0AA0
100	3VA6210-6JP31-0AA0	3VA6210-7JP31-0AA0	3VA6210-8JP31-0AA0
250	3VA6225-6JP31-0AA0	3VA6225-7JP31-0AA0	3VA6225-8JP31-0AA0
250	3VA6325-6JP31-0AA0	3VA6325-7JP31-0AA0	3VA6325-8JP31-0AA0
400	3VA6340-6JP31-0AA0	3VA6340-7JP31-0AA0	3VA6340-8JP31-0AA0
400	3VA6440-6JP31-0AA0	3VA6440-7JP31-0AA0	3VA6440-8JP31-0AA0
600	3VA6460-6JP31-0AA0	3VA6460-7JP31-0AA0	3VA6460-8JP31-0AA0

ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

40	3VA6140-6JT31-0AA0	3VA6140-7JT31-0AA0	3VA6140-8JT31-0AA0
100	3VA6110-6JT31-0AA0	3VA6110-7JT31-0AA0	3VA6110-8JT31-0AA0
150	3VA6115-6JT31-0AA0	3VA6115-7JT31-0AA0	3VA6115-8JT31-0AA0
100	3VA6210-6JT31-0AA0	3VA6210-7JT31-0AA0	3VA6210-8JT31-0AA0
250	3VA6225-6JT31-0AA0	3VA6225-7JT31-0AA0	3VA6225-8JT31-0AA0
250	3VA6325-6JT31-0AA0	3VA6325-7JT31-0AA0	3VA6325-8JT31-0AA0
400	3VA6340-6JT31-0AA0	3VA6340-7JT31-0AA0	3VA6340-8JT31-0AA0
400	3VA6440-6JT31-0AA0	3VA6440-7JT31-0AA0	3VA6440-8JT31-0AA0
600	3VA6460-6JT31-0AA0	3VA6460-7JT31-0AA0	3VA6460-8JT31-0AA0

ETU560 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6JQ31-0AA0	3VA6140-7JQ31-0AA0	3VA6140-8JQ31-0AA0
100	3VA6110-6JQ31-0AA0	3VA6110-7JQ31-0AA0	3VA6110-8JQ31-0AA0
150	3VA6115-6JQ31-0AA0	3VA6115-7JQ31-0AA0	3VA6115-8JQ31-0AA0
100	3VA6210-6JQ31-0AA0	3VA6210-7JQ31-0AA0	3VA6210-8JQ31-0AA0
250	3VA6225-6JQ31-0AA0	3VA6225-7JQ31-0AA0	3VA6225-8JQ31-0AA0
250	3VA6325-6JQ31-0AA0	3VA6325-7JQ31-0AA0	3VA6325-8JQ31-0AA0
400	3VA6340-6JQ31-0AA0	3VA6340-7JQ31-0AA0	3VA6340-8JQ31-0AA0
400	3VA6440-6JQ31-0AA0	3VA6440-7JQ31-0AA0	3VA6440-8JQ31-0AA0
600	3VA6460-6JQ31-0AA0	3VA6460-7JQ31-0AA0	3VA6460-8JQ31-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7
	A	A	A	A		Article No. Basic price per PU

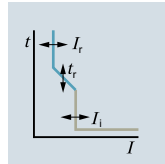
3-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

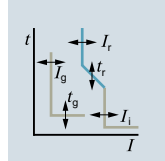
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	--	3VA6140-5KL31-0AA0 3VA6110-5KL31-0AA0 3VA6115-5KL31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	--	3VA6210-5KL31-0AA0 3VA6225-5KL31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	--	3VA6325-5KL31-0AA0 3VA6340-5KL31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	--	3VA6440-5KL31-0AA0 3VA6460-5KL31-0AA0



ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	15 ... 40 20 ... 100 30 ... 150	3VA6140-5KM31-0AA0 3VA6110-5KM31-0AA0 3VA6115-5KM31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	20 ... 100 50 ... 250	3VA6210-5KM31-0AA0 3VA6225-5KM31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	50 ... 250 80 ... 400	3VA6325-5KM31-0AA0 3VA6340-5KM31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	80 ... 400 120 ... 600	3VA6440-5KM31-0AA0 3VA6460-5KM31-0AA0



3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6KL31-0AA0	3VA6140-7KL31-0AA0	3VA6140-8KL31-0AA0
100	3VA6110-6KL31-0AA0	3VA6110-7KL31-0AA0	3VA6110-8KL31-0AA0
150	3VA6115-6KL31-0AA0	3VA6115-7KL31-0AA0	3VA6115-8KL31-0AA0
100	3VA6210-6KL31-0AA0	3VA6210-7KL31-0AA0	3VA6210-8KL31-0AA0
250	3VA6225-6KL31-0AA0	3VA6225-7KL31-0AA0	3VA6225-8KL31-0AA0
250	3VA6325-6KL31-0AA0	3VA6325-7KL31-0AA0	3VA6325-8KL31-0AA0
400	3VA6340-6KL31-0AA0	3VA6340-7KL31-0AA0	3VA6340-8KL31-0AA0
400	3VA6440-6KL31-0AA0	3VA6440-7KL31-0AA0	3VA6440-8KL31-0AA0
600	3VA6460-6KL31-0AA0	3VA6460-7KL31-0AA0	3VA6460-8KL31-0AA0

ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6KM31-0AA0	3VA6140-7KM31-0AA0	3VA6140-8KM31-0AA0
100	3VA6110-6KM31-0AA0	3VA6110-7KM31-0AA0	3VA6110-8KM31-0AA0
150	3VA6115-6KM31-0AA0	3VA6115-7KM31-0AA0	3VA6115-8KM31-0AA0
100	3VA6210-6KM31-0AA0	3VA6210-7KM31-0AA0	3VA6210-8KM31-0AA0
250	3VA6225-6KM31-0AA0	3VA6225-7KM31-0AA0	3VA6225-8KM31-0AA0
250	3VA6325-6KM31-0AA0	3VA6325-7KM31-0AA0	3VA6325-8KM31-0AA0
400	3VA6340-6KM31-0AA0	3VA6340-7KM31-0AA0	3VA6340-8KM31-0AA0
400	3VA6440-6KM31-0AA0	3VA6440-7KM31-0AA0	3VA6440-8KM31-0AA0
600	3VA6460-6KM31-0AA0	3VA6460-7KM31-0AA0	3VA6460-8KM31-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



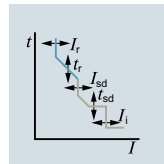
Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	Article No.	Basic price per PU
	A	A	A	A				

3-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

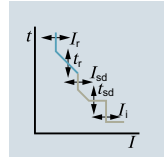


3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5KP31-0AA0 3VA6110-5KP31-0AA0 3VA6115-5KP31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5KP31-0AA0 3VA6225-5KP31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5KP31-0AA0 3VA6340-5KP31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5KP31-0AA0 3VA6460-5KP31-0AA0



ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

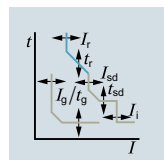


3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5KT31-0AA0 3VA6110-5KT31-0AA0 3VA6115-5KT31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5KT31-0AA0 3VA6225-5KT31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5KT31-0AA0 3VA6340-5KT31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5KT31-0AA0 3VA6460-5KT31-0AA0



ETU860 LSIG with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g



3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5KQ31-0AA0 3VA6110-5KQ31-0AA0 3VA6115-5KQ31-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5KQ31-0AA0 3VA6225-5KQ31-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5KQ31-0AA0 3VA6340-5KQ31-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5KQ31-0AA0 3VA6460-5KQ31-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6KP31-0AA0	3VA6140-7KP31-0AA0	3VA6140-8KP31-0AA0
100	3VA6110-6KP31-0AA0	3VA6110-7KP31-0AA0	3VA6110-8KP31-0AA0
150	3VA6115-6KP31-0AA0	3VA6115-7KP31-0AA0	3VA6115-8KP31-0AA0
100	3VA6210-6KP31-0AA0	3VA6210-7KP31-0AA0	3VA6210-8KP31-0AA0
250	3VA6225-6KP31-0AA0	3VA6225-7KP31-0AA0	3VA6225-8KP31-0AA0
250	3VA6325-6KP31-0AA0	3VA6325-7KP31-0AA0	3VA6325-8KP31-0AA0
400	3VA6340-6KP31-0AA0	3VA6340-7KP31-0AA0	3VA6340-8KP31-0AA0
400	3VA6440-6KP31-0AA0	3VA6440-7KP31-0AA0	3VA6440-8KP31-0AA0
600	3VA6460-6KP31-0AA0	3VA6460-7KP31-0AA0	3VA6460-8KP31-0AA0

ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

40	3VA6140-6KT31-0AA0	3VA6140-7KT31-0AA0	3VA6140-8KT31-0AA0
100	3VA6110-6KT31-0AA0	3VA6110-7KT31-0AA0	3VA6110-8KT31-0AA0
150	3VA6115-6KT31-0AA0	3VA6115-7KT31-0AA0	3VA6115-8KT31-0AA0
100	3VA6210-6KT31-0AA0	3VA6210-7KT31-0AA0	3VA6210-8KT31-0AA0
250	3VA6225-6KT31-0AA0	3VA6225-7KT31-0AA0	3VA6225-8KT31-0AA0
250	3VA6325-6KT31-0AA0	3VA6325-7KT31-0AA0	3VA6325-8KT31-0AA0
400	3VA6340-6KT31-0AA0	3VA6340-7KT31-0AA0	3VA6340-8KT31-0AA0
400	3VA6440-6KT31-0AA0	3VA6440-7KT31-0AA0	3VA6440-8KT31-0AA0
600	3VA6460-6KT31-0AA0	3VA6460-7KT31-0AA0	3VA6460-8KT31-0AA0

ETU860 LSIG with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6KQ31-0AA0	3VA6140-7KQ31-0AA0	3VA6140-8KQ31-0AA0
100	3VA6110-6KQ31-0AA0	3VA6110-7KQ31-0AA0	3VA6110-8KQ31-0AA0
150	3VA6115-6KQ31-0AA0	3VA6115-7KQ31-0AA0	3VA6115-8KQ31-0AA0
100	3VA6210-6KQ31-0AA0	3VA6210-7KQ31-0AA0	3VA6210-8KQ31-0AA0
250	3VA6225-6KQ31-0AA0	3VA6225-7KQ31-0AA0	3VA6225-8KQ31-0AA0
250	3VA6325-6KQ31-0AA0	3VA6325-7KQ31-0AA0	3VA6325-8KQ31-0AA0
400	3VA6340-6KQ31-0AA0	3VA6340-7KQ31-0AA0	3VA6340-8KQ31-0AA0
400	3VA6440-6KQ31-0AA0	3VA6440-7KQ31-0AA0	3VA6440-8KQ31-0AA0
600	3VA6460-6KQ31-0AA0	3VA6460-7KQ31-0AA0	3VA6460-8KQ31-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	
Article No.	Basic price per PU

4-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit

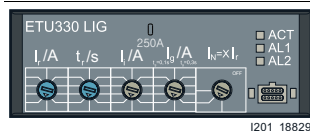
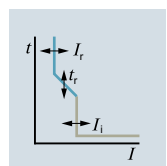


ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit 0 %, 50 % or 100 %

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	--
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	--
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	--
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	--

3VA6140-5HL41-0AA0	
3VA6110-5HL41-0AA0	
3VA6115-5HL41-0AA0	
3VA6210-5HL41-0AA0	
3VA6225-5HL41-0AA0	
3VA6325-5HL41-0AA0	
3VA6340-5HL41-0AA0	
3VA6440-5HL41-0AA0	
3VA6460-5HL41-0AA0	

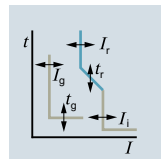


ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit 0 %, 50 % or 100 % and adjustable ground-fault protection I_g

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	8 ... 40 20 ... 100 30 ... 150
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	20 ... 100 50 ... 250
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	50 ... 250 80 ... 400
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	80 ... 400 120 ... 600

3VA6140-5HM41-0AA0	
3VA6110-5HM41-0AA0	
3VA6115-5HM41-0AA0	
3VA6210-5HM41-0AA0	
3VA6225-5HM41-0AA0	
3VA6325-5HM41-0AA0	
3VA6340-5HM41-0AA0	
3VA6440-5HM41-0AA0	
3VA6460-5HM41-0AA0	



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	
Article No.	Basic price per PU

4-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit

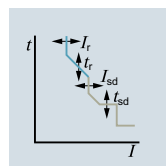


ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and fixed instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit 0 %, 50 % or 100 %

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	$I_r \times \dots$ 1.5 ... 10 1.5 ... 10 1.5 ... 10	480 1200 1500
3VA62	100 250	40 ... 100 100 ... 250	1.5 ... 10 1.5 ... 10	1200 2500
3VA63	250 400	100 ... 250 160 ... 400	1.5 ... 10 1.5 ... 10	3000 4000
3VA64	400 600	160 ... 400 240 ... 600	1.5 ... 10 1.5 ... 9	4800 5400

3VA6140-5HN41-0AA0	
3VA6110-5HN41-0AA0	
3VA6115-5HN41-0AA0	
3VA6210-5HN41-0AA0	
3VA6225-5HN41-0AA0	
3VA6325-5HN41-0AA0	
3VA6340-5HN41-0AA0	
3VA6440-5HN41-0AA0	
3VA6460-5HN41-0AA0	



3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i ,
with neutral protection against overload and short circuit 0 %, 50 % or 100 %

40	3VA6140-6HL41-0AA0	3VA6140-7HL41-0AA0	3VA6140-8HL41-0AA0
100	3VA6110-6HL41-0AA0	3VA6110-7HL41-0AA0	3VA6110-8HL41-0AA0
150	3VA6115-6HL41-0AA0	3VA6115-7HL41-0AA0	3VA6115-8HL41-0AA0
100	3VA6210-6HL41-0AA0	3VA6210-7HL41-0AA0	3VA6210-8HL41-0AA0
250	3VA6225-6HL41-0AA0	3VA6225-7HL41-0AA0	3VA6225-8HL41-0AA0
250	3VA6325-6HL41-0AA0	3VA6325-7HL41-0AA0	3VA6325-8HL41-0AA0
400	3VA6340-6HL41-0AA0	3VA6340-7HL41-0AA0	3VA6340-8HL41-0AA0
400	3VA6440-6HL41-0AA0	3VA6440-7HL41-0AA0	3VA6440-8HL41-0AA0
600	3VA6460-6HL41-0AA0	3VA6460-7HL41-0AA0	3VA6460-8HL41-0AA0

ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i ,
with neutral protection against overload and short circuit 0 %, 50 % or 100 %
and adjustable ground-fault protection I_g

40	3VA6140-6HM41-0AA0	3VA6140-7HM41-0AA0	3VA6140-8HM41-0AA0
100	3VA6110-6HM41-0AA0	3VA6110-7HM41-0AA0	3VA6110-8HM41-0AA0
150	3VA6115-6HM41-0AA0	3VA6115-7HM41-0AA0	3VA6115-8HM41-0AA0
100	3VA6210-6HM41-0AA0	3VA6210-7HM41-0AA0	3VA6210-8HM41-0AA0
250	3VA6225-6HM41-0AA0	3VA6225-7HM41-0AA0	3VA6225-8HM41-0AA0
250	3VA6325-6HM41-0AA0	3VA6325-7HM41-0AA0	3VA6325-8HM41-0AA0
400	3VA6340-6HM41-0AA0	3VA6340-7HM41-0AA0	3VA6340-8HM41-0AA0
400	3VA6440-6HM41-0AA0	3VA6440-7HM41-0AA0	3VA6440-8HM41-0AA0
600	3VA6460-6HM41-0AA0	3VA6460-7HM41-0AA0	3VA6460-8HM41-0AA0

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd}
and fixed instantaneous short-circuit protection I_i ,
with neutral protection against overload and short circuit 0 %, 50 % or 100 %

40	3VA6140-6HN41-0AA0	3VA6140-7HN41-0AA0	3VA6140-8HN41-0AA0
100	3VA6110-6HN41-0AA0	3VA6110-7HN41-0AA0	3VA6110-8HN41-0AA0
150	3VA6115-6HN41-0AA0	3VA6115-7HN41-0AA0	3VA6115-8HN41-0AA0
100	3VA6210-6HN41-0AA0	3VA6210-7HN41-0AA0	3VA6210-8HN41-0AA0
250	3VA6225-6HN41-0AA0	3VA6225-7HN41-0AA0	3VA6225-8HN41-0AA0
250	3VA6325-6HN41-0AA0	3VA6325-7HN41-0AA0	3VA6325-8HN41-0AA0
400	3VA6340-6HN41-0AA0	3VA6340-7HN41-0AA0	3VA6340-8HN41-0AA0
400	3VA6440-6HN41-0AA0	3VA6440-7HN41-0AA0	3VA6440-8HN41-0AA0
600	3VA6460-6HN41-0AA0	3VA6460-7HN41-0AA0	3VA6460-8HN41-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

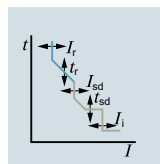


Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	Article No.	Basic price per PU
	A	A	A	A				

4-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



I201_18480



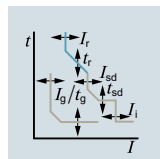
ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % up to 100 %/160 %

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JP41-0AA0 3VA6110-5JP41-0AA0 3VA6115-5JP41-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JP41-0AA0 3VA6225-5JP41-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5JP41-0AA0 3VA6340-5JP41-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5JP41-0AA0 3VA6460-5JP41-0AA0



I201_19550



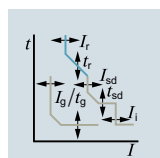
ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JT41-0AA0 3VA6110-5JT41-0AA0 3VA6115-5JT41-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JT41-0AA0 3VA6225-5JT41-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5JT41-0AA0 3VA6340-5JT41-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5JT41-0AA0 3VA6460-5JT41-0AA0



I201_18481



ETU560 LSIG with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JQ41-0AA0 3VA6110-5JQ41-0AA0 3VA6115-5JQ41-0AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JQ41-0AA0 3VA6225-5JQ41-0AA0
3VA63	250 400	100 ... 250 160 ... 400	150 ... 2500 240 ... 4000	375 ... 3000 600 ... 4000	3VA6325-5JQ41-0AA0 3VA6340-5JQ41-0AA0
3VA64	400 600	160 ... 400 240 ... 600	240 ... 4000 360 ... 5400	600 ... 4800 900 ... 5400	3VA6440-5JQ41-0AA0 3VA6460-5JQ41-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %

40	3VA6140-6JP41-0AA0	3VA6140-7JP41-0AA0	3VA6140-8JP41-0AA0
100	3VA6110-6JP41-0AA0	3VA6110-7JP41-0AA0	3VA6110-8JP41-0AA0
150	3VA6115-6JP41-0AA0	3VA6115-7JP41-0AA0	3VA6115-8JP41-0AA0
100	3VA6210-6JP41-0AA0	3VA6210-7JP41-0AA0	3VA6210-8JP41-0AA0
250	3VA6225-6JP41-0AA0	3VA6225-7JP41-0AA0	3VA6225-8JP41-0AA0
250	3VA6325-6JP41-0AA0	3VA6325-7JP41-0AA0	3VA6325-8JP41-0AA0
400	3VA6340-6JP41-0AA0	3VA6340-7JP41-0AA0	3VA6340-8JP41-0AA0
400	3VA6440-6JP41-0AA0	3VA6440-7JP41-0AA0	3VA6440-8JP41-0AA0
600	3VA6460-6JP41-0AA0	3VA6460-7JP41-0AA0	3VA6460-8JP41-0AA0

ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

40	3VA6140-6JT41-0AA0	3VA6140-7JT41-0AA0	3VA6140-8JT41-0AA0
100	3VA6110-6JT41-0AA0	3VA6110-7JT41-0AA0	3VA6110-8JT41-0AA0
150	3VA6115-6JT41-0AA0	3VA6115-7JT41-0AA0	3VA6115-8JT41-0AA0
100	3VA6210-6JT41-0AA0	3VA6210-7JT41-0AA0	3VA6210-8JT41-0AA0
250	3VA6225-6JT41-0AA0	3VA6225-7JT41-0AA0	3VA6225-8JT41-0AA0
250	3VA6325-6JT41-0AA0	3VA6325-7JT41-0AA0	3VA6325-8JT41-0AA0
400	3VA6340-6JT41-0AA0	3VA6340-7JT41-0AA0	3VA6340-8JT41-0AA0
400	3VA6440-6JT41-0AA0	3VA6440-7JT41-0AA0	3VA6440-8JT41-0AA0
600	3VA6460-6JT41-0AA0	3VA6460-7JT41-0AA0	3VA6460-8JT41-0AA0

ETU560 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g

40	3VA6140-6JQ41-0AA0	3VA6140-7JQ41-0AA0	3VA6140-8JQ41-0AA0
100	3VA6110-6JQ41-0AA0	3VA6110-7JQ41-0AA0	3VA6110-8JQ41-0AA0
150	3VA6115-6JQ41-0AA0	3VA6115-7JQ41-0AA0	3VA6115-8JQ41-0AA0
100	3VA6210-6JQ41-0AA0	3VA6210-7JQ41-0AA0	3VA6210-8JQ41-0AA0
250	3VA6225-6JQ41-0AA0	3VA6225-7JQ41-0AA0	3VA6225-8JQ41-0AA0
250	3VA6325-6JQ41-0AA0	3VA6325-7JQ41-0AA0	3VA6325-8JQ41-0AA0
400	3VA6340-6JQ41-0AA0	3VA6340-7JQ41-0AA0	3VA6340-8JQ41-0AA0
400	3VA6440-6JQ41-0AA0	3VA6440-7JQ41-0AA0	3VA6440-8JQ41-0AA0
600	3VA6460-6JQ41-0AA0	3VA6460-7JQ41-0AA0	3VA6460-8JQ41-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7
	A	A	A	A		Article No. Basic price per PU

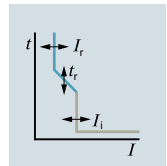
4-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

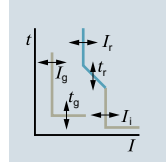
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	-- -- --	3VA6140-5KL41-0AA0 3VA6110-5KL41-0AA0 3VA6115-5KL41-0AA0
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	-- --	3VA6210-5KL41-0AA0 3VA6225-5KL41-0AA0
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	-- --	3VA6325-5KL41-0AA0 3VA6340-5KL41-0AA0
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	-- --	3VA6440-5KL41-0AA0 3VA6460-5KL41-0AA0



ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	60 ... 480 150 ... 1200 225 ... 1500	15 ... 40 20 ... 100 30 ... 150	3VA6140-5KM41-0AA0 3VA6110-5KM41-0AA0 3VA6115-5KM41-0AA0
3VA62	100 250	40 ... 100 100 ... 250	150 ... 1200 375 ... 2500	20 ... 100 50 ... 250	3VA6210-5KM41-0AA0 3VA6225-5KM41-0AA0
3VA63	250 400	100 ... 250 160 ... 400	375 ... 3000 600 ... 4000	50 ... 250 80 ... 400	3VA6325-5KM41-0AA0 3VA6340-5KM41-0AA0
3VA64	400 600	160 ... 400 240 ... 600	600 ... 4800 900 ... 5400	80 ... 400 120 ... 600	3VA6440-5KM41-0AA0 3VA6460-5KM41-0AA0



3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6KL41-0AA0	3VA6140-7KL41-0AA0	3VA6140-8KL41-0AA0
100	3VA6110-6KL41-0AA0	3VA6110-7KL41-0AA0	3VA6110-8KL41-0AA0
150	3VA6115-6KL41-0AA0	3VA6115-7KL41-0AA0	3VA6115-8KL41-0AA0
100	3VA6210-6KL41-0AA0	3VA6210-7KL41-0AA0	3VA6210-8KL41-0AA0
250	3VA6225-6KL41-0AA0	3VA6225-7KL41-0AA0	3VA6225-8KL41-0AA0
250	3VA6325-6KL41-0AA0	3VA6325-7KL41-0AA0	3VA6325-8KL41-0AA0
400	3VA6340-6KL41-0AA0	3VA6340-7KL41-0AA0	3VA6340-8KL41-0AA0
400	3VA6440-6KL41-0AA0	3VA6440-7KL41-0AA0	3VA6440-8KL41-0AA0
600	3VA6460-6KL41-0AA0	3VA6460-7KL41-0AA0	3VA6460-8KL41-0AA0

ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6KM41-0AA0	3VA6140-7KM41-0AA0	3VA6140-8KM41-0AA0
100	3VA6110-6KM41-0AA0	3VA6110-7KM41-0AA0	3VA6110-8KM41-0AA0
150	3VA6115-6KM41-0AA0	3VA6115-7KM41-0AA0	3VA6115-8KM41-0AA0
100	3VA6210-6KM41-0AA0	3VA6210-7KM41-0AA0	3VA6210-8KM41-0AA0
250	3VA6225-6KM41-0AA0	3VA6225-7KM41-0AA0	3VA6225-8KM41-0AA0
250	3VA6325-6KM41-0AA0	3VA6325-7KM41-0AA0	3VA6325-8KM41-0AA0
400	3VA6340-6KM41-0AA0	3VA6340-7KM41-0AA0	3VA6340-8KM41-0AA0
400	3VA6440-6KM41-0AA0	3VA6440-7KM41-0AA0	3VA6440-8KM41-0AA0
600	3VA6460-6KM41-0AA0	3VA6460-7KM41-0AA0	3VA6460-8KM41-0AA0

3

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	Article No.	Basic price per PU
	A	A	A	A				

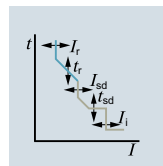
4-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



I201_18482

ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %



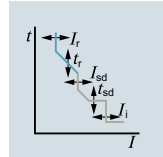
3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5KP41-0AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5KP41-0AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5KP41-0AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5KP41-0AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5KP41-0AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5KP41-0AA0
	400	160 ... 400	240 ... 4000	600 ... 4000	3VA6340-5KP41-0AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5KP41-0AA0
	600	240 ... 600	360 ... 5400	900 ... 5400	3VA6460-5KP41-0AA0



I201_19519

ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %



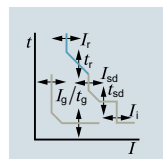
3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5KT41-0AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5KT41-0AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5KT41-0AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5KT41-0AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5KT41-0AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5KT41-0AA0
	400	160 ... 400	240 ... 4000	600 ... 4000	3VA6340-5KT41-0AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5KT41-0AA0
	600	240 ... 600	360 ... 5400	900 ... 5400	3VA6460-5KT41-0AA0



I201_18483

ETU860 LSiG with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g



3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5KQ41-0AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5KQ41-0AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5KQ41-0AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5KQ41-0AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5KQ41-0AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5KQ41-0AA0
	400	160 ... 400	240 ... 4000	600 ... 4000	3VA6340-5KQ41-0AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5KQ41-0AA0
	600	240 ... 600	360 ... 5400	900 ... 5400	3VA6460-5KQ41-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7	DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7	DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7
		Article No. Basic price per PU		Article No. Basic price per PU		Article No. Basic price per PU
A						

ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %

40	3VA6140-6KP41-0AA0	3VA6140-7KP41-0AA0	3VA6140-8KP41-0AA0
100	3VA6110-6KP41-0AA0	3VA6110-7KP41-0AA0	3VA6110-8KP41-0AA0
150	3VA6115-6KP41-0AA0	3VA6115-7KP41-0AA0	3VA6115-8KP41-0AA0
100	3VA6210-6KP41-0AA0	3VA6210-7KP41-0AA0	3VA6210-8KP41-0AA0
250	3VA6225-6KP41-0AA0	3VA6225-7KP41-0AA0	3VA6225-8KP41-0AA0
250	3VA6325-6KP41-0AA0	3VA6325-7KP41-0AA0	3VA6325-8KP41-0AA0
400	3VA6340-6KP41-0AA0	3VA6340-7KP41-0AA0	3VA6340-8KP41-0AA0
400	3VA6440-6KP41-0AA0	3VA6440-7KP41-0AA0	3VA6440-8KP41-0AA0
600	3VA6460-6KP41-0AA0	3VA6460-7KP41-0AA0	3VA6460-8KP41-0AA0

ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %

40	3VA6140-6KT41-0AA0	3VA6140-7KT41-0AA0	3VA6140-8KT41-0AA0
100	3VA6110-6KT41-0AA0	3VA6110-7KT41-0AA0	3VA6110-8KT41-0AA0
150	3VA6115-6KT41-0AA0	3VA6115-7KT41-0AA0	3VA6115-8KT41-0AA0
100	3VA6210-6KT41-0AA0	3VA6210-7KT41-0AA0	3VA6210-8KT41-0AA0
250	3VA6225-6KT41-0AA0	3VA6225-7KT41-0AA0	3VA6225-8KT41-0AA0
250	3VA6325-6KT41-0AA0	3VA6325-7KT41-0AA0	3VA6325-8KT41-0AA0
400	3VA6340-6KT41-0AA0	3VA6340-7KT41-0AA0	3VA6340-8KT41-0AA0
400	3VA6440-6KT41-0AA0	3VA6440-7KT41-0AA0	3VA6440-8KT41-0AA0
600	3VA6460-6KT41-0AA0	3VA6460-7KT41-0AA0	3VA6460-8KT41-0AA0

ETU860 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g

40	3VA6140-6KQ41-0AA0	3VA6140-7KQ41-0AA0	3VA6140-8KQ41-0AA0
100	3VA6110-6KQ41-0AA0	3VA6110-7KQ41-0AA0	3VA6110-8KQ41-0AA0
150	3VA6115-6KQ41-0AA0	3VA6115-7KQ41-0AA0	3VA6115-8KQ41-0AA0
100	3VA6210-6KQ41-0AA0	3VA6210-7KQ41-0AA0	3VA6210-8KQ41-0AA0
250	3VA6225-6KQ41-0AA0	3VA6225-7KQ41-0AA0	3VA6225-8KQ41-0AA0
250	3VA6325-6KQ41-0AA0	3VA6325-7KQ41-0AA0	3VA6325-8KQ41-0AA0
400	3VA6340-6KQ41-0AA0	3VA6340-7KQ41-0AA0	3VA6340-8KQ41-0AA0
400	3VA6440-6KQ41-0AA0	3VA6440-7KQ41-0AA0	3VA6440-8KQ41-0AA0
600	3VA6460-6KQ41-0AA0	3VA6460-7KQ41-0AA0	3VA6460-8KQ41-0AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT
	A	A	A	A	

**Medium breaking capacity M,
up to 35 kA at 480 V**
See "Overview", p. 1/6 and 1/7

(M)

Article No.

Basic
price
per PU

3-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

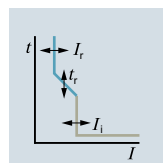
3VA61	40	16 ... 40	60 ... 480	--
	100	40 ... 100	150 ... 1200	--
	150	60 ... 150	225 ... 1500	--
3VA62	100	40 ... 100	150 ... 1200	--
	250	100 ... 250	375 ... 2500	--
3VA63	250	100 ... 250	375 ... 3000	--
3VA64	400	160 ... 400	600 ... 4800	--

3VA6140-5HL31-2AA0
3VA6110-5HL31-2AA0
3VA6115-5HL31-2AA0

3VA6210-5HL31-2AA0
3VA6225-5HL31-2AA0

3VA6325-5HL31-2AA0

3VA6440-5HL31-2AA0



ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i
and adjustable ground-fault protection I_g

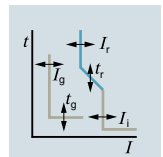
3VA61	40	16 ... 40	60 ... 480	8 ... 40
	100	40 ... 100	150 ... 1200	20 ... 100
	150	60 ... 150	225 ... 1500	30 ... 150
3VA62	100	40 ... 100	150 ... 1200	20 ... 100
	250	100 ... 250	375 ... 2500	50 ... 250
3VA63	250	100 ... 250	375 ... 3000	50 ... 250
3VA64	400	160 ... 400	600 ... 4800	80 ... 400

3VA6140-5HM31-2AA0
3VA6110-5HM31-2AA0
3VA6115-5HM31-2AA0

3VA6210-5HM31-2AA0
3VA6225-5HM31-2AA0

3VA6325-5HM31-2AA0

3VA6440-5HM31-2AA0



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short- time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT
	A	A	A	A	

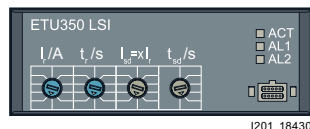
**Medium breaking capacity M,
up to 35 kA at 480 V**
See "Overview", p. 1/6 and 1/7

(M)

Article No.

Basic
price
per PU

3-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and
fixed instantaneous short-circuit protection I_i

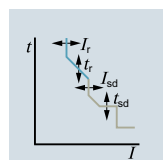
3VA61	40	16 ... 40	$I_r \times \dots$	480
	100	40 ... 100	1.5 ... 10	1200
	150	60 ... 150	1.5 ... 10	1500
3VA62	100	40 ... 100	1.5 ... 10	1200
	250	100 ... 250	1.5 ... 10	2500
3VA63	250	100 ... 250	1.5 ... 10	3000
3VA64	400	160 ... 400	1.5 ... 10	4800

3VA6140-5HN31-2AA0
3VA6110-5HN31-2AA0
3VA6115-5HN31-2AA0

3VA6210-5HN31-2AA0
3VA6225-5HN31-2AA0

3VA6325-5HN31-2AA0

3VA6440-5HN31-2AA0



¹⁾ 3VA6 molded case circuit breakers are supplied without connections.
Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 (H)	Article No.	Basic price per PU	DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 (C)	Article No.	Basic price per PU	DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 (L)	Article No.	Basic price per PU
A												

ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6HL31-2AA0	3VA6140-7HL31-2AA0	3VA6140-8HL31-2AA0
100	3VA6110-6HL31-2AA0	3VA6110-7HL31-2AA0	3VA6110-8HL31-2AA0
150	3VA6115-6HL31-2AA0	3VA6115-7HL31-2AA0	3VA6115-8HL31-2AA0
100	3VA6210-6HL31-2AA0	3VA6210-7HL31-2AA0	3VA6210-8HL31-2AA0
250	3VA6225-6HL31-2AA0	3VA6225-7HL31-2AA0	3VA6225-8HL31-2AA0
250	3VA6325-6HL31-2AA0	3VA6325-7HL31-2AA0	3VA6325-8HL31-2AA0
400	3VA6440-6HL31-2AA0	3VA6440-7HL31-2AA0	3VA6440-8HL31-2AA0

ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6HM31-2AA0	3VA6140-7HM31-2AA0	3VA6140-8HM31-2AA0
100	3VA6110-6HM31-2AA0	3VA6110-7HM31-2AA0	3VA6110-8HM31-2AA0
150	3VA6115-6HM31-2AA0	3VA6115-7HM31-2AA0	3VA6115-8HM31-2AA0
100	3VA6210-6HM31-2AA0	3VA6210-7HM31-2AA0	3VA6210-8HM31-2AA0
250	3VA6225-6HM31-2AA0	3VA6225-7HM31-2AA0	3VA6225-8HM31-2AA0
250	3VA6325-6HM31-2AA0	3VA6325-7HM31-2AA0	3VA6325-8HM31-2AA0
400	3VA6440-6HM31-2AA0	3VA6440-7HM31-2AA0	3VA6440-8HM31-2AA0

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 (H)	Article No.	Basic price per PU	DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 (C)	Article No.	Basic price per PU	DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 (L)	Article No.	Basic price per PU
A												

ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and fixed instantaneous short-circuit protection I_i

40	3VA6140-6HN31-2AA0	3VA6140-7HN31-2AA0	3VA6140-8HN31-2AA0
100	3VA6110-6HN31-2AA0	3VA6110-7HN31-2AA0	3VA6110-8HN31-2AA0
150	3VA6115-6HN31-2AA0	3VA6115-7HN31-2AA0	3VA6115-8HN31-2AA0
100	3VA6210-6HN31-2AA0	3VA6210-7HN31-2AA0	3VA6210-8HN31-2AA0
250	3VA6225-6HN31-2AA0	3VA6225-7HN31-2AA0	3VA6225-8HN31-2AA0
250	3VA6325-6HN31-2AA0	3VA6325-7HN31-2AA0	3VA6325-8HN31-2AA0
400	3VA6440-6HN31-2AA0	3VA6440-7HN31-2AA0	3VA6440-8HN31-2AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7
	A	A	A	A		Article No. Basic price per PU

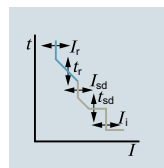
3-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

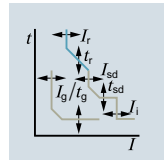
3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5JP31-2AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5JP31-2AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5JP31-2AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5JP31-2AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5JP31-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5JP31-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5JP31-2AA0



ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

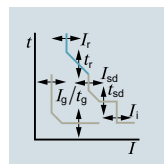
3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5JT31-2AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5JT31-2AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5JT31-2AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5JT31-2AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5JT31-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5JT31-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5JT31-2AA0



ETU560 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5JQ31-2AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5JQ31-2AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5JQ31-2AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5JQ31-2AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5JQ31-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5JQ31-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5JQ31-2AA0



¹⁾ 3VA6 molded case circuit breakers are supplied without connections. Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6JP31-2AA0	3VA6140-7JP31-2AA0	3VA6140-8JP31-2AA0
100	3VA6110-6JP31-2AA0	3VA6110-7JP31-2AA0	3VA6110-8JP31-2AA0
150	3VA6115-6JP31-2AA0	3VA6115-7JP31-2AA0	3VA6115-8JP31-2AA0
100	3VA6210-6JP31-2AA0	3VA6210-7JP31-2AA0	3VA6210-8JP31-2AA0
250	3VA6225-6JP31-2AA0	3VA6225-7JP31-2AA0	3VA6225-8JP31-2AA0
250	3VA6325-6JP31-2AA0	3VA6325-7JP31-2AA0	3VA6325-8JP31-2AA0
400	3VA6440-6JP31-2AA0	3VA6440-7JP31-2AA0	3VA6440-8JP31-2AA0

ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

40	3VA6140-6JT31-2AA0	3VA6140-7JT31-2AA0	3VA6140-8JT31-2AA0
100	3VA6110-6JT31-2AA0	3VA6110-7JT31-2AA0	3VA6110-8JT31-2AA0
150	3VA6115-6JT31-2AA0	3VA6115-7JT31-2AA0	3VA6115-8JT31-2AA0
100	3VA6210-6JT31-2AA0	3VA6210-7JT31-2AA0	3VA6210-8JT31-2AA0
250	3VA6225-6JT31-2AA0	3VA6225-7JT31-2AA0	3VA6225-8JT31-2AA0
250	3VA6325-6JT31-2AA0	3VA6325-7JT31-2AA0	3VA6325-8JT31-2AA0
400	3VA6440-6JT31-2AA0	3VA6440-7JT31-2AA0	3VA6440-8JT31-2AA0

ETU560 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6JQ31-2AA0	3VA6140-7JQ31-2AA0	3VA6140-8JQ31-2AA0
100	3VA6110-6JQ31-2AA0	3VA6110-7JQ31-2AA0	3VA6110-8JQ31-2AA0
150	3VA6115-6JQ31-2AA0	3VA6115-7JQ31-2AA0	3VA6115-8JQ31-2AA0
100	3VA6210-6JQ31-2AA0	3VA6210-7JQ31-2AA0	3VA6210-8JQ31-2AA0
250	3VA6225-6JQ31-2AA0	3VA6225-7JQ31-2AA0	3VA6225-8JQ31-2AA0
250	3VA6325-6JQ31-2AA0	3VA6325-7JQ31-2AA0	3VA6325-8JQ31-2AA0
400	3VA6440-6JQ31-2AA0	3VA6440-7JQ31-2AA0	3VA6440-8JQ31-2AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V
See "Overview", p. 1/6 and 1/7

Article No.

Basic price
per PU

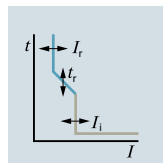
3-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

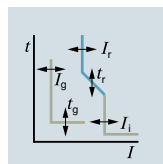
3VA61	40	16 ... 40	60 ... 480	--	3VA6140-5KL31-2AA0
	100	40 ... 100	150 ... 1200	--	3VA6110-5KL31-2AA0
	150	60 ... 150	225 ... 1500	--	3VA6115-5KL31-2AA0
3VA62	100	40 ... 100	150 ... 1200	--	3VA6210-5KL31-2AA0
	250	100 ... 250	375 ... 2500	--	3VA6225-5KL31-2AA0
3VA63	250	100 ... 250	375 ... 3000	--	3VA6325-5KL31-2AA0
3VA64	400	160 ... 400	600 ... 4800	--	3VA6440-5KL31-2AA0



ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

3VA61	40	16 ... 40	60 ... 480	15 ... 40	3VA6140-5KM31-2AA0
	100	40 ... 100	150 ... 1200	20 ... 100	3VA6110-5KM31-2AA0
	150	60 ... 150	225 ... 1500	30 ... 150	3VA6115-5KM31-2AA0
3VA62	100	40 ... 100	150 ... 1200	20 ... 100	3VA6210-5KM31-2AA0
	250	100 ... 250	375 ... 2500	50 ... 250	3VA6225-5KM31-2AA0
3VA63	250	100 ... 250	375 ... 3000	50 ... 250	3VA6325-5KM31-2AA0
3VA64	400	160 ... 400	600 ... 4800	80 ... 400	3VA6440-5KM31-2AA0



¹⁾ 3VA6 molded case circuit breakers are supplied without connections.
Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6KL31-2AA0	3VA6140-7KL31-2AA0	3VA6140-8KL31-2AA0
100	3VA6110-6KL31-2AA0	3VA6110-7KL31-2AA0	3VA6110-8KL31-2AA0
150	3VA6115-6KL31-2AA0	3VA6115-7KL31-2AA0	3VA6115-8KL31-2AA0
100	3VA6210-6KL31-2AA0	3VA6210-7KL31-2AA0	3VA6210-8KL31-2AA0
250	3VA6225-6KL31-2AA0	3VA6225-7KL31-2AA0	3VA6225-8KL31-2AA0
250	3VA6325-6KL31-2AA0	3VA6325-7KL31-2AA0	3VA6325-8KL31-2AA0
400	3VA6440-6KL31-2AA0	3VA6440-7KL31-2AA0	3VA6440-8KL31-2AA0

ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6KM31-2AA0	3VA6140-7KM31-2AA0	3VA6140-8KM31-2AA0
100	3VA6110-6KM31-2AA0	3VA6110-7KM31-2AA0	3VA6110-8KM31-2AA0
150	3VA6115-6KM31-2AA0	3VA6115-7KM31-2AA0	3VA6115-8KM31-2AA0
100	3VA6210-6KM31-2AA0	3VA6210-7KM31-2AA0	3VA6210-8KM31-2AA0
250	3VA6225-6KM31-2AA0	3VA6225-7KM31-2AA0	3VA6225-8KM31-2AA0
250	3VA6325-6KM31-2AA0	3VA6325-7KM31-2AA0	3VA6325-8KM31-2AA0
400	3VA6440-6KM31-2AA0	3VA6440-7KM31-2AA0	3VA6440-8KM31-2AA0

3

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	M
Article No.	Basic price per PU

3-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

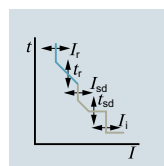
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800

3VA6140-5KP31-2AA0
3VA6110-5KP31-2AA0
3VA6115-5KP31-2AA0

3VA6210-5KP31-2AA0
3VA6225-5KP31-2AA0

3VA6325-5KP31-2AA0

3VA6440-5KP31-2AA0



ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

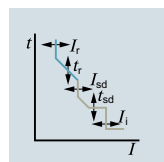
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800

3VA6140-5KT31-2AA0
3VA6110-5KT31-2AA0
3VA6115-5KT31-2AA0

3VA6210-5KT31-2AA0
3VA6225-5KT31-2AA0

3VA6325-5KT31-2AA0

3VA6440-5KT31-2AA0



ETU860 LSIG with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

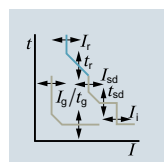
3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800

3VA6140-5KQ31-2AA0
3VA6110-5KQ31-2AA0
3VA6115-5KQ31-2AA0

3VA6210-5KQ31-2AA0
3VA6225-5KQ31-2AA0

3VA6325-5KQ31-2AA0

3VA6440-5KQ31-2AA0



¹⁾ 3VA6 molded case circuit breakers are supplied without connections. Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6KP31-2AA0	3VA6140-7KP31-2AA0	3VA6140-8KP31-2AA0
100	3VA6110-6KP31-2AA0	3VA6110-7KP31-2AA0	3VA6110-8KP31-2AA0
150	3VA6115-6KP31-2AA0	3VA6115-7KP31-2AA0	3VA6115-8KP31-2AA0
100	3VA6210-6KP31-2AA0	3VA6210-7KP31-2AA0	3VA6210-8KP31-2AA0
250	3VA6225-6KP31-2AA0	3VA6225-7KP31-2AA0	3VA6225-8KP31-2AA0
250	3VA6325-6KP31-2AA0	3VA6325-7KP31-2AA0	3VA6325-8KP31-2AA0
400	3VA6440-6KP31-2AA0	3VA6440-7KP31-2AA0	3VA6440-8KP31-2AA0

ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

40	3VA6140-6KT31-2AA0	3VA6140-7KT31-2AA0	3VA6140-8KT31-2AA0
100	3VA6110-6KT31-2AA0	3VA6110-7KT31-2AA0	3VA6110-8KT31-2AA0
150	3VA6115-6KT31-2AA0	3VA6115-7KT31-2AA0	3VA6115-8KT31-2AA0
100	3VA6210-6KT31-2AA0	3VA6210-7KT31-2AA0	3VA6210-8KT31-2AA0
250	3VA6225-6KT31-2AA0	3VA6225-7KT31-2AA0	3VA6225-8KT31-2AA0
250	3VA6325-6KT31-2AA0	3VA6325-7KT31-2AA0	3VA6325-8KT31-2AA0
400	3VA6440-6KT31-2AA0	3VA6440-7KT31-2AA0	3VA6440-8KT31-2AA0

ETU860 LSIG with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6KQ31-2AA0	3VA6140-7KQ31-2AA0	3VA6140-8KQ31-2AA0
100	3VA6110-6KQ31-2AA0	3VA6110-7KQ31-2AA0	3VA6110-8KQ31-2AA0
150	3VA6115-6KQ31-2AA0	3VA6115-7KQ31-2AA0	3VA6115-8KQ31-2AA0
100	3VA6210-6KQ31-2AA0	3VA6210-7KQ31-2AA0	3VA6210-8KQ31-2AA0
250	3VA6225-6KQ31-2AA0	3VA6225-7KQ31-2AA0	3VA6225-8KQ31-2AA0
250	3VA6325-6KQ31-2AA0	3VA6325-7KQ31-2AA0	3VA6325-8KQ31-2AA0
400	3VA6440-6KQ31-2AA0	3VA6440-7KQ31-2AA0	3VA6440-8KQ31-2AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

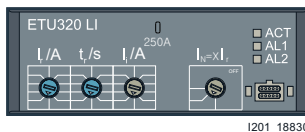
PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	
Article No.	Basic price per PU

4-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit 0 %, 50 % or 100 %

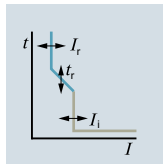
3VA61	40	16 ... 40	60 ... 480	--
	100	40 ... 100	150 ... 1200	--
	150	60 ... 150	225 ... 1500	--
3VA62	100	40 ... 100	150 ... 1200	--
	250	100 ... 250	375 ... 2500	--
3VA63	250	100 ... 250	375 ... 3000	--
3VA64	400	160 ... 400	600 ... 4800	--

3VA6140-5HL41-2AA0
3VA6110-5HL41-2AA0
3VA6115-5HL41-2AA0

3VA6210-5HL41-2AA0
3VA6225-5HL41-2AA0

3VA6325-5HL41-2AA0

3VA6440-5HL41-2AA0



ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit 0 %, 50 % or 100 % and adjustable ground-fault protection I_g

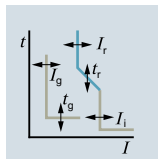
3VA61	40	16 ... 40	60 ... 480	8 ... 40
	100	40 ... 100	150 ... 1200	20 ... 100
	150	60 ... 150	225 ... 1500	30 ... 150
3VA62	100	40 ... 100	150 ... 1200	20 ... 100
	250	100 ... 250	375 ... 2500	50 ... 250
3VA63	250	100 ... 250	375 ... 3000	50 ... 250
3VA64	400	160 ... 400	600 ... 4800	80 ... 400

3VA6140-5HM41-2AA0
3VA6110-5HM41-2AA0
3VA6115-5HM41-2AA0

3VA6210-5HM41-2AA0
3VA6225-5HM41-2AA0

3VA6325-5HM41-2AA0

3VA6440-5HM41-2AA0



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	
Article No.	Basic price per PU

4-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and fixed instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit 0 %, 50 % or 100 %

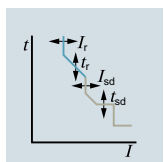
3VA61	40	16 ... 40	1.5 ... 10	480
	100	40 ... 100	1.5 ... 10	1200
	150	60 ... 150	1.5 ... 10	1500
3VA62	100	40 ... 100	1.5 ... 10	1200
	250	100 ... 250	1.5 ... 10	2500
3VA63	250	100 ... 250	1.5 ... 10	3000
3VA64	400	160 ... 400	1.5 ... 10	4800

3VA6140-5HN41-2AA0
3VA6110-5HN41-2AA0
3VA6115-5HN41-2AA0

3VA6210-5HN41-2AA0
3VA6225-5HN41-2AA0

3VA6325-5HN41-2AA0

3VA6440-5HN41-2AA0



¹⁾ 3VA6 molded case circuit breakers are supplied without connections. Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU320 LI

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i ,
with neutral protection against overload and short circuit 0 %, 50 % or 100 %

40	3VA6140-6HL41-2AA0	3VA6140-7HL41-2AA0	3VA6140-8HL41-2AA0
100	3VA6110-6HL41-2AA0	3VA6110-7HL41-2AA0	3VA6110-8HL41-2AA0
150	3VA6115-6HL41-2AA0	3VA6115-7HL41-2AA0	3VA6115-8HL41-2AA0
100	3VA6210-6HL41-2AA0	3VA6210-7HL41-2AA0	3VA6210-8HL41-2AA0
250	3VA6225-6HL41-2AA0	3VA6225-7HL41-2AA0	3VA6225-8HL41-2AA0
250	3VA6325-6HL41-2AA0	3VA6325-7HL41-2AA0	3VA6325-8HL41-2AA0
400	3VA6440-6HL41-2AA0	3VA6440-7HL41-2AA0	3VA6440-8HL41-2AA0

ETU330 LIG

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i ,
with neutral protection against overload and short circuit 0 %, 50 % or 100 %
and adjustable ground-fault protection I_g

40	3VA6140-6HM41-2AA0	3VA6140-7HM41-2AA0	3VA6140-8HM41-2AA0
100	3VA6110-6HM41-2AA0	3VA6110-7HM41-2AA0	3VA6110-8HM41-2AA0
150	3VA6115-6HM41-2AA0	3VA6115-7HM41-2AA0	3VA6115-8HM41-2AA0
100	3VA6210-6HM41-2AA0	3VA6210-7HM41-2AA0	3VA6210-8HM41-2AA0
250	3VA6225-6HM41-2AA0	3VA6225-7HM41-2AA0	3VA6225-8HM41-2AA0
250	3VA6325-6HM41-2AA0	3VA6325-7HM41-2AA0	3VA6325-8HM41-2AA0
400	3VA6440-6HM41-2AA0	3VA6440-7HM41-2AA0	3VA6440-8HM41-2AA0

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU350 LSI

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd}
and fixed instantaneous short-circuit protection I_i ,
with neutral protection against overload and short circuit 0 %, 50 % or 100 %

40	3VA6140-6HN41-2AA0	3VA6140-7HN41-2AA0	3VA6140-8HN41-2AA0
100	3VA6110-6HN41-2AA0	3VA6110-7HN41-2AA0	3VA6110-8HN41-2AA0
150	3VA6115-6HN41-2AA0	3VA6115-7HN41-2AA0	3VA6115-8HN41-2AA0
100	3VA6210-6HN41-2AA0	3VA6210-7HN41-2AA0	3VA6210-8HN41-2AA0
250	3VA6225-6HN41-2AA0	3VA6225-7HN41-2AA0	3VA6225-8HN41-2AA0
250	3VA6325-6HN41-2AA0	3VA6325-7HN41-2AA0	3VA6325-8HN41-2AA0
400	3VA6440-6HN41-2AA0	3VA6440-7HN41-2AA0	3VA6440-8HN41-2AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



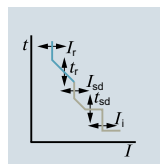
Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7
	A	A	A	A		Article No. Basic price per PU

4-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %

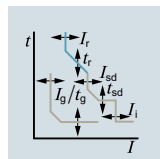


3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JP41-2AA0 3VA6110-5JP41-2AA0 3VA6115-5JP41-2AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JP41-2AA0 3VA6225-5JP41-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5JP41-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5JP41-2AA0



ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

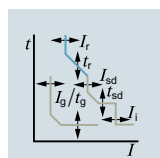


3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JT41-2AA0 3VA6110-5JT41-2AA0 3VA6115-5JT41-2AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JT41-2AA0 3VA6225-5JT41-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5JT41-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5JT41-2AA0



ETU560 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g



3VA61	40 100 150	16 ... 40 40 ... 100 60 ... 150	24 ... 400 60 ... 1000 90 ... 1500	60 ... 480 150 ... 1200 225 ... 1500	3VA6140-5JQ41-2AA0 3VA6110-5JQ41-2AA0 3VA6115-5JQ41-2AA0
3VA62	100 250	40 ... 100 100 ... 250	60 ... 1000 150 ... 2500	150 ... 1200 375 ... 2500	3VA6210-5JQ41-2AA0 3VA6225-5JQ41-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5JQ41-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5JQ41-2AA0

¹⁾ 3VA6 molded case circuit breakers are supplied without connections. Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 (H)		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 (C)		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 (L)	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU550 LSI with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %

40	3VA6140-6JP41-2AA0	3VA6140-7JP41-2AA0	3VA6140-8JP41-2AA0
100	3VA6110-6JP41-2AA0	3VA6110-7JP41-2AA0	3VA6110-8JP41-2AA0
150	3VA6115-6JP41-2AA0	3VA6115-7JP41-2AA0	3VA6115-8JP41-2AA0
100	3VA6210-6JP41-2AA0	3VA6210-7JP41-2AA0	3VA6210-8JP41-2AA0
250	3VA6225-6JP41-2AA0	3VA6225-7JP41-2AA0	3VA6225-8JP41-2AA0
250	3VA6325-6JP41-2AA0	3VA6325-7JP41-2AA0	3VA6325-8JP41-2AA0
400	3VA6440-6JP41-2AA0	3VA6440-7JP41-2AA0	3VA6440-8JP41-2AA0

ETU556 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g

40	3VA6140-6JT41-2AA0	3VA6140-7JT41-2AA0	3VA6140-8JT41-2AA0
100	3VA6110-6JT41-2AA0	3VA6110-7JT41-2AA0	3VA6110-8JT41-2AA0
150	3VA6115-6JT41-2AA0	3VA6115-7JT41-2AA0	3VA6115-8JT41-2AA0
100	3VA6210-6JT41-2AA0	3VA6210-7JT41-2AA0	3VA6210-8JT41-2AA0
250	3VA6225-6JT41-2AA0	3VA6225-7JT41-2AA0	3VA6225-8JT41-2AA0
250	3VA6325-6JT41-2AA0	3VA6325-7JT41-2AA0	3VA6325-8JT41-2AA0
400	3VA6440-6JT41-2AA0	3VA6440-7JT41-2AA0	3VA6440-8JT41-2AA0

ETU560 LSI(G) with display

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g

40	3VA6140-6JQ41-2AA0	3VA6140-7JQ41-2AA0	3VA6140-8JQ41-2AA0
100	3VA6110-6JQ41-2AA0	3VA6110-7JQ41-2AA0	3VA6110-8JQ41-2AA0
150	3VA6115-6JQ41-2AA0	3VA6115-7JQ41-2AA0	3VA6115-8JQ41-2AA0
100	3VA6210-6JQ41-2AA0	3VA6210-7JQ41-2AA0	3VA6210-8JQ41-2AA0
250	3VA6225-6JQ41-2AA0	3VA6225-7JQ41-2AA0	3VA6225-8JQ41-2AA0
250	3VA6325-6JQ41-2AA0	3VA6325-7JQ41-2AA0	3VA6325-8JQ41-2AA0
400	3VA6440-6JQ41-2AA0	3VA6440-7JQ41-2AA0	3VA6440-8JQ41-2AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	Ground-fault protection G I_g	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	
Article No.	Basic price per PU

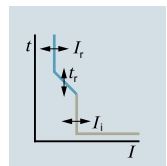
4-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

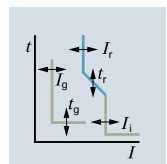
3VA61	40	16 ... 40	60 ... 480	--	3VA6140-5KL41-2AA0
	100	40 ... 100	150 ... 1200	--	3VA6110-5KL41-2AA0
	150	60 ... 150	225 ... 1500	--	3VA6115-5KL41-2AA0
3VA62	100	40 ... 100	150 ... 1200	--	3VA6210-5KL41-2AA0
	250	100 ... 250	375 ... 2500	--	3VA6225-5KL41-2AA0
3VA63	250	100 ... 250	375 ... 3000	--	3VA6325-5KL41-2AA0
3VA64	400	160 ... 400	600 ... 4800	--	3VA6440-5KL41-2AA0



ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

3VA61	40	16 ... 40	60 ... 480	15 ... 40	3VA6140-5KM41-2AA0
	100	40 ... 100	150 ... 1200	20 ... 100	3VA6110-5KM41-2AA0
	150	60 ... 150	225 ... 1500	30 ... 150	3VA6115-5KM41-2AA0
3VA62	100	40 ... 100	150 ... 1200	20 ... 100	3VA6210-5KM41-2AA0
	250	100 ... 250	375 ... 2500	50 ... 250	3VA6225-5KM41-2AA0
3VA63	250	100 ... 250	375 ... 3000	50 ... 250	3VA6325-5KM41-2AA0
3VA64	400	160 ... 400	600 ... 4800	80 ... 400	3VA6440-5KM41-2AA0



¹⁾ 3VA6 molded case circuit breakers are supplied without connections.
Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 (H)	DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 (C)	DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 (L)
A		Article No. Basic price per PU		Article No. Basic price per PU		Article No. Basic price per PU

ETU820 LI with display and metering function

With adjustable overload protection I_r and adjustable instantaneous short-circuit protection I_i

40	3VA6140-6KL41-2AA0	3VA6140-7KL41-2AA0	3VA6140-8KL41-2AA0
100	3VA6110-6KL41-2AA0	3VA6110-7KL41-2AA0	3VA6110-8KL41-2AA0
150	3VA6115-6KL41-2AA0	3VA6115-7KL41-2AA0	3VA6115-8KL41-2AA0
100	3VA6210-6KL41-2AA0	3VA6210-7KL41-2AA0	3VA6210-8KL41-2AA0
250	3VA6225-6KL41-2AA0	3VA6225-7KL41-2AA0	3VA6225-8KL41-2AA0
250	3VA6325-6KL41-2AA0	3VA6325-7KL41-2AA0	3VA6325-8KL41-2AA0
400	3VA6440-6KL41-2AA0	3VA6440-7KL41-2AA0	3VA6440-8KL41-2AA0

ETU830 LIG with display and metering function

With adjustable overload protection I_r , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault protection I_g

40	3VA6140-6KM41-2AA0	3VA6140-7KM41-2AA0	3VA6140-8KM41-2AA0
100	3VA6110-6KM41-2AA0	3VA6110-7KM41-2AA0	3VA6110-8KM41-2AA0
150	3VA6115-6KM41-2AA0	3VA6115-7KM41-2AA0	3VA6115-8KM41-2AA0
100	3VA6210-6KM41-2AA0	3VA6210-7KM41-2AA0	3VA6210-8KM41-2AA0
250	3VA6225-6KM41-2AA0	3VA6225-7KM41-2AA0	3VA6225-8KM41-2AA0
250	3VA6325-6KM41-2AA0	3VA6325-7KM41-2AA0	3VA6325-8KM41-2AA0
400	3VA6440-6KM41-2AA0	3VA6440-7KM41-2AA0	3VA6440-8KM41-2AA0

3

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT
	A	A	A	A	

Medium breaking capacity M, up to 35 kA at 480 V See "Overview", p. 1/6 and 1/7	
Article No.	Basic price per PU

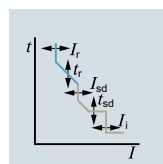
4-pole, fixed-mounted, 100 % rated, 3VA61 to 3VA64, up to 400 A¹⁾ Electronic Trip Unit



I201_18482

ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %



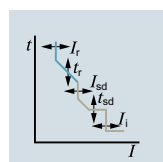
3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5KP41-2AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5KP41-2AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5KP41-2AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5KP41-2AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5KP41-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5KP41-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5KP41-2AA0



I201_19529

ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %



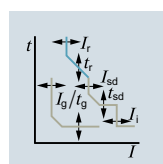
3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5KT41-2AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5KT41-2AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5KT41-2AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5KT41-2AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5KT41-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5KT41-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5KT41-2AA0



I201_18483

ETU860 LSIG with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g



3VA61	40	16 ... 40	24 ... 400	60 ... 480	3VA6140-5KQ41-2AA0
	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6110-5KQ41-2AA0
	150	60 ... 150	90 ... 1500	225 ... 1500	3VA6115-5KQ41-2AA0
3VA62	100	40 ... 100	60 ... 1000	150 ... 1200	3VA6210-5KQ41-2AA0
	250	100 ... 250	150 ... 2500	375 ... 2500	3VA6225-5KQ41-2AA0
3VA63	250	100 ... 250	150 ... 2500	375 ... 3000	3VA6325-5KQ41-2AA0
3VA64	400	160 ... 400	240 ... 4000	600 ... 4800	3VA6440-5KQ41-2AA0

¹⁾ 3VA6 molded case circuit breakers are supplied without connections. Refer to [page 4/20](#) for optional connections.

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Circuit protection, 100 % rated breakers

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB

Rated current I_n	DT	High breaking capacity H, up to 65 kA at 480 V See "Overview", p. 1/6 and 1/7 H		DT	Very high breaking capacity C, up to 100 kA at 480 V See "Overview", p. 1/6 and 1/7 C		DT	Extremely high breaking capacity L, up to 150 kA at 480 V See "Overview", p. 1/6 and 1/7 L	
		Article No.	Basic price per PU		Article No.	Basic price per PU		Article No.	Basic price per PU
A									

ETU850 LSI with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %

40	3VA6140-6KP41-2AA0	3VA6140-7KP41-2AA0	3VA6140-8KP41-2AA0
100	3VA6110-6KP41-2AA0	3VA6110-7KP41-2AA0	3VA6110-8KP41-2AA0
150	3VA6115-6KP41-2AA0	3VA6115-7KP41-2AA0	3VA6115-8KP41-2AA0
100	3VA6210-6KP41-2AA0	3VA6210-7KP41-2AA0	3VA6210-8KP41-2AA0
250	3VA6225-6KP41-2AA0	3VA6225-7KP41-2AA0	3VA6225-8KP41-2AA0
250	3VA6325-6KP41-2AA0	3VA6325-7KP41-2AA0	3VA6325-8KP41-2AA0
400	3VA6440-6KP41-2AA0	3VA6440-7KP41-2AA0	3VA6440-8KP41-2AA0

ETU856 LSI(G) with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} , adjustable instantaneous short-circuit protection I_i and adjustable ground-fault alarm I_g , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 %

40	3VA6140-6KT41-2AA0	3VA6140-7KT41-2AA0	3VA6140-8KT41-2AA0
100	3VA6110-6KT41-2AA0	3VA6110-7KT41-2AA0	3VA6110-8KT41-2AA0
150	3VA6115-6KT41-2AA0	3VA6115-7KT41-2AA0	3VA6115-8KT41-2AA0
100	3VA6210-6KT41-2AA0	3VA6210-7KT41-2AA0	3VA6210-8KT41-2AA0
250	3VA6225-6KT41-2AA0	3VA6225-7KT41-2AA0	3VA6225-8KT41-2AA0
250	3VA6325-6KT41-2AA0	3VA6325-7KT41-2AA0	3VA6325-8KT41-2AA0
400	3VA6440-6KT41-2AA0	3VA6440-7KT41-2AA0	3VA6440-8KT41-2AA0

ETU860 LSIG with display and metering function

With adjustable overload protection I_r , adjustable delayed short-circuit protection I_{sd} and adjustable instantaneous short-circuit protection I_i , with neutral protection against overload and short circuit from 20 %/40 % to 100 %/160 % and adjustable ground-fault protection I_g

40	3VA6140-6KQ41-2AA0	3VA6140-7KQ41-2AA0	3VA6140-8KQ41-2AA0
100	3VA6110-6KQ41-2AA0	3VA6110-7KQ41-2AA0	3VA6110-8KQ41-2AA0
150	3VA6115-6KQ41-2AA0	3VA6115-7KQ41-2AA0	3VA6115-8KQ41-2AA0
100	3VA6210-6KQ41-2AA0	3VA6210-7KQ41-2AA0	3VA6210-8KQ41-2AA0
250	3VA6225-6KQ41-2AA0	3VA6225-7KQ41-2AA0	3VA6225-8KQ41-2AA0
250	3VA6325-6KQ41-2AA0	3VA6325-7KQ41-2AA0	3VA6325-8KQ41-2AA0
400	3VA6440-6KQ41-2AA0	3VA6440-7KQ41-2AA0	3VA6440-8KQ41-2AA0

3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Motor circuit protectors and molded case switches

PU (UNIT, SET, M) = 1

PS*/P. unit = 1 unit

PG = 1CB



Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	SCCR without contactor, 100 kA ¹⁾ at 480 V See "Overview", p. 1/6 and 1/7
	A	A	A	A		Article No. Basic price per PU

3-pole, fixed-mounted, 3VA61 to 3VA64, up to 600 A Electronic Trip Unit



ETU310M Motor circuit protector With adjustable short-circuit release I_i

3VA61	25	--	--	75 ... 375	3VA6125-1MS31-0AA0
	30	--	--	90 ... 450	3VA6130-1MS31-0AA0
	40	--	--	120 ... 600	3VA6140-1MS31-0AA0
	50	--	--	150 ... 750	3VA6150-1MS31-0AA0
	70	--	--	210 ... 1050	3VA6170-1MS31-0AA0
	80	--	--	240 ... 1200	3VA6180-1MS31-0AA0
	90	--	--	270 ... 1350	3VA6190-1MS31-0AA0
	100	--	--	300 ... 1500	3VA6110-1MS31-0AA0
3VA62	110	--	--	330 ... 1650	3VA6211-1MS31-0AA0
	125	--	--	375 ... 1875	3VA6212-1MS31-0AA0
	150	--	--	450 ... 2250	3VA6215-1MS31-0AA0
	200	--	--	600 ... 2400	3VA6220-1MS31-0AA0
3VA63	200	--	--	600 ... 3000	3VA6320-1MS31-0AA0
	250	--	--	750 ... 3750	3VA6325-1MS31-0AA0
3VA64	400	--	--	1200 ... 5200	3VA6440-1MS31-0AA0
	500	--	--	1500 ... 6000	3VA6450-1MS31-0AA0

¹⁾ Breaking capacity (the SCCR rating) is the maximum permissible short-circuit current at the installation location of the MCS in combination with an appropriate overload protection element

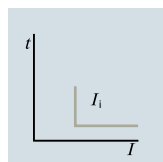
Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	S function (short-time delayed short-circuit protection "S") I_{sd}	Operating current of the instantaneous short-circuit protection "I" I_i	DT	SCCR 100 kA ¹⁾ at 480 V
	A	A	A	A		Article No. Basic price per PU

3-pole, fixed-mounted, 3VA63/3VA64, up to 600 A

Molded case switches

With non-adjustable short-circuit release I_i for self-protection

3VA63	400	--	--	5600	3VA6340-1BB31-0AA0
3VA64	600	--	--	5400	3VA6460-1BB31-0AA0



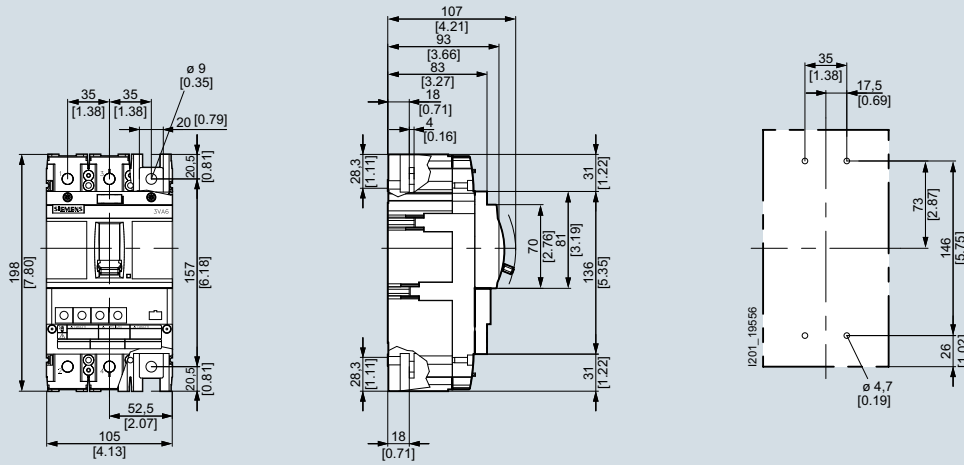
¹⁾ Breaking capacity (the SCCR rating) is the maximum permissible short-circuit current at the installation location of the MCS in combination with an appropriate overload protection element

3VA UL Molded Case Circuit Breakers

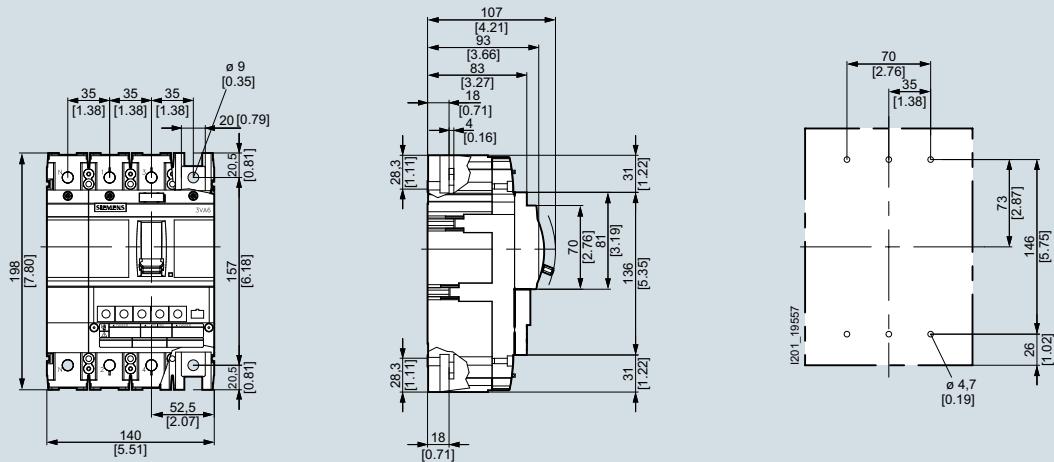
3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Dimensional drawings

Overview



3VA61 and 3VA62, 3-pole

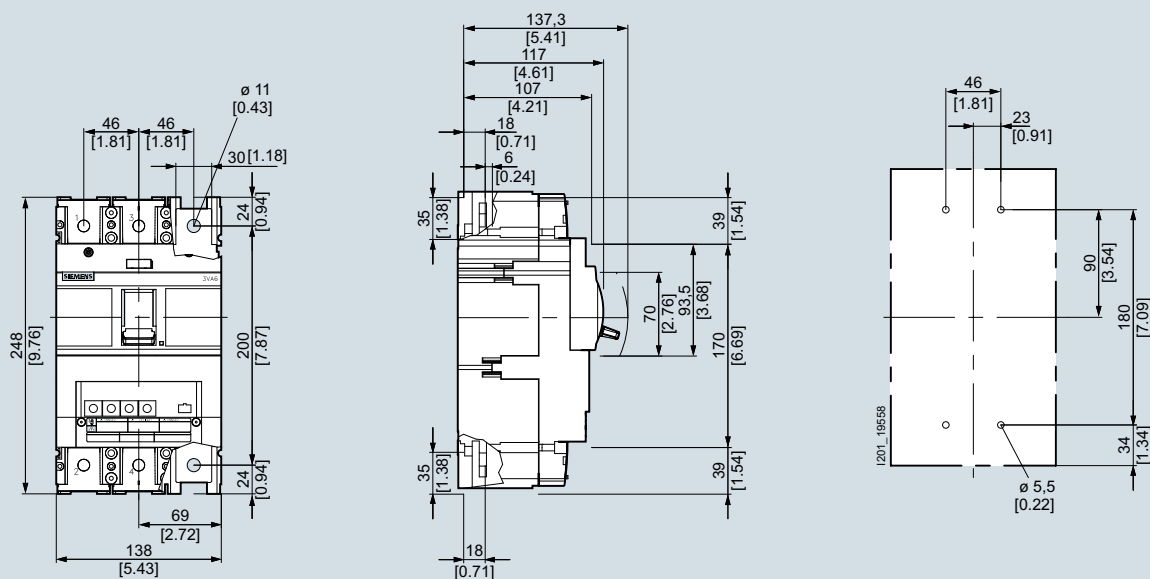


3VA61 and 3VA62, 4-pole

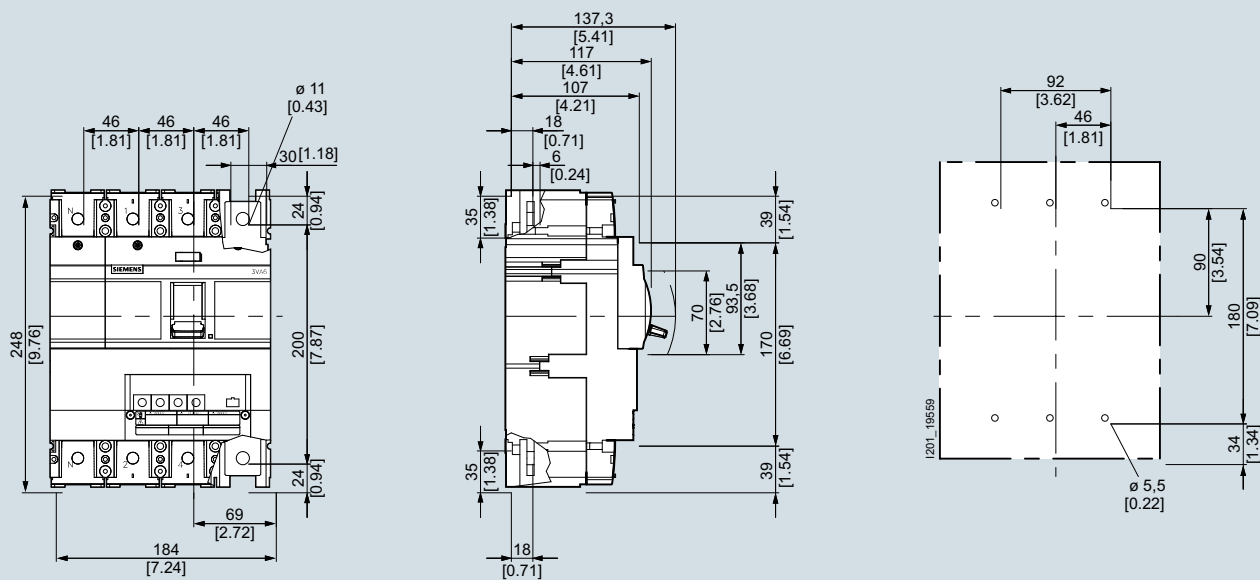
3VA UL Molded Case Circuit Breakers

3VA6 Molded Case Circuit Breakers up to 600 A, ETU, 600 V, up to 150 kA

Dimensional drawings



3VA63 and 3VA64, 3-pole



3VA63 and 3VA64, 4-pole

Further dimensional drawings can be found in the image database at: www.siemens.com/lowvoltage/picturedb

**NEW**

Direct reference to the products in the Industry Mall from the selection and ordering data tables:

Article No.

[www.siemens.com/
product?Article No.](http://www.siemens.com/product?ArticleNo.)

3VA2025-5HL36-0AA0

Paper catalog:

To get more product information enter the Web address plus Article No.

PDF catalog:

Get more product information with just a mouse click.

4/2	Internal accessories
4/12	Manual operators
4/19	Motor operators
4/20	Connection technology
4/31	Plug-in and draw-out technology
4/36	Communication and testing/ commissioning devices
4/43	Accessories for locking, blocking and interlocking
4/47	Other

For further technical product information:

Siemens Industry Online Support:
[www.siemens.com/lowvoltage/
product-support](http://www.siemens.com/lowvoltage/product-support)

→ Entry type:
 Application example
 Certificate
 Characteristic
 Download
 FAQ
 Manual
 Product note
 Software archive
 Technical data

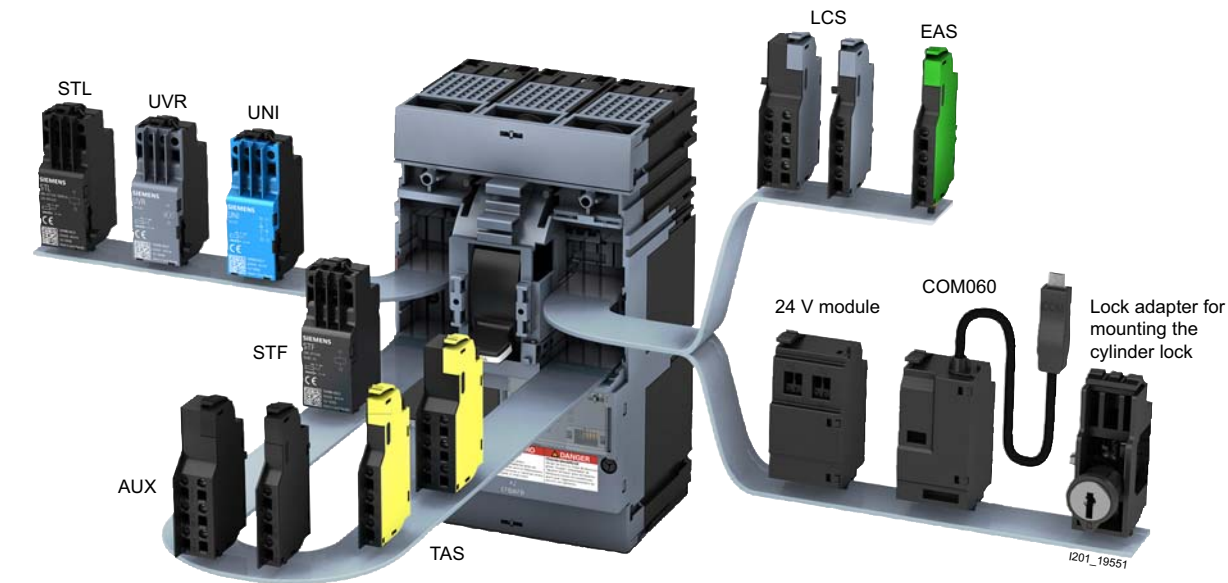
3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Internal accessories

Overview

Color coding of accessories



A color coding system has been used to clearly identify the specific functions of individual accessories:

Color	Auxiliary switches and alarm switches	Auxiliary releases
Black	Auxiliary switch AUX	• Shunt trip left STL • Shunt trip flexible STF
Gray	Leading changeover switch LCS	• Undervoltage release UVR
Yellow	Trip alarm switch TAS	--
Green	Electrical alarm switch EAS	--
Blue	--	Universal release UNI

Auxiliary switches

All auxiliary and alarm switches for the 3VA UL molded case circuit breakers belong to an integrated range of accessories. The auxiliary switches can be simply snapped into place and connected up in the accessories compartment provided on the front face of the unit to the left and right of the handle.

The purpose of the auxiliary switches (AUX) is to signal the position of the main contacts of the molded case circuit breaker. The contacts of the auxiliary switches open and close simultaneously with the main contacts of the molded case circuit breaker.

Leading changeover switches (LCS) signal the opening of the main contacts with a lead time of 20 ms in advance of the circuit breaker opening and could be used to deactivate a frequency converter, for example.

Trip alarm switches (TAS) signal every circuit breaker tripping operation, regardless of the cause of the trip. The trip alarm switches are actuated whenever the molded case circuit breaker switches to the TRIP position.

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.

Special electronically-compatible (el) variants are available for applications that require the auxiliary switch signals to be linked to low voltage systems.

Auxiliary releases

Auxiliary releases allow remote electrical tripping of the circuit breaker. They can be used to monitor control or main circuits in order to implement a protective system against accidental restart following a power failure, for example.

Undervoltage releases trip the 3VA UL molded case circuit breaker in the event that the rated voltage of a monitored circuit drops below a minimum permissible limit or fails altogether.

Shunt trips can be used to trip the 3VA UL molded case circuit breaker remotely. The STF variant can be mounted in either the left-hand or the right-hand accessories compartment (for 3VA6 only). The STL type is specifically designed for mounting in the left-hand compartment and is a very low power consumption device.

A universal release is a single, 21 mm wide component in which a shunt trip and an undervoltage release are combined. These are subject to the same tripping conditions as the individual devices.

Benefits

- The internal accessories are extremely easy to install. No tools are required to install the internal accessories because they are simply snapped into place in the accessories compartments to the left and right of the handle.
- The accessories are connected by screw terminals for auxiliary conductors with a cross-section of up to #14 AWG wire. The terminals are mounted on the front of the unit for easy access.
- All auxiliary and alarm switches are designed as changeover contacts and therefore provide a high degree of flexibility for planning and installation purposes.
- Slimline auxiliary and alarm switches HQ and double-width auxiliary and alarm switches HP are suitable for use in applications involving diverse types of signaling contact and with high continuous currents.
- With two conductors per contact point for the auxiliary and alarm switches HP, including multiple connections is extremely easy.
- Symbols engraved in the lid of the accessories compartment indicate the possible mounting positions of the internal accessories.

3VA UL with internal accessories pre-assembled at the factory

The basic circuit breakers with -0AA0 at the end of the article number are supplied without installed internal accessories.

Due to the high number of different internal accessory components available and the associated flexibility of use, it is not possible to represent all options with an article number for circuit breakers and installed internal accessories.

The standard delivery time for equipped 3VA UL breakers is 10 working days. The best possible delivery times are only achieved when the individual components are ordered.

For selecting the appropriate internal accessories, use the 3VA configurator to help in selecting the loose components to be ordered:

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

3VA molded-case circuit breaker

Language

The configuration is complete. You can order this product.

Additional actions

Basic configuration

Release

Form type

Main conductor connection

Auxiliary release/auxiliary switch

Mountable accessories

Result

CAD/CAE

1.81

Assembly option

Self-assembly

☒ When selecting factory installation by Siemens, an assembly surcharge will be added to the value of the built-in components. The standard delivery time for fitted 3VA switches is 10 working days. The best possible delivery times will only be offered on purchase of the components.

Auxiliary release

No auxiliary release

STL 24 V AC 50/60 Hz / 12-30

STL 110-127 V AC 50/60 Hz / DC

STL 208-277 V AC 50/60 Hz / 220-250 V DC

☒ UVR 24 V DC

UVR 120-127 V AC 50/60 Hz

UVR 208-230 V AC 50/60 Hz

UNI 24 V DC

Slot assignment

Auxiliary switch/alarm switch

Without auxiliary/alarm switches

Type HP 2 AUX

Type HQ 2 AUX

Type HQ 3 AUX

Type HQ 4 AUX

Type HQ 1 AUX + 1 TAS

Type HP 1 AUX + 1 TAS

Type HQ 2 AUX + 1 TAS

Type HP 2 AUX + 1 TAS

☒ Type HQ 1 AUX + 1 TAS + 1 EAS

Type HQ 2 AUX + 1 TAS + 1 EAS

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3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Internal accessories

Design

Internal accessories		3VA5 125 A 3-pole							3VA5 250 A 2(3)-pole & 3-pole								
Optional equipment		125 A							250 A								
Slot No.:		23	22	21		11	12	13	24	23	22	21		11	12	13	14
Auxiliary switch	Type																
Auxiliary switch	AUX_HQ	x	x	x		x	x	x	x	x	x	x		x	x	x	x
	AUX_HQ_el	x	x	x		x	x	x	x	x	x	x		x	x	x	x
	AUX_HP			x				x	x		x			x		x	
Leading changeover switch	LCS_HQ					x								x			
	LCS_HQ_el					x								x			
	LCS_HP							x								x	
Alarm switch	Type																
Trip alarm switch	TAS_HQ		x	x		x	x			x	x			x	x		
	TAS_HQ_el		x	x		x	x			x	x			x	x		
	TAS_HP		x				x				x				x		
Auxiliary release	Type																
Shunt trip flexible	STF		x							x							
Shunt trip left	STL		x							x							
Undervoltage release	UVR		x							x							
Universal release	UNI		x							x							
Other																	
Cylinder lock (type Ronis)							x									x	

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Internal accessories

Internal accessories	
Optional equipment	
Slot No.:	
Auxiliary switch	Type
Auxiliary switch	AUX_HQ
	AUX_HQ_el
	AUX_HP
Leading changeover switch	LCS_HQ
	LCS_HQ_el
	LCS_HP
Alarm switch	Type
Trip alarm switch	TAS_HQ
	TAS_HQ_el
	TAS_HP
Electrical alarm switch	EAS_HQ
	EAS_HQ_el
Auxiliary release	Type
Shunt trip flexible	STF
Shunt trip left	STL
Undervoltage release	UVR
Universal release	UNI
ETU/communication	Type
Communication module	COM060
Breaker data server	
24 V module	
Other	
Cylinder lock (type Ronis)	

3VA6 150/250 A 3-pole													
250 A													
24	23	22	21	11	12	13	14						
x	x	x	x	x	x	x	x						
x	x	x	x	x	x	x	x						
x	x			x		x							
	x					x							
				x									
				x									
				x									

3VA UL Molded Case Circuit Breakers

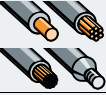
Accessories and Spare Parts

Internal accessories

Internal accessories		3VA6 400/600 A 3-pole														
Optional equipment		3VA6 400/600 A 4-pole														
		Slot No.:														
Auxiliary switch		Type														
Auxiliary switch	AUX_HQ	x	x	x	x	x				x	x	x	x	x		
	AUX_HQ_el	x	x	x	x	x				x	x	x	x	x		
	AUX_HP			x	x					x		x				
Leading changeover switch	LCS_HQ															
	LCS_HQ_el															
	LCS_HP															
Alarm switch		Type														
Trip alarm switch	TAS_HQ			x	x					x	x					
	TAS_HQ_el			x	x					x	x					
	TAS_HP				x						x					
Electrical alarm switch	EAS_HQ															x
	EAS_HQ_el															x
Auxiliary release		Type														
Shunt trip flexible	STF			x							x					
Shunt trip left	STL			x												
Undervoltage release	UVR			x							x					
Universal release	UNI			x							x					
ETU/communication		Type														
Communication module	COM060															x
Breaker data server																x
24 V module																x
Other																
Cylinder lock (type Ronis)																x

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Technical specifications

				Auxiliary switches and alarm switches HQ				Auxiliary switches and alarm switches HQ_electronic				Auxiliary switches and alarm switches HP		
				AUX	LCS	TAS	EAS	AUX	LCS	TAS	EAS	AUX	LCS	TAS
Mounting width		mm		7				7				14		
Conductor cross-sections	Solid/stranded/finely stranded with end sleeve	Screw connection (per contact)		1 x (0.5 - 1.5) 1 x (AWG20 - AWG16)				1 x (0.5 - 1.5) 1 x (AWG20 - AWG16)				2 x (0.75 - 2.5) 2 x (AWG18 - AWG14)		
														
	Finely stranded with insulated end sleeve	Screw connection (per contact)		1 x (0.5 - 1.0) 1 x (AWG20 - AWG16)				1 x (0.5 - 1.0) 1 x (AWG20 - AWG16)				2 x (0.75 - 1.0) 2 x (AWG18 - AWG16)		
														
	Tightening torque (connecting cables)	Nm		0.4 ^{+0.1}				0.4 ^{+0.1}				0.4 ^{+0.1}		
	Stripped length	mm		15				15				15		
														
Rated operational voltage	U_e	V AC 50 Hz		240				24				600		
		V DC		250				24				250		
Conventional free-air thermal current		$I_{th} = I_e$	A	6				0.3				10		
IEC Ratings Listed	AC-12	12 V	A	6				0.3				10		
		24 V	A	6				0.3				10		
		48 V	A	6				--				10		
		125 V	A	6				--				10		
		220/240 V	A	6				--				10		
		380/440 V	A	--				--				6		
		600 V	A	--				--				2		
	AC-15	12 V	A	3				0.3				6		
		2/4 V	A	3				0.3				6		
		48 V	A	3				--				6		
		125 V	A	3				--				6		
		220/240 V	A	3				--				6		
		380/440 V	A	--				--				2		
		600 V	A	--				--				0.6		
	DC-12	12 V	A	6				0.1				6		
		24 V	A	4				0.1				6		
		48 V	A	2				--				2		
		110 V	A	0.5				--				0.6		
		250 V	A	0.25				--				0.3		
	DC-13	12 V	A	1				0.07				3		
		24 V	A	0.8				0.07				3		
		48 V	A	0.4				--				0.8		
		110 V	A	0.2				--				0.2		
		250 V	A	0.1				--				0.1		

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Internal accessories

				Auxiliary switches and alarm switches HQ				Auxiliary switches and alarm switches HQ_electronic				Auxiliary switches and alarm switches HP		
				AUX	LCS	TAS	EAS	AUX	LCS	TAS	EAS	AUX	LCS	TAS
Max. rated current (UL/CSA)	Inductive load (0.75-0.8 AC)	24 V	A	3				0.3				6		
		300 V	A	3				--				6		
		600 V	A	--				--				6		
	Pilot duty (AC)	24 V	A	3				--				6		
		127 V	A	3				--				6		
		240 V	A	3				--				3		
		480 V	A	--				--				1.5		
		600 V	A	--				--				1.2		
	Resistive load (DC)	24 V	A	0.25				0.1				0.3		
		250 V	A	0.25				--				0.3		
	Resistive load - pilot duty sequence (DC)	125 V	A	0.6				--				0.9		
		250 V	A	0.3				--				0.55		
	Minimum load	At 24 V DC	mA	70				0.5				70		
		At 5 V DC	mA	--				1				--		

				Shunt trip left STL	Shunt trip flexible STF	Undervoltage releases UVR	Universal release UNI
							
Mounting width			mm	21			
Conductor cross-sections	Solid/stranded/finely stranded with end sleeve	Screw connection (per contact)	Number x mm ²	1 x (0.5 - 1.5)			
			Number x AWG	1 x (AWG20 - AWG16)			
	Finely stranded with insulated end sleeve	Screw connection (per contact)	Number x mm ²	1 x (0.5 - 1.0)			
			Number x AWG	1 x (AWG20 - AWG16)			
	Tightening torque (connecting cables)		Nm	0.4 ^{+0.1}			
	Stripped length		mm	10			
Power consumption U_e	12	V DC	W	50	--	--	--
	24	50 V AC/60 Hz	VA	50	--	--	--
	24 ... 30	V DC	W	7 ... 50	--	--	--
	48 ... 60	50 V AC/60 Hz	VA	15 ... 20	--	--	--
	48 ... 60	V DC	W	20 ... 30	--	--	--
	110 ... 127	50 V AC/60 Hz	VA	30 ... 40	--	--	--
	110 ... 127	V DC	W	30 ... 40	--	--	--
	208 ... 277	50 V AC/60 Hz	VA	16 ... 35	--	--	--
	220 ... 250	V DC	W	28 ... 35	--	--	--
	380 ... 600	50 V AC/60 Hz	VA	10 ... 30	--	--	--

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Internal accessories

				Shunt trip left STL	Shunt trip flexible STF	Undervoltage releases UVR	Universal release UNI
							
Power consumption U_e	24	50 V AC/60 Hz	VA	--	300	--	--
	48 ... 60	50 V AC/60 Hz	VA	--	340 ... 600	--	--
	110 ... 127	50 V AC/60 Hz	VA	--	500 ... 650	--	--
	208 ... 277	50 V AC/60 Hz	VA	--	360 ... 650	--	--
	380 ... 500	50 V AC/60 Hz	VA	--	330 ... 600	--	--
	600	50 V AC/60 Hz	VA	--	300	--	--
	12	V DC	W	--	--	< 2.5	--
	24	V DC	W	--	--	< 2.5	--
	48	V DC	W	--	--	< 2.5	--
	60	V DC	W	--	--	< 2.5	--
	125 ... 127	V DC	W	--	--	< 2.5	--
	220 ... 230	V DC	W	--	--	< 2.5	--
	250	V DC	W	--	--	< 2.5	--
	24	50 V AC/60 Hz	VA	--	--	< 2	--
	48	50 V AC/60 Hz	VA	--	--	< 2	--
	60	50 V AC/60 Hz	VA	--	--	< 2	--
	110	50 V AC/60 Hz	VA	--	--	< 2	--
	120 ... 127	50 V AC/60 Hz	VA	--	--	< 2	--
	208 ... 230	50 V AC/60 Hz	VA	--	--	< 2	--
	380 ... 400	50 V AC/60 Hz	VA	--	--	< 2.5	--
	440 ... 480	50 V AC/60 Hz	VA	--	--	< 2.5	--
	12	V DC (Cat II; PELV/SELV)	W	--	--	--	UVR: < 2.5 SHT: 20
	24	V DC (Cat II; PELV/SELV)	W	--	--	--	UVR: < 2.5 SHT: 20
	48	V DC (Cat II; PELV/SELV)	W	--	--	--	UVR: < 2.5 SHT: 20
Rated impulse withstand voltage		U_{imp}	kV	6		4	0.5
Making current		I_{max}	at V	1.5 A/24 V AC	18 A/24 V AC	5 mA/480 V	1.5 A/24 V
Maximum tripping time			ms	< 10			
Service life	Electrical trips			8500			
	Mechanical switching cycles of the circuit breaker			25000			
Priority over other control signals				Given			
Degree of protection	Lid of the accessories compartment closed			IP40			
	Lid of the accessories compartment open			IP 20			
Minimum signal duration			ms	40	40	--	40
Response voltage shunt trip	Pick-up (circuit breaker trips)	U_s/V	%	70 ... 110		--	70 ... 110
Undervoltage release response voltage	Pick-up (circuit breaker can be switched on)	U_s/V	%	--	--	85 ... 110	
	Pick-up (circuit breaker trips)	U_s/V	%	--	--	35 ... 70	
Tripping frequency	Trips per hour			Unlimited	120	Unlimited	
Can be used for electrical interlocking of molded case circuit breakers				No	No	Yes	

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Internal accessories

Selection and ordering data

	Version	DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
Auxiliary switches and alarm switches							
 3VA9978-0AA11 3VA9978-0AA12	Auxiliary switch AUX						
	Type/breaking capacity/size	Electronic-compatible					
	HP/high breaking capacity/2 slots	--	3VA9978-0AA11		1	1 unit	1CB
	HQ/compact size/1 slot	--	3VA9978-0AA12		1	1 unit	1CB
	HQ_el/compact size/1 slot	✓	3VA9978-0AA13		1	1 unit	1CB
 3VA9978-0AA21 3VA9978-0AA22	Leading changeover switch LCS						
	Type/breaking capacity/size	Electronic-compatible					
	HP/high breaking capacity/2 slots	--	3VA9978-0AA21		1	1 unit	1CB
	HQ/compact size/1 slot	--	3VA9978-0AA22		1	1 unit	1CB
	HQ_el/compact size/1 slot	✓	3VA9978-0AA23		1	1 unit	1CB
 3VA9978-0AB11 3VA9978-0AB12	Trip alarm switch TAS						
	Type/breaking capacity/size	Electronic-compatible					
	HP/high breaking capacity/2 slots	--	3VA9978-0AB11		1	1 unit	1CB
	HQ/compact size/1 slot	--	3VA9978-0AB12		1	1 unit	1CB
	HQ_el/compact size/1 slot	✓	3VA9978-0AB13		1	1 unit	1CB
 3VA9978-0AB22	Electrical alarm switch EAS (3VA6 only)						
	Type/breaking capacity/size	Electronic-compatible					
	HQ/compact size/1 slot	--	3VA9978-0AB22		1	1 unit	1CB
	HQ_el/compact size/1 slot	✓	3VA9978-0AB23		1	1 unit	1CB
Undervoltage releases							
 3VA9978-0BB16	Undervoltage release UVR						
	50/60 Hz V AC	V DC					
	--	12	3VA9978-0BB10		1	1 unit	1CB
	--	24	3VA9978-0BB11		1	1 unit	1CB
	--	48	3VA9978-0BB12		1	1 unit	1CB
	--	125 ... 127	3VA9978-0BB14		1	1 unit	1CB
	--	250	3VA9978-0BB16		1	1 unit	1CB
	24	--	3VA9978-0BB20		1	1 unit	1CB
	120 ... 127	--	3VA9978-0BB24		1	1 unit	1CB
	208 ... 230	--	3VA9978-0BB25		1	1 unit	1CB
	440 ... 480	--	3VA9978-0BB27		1	1 unit	1CB

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Internal accessories

	Version	DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
Shunt trip left							
	Shunt trip left STL		3VA9978-0BL20 3VA9978-0BL10 3VA9978-0BL30 3VA9978-0BL31 3VA9978-0BL32 3VA9978-0BL33				
	50/60 Hz V AC	V DC					
	380 ... 600	--					
	--	12					
	24	24 ... 30					
	48 ... 60	--					
	110 ... 127	110 ... 127					
208 ... 277	220 ... 250						
3VA9978-0BL33							
Shunt trip flexible STF							
	Shunt trip flexible		3VA9978-0BA20 3VA9978-0BA21 3VA9978-0BA22 3VA9978-0BA23 3VA9978-0BA24 3VA9978-0BA25				
	50/60 Hz V AC	V DC					
	24	--					
	48 ... 60	--					
	110 ... 127	--					
	208 ... 277	--					
	380 ... 500	--					
600	--						
3VA9978-0BA23							
Universal release UNI							
	Universal release		3VA9978-0BD11 3VA9978-0BD12 3VA9978-0BD13				
	50/60 Hz V AC	V DC					
	--	12					
	--	24					
3VA9908-0BD13							
Time-delay device for undervoltage releases							
	Time-delay device			3VA9978-0BF22 3VA9978-0BF23			
	V AC	V DC	Delay time				
	230	230	Fixed				
3VA9978-0BF22							
3VA9978-0BF23							

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Manual operators

Overview

Manual operators are provided to facilitate manual operation of the 3VA UL molded case circuit breakers, either directly at the circuit breaker or through the cubicle door.

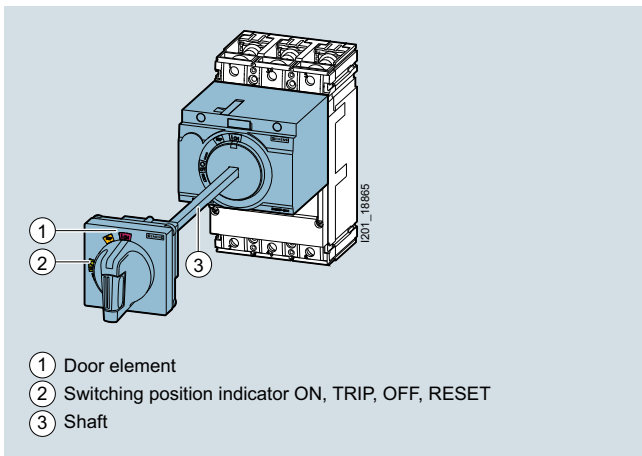
Front mounted rotary operator

The front mounted rotary operator is mounted directly on the molded case circuit breaker and is available with or without a door interlocking system. It meets the requirements for degree of protection NEMA 1. The optional door interlock locks the cubicle door when the molded case circuit breaker is closed, but can be deliberately overridden if necessary.



Door mounted rotary operator

The door mounted rotary operator enables operation of the molded case circuit breaker from the cubicle door. The door element meets the requirements for degree of protection NEMA 3R/12 and features a door interlocking system and tolerance compensation. A variable depth adapter can be deployed to allow use of the door mounted rotary operator in conjunction with draw-out units. A supplementary handle can be attached directly to the shaft shoulder to allow convenient operation of the molded case circuit breaker when the cubicle door is open (i.e. when the control element is decoupled).



- ① Door element
- ② Switching position indicator ON, TRIP, OFF, RESET
- ③ Shaft

Interlocking methods

All manual operators are designed to allow locking of the operator at the handle and at the rotary operator with up to three padlocks in each case. It is also possible to fit a cylinder lock, which can be used either to lock or to interlock molded case circuit breakers depending on the application.

If the cylinder lock is applied as a lock, it can be used to prevent the molded case circuit breaker from closing. The key can be removed at any time. If the lock is used to create an interlock, the key can be removed only when it is in the OFF position, allowing the creation of an interlock by the use of a single key for several breakers.

Active illumination

The manual rotary operators are also available in illuminated variants in which the handle is illuminated red, yellow or green via LEDs (24 V DC) depending on the position of the breaker. This means that the status of the breaker (on, off, trip) can be immediately identified, even when lighting conditions are poor. This option can also be retrofitted.

Max Flex operator

The Max Flex operator is a hand lever operator for operating the breaker from the outer side of the cabinet. The handle is connected to the switching mechanism via a Bowden cable.

The Max Flex operator can be ordered as a complete set, but is also available as single parts and offers considerable variety in terms of handles and lengths of Bowden cables. It can also be equipped with auxiliary switches.

Note:

The Max Flex operator is approved for the UL market. It does not carry a CE mark.

Variable depth flange mounted operator kit

Contrary to the Max Flex operator, this operating mechanism links the handle and the switching mechanism by means of a rigid switching shaft of variable length.

Note:

The operating mechanism with flange connection is approved for the UL market. It does not carry a CE mark.

Benefits

- Convenient circuit breaker operation inside and outside the panel
- Locking and interlocking for all manual operators prevents unauthorized breaker operation
- Colored variant for EMERGENCY-OFF circuits
- Illumination option for clear indication of the breaker status (on, off, trip) even when lighting conditions are poor
- All manual operators meet the standards for isolating characteristics defined by IEC / EN 60947-1

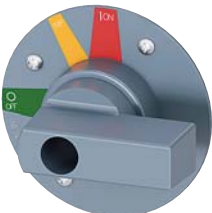
Selection and ordering data

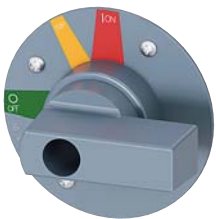
	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A, 250 A	3VA6 400 A, 600 A						
Front mounted rotary operators											
 3VA9277-0EK11	Front mounted rotary operator										
	• Rotary operator • Handle • Degree of protection IP30										
	Type	Color									
	• Standard, without illumination kit	Gray	✓	--	--	--	3VA9137-0EK11		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK11		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK11		1	1 unit	1CB
	• Standard, with illumination kit	Gray	✓	--	--	--	3VA9137-0EK13		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK13		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK13		1	1 unit	1CB
	• EMERGENCY-OFF, without illumination kit	Yellow-red	✓	--	--	--	3VA9137-0EK15		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK15		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK15		1	1 unit	1CB
	• EMERGENCY-OFF, with illumination kit	Yellow-red	✓	--	--	--	3VA9137-0EK17		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK17		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK17		1	1 unit	1CB
	• Standard, with door interlock	Gray	✓	--	--	--	3VA9137-0EK21		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK21		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK21		1	1 unit	1CB
	• Standard, with door interlock, with illumination kit	Gray	✓	--	--	--	3VA9137-0EK23		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK23		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK23		1	1 unit	1CB
	• EMERGENCY-OFF, with door interlock	Yellow-red	✓	--	--	--	3VA9137-0EK25		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK25		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK25		1	1 unit	1CB
	• EMERGENCY-OFF, with door interlock, with illumination kit	Yellow-red	✓	--	--	--	3VA9137-0EK27		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK27		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK27		1	1 unit	1CB
 3VA9277-0EK31	• Standard, with door interlock, with door open function	Gray	✓	--	--	--	3VA9137-0EK31		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK31		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK31		1	1 unit	1CB
	• Standard, with door interlock, with door open function, with illumination kit	Gray	✓	--	--	--	3VA9137-0EK33		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK33		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK33		1	1 unit	1CB
	• EMERGENCY -OFF, with door interlock, with door open function	Yellow-red	✓	--	--	--	3VA9137-0EK35		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK35		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK35		1	1 unit	1CB
	• EMERGENCY-OFF, with door interlock, with door open function, with illumination kit	Yellow-red	✓	--	--	--	3VA9137-0EK37		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0EK37		1	1 unit	1CB
			--	--	--	✓	3VA9447-0EK37		1	1 unit	1CB
 3VA9277-0GK00	• Without handle, with shaft stub, without door interlock	Gray	✓	--	--	--	3VA9137-0GK00		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0GK00		1	1 unit	1CB
			--	--	--	✓	3VA9447-0GK00		1	1 unit	1CB
	• For retrofitting with 3VL handle										

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Manual operators

	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A, 250 A	3VA6 400 A, 600 A						
Door mounted rotary operators											
 3VA9277-0FK21	Door mounted rotary operator • Rotary operator • Shaft 300 mm • Mounting tolerance compensation • Handle with masking plate 75 × 75 mm • Degree of protection IP65										
	Type	Color									
	• Standard	Gray	✓	--	--	--	3VA9137-0FK21		1	1 unit	1CB
			--	✓	✓	--	3VA9277-0FK21		1	1 unit	1CB
--			--	--	✓	3VA9447-0FK21		1	1 unit	1CB	
• Standard, with illumination kit	Gray	✓	--	--	--	3VA9137-0FK23		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK23		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK23		1	1 unit	1CB	
• EMERGENCY-OFF	Yellow-red	✓	--	--	--	3VA9137-0FK25		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK25		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK25		1	1 unit	1CB	
• EMERGENCY-OFF, with illumination kit	Yellow-red	✓	--	--	--	3VA9137-0FK27		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK27		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK27		1	1 unit	1CB	
• Standard NEMA 1, 3R, 12, with door interlock, with door open function	Gray	✓	--	--	--	3VA9137-0FK31		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK31		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK31		1	1 unit	1CB	
• Standard NEMA 1, 3R, 12, with door interlock, with door open function, with illumination kit	Gray	✓	--	--	--	3VA9137-0FK33		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK33		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK33		1	1 unit	1CB	
• EMERGENCY-OFF NEMA 1, 3R, 12, with door interlock, with door open function	Yellow-red	✓	--	--	--	3VA9137-0FK35		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK35		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK35		1	1 unit	1CB	
• EMERGENCY-OFF NEMA 1, 3R, 12, with door interlock, with door open function, with illumination kit	Yellow-red	✓	--	--	--	3VA9137-0FK37		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK37		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK37		1	1 unit	1CB	
• Standard NEMA 4/4X, with door interlock, with door open function	Gray	✓	--	--	--	3VA9137-0FK41		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK41		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK41		1	1 unit	1CB	
• Standard NEMA 4/4X, with door interlock, with door open function, with illumination kit	Gray	✓	--	--	--	3VA9137-0FK43		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK43		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK43		1	1 unit	1CB	
• EMERGENCY-OFF NEMA 4/4X, with door interlock, with door open function	Yellow-red	✓	--	--	--	3VA9137-0FK45		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK45		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK45		1	1 unit	1CB	
• EMERGENCY-OFF NEMA 4/4X, with door interlock, with door open function, with illumination kit	Yellow-red	✓	--	--	--	3VA9137-0FK47		1	1 unit	1CB	
		--	✓	✓	--	3VA9277-0FK47		1	1 unit	1CB	
		--	--	--	✓	3VA9447-0FK47		1	1 unit	1CB	
Supplementary handle for door mounted rotary operator (for NFPA-79 compliance)											
 3VA9477-0GC01	Type	Color									
	• Standard	Gray	✓	--	--	--	3VA9137-0GC01		1	1 unit	1CB
			--	✓	✓	--	3VA9477-0GC01		1	1 unit	1CB
			--	--	--	✓	3VA9477-0GC11		1	1 unit	1CB
• EMERGENCY-OFF	Yellow-red	✓	--	--	--	3VA9137-0GC05		1	1 unit	1CB	
		--	✓	✓	--	3VA9477-0GC05		1	1 unit	1CB	
		--	--	--	✓	3VA9477-0GC15		1	1 unit	1CB	



3VA9477-0GC01

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Manual operators

	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A, 250 A	3VA6 400 A, 600 A						
	Shaft 8 mm										
	Versions										
	• 300 mm long						8UD1900-2WA00		1	1 unit	1CB
	• 600 mm long						8UD1900-2WB00		1	1 unit	1CB
8UD1900-2WB00											
	Adapter for shaft 8 mm x 8 mm For door mounted rotary operator						8UD1900-2DA00		1	1 unit	1CB
8UD1900-2DA00											
	Door coupling 8 x 8 mm						8UD1900-2HA00		1	1 unit	1CB
8UD1900-2HA00											
	Fixing bracket for shaft	✓	--	--	--		3VA9137-0GA80		1	1 unit	1CB
		--	✓	✓	✓		3VA9477-0GA80		1	1 unit	1CB
3VA9477-0GA80											
	Variable depth adapter 8 x 8 mm						3VA9487-0GB10		1	1 unit	1CB
3VA9487-0GB10											
	Mounting tolerance compensation 8 x 8 mm						8UD1900-2GA00		1	1 unit	1CB
8UD1900-2GA00											

Handles

Handles

- With masking plate



8UD1731-0AB11

Type	Color	Tolerance compensation	Door open function								
• Standard	Gray	Without	Without	✓	✓	✓	--	8UD1721-0AB11	1	1 unit	1CB
		With	Without	✓	✓	✓	--	8UD1721-0AB21	1	1 unit	1CB
		Without	Without	--	--	--	✓	8UD1731-0AB11	1	1 unit	1CB
		With	Without	--	--	--	✓	8UD1731-0AB21	1	1 unit	1CB
		Without	With	✓	✓	✓	--	8UD1721-0AC11	1	1 unit	1CB
		With	With	✓	✓	✓	--	8UD1721-0AC21	1	1 unit	1CB
		Without	With	--	--	--	✓	8UD1731-0AC11	1	1 unit	1CB
		With	With	--	--	--	✓	8UD1731-0AC21	1	1 unit	1CB
• EMERGEN- CY-OFF	Yellow- red	Without	Without	✓	✓	✓	--	8UD1721-0AB15	1	1 unit	1CB
		With	Without	✓	✓	✓	--	8UD1721-0AB25	1	1 unit	1CB
		Without	Without	--	--	--	✓	8UD1731-0AB15	1	1 unit	1CB
		With	Without	--	--	--	✓	8UD1731-0AB25	1	1 unit	1CB
		Without	With	✓	✓	✓	--	8UD1721-0AC15	1	1 unit	1CB
		With	With	✓	✓	✓	--	8UD1721-0AC25	1	1 unit	1CB
		Without	With	--	--	--	✓	8UD1731-0AC15	1	1 unit	1CB
		With	With	--	--	--	✓	8UD1731-0AC25	1	1 unit	1CB

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Manual operators

Version	DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/P. unit	PG		
General accessories for manual operators								
 3VA9087-0SX10	Labeling plate for manual operators		3VA9087-0SX10	1	10 units	1CB		
 8UD1900-0KA20	Illumination kit for manual operators 24 V DC voltage	For molded case circuit breakers						
		3VA5, 125 ... 250 A Front mounted rotary operators	8UD1900-0KA10	1	1 unit	1CB		
		3VA6, 150 ... 600 A Front mounted rotary operators	8UD1900-0KA20	1	1 unit	1CB		
		3VA5, 3VA6, 125 ... 600 A Door mounted rotary operators	8UD1900-0KA20	1	1 unit	1CB		
 8UD1900-0MB01	Cylinder lock (type Kaba)	• For door mounted rotary operator (in the masking plate)	Key 1	8UD1900-0MB01	1	1 unit	1CB	
		• Standard masking plate	Key 2	8UD1900-0NB01	1	1 unit	1CB	
			Key 3	8UD1900-0PB01	1	1 unit	1CB	
			Key 4	8UD1900-0QB01	1	1 unit	1CB	
	• For door mounted rotary operator (in the masking plate)	Key 1	8UD1900-0MC01	1	1 unit	1CB		
		• with door open function	Key 2	8UD1900-0NC01	1	1 unit	1CB	
			Key 3	8UD1900-0PC01	1	1 unit	1CB	
			Key 4	8UD1900-0QC01	1	1 unit	1CB	
	 8UD1900-0MB05	Cylinder lock (type Kaba)	• For door mounted rotary operator (in the masking plate)	Key 1	8UD1900-0MB05	1	1 unit	1CB
			• EMERGENCY-OFF masking plate	Key 2	8UD1900-0NB05	1	1 unit	1CB
				Key 3	8UD1900-0PB05	1	1 unit	1CB
				Key 4	8UD1900-0QB05	1	1 unit	1CB
• For door mounted rotary operator (in the masking plate)		Key 1	8UD1900-0MC05	1	1 unit	1CB		
		• with door open function	Key 2	8UD1900-0NC05	1	1 unit	1CB	
			Key 3	8UD1900-0PC05	1	1 unit	1CB	
			Key 4	8UD1900-0QC05	1	1 unit	1CB	
 3VA9980-0VL10		Cylinder lock (type Ronis)	• Includes a lock with 2 keys					
			• For locking or interlocking					
			• For installation in all rotary operators with shaft stub					
			• For mounting in the adapter kit for the accessories compartment					
		Key 1	3VA9980-0VL10	1	1 unit	1CB		
		Key 2	3VA9980-0VL20	1	1 unit	1CB		
		Key 3	3VA9980-0VL30	1	1 unit	1CB		
		Key 4	3VA9980-0VL40	1	1 unit	1CB		
Note								
The cylinder lock adapter for rotary operators is also needed for locking or interlocking circuit breakers via rotary operators.								
 3VA9980-0LF20	Cylinder lock adapter for rotary operators		3VA9980-0LF20	1	1 unit	1CB		
To mount the cylinder lock in the rotary operator (also possible with door mounted rotary operator)								

3VA9578-0CC10

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Manual operators

	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG	
		3VA5 125 A	3VA5 250 A	3VA6 150 A, 250 A	3VA6 400 A, 600 A							
 3VA9478-OCX10	Auxiliary switches Leading from On to Off											
	Versions											
	• 1 CO						✓	✓	✓	✓	3VA9478-OCX10	1 1 unit 1CB
	• 2 CO						✓	✓	✓	✓	3VA9478-OCX20	1 1 unit 1CB
 3VA9278-ODK82	Variable depth flange mounted operator kit						✓	--	--	--	3VA9138-ODK82	1 1 unit 1CB
							--	✓	✓	--	3VA9278-ODK82	1 1 unit 1CB
	• Complete kit comprising						--	--	--	✓	3VA9448-ODK82	1 1 unit 1CB
	- Switching mechanism Adjustable for depths from 200 mm to 400 mm											
 3VA9278-ODK74	- Handle stainless steel, chrome-plated NEMA 4/4X, black = OFF, red = ON											
	• Complete kit comprising						✓	--	--	--	3VA9138-ODK74	1 1 unit 1CB
	- Switching mechanism Adjustable for depths from 200 mm to 400 mm						--	✓	✓	--	3VA9278-ODK74	1 1 unit 1CB
	- Handle stainless steel, epoxy coated NEMA 1/3R/12, black = OFF, red = ON						--	--	--	✓	3VA9448-ODK74	1 1 unit 1CB

Overview

MO320 front motor operator

The MO320 motor operator is mounted on the front of the 3VA UL molded case circuit breaker and opens and closes the molded case circuit breaker by means of digital input commands (e.g. from pushbuttons or a PLC). It can also be operated manually, however, and a handle is provided on the unit for this purpose.

The motor operator also features a clear MCCB position indicator which indicates ON and OFF and, via LED, whether the circuit breaker has tripped (TRIP). It is thus possible to identify the switching position of the molded case circuit breaker at any time.

Two different reset modes can be selected, i.e. in one mode, the operator resets the molded case circuit breaker automatically and in the other, it waits for confirmation by an OFF signal before it resets the breaker.

Furthermore, the motor operator can be locked in the OFF position by means of several padlocks.



Benefits

- Remote operation of the molded case circuit breaker by means of digital input commands
- Clear switching position indication including TRIP provides a quick visual overview and prevents operating errors
- Locking capability prevents unauthorized operations
- Even with a mounted MO320 the 3VA still meets the standards for isolating characteristics defined by IEC / EN 60947-1

Design

- The MO320 motor operator is simply snapped into position on a mounting frame that is installed instead of the accessories lid of the molded case circuit breaker.

Technical specifications

MO320 motor operator	3VA5 125 A	3VA5 250 A	3VA6 150 A/ 250 A	3VA6 400 A/ 600 A
Degree of protection	NEMA 1			
Rated control supply voltage (operating range of control supply voltage)	24 V ... 60 V DC (0.85 ... 1.26) 110 V ... 230 V AC/ 110 V ... 250 V DC (0.85 ... 1.1)			
Rating	250 W, max. 500 W (60 ms)			
Make time, typically	< 800 ms	< 1000 ms	< 1700 ms	
Break time, typically	< 800 ms	< 1000 ms	< 1400 ms	

Selection and ordering data

Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
	3VA5 125 A	3VA5 250 A	3VA6 150 A, 250 A	3VA6 400 A, 600 A						

Motor operators



3VA9277-0HA10

Motor operators without stored energy feature (MO320)

Versions

• 24 ... 60 V DC	✓	--	--	--		3VA9137-0HA10		1	1 unit	1CB
	--	✓	✓	--		3VA9277-0HA10		1	1 unit	1CB
	--	--	--	✓		3VA9447-0HA10		1	1 unit	1CB
• 110 ... 230 V AC, 110 ... 250 V DC	✓	--	--	--		3VA9137-0HA20		1	1 unit	1CB
	--	✓	✓	--		3VA9277-0HA20		1	1 unit	1CB
	--	--	--	✓		3VA9447-0HA20		1	1 unit	1CB

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Connection technology

Overview

The proper functioning and in particular the safety of electrical installations does not just depend on the quality and design of the components, but also on the method of installation.

The following aspects of electrical installations are of crucial importance for the implementation of a properly functioning connection to the 3VA UL molded case circuit breakers:

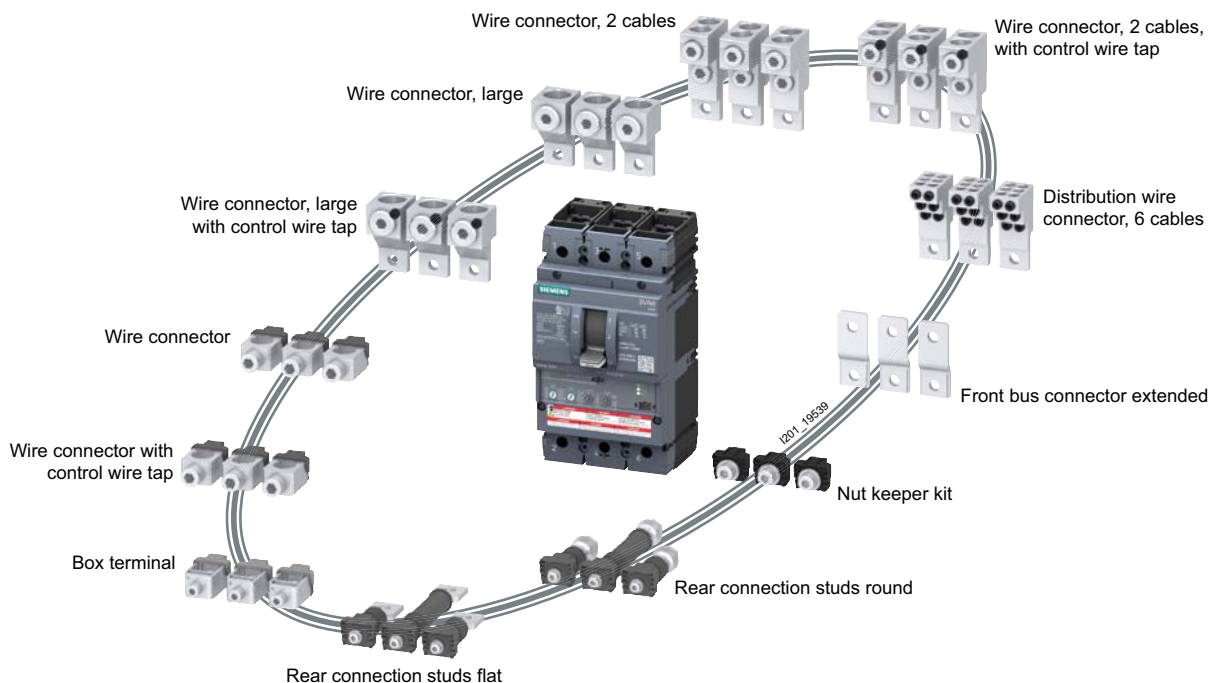
- Installation, e.g. connection to cables or busbars
- Dimensioning of the cables and busbars
- Installation medium, e.g. rigid or flexible

The following catalog pages provide all the information needed to ensure that a 3VA UL molded case circuit breaker is properly connected.

Connection technology for the 3VA UL molded case circuit breaker

The connection technology of the 3VA UL molded case circuit breaker is designed to support uncomplicated and convenient commissioning of the 3VA UL molded case circuit breakers and to meet all installation requirements.

To meet this objective, an extensive portfolio of connection components is available.



Note:

The following connection technologies are permissible for single-pole 3VA51 devices:

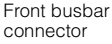
- Nut keeper
- Box terminal
- Aluminum/copper wire connector
- Front bus connector extended

Optionally, the versions with 3 or 4 single terminals/connection extensions can be ordered.

Note on 3VA6 100 % rated breakers:

For molded case circuit breakers with 400 A rated current in the 600 A size and 250 A rated current in the 250 A size, only copper wire connectors are permissible.

UL conductor cross-sections

Connection technology	Cable medium	Cables and busbars	3VA5		3VA6		
			125 A	250 A	250 A	400 A	600 A
	Solid	Cu cable	AWG 14 - AWG 10	AWG 10	AWG 10	--	--
	Stranded class B		AWG 14 - 3/0	AWG 10 - 3/0 AWG 4 - 350 kcmil	AWG 10 - 3/0 AWG 4 - 350 kcmil	1/0 - 500 kcmil	1/0 - 500 kcmil
	Stranded class C		AWG 14 - 3/0	AWG 10 - 3/0 AWG 4 - 350 kcmil	AWG 10 - 3/0 AWG 4 - 350 kcmil	1/0 - 500 kcmil	1/0 - 500 kcmil
	Solid	Al and Cu cable	AWG 14 - AWG 10	AWG 14 - AWG 10	AWG 14 - AWG 10	--	--
	Stranded class B		AWG 14 - 3/0	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 1 - 600 kcmil	--
	Stranded class C		AWG 14 - 3/0	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 1 - 600 kcmil	--
	Solid	Al and Cu cable	--	--	--	--	--
	Stranded class B		AWG 4 - 300 kcmil	AWG 2 - 350 kcmil	AWG 2 - 350 kcmil	--	--
	Stranded class C		AWG 4 - 300 kcmil	AWG 2 - 350 kcmil	AWG 2 - 350 kcmil	--	--
	Solid	Al and Cu cable	--	--	--	--	--
	Stranded class B		--	AWG 4 - 300 kcmil	AWG 4 - 300 kcmil	2/0 - 600 kcmil	2/0 - 600 kcmil
	Stranded class C		--	AWG 4 - 300 kcmil	AWG 4 - 300 kcmil	2/0 - 600 kcmil	2/0 - 600 kcmil
	Solid	Al and Cu cable	AWG 14 - AWG 10	AWG 14 - AWG 10	AWG 14 - AWG 10	AWG 14 - AWG 10	AWG 14 - AWG 10
	Stranded class B		AWG 14 - AWG 2	AWG 14 - AWG 2	AWG 14 - AWG 2	AWG 14 - AWG 2	AWG 14 - AWG 2
	Stranded class C		AWG 14 - AWG 2	AWG 14 - AWG 2	AWG 14 - AWG 2	AWG 14 - AWG 2	AWG 14 - AWG 2
	Solid	Cu cable	AWG 14 - AWG 10	AWG 14 - AWG 10	AWG 14 - AWG 10	--	--
	Stranded class B		AWG 14 - 2/0	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 1 - 600 kcmil	--
	Stranded class C		AWG 14 - 2/0	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 14 - 1/0 AWG 6 - 350 kcmil	AWG 1 - 600 kcmil	--
	Solid	Cu cable	--	--	--	--	--
	Stranded class B		--	--	--	2/0 - 600 kcmil	2/0 - 600 kcmil
	Stranded class C		--	--	--	2/0 - 600 kcmil	2/0 - 600 kcmil
	Front bus connectors (width x height)	Busbar	0.7 x 0.25 inch	1 x 0.3 inch		1.4 x 0.4 inch	
	Front bus connectors extended		0.9 x 0.3 inch	1.3 x 0.4 inch		1.6 x 0.5 inch	
	Front bus connectors flared		--		--	2.4 x 0.5 inch	

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Connection technology

IEC conductor cross-sections

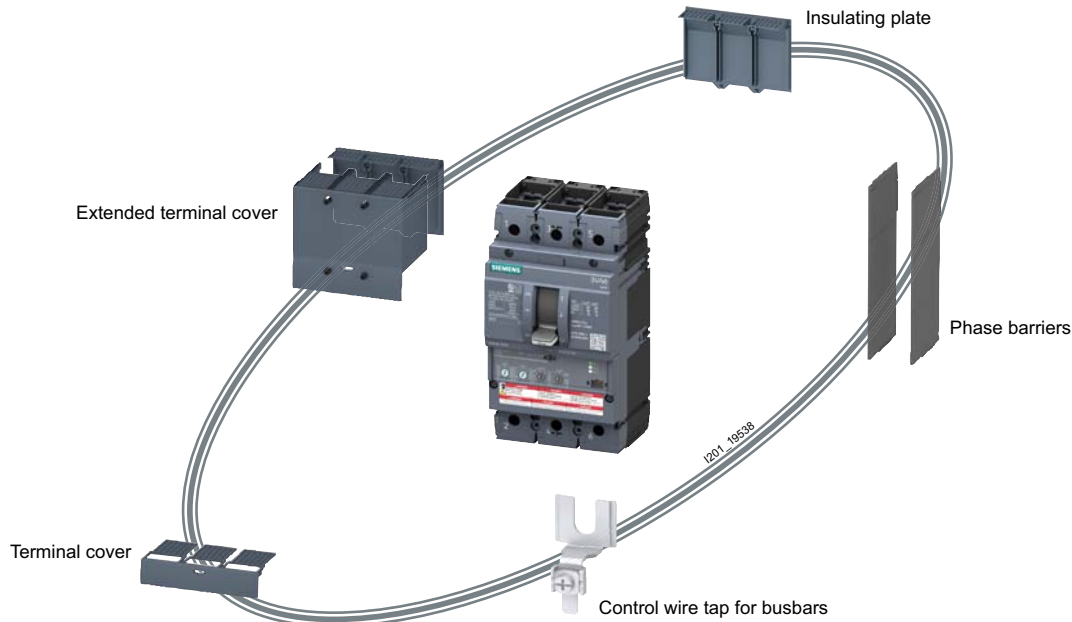
Connection technology	Cable medium	Cables and busbars	Dimensions	3VA5		3VA6		
				125 A	250 A	250 A	400 A	600 A
	Solid cable	Cu cable	mm ²	1.5 ... 16	6 ... 16	6 ... 16	--	--
	Stranded cable	Cu cable	mm ²	1.5 ... 70	6 ... 120 50 ... 185	6 ... 120 25 ... 185	35 ... 300	35 ... 300
	Finely stranded cable	Cu cable	mm ²	1.5 ... 50	10 ... 95 95 ... 150	10 ... 95 35 ... 150	25 ... 240	25 ... 240
	Finely stranded with insulated end sleeve	Cu cable	mm ²	1.5 ... 50	6 ... 95 50 ... 150	6 ... 95 25 ... 150	25 ... 240	25 ... 240
	Flexible copper busbar	Flexible connecting bar	mm x mm	2x ..6x [13 x 0.5] ... 2x ..9x [9 x 0.8]	2x ..6x [13 x 0.5] ... 2x ..6x [15.5 x 0.8] ... 2x ..6x [20 x 1]	2x ..6x [13 x 0.5] ... 2x ..6x [15.5 x 0.8] 2x ..6x [20 x 1]	2x ..10x [20 x 1] ... 2x ..10x [24 x 1]	2x ..10x [20 x 1] ... 2x ..10x [24 x 1]
	Solid cable	Cu/Al cable	mm ²	2.5/4 ... 16	--	1.5/4 ... 16	--	--
	Stranded cable	Cu/Al cable	mm ²	1.5/4 ... 95	35 ... 185	1.5/4 ... 50 16 ... 185	50 ... 300	--
	Finely stranded cable	Cu cable	mm ²	1.5 ... 35	35 ... 150	1.5 ... 35 25 ... 150	50 ... 240	--
	Finely stranded with insulated end sleeve	Cu cable	mm ²	1.5 ... 35	35 ... 150	1.5 ... 35 16 ... 120	50 ... 240	--
	Solid cable			--	--	--	--	--
	Stranded cable	Cu/Al cable	mm ²	25 ... 150	50 ... 240	50 ... 240	--	--
	Finely stranded cable	Cu cable	mm ²	25 ... 120	50 ... 185	50 ... 185	--	--
	Finely stranded with insulated end sleeve	Cu cable	mm ²	25 ... 95	50 ... 185	50 ... 185	--	--
	Solid cable			--	--	--	--	--
	Stranded cable	Cu/Al cable	mm ²	--	25 ... 150	25 ... 150	70 ... 300	70 ... 300
	Finely stranded cable	Cu cable	mm ²	--	25 ... 150	25 ... 150	70 ... 240	70 ... 240
	Finely stranded with insulated end sleeve	Cu cable	mm ²	--	25 ... 70	25 ... 70	70 ... 185	70 ... 185
	Solid cable	Cu/Al cable	mm ²	1.5/4 ... 16	1.5/4 ... 16	1.5/4 ... 16	1.5/4 ... 16	1.5/4 ... 16
	Stranded cable	Cu/Al cable	mm ²	1.5/4 ... 35	1.5/4 ... 35	1.5/4 ... 35	1.5/4 ... 35	1.5/4 ... 35
	Finely stranded cable	Cu cable	mm ²	1.5 ... 25	1.5 ... 25	1.5 ... 25	1.5 ... 25	1.5 ... 25
	Finely stranded with insulated end sleeve	Cu cable	mm ²	1.5 ... 25	1.5 ... 25	1.5 ... 25	1.5 ... 25	1.5 ... 25
	Direct (width x height)	Busbar	mm x mm	17 x 6.5	25 x 8	25 x 8	35 x 10	35 x 10
	Front connection bars extended	Busbar	mm x mm	22 x 8	32 x 10	32 x 10	40 x 12.5	40 x 12.5
	Front connection bars broadened	Busbar	mm x mm	30 x 8	35 x 10	35 x 10	60 x 12.5	60 x 12.5

Further connection accessories

Insulation / control wire taps

The connection accessories portfolio includes an extensive selection of insulating components (phase barriers, terminal

covers, etc.). Control wire taps for box terminals and busbars are also available.



Terminal covers

Terminal covers are insulating and sealable insulation accessories which protect against accidental contact with main current paths.

- Short terminal covers are normally installed for all types of front termination that do not exceed the geometric dimensions of the molded case circuit breaker (the termination area) (e.g. box terminal, nut keeper kit, etc.).
- Extended terminal covers are required when bar extensions or external terminals (i.e. terminals that exceed the dimensions of the termination area of the molded case circuit breaker) are installed. The extended terminal cover consists of two parts, an insulating plate and the top half of the terminal cover. Both parts are attached by screws and thus afford the degrees of protection specified above.
- Broad terminal covers are required when broadened connection bars are installed. The extended terminal cover consists of two parts, a broadened insulating plate and the top half of the terminal cover. Both parts are attached by screws and thus afford the degrees of protection specified above.

Insulating plates

The purpose of insulating plates is to insulate the main terminals of the molded case circuit breaker from the mounting plate (cubicle).

- Insulating plate: in combination with front bus connectors, for example
- Rear insulating plate offset: in combination with front bus connectors offset, for example

Control wire taps

All wire connectors can be ordered with or without control wire taps (see page 1/10, [Front terminals](#)). The following accessories are available to allow the implementation of a control wire tap in combination with a box terminal or busbar connection:

- Control wire taps for busbars: This tap is attached by screws directly to the busbar.

All control wire taps are rated for a maximum load of 6 A. Cables of up to 2.5 mm² / AWG 14 can be connected.

Benefits

- High degree of flexibility
- Cables and busbars can be connected quickly and easily to the 3VA UL molded case circuit breaker
- Extensive selection of connection accessories

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Connection technology

Selection and ordering data

	Version	Minimum cable cross-section (stranded) Class B	Maximum cable cross-section (stranded) Class B	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/P. unit	PG
				3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
Box terminals													
 3VA9233-OJA12	Box terminal • Connection of Cu cable • Included in scope of supply: 3 single terminals	AWG 14	3/0	✓	--	--	--		3VA9133-OJA11		1	1 unit	1CB
		AWG 10 ¹⁾	3/0 ¹⁾	--	✓	--	--		3VA9233-OJA11		1	1 unit	1CB
		AWG 4	350 kcmil	--	✓	--	--		3VA9233-OJA12		1	1 unit	1CB
		AWG 10	3/0	--	--	✓	--		3VA9143-OJA12		1	1 unit	1CB
		AWG 4	350 kcmil	--	--	✓	--		3VA9243-OJA12		1	1 unit	1CB
		1/0	500 kcmil	--	--	--	✓		3VA9473-OJA13		1	1 unit	1CB
 3VA9244-OJA12	Box terminal • Connection of Cu cable • Included in scope of supply: 4 single terminals	AWG 10	3/0	--	--	✓	--		3VA9144-OJA12		1	1 unit	1CB
		AWG 4	350 kcmil	--	--	✓	--		3VA9244-OJA12		1	1 unit	1CB
		1/0	500 kcmil	--	--	--	✓		3VA9474-OJA13		1	1 unit	1CB
Wire connectors													
 3VA9243-OJB12	Wire connector • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals	AWG 14	3/0	✓	--	--	--		3VA9133-OJB11		1	1 unit	1CB
		AWG 6	350 kcmil	--	✓	--	--		3VA9233-OJB12		1	1 unit	1CB
		AWG 14	1/0	--	--	✓	--		3VA9143-OJB11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9243-OJB12		1	1 unit	1CB
		AWG 1	600 kcmil	--	--	--	✓		3VA9373-OJB13		1	1 unit	1CB
 3VA9244-OJB12	Wire connector • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals	AWG 14	1/0	--	--	✓	--		3VA9144-OJB11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9244-OJB12		1	1 unit	1CB
		AWG 1	600 kcmil	--	--	--	✓		3VA9374-OJB13		1	1 unit	1CB
 3VA9243-OJG12	Wire connector with control wire tap¹⁾ • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals	AWG 14	3/0	✓	--	--	--		3VA9133-OJG11		1	1 unit	1CB
		AWG 6	350 kcmil	--	✓	--	--		3VA9233-OJG12		1	1 unit	1CB
		AWG 14	1/0	--	--	✓	--		3VA9143-OJG11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9243-OJG12		1	1 unit	1CB
		AWG 1	600 kcmil	--	--	--	✓		3VA9373-OJG13		1	1 unit	1CB
 3VA9244-OJG12	Wire connector with control wire tap¹⁾ • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals	AWG 14	1/0	--	--	✓	--		3VA9144-OJG11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9244-OJG12		1	1 unit	1CB
		AWG 1	600 kcmil	--	--	--	✓		3VA9374-OJG13		1	1 unit	1CB
 3VA9243-OJJ13	Wire connector, large • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover	AWG 4	300 kcmil	✓	--	--	--		3VA9133-OJJ12		1	1 unit	1CB
		AWG 2	350 kcmil	--	✓	--	--		3VA9233-OJJ13		1	1 unit	1CB
		AWG 2	350 kcmil	--	--	✓	--		3VA9243-OJJ13		1	1 unit	1CB
 3VA9244-OJJ13	Wire connector, large • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover	AWG 2	350 kcmil	--	--	✓	--		3VA9244-OJJ13		1	1 unit	1CB

¹⁾ Start of delivery scheduled for 1st quarter 2017

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Connection technology

	Version	Minimum cable cross-section (stranded) Class B	Maximum cable cross-section (stranded) Class B	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/P. unit	PG
				3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
 3VA9243-0JC13	Wire connector, large, with control wire tap¹⁾ • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover	AWG 4	300 kcmil	✓	--	--	--		3VA9133-0JC12		1	1 unit	1CB
		AWG 2	350 kcmil	--	✓	--	--		3VA9233-0JC13		1	1 unit	1CB
		AWG 2	350 kcmil	--	--	✓	--		3VA9243-0JC13		1	1 unit	1CB
 3VA9244-0JC13	Wire connector, large, with control wire tap¹⁾ • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover	AWG 2	350 kcmil	--	--	✓	--		3VA9244-0JC13		1	1 unit	1CB
 3VA9243-0JJ22	Wire connector, 2 cables • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover	AWG 4	300 kcmil	--	✓	--	--		3VA9233-0JJ22		1	1 unit	1CB
		AWG 4	300 kcmil	--	--	✓	--		3VA9243-0JJ22		1	1 unit	1CB
		2/0	600 kcmil	--	--	--	✓		3VA9473-0JJ23		1	1 unit	1CB
 3VA9244-0JJ22	Wire connector, 2 cables • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover	AWG 4	300 kcmil	--	--	✓	--		3VA9244-0JJ22		1	1 unit	1CB
		2/0	600 kcmil	--	--	--	✓		3VA9474-0JJ23		1	1 unit	1CB
 3VA9243-0JC22	Wire connector, 2 cables, with control wire tap¹⁾ • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 terminal cover extended	AWG 4	300 kcmil	--	✓	--	--		3VA9233-0JC22		1	1 unit	1CB
		AWG 4	300 kcmil	--	--	✓	--		3VA9243-0JC22		1	1 unit	1CB
		2/0	600 kcmil	--	--	--	✓		3VA9473-0JC23		1	1 unit	1CB
 3VA9244-0JC22	Wire connector, 2 cables, with control wire tap¹⁾ • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover	AWG 4	300 kcmil	--	--	✓	--		3VA9244-0JC22		1	1 unit	1CB
		2/0	600 kcmil	--	--	--	✓		3VA9474-0JC23		1	1 unit	1CB

¹⁾ Start of delivery scheduled for 1st quarter 2017

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Accessories and Spare Parts

Connection technology

	Version	Minimum cable cross-section (stranded) Class B	Maximum cable cross-section (stranded) Class B	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/P. unit	PG
				3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
 3VA9243-0JF60	Distribution wire connector, 6 cables • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover	AWG 14	AWG 2	✓	--	--	--		3VA9133-0JF60		1	1 unit	1CB
			AWG 2	--	✓	--	--		3VA9233-0JF60		1	1 unit	1CB
			AWG 2	--	--	✓	--		3VA9243-0JF60		1	1 unit	1CB
			AWG 2	--	--	--	✓		3VA9373-0JF60		1	1 unit	1CB
 3VA9244-0JF60	Distribution wire connector, 6 cables • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover	AWG 14	AWG 2	--	--	✓	--		3VA9244-0JF60		1	1 unit	1CB
			AWG 2	--	--	--	✓		3VA9374-0JF60		1	1 unit	1CB
Copper wire connectors													
 3VA9243-0JD12	Copper wire connector • Connection of Cu cable • Included in scope of supply: 3 single terminals	AWG 14	2/0	✓	--	--	--		3VA9133-0JD11		1	1 unit	1CB
		AWG 6	350 kcmil	--	✓	--	--		3VA9233-0JD12		1	1 unit	1CB
		AWG 14	1/0	--	--	✓	--		3VA9143-0JD11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9243-0JD12		1	1 unit	1CB
		AWG 1 ¹⁾	600 kcmil ¹⁾	--	--	--	✓		3VA9373-0JD13		1	1 unit	1CB
 3VA9244-0JD12	Copper wire connector • Connection of Cu cable • Included in scope of supply: 4 single terminals	AWG 14	1/0	--	--	✓	--		3VA9144-0JD11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9244-0JD12		1	1 unit	1CB
		AWG 1 ¹⁾	600 kcmil ¹⁾	--	--	--	✓		3VA9374-0JD13		1	1 unit	1CB
 3VA9243-0JK12	Copper wire connector, with control wire tap¹⁾ • Connection of Cu cable • Included in scope of supply: 3 single terminals	AWG 14	2/0	✓	--	--	--		3VA9133-0JK11		1	1 unit	1CB
		AWG 6	350 kcmil	--	✓	--	--		3VA9233-0JK12		1	1 unit	1CB
		AWG 14	1/0	--	--	✓	--		3VA9143-0JK11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9243-0JK12		1	1 unit	1CB
		AWG 1 ¹⁾	600 kcmil ¹⁾	--	--	--	✓		3VA9373-0JK13		1	1 unit	1CB
 3VA9244-0JK12	Copper wire connector, with control wire tap¹⁾ • Connection of Cu cable • Included in scope of supply: 4 single terminals	AWG 14	1/0	--	--	✓	--		3VA9144-0JK11		1	1 unit	1CB
		AWG 6	350 kcmil	--	--	✓	--		3VA9244-0JK12		1	1 unit	1CB
		AWG 1 ¹⁾	600 kcmil ¹⁾	--	--	--	✓		3VA9374-0JK13		1	1 unit	1CB
 3VA9473-0JE23	Wire connector, 2 cables • Connection of Cu cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover	2/0	600 kcmil	--	--	--	✓		3VA9473-0JE23		1	1 unit	1CB
 3VA9474-0JE23	Wire connector, 2 cables • Connection of Cu cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover	2/0	600 kcmil	--	--	--	✓		3VA9474-0JE23		1	1 unit	1CB

¹⁾ Start of delivery scheduled for 1st quarter 2017

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Connection technology

	Version	Minimum terminal thickness	Maximum terminal thickness	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
				3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
Nut keeper kits													
 3VA9243-QQA00	Nut keeper kit Included in delivery: • 3 single terminals	17 mm / 0.7 inch	6.5 mm / 0.25 inch	✓	--	--	--		3VA9133-QQA00		1	1 unit	1CB
		25 mm / 1 inch	8 mm / 0.3 inch	--	✓	--	--		3VA9233-QQA00		1	1 unit	1CB
		25 mm / 1 inch	8 mm / 0.3 inch	--	--	✓	--		3VA9243-QQA00		1	1 unit	1CB
		35 mm / 1.4 inch	10 mm / 0.4 inch	--	--	--	✓		3VA9473-QQA00		1	1 unit	1CB
 3VA9244-QQA00	Nut keeper kit Included in delivery: • 4 single terminals	25 mm / 1 inch	8 mm / 0.3 inch	--	--	✓	--		3VA9244-QQA00		1	1 unit	1CB
		35 mm / 1.4 inch	10 mm / 0.4 inch	--	--	--	✓		3VA9474-QQA00		1	1 unit	1CB
Bus connector extensions													
 3VA9131-QQB00	Front bus connectors extended Included in scope of supply: • 1 single connection	22 mm / 0.9 inch	8 mm / 0.3 inch	✓	--	--	--		3VA9131-QQB00		1	1 unit	1CB
 3VA9133-QQB00	Front bus connectors extended Included in scope of supply: • 3 single terminals • 2 phase barriers • 1 insulating plate	22 mm / 0.9 inch	8 mm / 0.3 inch	✓	--	--	--		3VA9133-QQB00		1	1 unit	1CB
 3VA9273-QQB00	Front bus connectors extended Included in scope of supply: • 3 single terminals • 1 insulating plate	32 mm / 1.3 inch	10 mm / 0.4 inch	--	✓	✓	--		3VA9273-QQB00		1	1 unit	1CB
		40 mm / 1.6 inch	12.5 mm / 0.5 inch	--	--	--	✓		3VA9473-QQB00		1	1 unit	1CB
 3VA9274-QQB00	Front bus connectors extended Included in scope of supply: • 4 single terminals • 1 insulating plate	32 mm / 1.3 inch	10 mm / 0.4 inch	--	--	✓	--		3VA9274-QQB00		1	1 unit	1CB
		40 mm / 1.6 inch	12.5 mm / 0.5 inch	--	--	--	✓		3VA9474-QQB00		1	1 unit	1CB
 3VA9473-QQC00	Front bus connectors offset Included in scope of supply: • 3 single terminals • 1 insulating plate Distance between pole centers: 400/600 A = 70 mm / 2.76 inches	60 mm / 2.4 inches	12.5 mm / 0.5 inch	--	--	--	✓		3VA9473-QQC00		1	1 unit	1CB
 3VA9474-QQC00	Front bus connectors offset Included in scope of supply: • 4 single terminals • 1 insulating plate Distance between pole centers: 400/600 A = 70 mm / 2.76 inches	60 mm / 2.4 inches	12.5 mm / 0.5 inch	--	--	--	✓		3VA9474-QQC00		1	1 unit	1CB

* You can order this quantity or a multiple thereof.

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	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
Rear connection studs flat											
	Rear connection studs flat Included in scope of supply: • 2 short terminals flat • 1 long terminal flat	✓	--	--	--		3VA9133-0QE00		1	1 unit	1CB
		--	✓	--	--		3VA9233-0QE00		1	1 unit	1CB
		--	--	✓	--		3VA9243-0QE00		1	1 unit	1CB
		--	--	--	✓		3VA9473-0QE00		1	1 unit	1CB
3VA9243-0QE00											
	Rear connection studs flat Included in scope of supply: • 2 short terminals flat • 2 long terminals flat	--	--	✓	--		3VA9244-0QE00		1	1 unit	1CB
		--	--	--	✓		3VA9474-0QE00		1	1 unit	1CB
3VA9244-0QE00											
	Rear connection stud flat Included in scope of supply: • 1 short terminal flat	✓	--	--	--		3VA9131-0QE10		1	1 unit	1CB
		--	✓	--	--		3VA9231-0QE10		1	1 unit	1CB
		--	--	✓	--		3VA9241-0QE10		1	1 unit	1CB
		--	--	--	✓		3VA9471-0QE10		1	1 unit	1CB
3VA9241-0QE10											
	Rear connection stud flat Included in scope of supply: • 1 long terminal flat	✓	--	--	--		3VA9131-0QE20		1	1 unit	1CB
		--	✓	--	--		3VA9231-0QE20		1	1 unit	1CB
		--	--	✓	--		3VA9241-0QE20		1	1 unit	1CB
		--	--	--	✓		3VA9471-0QE20		1	1 unit	1CB
3VA9241-0QE20											
Rear connecting studs											
	Rear connection studs round Included in scope of supply: • 1 long connecting stud • 2 short connecting studs	✓	--	--	--		3VA9133-0QF00		1	1 unit	1CB
		--	✓	--	--		3VA9233-0QF00		1	1 unit	1CB
		--	--	✓	--		3VA9243-0QF00		1	1 unit	1CB
		--	--	--	✓		3VA9473-0QF00		1	1 unit	1CB
3VA9243-0QF00											
	Rear connection studs round Included in scope of supply: • 2 long connecting studs • 2 short connecting studs	--	--	✓	--		3VA9244-0QF00		1	1 unit	1CB
		--	--	--	✓		3VA9474-0QF00		1	1 unit	1CB
3VA9244-0QF00											
	Rear connection stud round Included in scope of supply: • 1 short connecting stud	✓	--	--	--		3VA9131-0QF10		1	1 unit	1CB
		--	✓	--	--		3VA9231-0QF10		1	1 unit	1CB
		--	--	✓	--		3VA9241-0QF10		1	1 unit	1CB
		--	--	--	✓		3VA9471-0QF10		1	1 unit	1CB
3VA9241-0QF10											
	Rear connection stud round Included in scope of supply: • 1 long connecting stud	✓	--	--	--		3VA9131-0QF20		1	1 unit	1CB
		--	✓	--	--		3VA9231-0QF20		1	1 unit	1CB
		--	--	✓	--		3VA9241-0QF20		1	1 unit	1CB
		--	--	--	✓		3VA9471-0QF20		1	1 unit	1CB
3VA9241-0QF20											
Phase barriers											
	Phase barriers Included in scope of supply: • 2 phase barriers	✓	--	--	--		3VA9132-0WA00		1	1 unit	1CB
		--	✓	✓	--		3VA9272-0WA00		1	1 unit	1CB
		--	--	--	✓		3VA9472-0WA00		1	1 unit	1CB
3VA9272-0WA00											

* You can order this quantity or a multiple thereof.

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	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
Terminal covers											
	Terminal cover for 1-pole breakers	✓	--	--	--		3VA9131-0WD10		1	1 unit	1CB
	Terminal cover for 3-pole breakers	✓	--	--	--		3VA9131-0WD30		1	1 unit	1CB
		--	✓	✓	--		3VA9271-0WD30		1	1 unit	1CB
		--	--	--	✓		3VA9471-0WD30		1	1 unit	1CB
	Terminal cover for 4-pole breakers	--	--	✓	--		3VA9271-0WD40		1	1 unit	1CB
		--	--	--	✓		3VA9471-0WD40		1	1 unit	1CB
	Terminal cover extended for 3-pole breakers	✓	--	--	--		3VA9131-0WF30		1	1 unit	1CB
		--	✓	✓	--		3VA9271-0WF30		1	1 unit	1CB
		--	--	--	✓		3VA9471-0WF30		1	1 unit	1CB
	Terminal cover extended for 4-pole breakers	--	--	✓	--		3VA9271-0WF40		1	1 unit	1CB
		--	--	--	✓		3VA9471-0WF40		1	1 unit	1CB
	Terminal cover offset for 3-pole breakers	--	--	--	✓		3VA9471-0WG30		1	1 unit	1CB
	Terminal cover offset for 4-pole breakers	--	--	--	✓		3VA9471-0WG40		1	1 unit	1CB

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Version		For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
Insulating plates specially for fixed mounting											
	Rear insulating plate extended, 3-pole	✓	--	--	--		3VA9131-0WJ30		1	1 unit	1CB
		--	✓	✓	--		3VA9271-0WJ30		1	1 unit	1CB
		--	--	--	✓		3VA9471-0WJ30		1	1 unit	1CB
3VA9271-0WJ30											
	Rear insulating plate extended, 4-pole	--	--	✓	--		3VA9271-0WJ40		1	1 unit	1CB
		--	--	--	✓		3VA9471-0WJ40		1	1 unit	1CB
3VA9271-0WJ40											
	Rear insulating plate offset, 3-pole	--	--	--	✓		3VA9471-0WK30		1	1 unit	1CB
3VA9471-0WK30											
	Rear insulating plate offset, 4-pole	--	--	--	✓		3VA9471-0WK40		1	1 unit	1CB
3VA9471-0WK40											
Control wire taps specially for fixed mounting											
	Control wire tap for busbar ¹⁾	✓	--	--	--		3VA9130-0WC00		1	1 unit	1CB
		--	✓	✓	--		3VA9270-0WC00		1	1 unit	1CB
		--	--	--	✓		3VA9470-0WC00		1	1 unit	1CB
3VA9270-0WC00											

¹⁾ Start of delivery scheduled for 1st quarter 2017

Overview

Using plug-in and draw-out technology the 3VA UL molded case circuit breakers can be installed/removed or replaced quickly. In this case, the cables or busbars of the main current paths are connected to the connectors of the plug-in socket or the draw-out socket.

The incoming and outgoing feeder ends of the socket unit termination area are designed to match the relevant 3VA UL molded case circuit breaker. The major benefit of this design feature is that all terminal and connection variants of the molded case circuit breaker are fully compatible with the corresponding plug-in or draw-out unit.

A 3VA UL molded case circuit breaker in the plug-in or draw-out version has plug-in contacts on the input and load side of the main terminals. When the circuit breaker is plugged or moved into the socket, the plug-in contacts slide into the socket-side tulip contacts and connect the main current paths with the circuit breaker. In addition, auxiliary circuit connectors can be used to connect the auxiliary and control signals from the internal accessories of the molded case circuit breaker to the outside.

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

Plug-in technology

Plug-in technology is the more cost effective and space-saving of the two solutions. The plug-in version of the molded case circuit breaker is equipped with plug-in contacts on the back of the 3VA UL breaker that make a friction-locked and keyed connection with the corresponding mating connectors in the plug-in socket. The plug-in unit can be supplied as a complete kit or as a conversion kit for breakers including screw-fastened terminal covers.

Installation variants

3VA6 molded case circuit breakers are available in the following installation variants:

Draw-out technology

Draw-out versions of the molded case circuit breaker are also equipped with plug-in contacts at the main current paths. In addition, side walls including guide and support bolts are bolted to the sides of the molded case circuit breaker. With this version, the mating component is the draw-out socket. It is also equipped with a guide mechanism via which the molded case circuit breaker is moved into the draw-out socket by means of a handle in order to connect the breaker to the main circuits. The operator can clearly read from a position indicator whether the breaker is properly connected to the main circuits or safely isolated from them (so that it can be withdrawn).

Position signaling switches which transmit the position information CONNECT, TEST, and DISCONNECT can be integrated in the right-hand side wall of the draw-out unit. A special set of position signaling switches transfers the position data to the COM060 communication module via a preassembled wires.

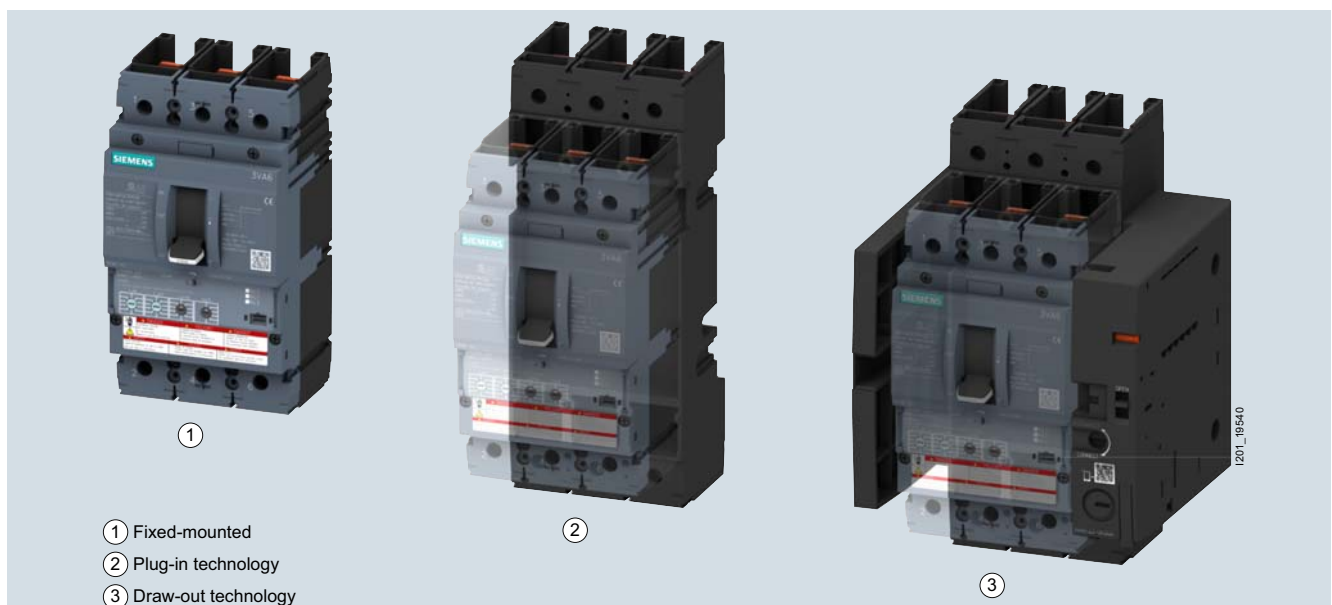
The draw-out complete kit as well as the draw-out conversion kit for one breaker are available. Both kits include screw-fastened terminal covers for the breaker. The crank handle for the draw-out unit must be ordered separately.

Note:

Plug-in and draw-out technologies are only available for the 3VA6 molded case circuit breaker with electronic trip units up to 250 A. For temperature reasons, the 100 % rated breakers cannot be used with plug-in or draw-out technology.

Benefits

- Molded case circuit breakers can be replaced quickly and easily for the purpose of overhaul or servicing
- Electrical isolation and clearly visible isolating distance
- Socket can be interlocked to prevent the 3VA UL 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, draw-out or fixed-mounted units
- Test of the auxiliary and control circuit connections in the test position of the draw-out unit possible without contacted main current paths



3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Plug-in and draw-out technology

Selection and ordering data

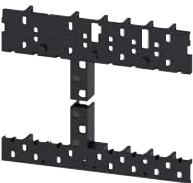
	Version	For molded case circuit breakers/rated current		DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA6 150 A, 250 A	3VA6 400 A						
Plug-in socket									
 3VA9143-0KP00	Plug-in unit, complete kit Comprising: • Plug-in socket • Plug-in unit, conversion kit • Mounting screw kit								
	Versions								
	• 3-pole	✓	--		3VA9143-0KP00		1	1 unit	1CB
	• 4-pole	✓	--		3VA9144-0KP00		1	1 unit	1CB
 3VA9144-0KP00	Plug-in unit, conversion kit Comprising: • Screw-fastened terminal covers for molded case circuit breakers • Plug-in contacts • Cable cage • Autotrip plunger								
	Versions								
	• 3-pole	✓	--		3VA9143-0KP10		1	1 unit	1CB
	• 4-pole	✓	--		3VA9144-0KP10		1	1 unit	1CB
 3VA9143-0KP10									
 3VA9144-0KP10									

	Version	For molded case circuit breakers/rated current		DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS* P. unit	PG		
		3VA6 150 A, 250 A	3VA6 400 A								
Draw-out units											
 3VA9143-0KD00 3VA9144-0KD00	Draw-out unit, complete kit Comprising: • Draw-out socket • Draw-out unit, conversion kit • Mounting screw kit										
	Versions										
	• 3-pole	✓	--	3VA9143-0KD00					1	1 unit	1CB
	• 4-pole	✓	--	3VA9144-0KD00					1	1 unit	1CB
	Draw-out unit, conversion kit Conversion kit comprising: • Screw-fastened terminal covers for molded case circuit breakers • Side wall • Plug-in contacts • Cable cage • Autotrip plunger										
 3VA9143-0KD10 3VA9144-0KD10	Versions										
	• 3-pole	✓	--	3VA9143-0KD10					1	1 unit	1CB
	• 4-pole	✓	--	3VA9144-0KD10					1	1 unit	1CB
	Note										
	The crank handle for the drawout unit must be ordered separately.										

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Plug-in and draw-out technology

	Version	For molded case circuit breakers/rated current		DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA6 150 A, 250 A	3VA6 400 A						
Cable cage									
	Cable cage for plug-in/draw-out unit 3-/4-pole (spare part) Cable duct for routing of the required cables from the internal accessories on the back of the circuit breaker	✓	--		3VA9167-0KB02		1	1 unit	1CB
Door feedthrough									
	Door feedthrough	✓	--		3VA9147-0KT00		1	1 unit	1CB
Autotrip plunger									
	Autotrip plunger								
	• Accessories for plug-in unit	✓	--		3VA9267-0KP81		1	1 unit	1CB
	• Accessories for draw-out unit	✓	--		3VA9267-0KD81		1	1 unit	1CB

3VA9267-0KP81

4

	Version	For molded case circuit breakers/ rated current		DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA6 150 A 250 A	3VA6 400 A						
Terminal covers									
Terminal cover for plug-in/draw-out unit (spare part) - To provide circuit breaker touch protection - For mounting on the molded case circuit breaker									
Versions									
	• 3-pole	✓	--		3VA9143-0KB01		1	1 unit	1CB
 3VA9143-0KB01									
	• 4-pole	✓	--		3VA9144-0KB01		1	1 unit	1CB
 3VA9144-0KB01									

3VA9143-0KB01

3VA9144-0KB01

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Plug-in and draw-out technology

	Version	DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
Other accessories							
	Communication link for draw-out unit Comprising: • Cable kit with 3 special position signaling switches • Connecting cable 3VA9987-0KC10		3VA9977-0KC00		1	1 unit	1CB
	Position signaling switches For draw-out unit		3VA9977-0KB00		1	1 unit	1CB
	Spare connecting cable To connect the position signaling switches for communication with the COM060		3VA9987-0KC10		1	1 unit	1CB
	Crank handle for draw-out unit Insulated, incl. crank holder		3VA9987-0KD81		1	1 unit	1CB
	Auxiliary circuit connector						
	Versions						
	• For all draw-out units		3VA9977-0KD80		1	1 unit	1CB
	• For all plug-in units		3VA9977-0KP80		1	1 unit	1CB
	Cylinder lock (type Ronis) • Includes a lock with 2 keys • For locking • For installation in all rotary operators with shaft stub • For mounting in the adapter kit for the accessories compartment		3VA9980-0VL10		1	1 unit	1CB
			3VA9980-0VL20		1	1 unit	1CB
			3VA9980-0VL30		1	1 unit	1CB
			3VA9980-0VL40		1	1 unit	1CB
	Cylinder lock adapter for draw-out unit • For fitting a cylinder lock in the right-hand side wall of the draw-out unit • To prevent unauthorized withdrawal or insertion of the circuit breaker into the draw-out unit • Circuit breaker can be locked in the CONNECT, TEST and DISCONNECT positions		3VA9970-0LF40		1	1 unit	1CB

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Communication and testing/commissioning devices

Overview

Metering function

The Rogowski coils integrated in the 3VA6 molded case circuit breakers are capable of delivering particularly accurate current measurements. An additional voltage tap is integrated in molded case circuit breakers equipped with an 8-series ETU, which means that energy data can also be measured – the 3VA6 molded case circuit breaker therefore offers a range of metering functions similar to those available with the tried-and-tested 7KM PAC measuring device!

An external current transformer for N conductors is available to allow direct measurement of the neutral conductor current with 3-pole molded case circuit breakers. When the 3-pole circuit breaker is installed in the 4-pole network, it is advisable to deploy the voltage tap at the neutral conductor so that the neutral point of the voltage network can be fixed.

Communication via the COM800/COM100 breaker data server

The 3VA6 molded case circuit breaker utilizes an innovative, modern communication concept. This concept is based on the COM800 breaker data server, which can link up to eight molded case circuit breakers to different bus systems. For applications involving only one 3VA6 molded case circuit breaker, the COM100 is an ideal alternative to the COM800 breaker data server.

The COM060 communication module in the molded case circuit breaker is wired via a T-Connector to the COM800/COM100 breaker data server. Integrated as standard in the COM800/COM100 breaker data server is an Ethernet interface with the Modbus TCP protocol to allow communication with powerconfig and the powermanager. Optional communication modules can be installed to provide different communication protocols. An additional benefit of this structure is that the communication costs per molded case circuit breaker decrease with every further circuit breaker that is connected to the COM800 breaker data server.

The communication equipment for the molded case circuit breakers can be installed and connected extremely easily, reliably and efficiently thanks to the connector system used. The 24 V DC supply to the electronic trip units is also reliably provided by these connections. The breaker data server utilizes independent supplementary functions to deliver valuable information about the connected molded case circuit breakers and the power distribution system.

Flexible communication thanks to optional expansion modules

With COM800/COM100, the 3VA6 molded case circuit breakers can be integrated into the relevant communication networks via the following optional expansion modules:

- Switched Ethernet PROFINET IO
- PROFIBUS DPV1
- RS 485 / Modbus RTU

3VA UL molded case circuit breakers are integrated in STEP 7 (TIA Portal), Version 14 or higher, and an additional engineering tool is not required. GSD and GSDML files are available for integration in third-party systems.

DSP800 display

The DSP800 display can be used to show breaker information (status, measured values, parameters) on the cubicle door. It communicates via the integral Ethernet interface with the COM800/COM100 and is thus able to display the data of up to 8 3VA6 molded case circuit breakers simultaneously.

EFB300 external function box

The EFB300 external function box is linked directly to the ETU of the 3VA6 molded case circuit breaker by a cable. It provides four digital outputs and one digital input. The powerconfig software can be used to set which information is to be output from the ETU via the four digital outputs:

- All reasons for tripping, categorized according to LSING
- Overload alarms AL1 and AL2
- Pre-trip alarm from overload protection system
- Load shedding and load pick-up
- Temperature alarm
- Output of an energy pulse (S0 signal), in combination with an 8-series ETU only

A zone selective interlocking functionality (ZSI) can also be implemented via the module.

Note:

A TD500 or the COM060 and COM800/COM100 combination is needed to program a change in the output assignments with powerconfig.

TD300 and TD500 test devices

The TD300 activation and trip box is a mobile, battery-operated local test device. One of its functions is to provide a temporary power supply to the Electronic Trip Units (ETUs) so that they can be operated and parameterized. It is also used to test the tripping function of the molded case circuit breaker.

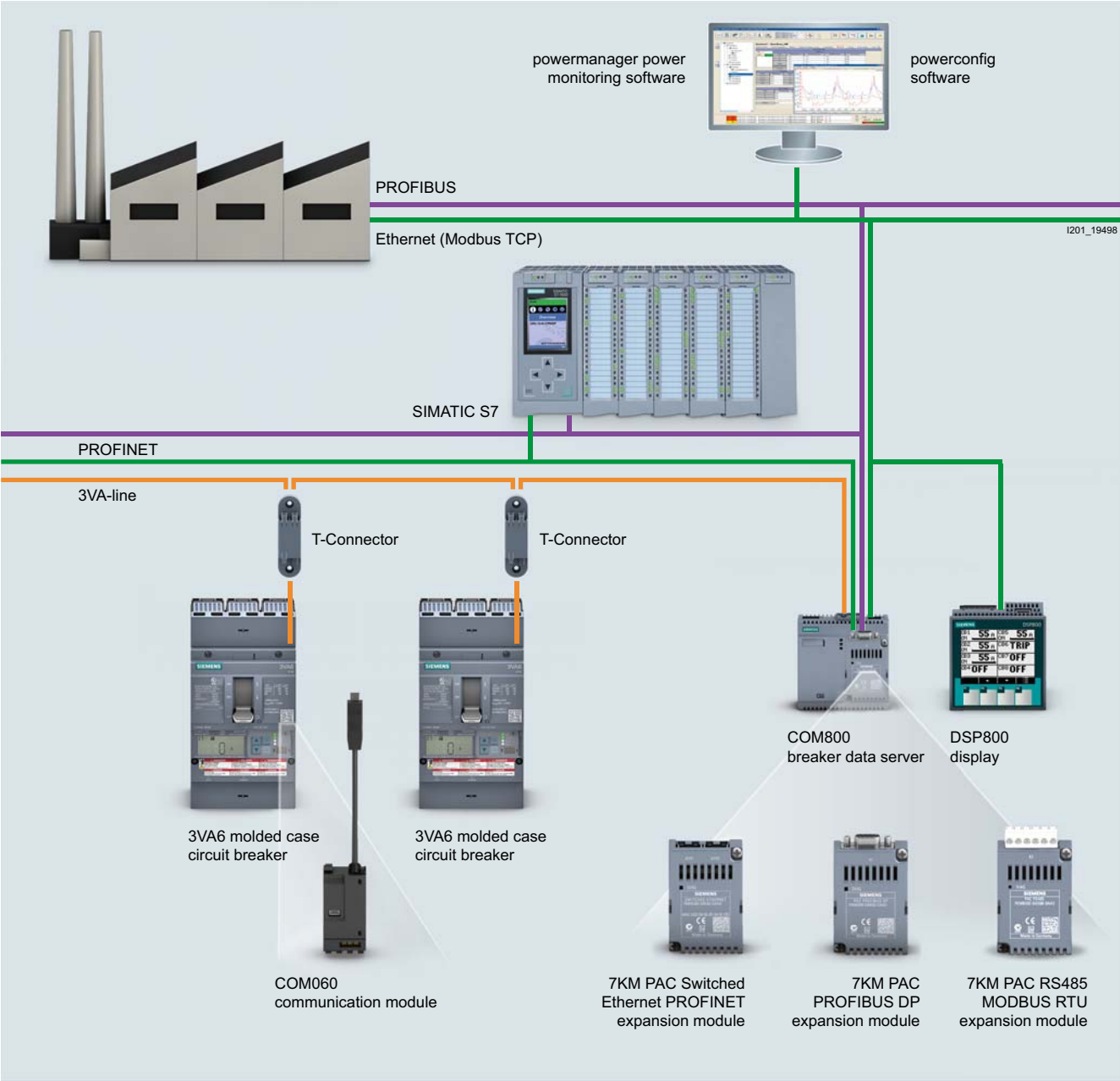
The TD500 mobile test device allows the proper functioning and connections of all connected system components to be tested at the breaker commissioning stage because it is capable of simulating every conceivable cause of breaker tripping. The molded case circuit breaker responds as if the emergency were real – it trips in accordance with the set parameters and transmits all alarm and trip signals to the connected components.

The TD500 test device can be used as a hand-held tester or in conjunction with a PC. In the latter case, the TD500 test device is connected to the PC via a supplied USB cable and acts as a gateway to the 3VA6 molded case circuit breaker. Using the powerconfig software, it is possible to read out or modify the setting parameters of the molded case circuit breaker and monitor the measured values.

Benefits

- The metering function integrated in 8-series ETUs can acquire energy data without requiring additional external transformers
- The COM800 breaker data server provides a cost-efficient communication interface for up to 8 3VA6 molded case circuit breakers
- Universal bus interfaces are available for the COM800/COM100 breaker data server
- Standardized engineering thanks to integration in STEP 7 (TIA Portal)
- Universal S0 interface for the output of energy pulses
- 100 test results can be stored with the TD500 test device
- Status and measured values of up to 8 molded case circuit breakers are displayed in the cubicle door using the DSP800

Design



3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Communication and testing/commissioning devices

Overview of the metering functions

Metering function ¹⁾			ETUs of the		Display		Communication
			5-series	8-series	Display in ETU	DSP800	COM800/COM100
Current							
Phase and neutral conductor currents	I_1, I_2, I_3, I_N	A	✓	✓	👁	👁	👁
Residual current to ground	I_g	A	✓	✓	👁	👁	👁
Phase with highest load		A	✓	✓	👁	👁	👁
Average value over the three phase currents	$I_{\text{LAVG}} = (I_1 + I_2 + I_3)/3$	A	--	✓	--	👁	👁
Unbalance of the phase currents	I_{nba}	%	--	✓	--	👁	👁
THD of the 3 phases	$\text{THDI}_1, \text{THDI}_2, \text{THDI}_3$	%	--	✓	--	👁	👁
Voltage							
Phase voltages incl. mean value	$U_{12}, U_{23}, U_{31}, U_{\text{phavg}}$	V	--	✓	👁	👁	👁
Voltages to N conductor incl. mean value	$U_{1N}, U_{2N}, U_{3N}, U_{\text{Navg}}$	V	--	✓	--	👁	👁
Voltage unbalance		%	--	✓	--	👁	👁
THD phase/phase and phase/N	$\text{THDI}_1, \text{THDI}_2, \text{THDI}_3$	%	--	✓	--	👁	👁
Power							
Active power, total and per phase	$P_1, P_2, P_3, P_{\text{tot}}$	kW	--	✓	👁 (P_{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	$\text{PF}_1, \text{PF}_2, \text{PF}_3, \text{PF}_{\text{avg}}$		--	✓	👁 (PF_{avg})	👁	👁
Energy							
Active energy, infeed and feedback	E_p	kWh	--	✓	👁	👁	👁
Reactive energy, infeed and feedback	E_q	kVArh	--	✓	--	👁	👁
Apparent energy	E_s	kVAh	--	✓	--	👁	👁
Frequency							
Present frequency	f	Hz	--	✓	👁	👁	👁
Maximum pointer function							
Min/max current, voltage, power	with time stamp		--	--	--	--	👁

¹⁾ Depending on ETU version

✓ Available

-- Not available

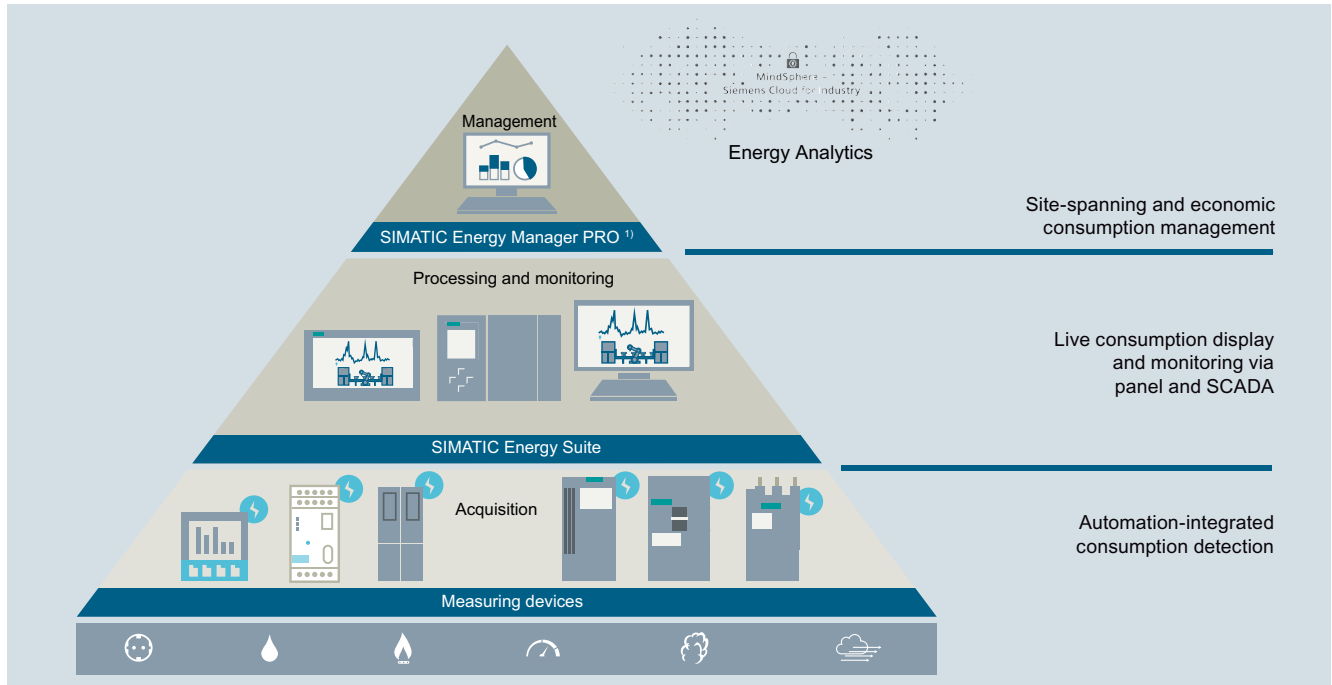
👁 Displayable

Accuracy specifications

Accuracy levels of the specified measured values of the 8-series ETU, including the integrated current sensors:

Measured value	Accuracy
Current	1 % in the range from 0.2 ... 1.2 I_n
Voltage	1 % in the range from 80 ... 800 V
Active power, active energy	2 % if current and voltage lie in the aforementioned ranges

Integrated energy management



SIMATIC Energy Suite

A high energy consumption and automated production are typical for many industries.

If you want to keep your energy costs under control in the long term and you are already focusing on the digital future, you will equip your plant with integrated energy measuring technology, thus anchoring your energy management in the automation of your production processes – which is where most energy is consumed. SIMATIC Energy Suite as an integrated option for the TIA Portal efficiently links energy management with automation, thus creating energy transparency in production. The significantly simplified configuration of power-measuring components from the SIMATIC, SENTRON, SINAMICS, SIRIUS and SIMOCODE product families²⁾ substantially reduces configuration effort. Thanks to consistent interfacing to SIMATIC Energy Manager PRO¹⁾ or to the cloud-based Energy Analytics service, recorded energy data can be expanded seamlessly into a cross-location energy management system.

This way, businesses can also do justice to all other required economic and management energy aspects, from purchasing energy through planning to energy controlling.

The advantages at a glance:

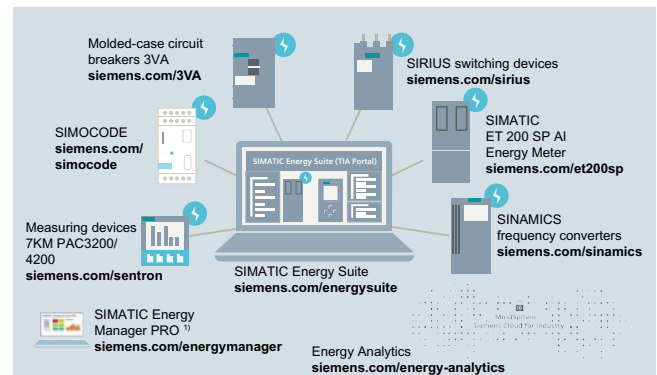
- Automatic generation of energy management data
- Integration into TIA Portal and the automation system
- Easy configuration

¹⁾ SIMATIC Energy Manager PRO is the innovative successor of SIMATIC B.Data

²⁾ Products from the SIMATIC, SENTRON, SINAMICS, SIRIUS and SIMOCODE product families. You will find details of currently supported devices here: www.siemens.com/energysuite-hardware

Highlights

- Simple and intuitive configuration instead of programming
- Automatic generation of the PLC energy program
- Convenient integration of measuring components from the Siemens portfolio and from other manufacturers
- Integrated into TIA Portal and the automation system
- Archiving in WinCC Professional or PLC
- Seamless interfacing to Energy Manager PRO and Energy Analytics



For more information on SIMATIC Energy Suite:
www.siemens.com/energysuite

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Communication and testing/commissioning devices

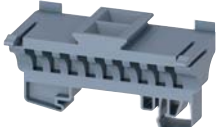
Selection and ordering data

	Version	For molded case circuit breakers/ rated current		DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA6 150 A, 250 A	3VA6 400 A, 600 A						
24 V module									
	24 V module • 24 V DC • For mounting in the right-hand accessories compartment of the 3VA6 • Optional energy supply for the ETU, also includes continuous operation of the ETU display and the metering function of the ETU 8-series	✓	--		3VA9177-0TB50		1	1 unit	1CB
		--	✓		3VA9377-0TB50		1	1 unit	1CB
Communication accessories in the molded case circuit breaker									
	COM060 communication module • For mounting in the right-hand accessories compartment of the 3VA6 molded case circuit breaker (including ETU power supply) • Communication with the COM800/COM100 breaker data server via the 3VA-line • Including a T-Connector	✓	--		3VA9177-0TB10		1	1 unit	1CB
		--	✓		3VA9377-0TB10		1	1 unit	1CB
Breaker data server									
	COM800 breaker data server • 2 terminating resistors • Central communication module for connecting up to eight 3VA6 molded case circuit breakers via the 3VA-line • Ethernet 10/100 Mbit/s interface • Module slot for plugging on an optional PROFIBUS DP, PROFINET or RS485 module				3VA9977-0TA10		1	1 unit	1CB
	COM100 breaker data server • 2 terminating resistors • Optimized, central communication module for connecting a 3VA6 molded case circuit breaker via the 3VA-line • Ethernet 10/100 Mbit/s interface • Module slot for plugging on an optional PROFIBUS DP, PROFINET or RS485 module				3VA9977-0TA20		1	1 unit	1CB
	7KM PAC PROFIBUS DP expansion module • The 7KM PAC PROFIBUS DP expansion module is used for connecting the COM800/COM100 breaker data server, and the 3VA molded case circuit breakers connected to it, to PROFIBUS DPV1. • The 7KM PAC PROFIBUS DP expansion module provides the status and measured quantities of the 3VA molded case circuit breaker for the PROFIBUS DP master. It receives information (e.g. commands) from the PROFIBUS DP master, and forwards this information to the 3VA molded case circuit breaker.				7KM9300-0AB01-0AA0		1	1 unit	1DD
	7KM PAC Switched Ethernet PROFINET expansion module • The 7KM PAC Switched Ethernet PROFINET expansion module is used to connect the COM800/COM100 breaker data server, and the connected 3VA molded case circuit breaker, to PROFINET via two Ethernet interfaces. • The 7KM PAC Switched Ethernet PROFINET expansion module provides the status and measured quantities of the 3VA molded case circuit breaker to PROFINET via the PROFINET IO, PROFinergy and Modbus TCP protocols.				7KM9300-0AE01-0AA0		1	1 unit	1DD
	7KM PAC RS485 Modbus RTU expansion module • The 7KM PAC RS485 Modbus expansion module is used to connect the COM800/COM100 breaker data server, and the 3VA molded case circuit breakers connected to it, to Modbus RTU. • The 7KM PAC RS485 Modbus expansion module provides the status and measured quantities of the 3VA molded case circuit breaker for the Modbus RTU master. It receives information (e.g. commands) from the Modbus RTU master, and forwards this information to the 3VA molded case circuit breaker.				7KM9300-0AM00-0AA0		1	1 unit	1DD

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Communication and testing/commissioning devices

	Version	DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/P. unit	PG
Accessories for communication							
	T-Connector • Spare part • Provides spur line feeder to COM060 and loops through to the next circuit breaker. • Includes a connection adapter for mounting on the 3VA6 breaker enclosure		3VA9987-0TG10		1	1 unit	1CB
3VA9987-0TG10							
	DIN rail adapter For snapping the T-Connector onto a DIN rail.		3VA9987-0TG11		1	1 unit	1CB
3VA9987-0TG11							
	Preassembled T-Connector-to-T-Connector or T-Connector-to-COM800/COM100 connecting cable • 0.4 m long • 1 m long • 2 m long • 4 m long		3VA9987-0TC10 3VA9987-0TC20 3VA9987-0TC30 3VA9987-0TC40		1 1 1 1	1 unit 1 unit 1 unit 1 unit	1CB 1CB 1CB 1CB
3VA9987-0TC10							
	Preassembled connecting cable for extending the COM060-to-T-Connector spur line connection • 0.4 m long • 0.8 m long		3VA9987-0TF20 3VA9987-0TF10		1 1	1 unit 1 unit	1CB 1CB
3VA9987-0TF20							
	Additional bus terminating resistors		3VA9987-0TE10		1	5 units	1CB
3VA9987-0TE10							
	Voltage tap to external N conductor Cable for connecting the neutral point for the metering function of the 8-series ETU, length 1.5 m		3VA9987-0UC10		1	1 unit	1CB
3VA9987-0UC10							
Display							
	DSP800 display • For displaying the status, measured values and parameters of up to 8 3VA6 molded case circuit breakers • Connection to the COM800/COM100 via Ethernet for displaying information of the COM800/COM100 and the connected 3VA6 molded case circuit breaker		3VA9977-0TD10		1	1 unit	1CB
3VA9977-0TD10							
External function box							
	EFB300 • External function box for connection to the ETU of the 3VA6 molded case circuit breaker • 4 digital outputs for information output • 1 digital input • ZSI functionality • SO interface • Including cable 1.5 m in length		3VA9977-0UA10		1	1 unit	1CB
3VA9977-0UA10							
	Connecting cable for EFB300 Spare part • Length 1.5 m • Length 3.0 m • Length 3.0 m for 3VA6 with EFB and RCD820		3VA9987-0UB10 3VA9987-0UB20 3VA9987-0UB30		1 1 1	1 unit 1 unit 1 unit	1CB 1CB 1CB

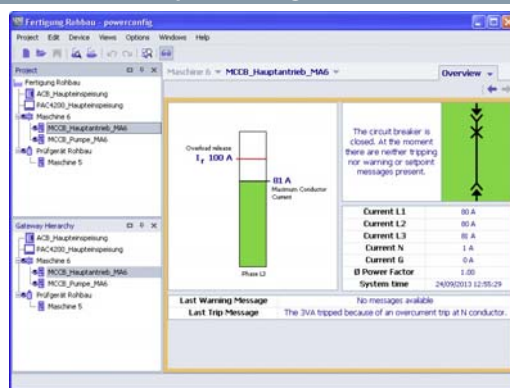
3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Communication and testing/commissioning devices

	Version	DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/P. unit	PG
Test devices							
	TD300 • Connection to the front interface of the ETU • Test device for activating the ETU and triggering a test trip		3VA9977-0MA10		1	1 unit	1CB
							
	TD500 • Connection to the front interface of the ETU • Initiation of various test trips (LSING) • USB interface for connection of a PC using powerconfig • ETU parameterization • Including external power supply unit with adapter for Europe, UL and GB • Including connecting cable to the 3VA6 molded case circuit breaker		3VA9977-0MB10		1	1 unit	1CB
							
	Spare part: External power supply for TD500 Spare part 110 ... 240 V AC		3VA9987-0MX10		1	1 unit	1CB
							
	Spare part: Cable for connecting the TD500 to the 3VA6 molded case circuit breaker		3VA9977-0MY10		1	1 unit	1CB
							

Commissioning and service software: powerconfig



- Commissioning and service software for 3VA6 molded case circuit breakers and further SENTRON components
- For Windows 7 and Windows 8
- Connection via TD500 or COM800/COM100
- Languages: English, German, Chinese, Spanish, Portuguese and Italian
- Enables complete use of the electronic components of the 3VA6 such as ETU, EFB300, DSP800, TD500
- Communication via PROFINET, PROFIBUS, Ethernet Modbus TCP and RS 485 with Modbus RTU
- See Catalog LV 10, "Software" "Configuring, visualizing and controlling with SENTRON".
- powerconfig can be downloaded free of charge from Siemens Industry Online Support at <http://support.automation.siemens.com/WW/view/en/63452759>
- You can find more information on the Internet at: www.siemens.com/sentron

Overview

With all types of 3VA molded case circuit breakers, a basic distinction is made between:

- Locking of molded case circuit breakers
- Interlocking of molded case circuit breakers

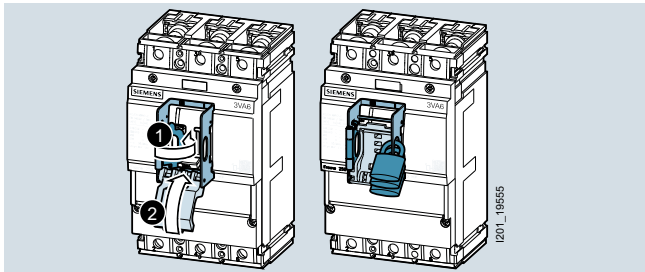
The padlock devices make it possible to lock the 3VA molded case circuit breaker in either the OFF or the ON operating position.

Using the 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

Blocking device for the handle

A blocking device mounted and latched on the handle allows the handle to be blocked and the molded case circuit breaker to be locked in the OFF or the ON position.



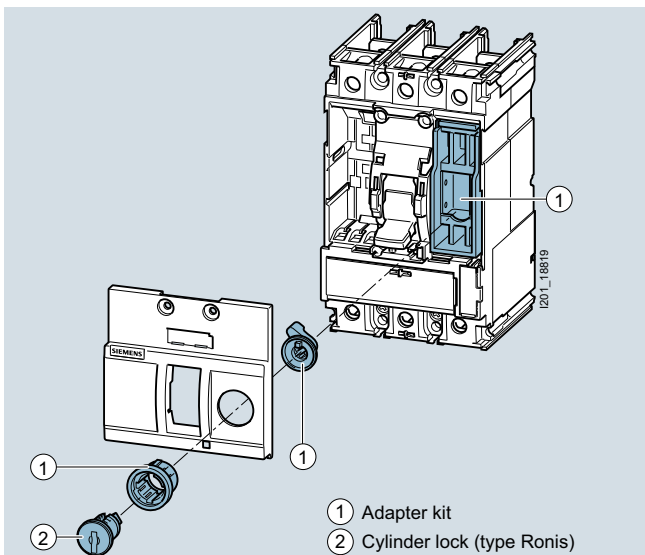
Locking technology

Locking with cylinder lock

The 3VA molded case circuit breaker can also be locked in the OFF (O) or ON (I) position by means of a cylinder lock supplied by Ronis. This prevents further operation of the circuit breaker.

In order to lock a molded case circuit breaker in a specific operating state, the following two components need to be ordered.

- Cylinder lock (type Ronis)
- Lock adapter kit for mounting the cylinder lock in the accessories compartment

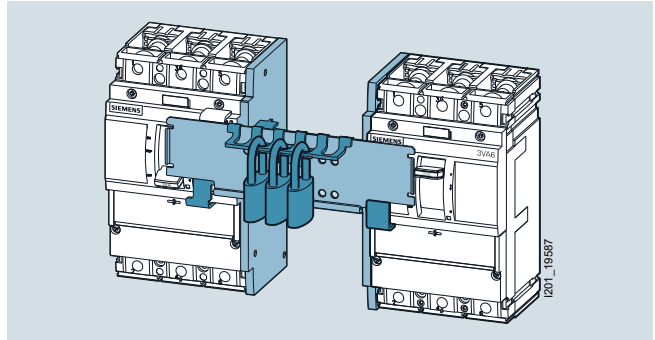


Interlocking technology

Interlocking by means of a sliding bar

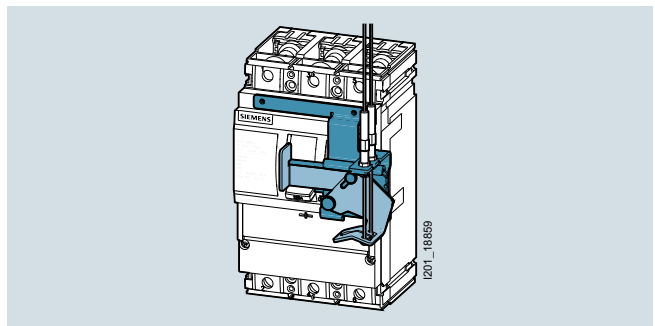
The sliding bar allows between two and three 3VA molded case circuit breakers of the same size to be mutually interlocked by means of a sliding bar.

With this device, the sliding bar is moved to block the handle of the interlocked molded case circuit breaker. For this reason, a molded case circuit breaker is always locked in the OFF position, while the released circuit breaker can still be operated.



Handle interlock using a Bowden cable

With the front Bowden cable interlock, it is possible to implement a mutual interlock between two or three molded case circuit breakers of different sizes. The front Bowden cable interlock operates according to the blocking principle. In order to implement this system, modules for the Bowden cable interlock must be mounted on the molded case circuit breakers to be included in the interlock arrangement. Each of these modules is equipped with a slide which blocks or releases operation of the handle.



Interlocking with cylinder locks

Using the cylinder lock (type Ronis), it is not only possible to lock a molded case circuit breaker, but also to create an interlock between an optional number of molded case circuit breakers of different sizes. To implement an interlocking application using cylinder locks, the adapter kit with the cylinder lock (type Ronis) must be fitted in the right-hand accessories compartment of each molded case circuit breaker to be included in the interlock arrangement and all breakers must be locked in the OFF position. In order to ensure reliable functioning of the interlock, only one key may be used for the entire interlock application! All other keys must be kept or locked away in a safe place. This one key must be used as the release instrument for only one molded case circuit breaker at a time! To release or operate a molded case circuit breaker, the cylinder lock must be turned to the "Unlocked" position with this one particular key. Only then can the handle of the circuit breaker be moved to the ON position. When the cylinder lock is in the "Unlocked" position, the key cannot be removed and must be left in the lock.

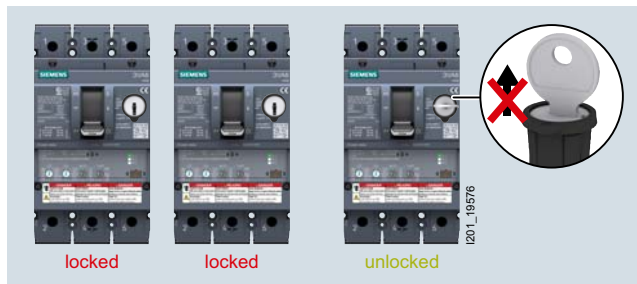
3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Accessories for locking, blocking and interlocking

To implement an interlocking application involving multiple molded case circuit breakers, the following two components must be ordered for each circuit breaker:

- Cylinder lock (type Ronis) with identical key number
- Interlock adapter kit for mounting the cylinder lock in the accessories compartment



Rear interlock

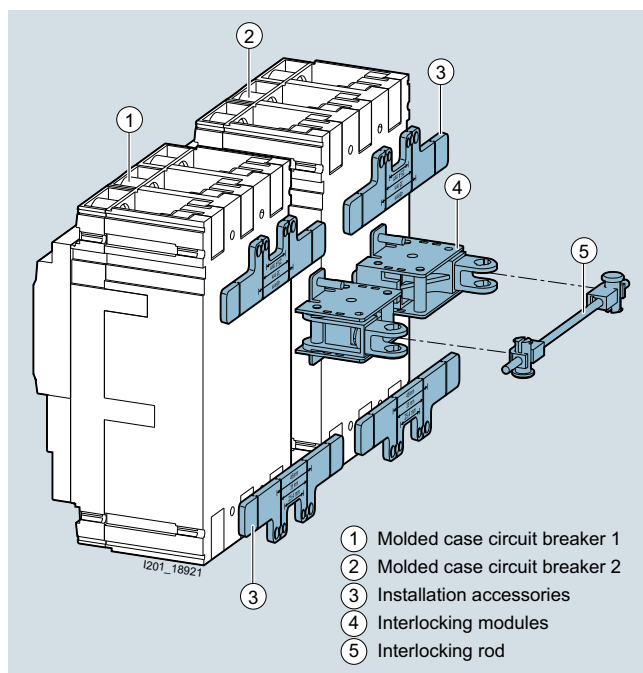
The rear interlock system allows implementation of an interlock without restricting the number of accessories which can be installed at the front of the 3VA molded case circuit breaker. Using the rear interlock, it is possible to create an interlock between two molded case circuit breakers of different sizes based on the blocking principle. When one molded case circuit breaker closes, the other circuit breaker is prevented from closing by a tappet which engages in the breaker mechanism directly from the rear panel of the molded case circuit breaker.

This system requires the installation of two interlocking modules which are mounted behind the molded case circuit breakers and behind the mounting frame of the cubicle. The two interlocking modules are interconnected by means of the interlocking rod.

A mounting plate comprising a plate and two profile rails is available as an accessory to assist installation.

Rear interlock for plug-in or draw-out units

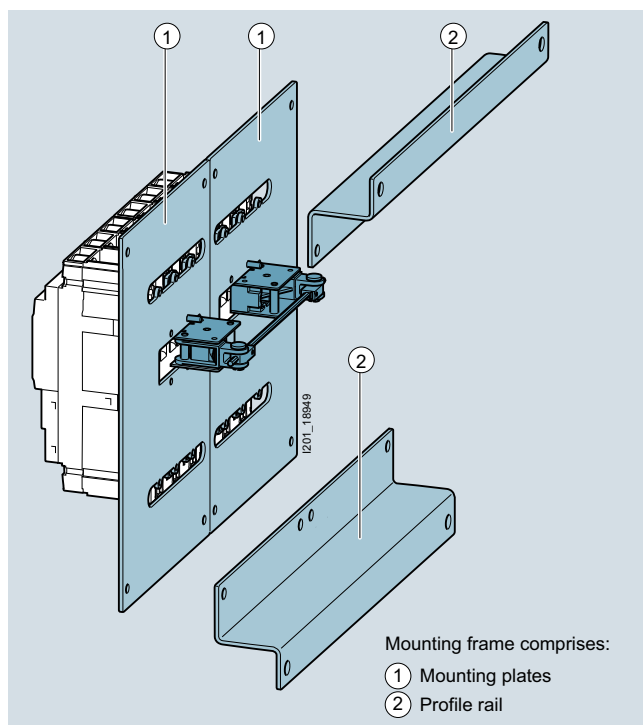
In order to install a rear interlock for plug-in or draw-out versions of the molded case circuit breakers, the tappet needs to be lengthened. The rear interlock for plug-in or draw-out versions is offered as a complete kit.



Rear interlock without mounting frame

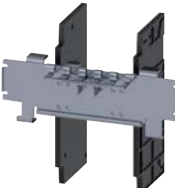
Benefits

- Broad range of applications thanks to flexibility of interlocking technology
- Locking technology ensures safe locking of molded case circuit breakers, e.g. for maintenance purposes
- No restriction to use of internal accessories or to scope of accessories installed at the front of the molded case circuit breaker (when a rear interlock is deployed)
- Molded case circuit breakers of different sizes can be mutually interlocked.



Rear interlock with mounting frame

Selection and ordering data

	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
Accessories for locking, blocking and interlocking											
	Blocking device for the handle	✓	--	--	--		3VA9038-OLB10		1	1 unit	1CB
		--	✓	✓	✓		3VA9378-OLB10		1	1 unit	1CB
3VA9378-OLB10											
	Adapter kit for mounting the cylinder lock (type Ronis) in the accessories compartment of the molded case circuit breaker Comprising 2 cylinder lock casings (one for locking and one for interlocking) and the appropriate mounting module	Notes	✓	--	--	--	3VA9137-OLF10		1	1 unit	1CB
		• To implement an interlock or a lock: select suitable cylinder lock(s)	--	✓	--	--	3VA9237-OLF10		1	1 unit	1CB
		• For an interlock: select the same cylinder lock number	--	--	✓	--	3VA9147-OLF10		1	1 unit	1CB
			--	--	--	✓	3VA9347-OLF10		1	1 unit	1CB
	Cylinder lock (type Ronis) • Includes a lock with 2 keys • For locking or interlocking • For installation in all rotary operators with shaft stub • For mounting in the adapter kit for the accessories compartment	Versions									
		• Key 1 (lock number 1)	✓	✓	✓	✓	3VA9980-OVL10		1	1 unit	1CB
		• Key 2 (lock number 2)	✓	✓	✓	✓	3VA9980-OVL20		1	1 unit	1CB
		• Key 3 (lock number 3)	✓	✓	✓	✓	3VA9980-OVL30		1	1 unit	1CB
		• Key 4 (lock number 4)	✓	✓	✓	✓	3VA9980-OVL40		1	1 unit	1CB
3VA9980-OVL10											
	Sliding bar Complete kit for interlocking 2 circuit breakers	Note	✓	--	--	--	3VA9138-0VF30		1	1 unit	1CB
		The article number must be ordered 2 x to implement an interlock between 3 breakers of the same size.	--	✓	--	--	3VA9238-0VF30		1	1 unit	1CB
			--	--	✓	--	3VA9148-0VF30		1	1 unit	1CB
			--	--	--	✓	3VA9348-0VF30		1	1 unit	1CB
3VA9148-0VF30											
	Module for handle interlock using a Bowden cable	Notes	✓	--	--	--	3VA9137-0VF10		1	1 unit	1CB
		• A separate handle interlock module is required for each switching device.	--	✓	--	--	3VA9237-0VF10		1	1 unit	1CB
		• A Bowden cable must be ordered separately.	--	--	✓	--	3VA9147-0VF10		1	1 unit	1CB
			--	--	--	✓	3VA9347-0VF10		1	1 unit	1CB
3VA9147-0VF10											
	Rear interlock with rod Complete kit		✓	✓	✓	✓	3VA9078-OVM10		1	1 unit	1CB
		Note Mounting frames are not included in scope of supply.									
3VA9078-OVM10											
	Rear interlock with rod Complete kit for plug-in/draw-out unit		✓	✓	✓	✓	3VA9078-OVM30		1	1 unit	1CB
		Note Mounting frames are not included in scope of supply.									
3VA9078-OVM30											

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Accessories for locking, blocking and interlocking

	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						
	Bowden cable										
	Versions										
	• Length 0.6 m	✓	✓	✓	✓		3VA9980-0VC10		1	1 unit	1CB
	• Length 1.0 m	✓	✓	✓	✓		3VA9980-0VC20		1	1 unit	1CB
	• Length 1.5 m	✓	✓	✓	✓		3VA9980-0VC30		1	1 unit	1CB
3VA9980-0VC10											
	Mounting frame for rear interlock with rod										
	The following are required for the complete mounting frame kit:										
	Versions										
	• Profile rails	✓	✓	✓	✓		3VA9078-0VK10		1	1 unit	1CB
	• Mounting plates	✓	--	--	--		3VA9138-0VK20		1	1 unit	1CB
		--	✓	--	--		3VA9238-0VK20		1	1 unit	1CB
		--	--	✓	--		3VA9248-0VK20		1	1 unit	1CB
		--	--	--	✓		3VA9448-0VK20		1	1 unit	1CB
3VA9248-0VK20											
Notes											
• 2 mounting plates are required. They are screwed onto the profile rail that can be ordered above. Different breakers can be mutually interlocked.											
• Breakers with plug-in unit can be mounted on mounting plates, but the profile rails cannot be used.											

Selection and ordering data

	Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
		3VA5	3VA5	3VA6	3VA6						
		125 A	250 A	150 A, 250 A	400 A, 600 A						
Cover frames for door cut-out											
 3VA9143-OSB10	Cover frame for door cut-out for molded case circuit breaker										
	Versions										
	• 3-pole, door cutout without trip unit	✓	--	--	--	3VA9033-OSB10		1	1 unit	1CB	
		--	✓	✓	--	3VA9143-OSB10		1	1 unit	1CB	
		--	--	--	✓	3VA9373-OSB10		1	1 unit	1CB	
		✓	--	--	--	3VA9033-OSB20		1	1 unit	1CB	
	• 3-pole, door cutout with trip unit	--	✓	--	--	3VA9233-OSB20		1	1 unit	1CB	
		--	--	✓	--	3VA9143-OSB20		1	1 unit	1CB	
		--	--	--	✓	3VA9343-OSB20		1	1 unit	1CB	
		• 4-pole, door cutout without trip unit	✓	--	--	--	3VA9034-OSB10		1	1 unit	1CB
	--		✓	✓	--	3VA9144-OSB10		1	1 unit	1CB	
	--		--	--	✓	3VA9374-OSB10		1	1 unit	1CB	
	• 4-pole, door cutout with trip unit	✓	--	--	--	3VA9034-OSB20		1	1 unit	1CB	
		--	✓	--	--	3VA9234-OSB20		1	1 unit	1CB	
		--	--	✓	--	3VA9144-OSB20		1	1 unit	1CB	
		--	--	--	✓	3VA9344-OSB20		1	1 unit	1CB	
	Cover frame for door cut-out for MO320 motor operators	✓	--	--	--	3VA9033-OSB10		1	1 unit	1CB	
		--	✓	✓	--	3VA9237-OSB30		1	1 unit	1CB	
		--	--	--	✓	3VA9377-OSB30		1	1 unit	1CB	
	Cover frame for door cut-out for front mounted rotary operator	✓	--	--	--	3VA9033-OSB10		1	1 unit	1CB	
		--	✓	✓	--	3VA9143-OSB10		1	1 unit	1CB	
		--	--	--	✓	3VA9373-OSB10		1	1 unit	1CB	
	Cover frame for door cut-out for front mounted rotary operator with door interlock	--	--	--	✓	3VA9377-OSB30		1	1 unit	1CB	
	Cover frame for door cut-out for door feedthrough	--	✓	✓	--	3VA9233-OSB20		1	1 unit	1CB	
		--	--	--	✓	3VA9333-OSB20		1	1 unit	1CB	
	Labeling plate for cover frame						3VA9087-OSX10		1	10 units	1CB
 3VA9087-OSX10											

3VA UL Molded Case Circuit Breakers

Accessories and Spare Parts

Other

Version	For molded case circuit breakers/ rated current				DT	Article No.	Price per PU	PE (UNIT, SET, M)	PS*/ P. unit	PG
	3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA6 400 A 600 A						

Adapter for 60 mm busbar system (8US)



Busbar adapter system with 60 mm busbar center-to-center spacing.

For further information, see [Catalog LV 10, Busbar systems, 60 mm busbar system \(8US\) up to 1600 A, device adapters and device holders](#).

Versions

- 3-pole

✓	--	--	--	8US1211-4SS00	1	1 unit	1CU
--	✓	✓	--	8US1213-4AP03	1	1 unit	1CU
--	--	--	✓	8US1213-4AH04	1	1 unit	1CU

8US1213-4AP03

Mounting screw kit



3VA9151-0SS10

Mounting screw kit

Metric Versions

- For fixed-mounted molded case circuit breakers

- 1-pole	✓	--	--	--	3VA9151-0SS10	1	1 unit	1CB
- 2 and 3-pole (except 125 A/160 A with 55 kA and 70 kA)	✓	✓	--	--	3VA9116-0SS10	1	1 unit	1CB
- 3-pole (125 A/160 A with 55 kA and 70 kA) and 4-pole	✓	✓	--	--	3VA9114-0SS10	1	1 unit	1CB
- 3-pole	--	--	✓	--	3VA9126-0SS10	1	1 unit	1CB
- 4-pole	--	--	✓	--	3VA9124-0SS10	1	1 unit	1CB
- 3- and 4-pole	--	--	--	✓	3VA9328-0SS10	1	1 unit	1CB
• For plug-in and draw-out units	--	--	✓	--	3VA9124-0SS10	1	1 unit	1CB



5/2	Catalog notes
5/3	Ordering notes
5/5	Further documentation
5/9	Quality management
5/10	Standards and approvals
5/12	Siemens contacts
5/13	Service & Support
5/14	Comprehensive support from A to Z
5/15	Software licenses
5/17	Article No. index incl. export markings
5/36	Conditions of sale and delivery

Overview

Trademarks

All product designations may be registered trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes may violate the rights of the owner.

Amendments

Unless stated otherwise on the individual pages of this catalog, we reserve the right to make changes, in particular to the specified values, measurements and weights.

Dimensions

All dimensions are given in mm.

Illustrations

The illustrations are not binding.

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.

Further technical information is available at www.siemens.com/lowvoltage/product-support

- under "Entry type":
 - Application example
 - Certificate
 - Characteristic
 - Download
 - FAQ
 - Manual
 - Product note
 - Software archive
 - Technical data

Configurators can be found under www.siemens.com/lowvoltage/configurators

Assembly, operation and maintenance

Always heed the operating instructions and notices on individual products during assembly, operation and maintenance.

Symbols

In the table below, you will find all symbols concerning connections that can occur in this catalog. In combination with orange highlighting, these identify special selection criteria.

Connections	
	Screw connection
	Ring cable lug connection
	Spring-loaded terminals

EM LP Kataloghinweise En 26.08.2016
(De 20.03.2015)

Logistics

General

With regard to delivery service, communications and environmental protection, our logistics service ensures "quality from the moment of ordering right through to delivery". By designing our infrastructure according to customer requirements and implementing electronic order processing, we have successfully optimized our logistics processes.

To this end, we supply preferred types marked with ► ex works.

We regard the DIN ISO 9001 certification and consistent quality checks as an integral part of our services.

Electronic order processing is fast, cost-efficient and error-free. Please contact us if you want to benefit from these advantages.

Packaging, packing units

The packaging in which our equipment is dispatched provides protection against dust and mechanical damage during transport, thus ensuring that all our products arrive in perfect condition.

We select our packaging for maximum environmental compatibility and reusability (e.g. crumpled paper for protection during transport in packages up to 32 kg) and, in particular, with a view to reducing waste.

With our multi-unit and reusable packaging, we offer you specific types of packaging that are both kind to the environment and tailored to your requirements:

Your advantages at a glance:

- Lower ordering costs.
- Cost savings through same-material type packaging: Low/no disposal costs.
- Reduced time and cost thanks to short unpacking times.
- "Just-in-time" delivery directly to the production line helps reduce stock: Cost savings through reduction of storage areas.
- Fast assembly thanks to supply in sets.
- Standard Euro boxes - corresponding to the Euro pallet modular system - suitable for most conveyor systems.
- Active contribution to environmental protection.

Unless stated otherwise in the "Selection and ordering data" of this catalog, our products are supplied individually packed.

For small parts/accessories, we offer you cost-effective packaging units as standard packs containing more than one item, e.g. 5, 10, 50 or 100 units. It is essential that whole number multiples of these quantities be ordered to ensure satisfactory quality of the products and problem-free order processing.

The products are delivered in a neutral carton. The label includes warning notices, the CE marking, and device descriptions in English and German.

In addition to the Article No. (MLFB) and the number of items in the packaging, the operating instructions order number (Instr.-Order-No.) is also specified. They can be obtained from your local Siemens representative (you will find a list at www.siemens.com/lowvoltage/contact).

Most device Article No.'s can be obtained by means of the EAN barcode to simplify ordering and storage logistics.

The associated master data, too, is available from your local Siemens representative.

Ordering notes

Overview

Ordering very small quantities

When very small orders are placed, the costs associated with order processing are greater than the order value. We therefore recommend that you combine several small orders. Where this is not possible, we regret that we are obliged to make a small processing charge: for orders with a net goods value of less than \$400 are subject to a \$25 handling fee to cover our order processing and invoicing costs.

Explanations of Selection and Ordering Data**Delivery time class (DT)**

DT	Meaning	
▶	Preferred type	Preferred types are device types that can be delivered immediately ex works, i.e. they are dispatched within 24 hours.
A	Two working days	If ordered in normal quantities, the products are usually delivered within the specified delivery times, calculated from the date we receive your order.
B	One week	In exceptional cases, delivery times may vary from those specified.
C	Three weeks	The delivery times are valid ex works from Siemens AG (products ready for dispatch).
D	Six weeks	Shipping times depend on the destination and the method of shipping. The standard shipping time for Germany is one day.
X	On request	The specified delivery times are correct at the time of going to print and are subject to constant optimization. Up-to-date information can be found at www.siemens.com/industrymall .

Price units (PU)

The price unit defines the number of units, sets or meters to which the specified price and weight apply.

PS/P. unit (packaging size/packaging unit)

The packaging size/packaging unit defines the number, e.g. of units, sets or meters, contained within outer packaging:

- The **first digit** in the PS/P. unit column (packaging size/packaging unit) indicates the minimum order quantity. You can only order this specified quantity or a multiple thereof.
- The **second digit** in the PS/P. unit column (packaging size/packaging unit) specifies the number of units contained within the outer packaging (e.g. in a carton). You must order this quantity or a multiple thereof if you want the items to be delivered in discrete packaging quantities.

Examples:

PS/P. unit	Meaning
1 unit	You can order one item or a multiple thereof.
5 units	Five units are packed in a bag, for example. Because the bags cannot be opened, you can only order a multiple of the quantity contained in the bag: 5, 10, 15, 20 etc.
5/100 units	One carton contains (for example) 20 bags, each containing 5 units, i.e. a total of 100 units. If only cartons are available for delivery, you need to order a multiple of the carton quantity: 100, 200, 300, etc. Ordering a quantity of 220 units would result in the following delivery: two cartons, each containing 100 units (= 200 units) and 4 bags, each containing 5 units (= 20 units).
1 set	A set comprises a defined number of different parts.

Price group (PG)

Each product is allocated to a price group.

Weight

The defined weight is the net weight in kg and refers to the price unit (PU).

Examples

DT	Article No.	Price per PU	PU (UNIT, SET, M)	PS/P. unit	PG	Weight per PU approx. kg	DT	Article No.	Price per PU	PU (UNIT, SET, M)	PS/P. unit	PG
▶	3NW7013		1	1/12 units	1BM	0.076		3VA1196-3ED26-0AA0		1	1 unit	1CB

DT: Preferred type

PU: One unit (on which price is based)

PS/P. unit: 1 = minimum order quantity / 12 = quantity per carton

PG: 1BM

Weight per PU: 76 g, always given in kg

PU: One unit (on which price is based)

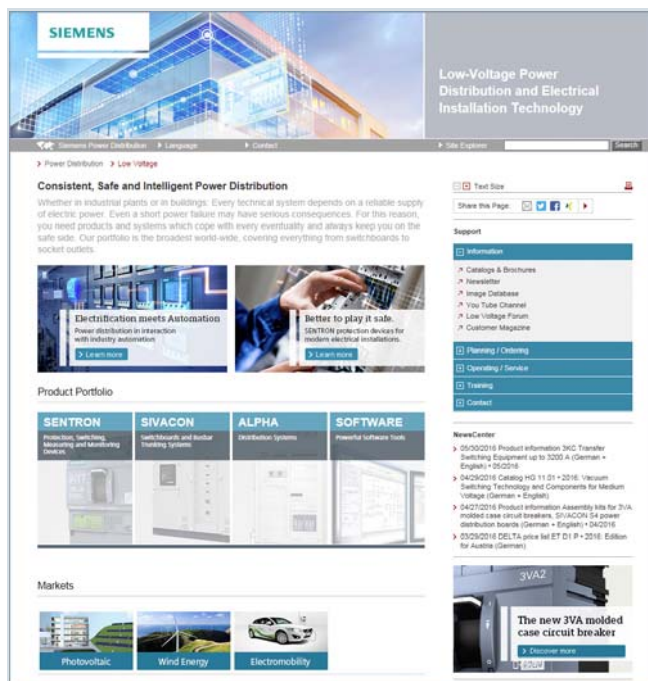
PS/P. unit: 1 = minimum order quantity

PG: 1CB

Note:

The article numbers shown here are examples only. They are not necessarily included in this catalog, nor is it essential that their specifications regarding selection and ordering data be up to date. When ordering, always use the selection and ordering data.

Low-Voltage Power Distribution and Electrical Installation Technology on the WWW



We regard product support to be just as important as the products and systems themselves.

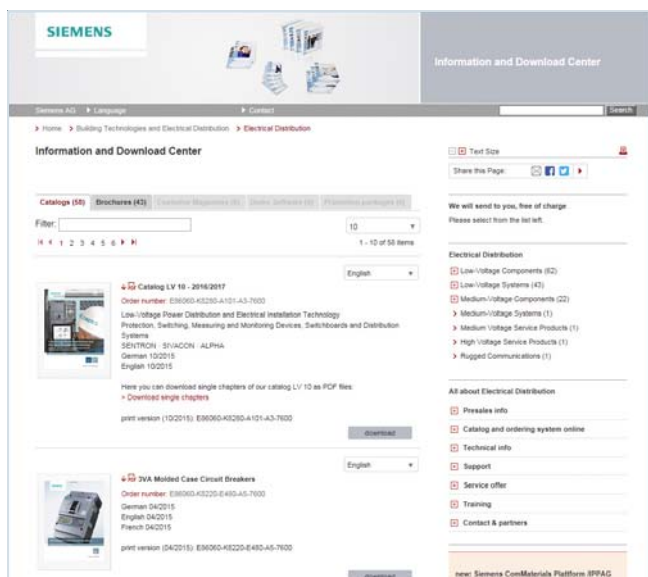
Visit our website for a comprehensive offering of support for low-voltage power distribution and electrical installation products, such as:

- Overview of the entire product portfolio
- Keeping up to date via newsletters, podcasts, blogs and Twitter
- Access to interesting videos on YouTube
- Contact with partners around the world
- Operating instructions and manuals for direct download

and much more - all conveniently and easily accessible.

www.siemens.com/lowvoltage

Information and Download Center

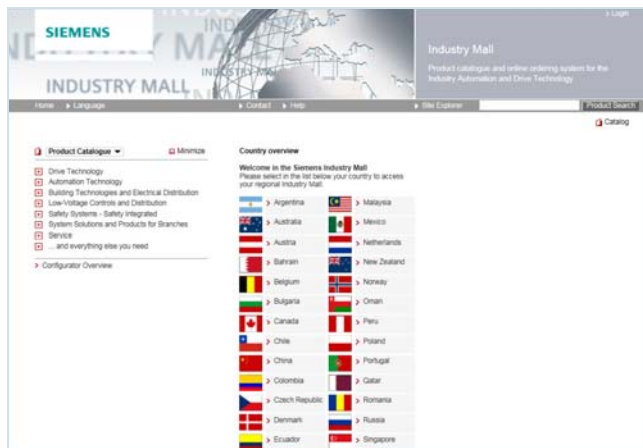


You will find regularly updated informational material (such as catalogs and brochures) for low-voltage power distribution and electrical installations on the Internet at

www.siemens.com/lowvoltage/infomaterial

Here you can order your copy of the available documentation or download it in common file formats (PDF, ZIP).

Industry Mall



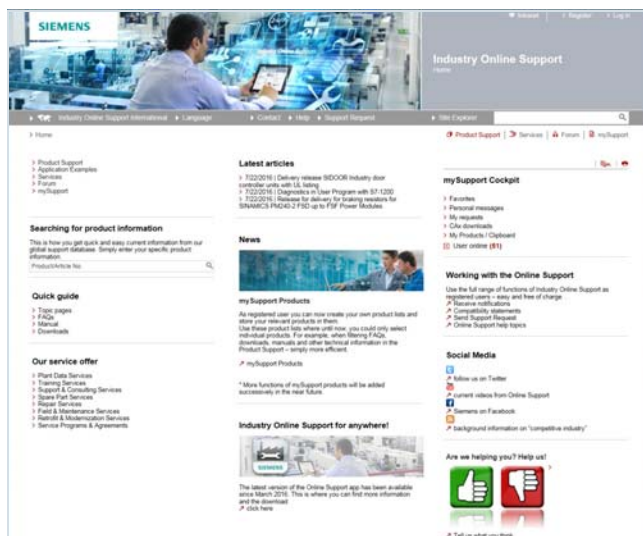
The Industry Mall – for online information, product selection and ordering

- Detailed information including product data, illustrations, certificates and CAX data
- Simple configuring of systems
- Possible to request individualized quotations
- Availability check
- Online ordering facility
- Order tracking/order overview
- Fast access to relevant training offers and services

You can find the Industry Mall on the Internet at

www.siemens.com/industrymall

Industry Online Support



Comprehensive support – at any time, whatever your location

- FAQs, sample applications, information about successor products and product news
- Prompt assistance with technical queries
- Discussions and best practice sharing with other users in the forum
- Provision of high-quality product data for your planning programs
- Faster access to information – with helpful filter and folder functions in mySupport
- Automatic notification service to keep you up to date with the latest information about topics of interest to you

You can find Siemens Industry Online Support on the Internet at

www.siemens.com/online-support

Industry Online Support App

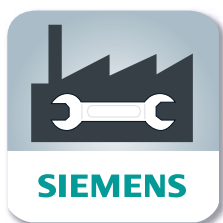


Main functions at a glance

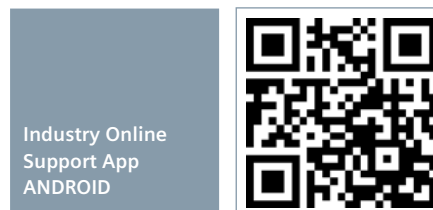
- Scanning of product codes (EAN/QR and data matrix codes) with direct display of all technical information on the product, including graphic data (CAx data).
- Sending of product information or entries by email, so that the information can immediately be processed at the workplace.
- Submission of queries to Technical Support (Support Requests). With photo function for transmitting detailed information.
- Contents and interfaces available in six languages (German, English, French, Italian, Spanish and Chinese) – including option of temporary switchover to English.
- Offline cache function for all favorites stored in "mySupport". These entries can also be retrieved without network reception.
- Import of PDF documents into a library (e.g. iBooks or similar).

You can find information on the Industry Online Support App on the Internet at

www.siemens.com/industry/onlinesupportapp



Android:



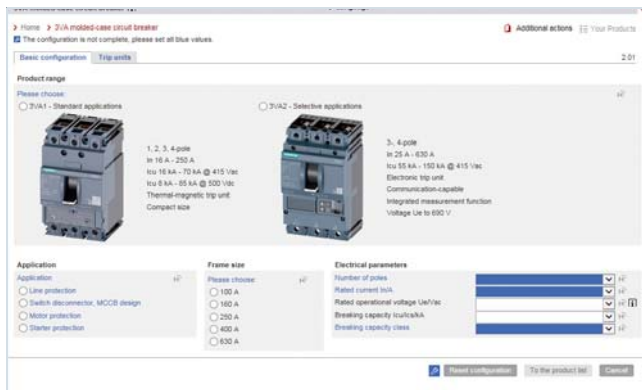
Apple iOS:



Windows:



Product configurator



Finding the right product faster

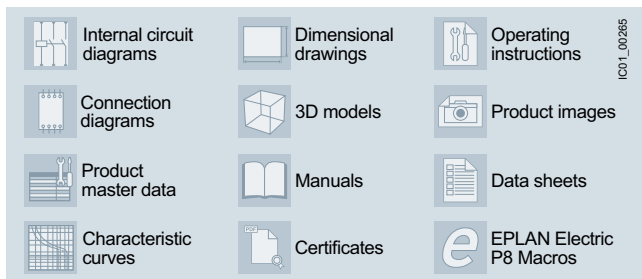
- Complete selection of products and systems based on technical characteristics or application requirements
- Simple, intuitive operation
- Option to save the configuration and order lists in a file format of your choice (txt, pdf, xls, csv)
- Direct transfer of the order list into the shopping cart of the Siemens Industry Mall
- Fast access to product data, diagrams, certificates and CAx data for the selected product and system configuration
- Available in multiple languages for use by customers anywhere in the world

The configurators are available online in the Siemens Industry Mall and offline in Catalog CA 01.

You can find our configurators at the following website:

www.siemens.com/lowvoltage/configurators

CAx Download Manager



You can find the CAx Download Manager on the Internet at

www.siemens.com/lowvoltage/cax

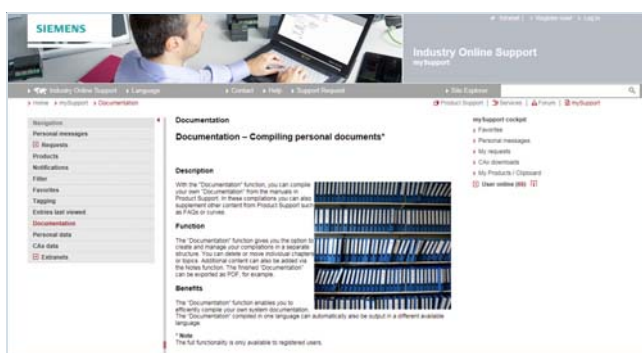
Time savings of up to 80% with universal product data for your CAE and CAD systems

The CAx Download Manager can supply you with all the necessary CAx file types for the products of your choice for use in all common CAE and CAD systems free of charge in just four selection steps. The data is updated on a daily basis. All your selected files are packed into a zip file which you can download for further use.

Siemens makes up to 12 file types available around the clock to support your mechanical (CAD) and electrical (CAE) planning processes.

- No manual data collection necessary
- Universal manufacturer data for all common CAE and CAD systems
- Standardized documentation is simple to generate
- Choice of different languages for system commissioning anywhere in the world

My Documentation Manager



In "mySupport" you can compile individual documentation for your project by dragging and dropping

* e.g. Low Voltage Directive 2006/95/EC and EC Machinery Directive 2006/42/EC

You can find My Documentation Manager on the Internet at

www.siemens.com/lowvoltage/mdm

User-friendly compilation of project-specific documentation

In accordance with directives*, the documentation is part of the plant and requires certification, thus giving the purchaser the right to full plant documentation.

To support you in this, a manual configurator has been developed with which you can put together individual and standard-compliant documentation – fully in accordance with the relevant project-specific requirements.

You can thus select the chapters relevant to the respective project from the available manuals of the installed Siemens components. FAQs, certificates, data sheets and your own content can also be incorporated.

- Compile and structure manuals, data sheets, FAQs and certificates simply by dragging and dropping
- Insert personalized content via the Notes function
- Further processing possible thanks to selectable export formats (pdf, xml, rtf)
- After generating the documentation, automatic translation into the desired language is possible
- Always up-to-the minute thanks to the Update function

Overview

The quality management system of our "Low Voltage & Products" Business Unit in the "Energy Management" Division complies with the international EN ISO 9001 standard.

The products and systems listed in this catalog are developed and manufactured using a certified quality management system in accordance with EN ISO 9001:2008.

Overview

Certificates

An overview, updated on a daily basis, of our products certified in accordance with CE, UL, CSA, FM, shipping authorizations etc. for low-voltage power distribution and electrical installation products can be found on the Internet at

www.siemens.com/lowvoltage/certificates

The screenshot shows the Siemens Industry Online Support website. The main content area displays a list of 3964 entries filtered by "Electrical Distribution" and "Certificate". The list includes details such as certificate type, date, and approval office. A sidebar on the right shows the "mySupport Cockpit" with links to favorites, personal messages, and user online status.

5

In the **Entry list**, you can **filter the view** in order to quickly find comprehensive information on the following subjects:

- Product or search term
- Date
- Type of certificate (general product approval, test certificates, shipping approval, ...)
- Certificate (confirmations, UL, VDE,...)
- Approval office (TÜV, VDE, UL, ...)
- Country

The screenshot shows the Siemens Industry Online Support website with a more detailed view of the entry list. The list includes details such as certificate type, date, and approval office. A sidebar on the right shows the "mySupport Cockpit" with links to favorites, personal messages, and user online status.

Approval requirements valid in different countries

Siemens low-voltage switchgear and controlgear are designed, manufactured and tested according to the relevant German standards (DIN and VDE), IEC publications and European standards (EN) as well as CSA and UL standards. You will find the standards assigned to the single devices in the relevant certificates at

www.siemens.com/lowvoltage/certificates

In addition to the pertinent VDE, EN and IEC standards, the requirements of the various regulations valid in other countries have also been taken into account in the design of the equipment in some cases, in order that the devices can be deployed globally as far as possible.

In some countries an approval is required for certain low-voltage switchgear and controlgear components. Depending on the market requirements, these devices have been submitted for approval to the authorized testing institutes.

In some cases, CSA for Canada and UL for the USA only approve special versions. Such special versions are listed separately from the standard versions in the relevant parts of this catalog.

For this equipment, there are sometimes limits with regard to the maximum permissible voltages, currents and rated outputs or special approvals and, in some cases, special identification may be required.

For use on board ship, the specifications of the marine classification societies must be observed. In some cases, they require type tests of the components to be approved.

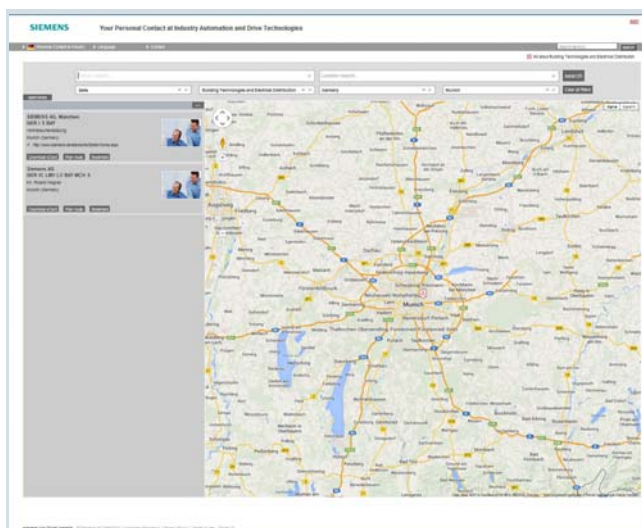
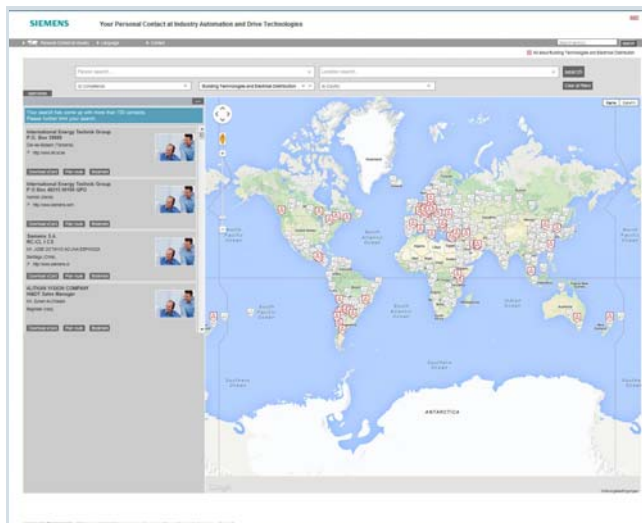
For more information on UL, visit

www.siemens.com/applicationconsulting/ul

If you have any questions concerning UL/CSA approvals, please contact Technical Support:

www.siemens.com/lowvoltage/contact

Contacts for low-voltage power distribution and electrical installation technology



With low-voltage power distribution and electrical installation technology we consistently pursue one goal:

long-term improvement of your competitive ability.

We are committed to this goal. Thanks to our dedication, we are continually setting new standards. In all industries – worldwide.

At your service, locally, around the globe: Partners for consulting, sales, training, service, support, spare parts ... on the entire range of low-voltage power distribution and electrical installation technology.

Your personal contact can be found in our Contact Database at

www.siemens.com/lowvoltage/contact

You start by selecting a

- Required competence
- Product or sector
- Country
- City

or by performing a

- search for a specific location or
- individual.

Industry Online Support



Industry Online Support is an extensive information system for all questions relating to products, systems and solutions developed for industry by Siemens.

You will find further information at
www.siemens.com/online-support
www.siemens.com/lowvoltage/product-support

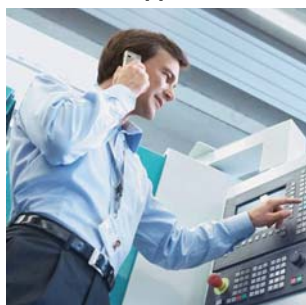
Field Service



Siemens Field Service offers support with all aspects of maintenance – so that the availability of your machines and plants is assured whatever the case.

You will find further information at
www.siemens.com/lowvoltage/contact

Technical Support



The competent consulting service for technical issues with a broad range of customer-oriented services for all our products and systems.

You will find further information at
www.siemens.com/lowvoltage/contact

Spare Parts

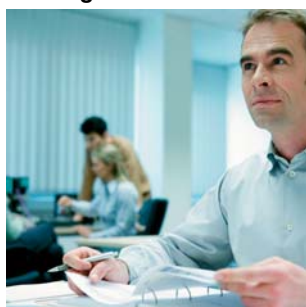


Plants and systems in all industries worldwide are expected to meet ever higher levels of availability.

We can help you rule out unexpected stoppages: with a global network and optimum logistics chains.

You will find further information at
www.siemens.com/lowvoltage/contact

Training



Extend your lead – with practical know-how straight from the manufacturer.

You will find further information at
www.siemens.com/lowvoltage/training

Specification texts

You can obtain qualified, free support to help you produce specifications for technically equipping non-residential and industrial buildings at
www.siemens.com/specifications

EM LP Support En 26.08.16
(De 04.08.16)

Comprehensive support from A to Z

Overview

Product information	
Website	Fast and targeted information on low-voltage power distribution and electrical installation technology: www.siemens.com/lowvoltage
Newsletter	Always up to date about our trend-setting products and systems: www.siemens.com/lowvoltage/newsletter
Product information/product & system selection	
Information and Download Center	Current information (e.g. catalogs and brochures): www.siemens.com/lowvoltage/infomaterial
Industry Mall	Comprehensive information and order platform for the Siemens Industry Basket: www.siemens.com/lowvoltage/mall
CA 01	Every product for automation and drive technology, interactive catalog, DVD
Product and system engineering	
SIMARIS Planning tools	Support in planning and configuring electrical power distribution: www.siemens.com/simaris
SIMARIS configuration software	Support throughout the entire configuration cycle from the configuration of ALPHA distribution boards and SIVACON S4 power distribution boards, cost calculations and quotation preparation, right through to the creation of plant documentation: www.siemens.com/simarisconfig
Software for power loss calculations - SIMARIS therm	Support in performing power loss calculations for the dimensioning of control cabinets: www.siemens.com/simaristherm
Product documentation	
Siemens Industry Online Support	Comprehensive technical information - from planning to configuration and operation: www.siemens.com/online-support www.siemens.com/lowvoltage/product-support
Product configurator	Complete selection of products and systems based on technical characteristics or application requirements: www.siemens.com/lowvoltage/configurators
CAX Download Manager	Collation of CAX data types for standard CAE and CAD systems: www.siemens.com/lowvoltage/cax
My Documentation Manager	Compilation of project-specific documentation: www.siemens.com/lowvoltage/mdm
Image database	Collection of product photographs and graphics, such as dimensional drawings and internal circuit diagrams: www.siemens.com/lowvoltage/picturedb
Product training	
SITRAIN Portal	Comprehensive training program for our products, systems and engineering tools: www.siemens.com/lowvoltage/training
Product hotline	
Technical Support	Support for all technical queries about our products: www.siemens.com/lowvoltage/contact www.siemens.com/lowvoltage/technical-support

Overview

Software types

Software requiring a license is categorized into types. The following software types have been defined:

- Engineering software
- Runtime software

Engineering software

This includes all software products for creating (engineering) user software, e.g. for configuring, programming, parameterizing, testing, commissioning or servicing.

Data generated with engineering software and executable programs can be duplicated for your own use or for use by third-parties free-of-charge.

Runtime software

This includes all software products required for plant/machine operation, e.g. operating system, basic system, system expansions, drivers, etc.

The duplication of the runtime software and executable programs created with the runtime software for your own use or for use by third-parties is subject to a charge.

You can find information about license fees according to use in the ordering data (e.g. in the catalog). Examples of categories of use include per CPU, per installation, per channel, per instance, per axis, per control loop, per variable, etc.

Information about extended rights of use for parameterization/configuration tools supplied as integral components of the scope of delivery can be found in the readme file supplied with the relevant product(s).

License types

Siemens Industry Automation & Drive Technologies offers various types of software license:

- Floating license
- Single license
- Rental license
- Rental floating license
- Trial license
- Demo license
- Demo floating license

Floating license

The software may be installed for internal use on any number of devices by the licensee. Only the concurrent user is licensed. The concurrent user is the person using the program. Use begins when the software is started. A license is required for each concurrent user.

Single license

Unlike the floating license, a single license permits only one installation of the software per license.

The type of use licensed is specified in the ordering data and in the Certificate of License (CoL). Types of use include for example per instance, per axis, per channel, etc.

One single license is required for each type of use defined.

Rental license

A rental license supports the "sporadic use" of engineering software. Once the license key has been installed, the software can be used for a specific period of time (the operating hours do not have to be consecutive).

One license is required for each installation of the software.

Rental floating license

The rental floating license corresponds to the rental license, except that a license is not required for each installation of the software. Rather, one license is required per object (for example, user or device).

Trial license

A trial license supports "short-term use" of the software in a non-productive context, e.g. for testing and evaluation purposes. It can be transferred to another license.

Demo license

The demo license support the "sporadic use" of engineering software in a non-productive context, for example, use for testing and evaluation purposes. It can be transferred to another license. After the installation of the license key, the software can be operated for a specific period of time, whereby usage can be interrupted as often as required.

One license is required per installation of the software.

Demo floating license

The demo floating license corresponds to the demo license, except that a license is not required for each installation of the software. Rather, one license is required per object (for example, user or device).

Certificate of license (CoL)

The CoL is the licensee's proof that the use of the software has been licensed by Siemens. A CoL is required for every type of use and must be kept in a safe place.

Downgrading

The licensee is permitted to use the software or an earlier version/release of the software, provided that the licensee owns such a version/release and its use is technically feasible.

Delivery versions

Software is constantly being updated.

The following delivery versions

- PowerPack
- Upgrade

can be used to access updates.

Existing bug fixes are supplied with the ServicePack version.

PowerPack

PowerPacks can be used to upgrade to more powerful software. The licensee receives a new license agreement and CoL (Certificate of License) with the PowerPack. This CoL, together with the CoL for the original product, proves that the new software is licensed.

A separate PowerPack must be purchased for each original license of the software to be replaced.

Upgrade

An upgrade permits the use of a new version of the software on the condition that a license for a previous version of the product is already held.

The licensee receives a new license agreement and CoL with the upgrade. This CoL, together with the CoL for the previous product, proves that the new version is licensed.

A separate upgrade must be purchased for each original license of the software to be upgraded.

Overview

ServicePack

ServicePacks are used to debug existing products. ServicePacks may be duplicated for use as prescribed according to the number of existing original licenses.

License key

Siemens Industry Automation & Drive Technologies supplies software products with and without license keys.

The license key serves as an electronic license stamp and is also the "switch" for activating the software (floating license, rental license, etc.).

The complete installation of software products requiring license keys includes the program to be licensed (the software) and the license key (which represents the license).

Software Update Service (SUS)

As part of the SUS contract, all software updates for the respective product are made available to you free of charge for a period of one year from the invoice date. The contract will automatically be extended for one year if it is not canceled three months before it expires.

The possession of the current version of the respective software is a basic condition for entering into an SUS contract.

You can download explanations concerning license conditions from www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

Appendix

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3VA5225-7EC31-0AA0	2/5	EAR99	N
3VA5225-7EC61-0AA0	2/7	EAR99	N
3VA5225-7ED31-0AA0	2/5	EAR99	N
3VA5225-7ED61-0AA0	2/7	EAR99	N
3VA6			
3VA6110-1MS31-0AA0	3/34	EAR99	N
3VA6110-5HL31-0AA0	3/2	EAR99	N
3VA6110-5HL31-2AA0	3/18	EAR99	N
3VA6110-5HL41-0AA0	3/10	EAR99	N
3VA6110-5HL41-2AA0	3/26	EAR99	N
3VA6110-5HM31-0AA0	3/2	EAR99	N
3VA6110-5HM31-2AA0	3/18	EAR99	N
3VA6110-5HM41-0AA0	3/10	EAR99	N
3VA6110-5HM41-2AA0	3/26	EAR99	N
3VA6110-5HN31-0AA0	3/2	EAR99	N
3VA6110-5HN31-2AA0	3/18	EAR99	N
3VA6110-5HN41-0AA0	3/10	EAR99	N
3VA6110-5HN41-2AA0	3/26	EAR99	N
3VA6110-5JP31-0AA0	3/4	EAR99	N

Article No.	Page	Export markings	
		ECCN	AL
3VA6110-5JP31-2AA0	3/20	EAR99	N
3VA6110-5JP41-0AA0	3/12	EAR99	N
3VA6110-5JP41-2AA0	3/28	EAR99	N
3VA6110-5JQ31-0AA0	3/4	EAR99	N
3VA6110-5JQ31-2AA0	3/20	EAR99	N
3VA6110-5JQ41-0AA0	3/12	EAR99	N
3VA6110-5JQ41-2AA0	3/28	EAR99	N
3VA6110-5JT31-0AA0	3/4	EAR99	N
3VA6110-5JT31-2AA0	3/20	EAR99	N
3VA6110-5JT41-0AA0	3/12	EAR99	N
3VA6110-5JT41-2AA0	3/28	EAR99	N
3VA6110-5KL31-0AA0	3/6	EAR99	N
3VA6110-5KL31-2AA0	3/22	EAR99	N
3VA6110-5KL41-0AA0	3/14	EAR99	N
3VA6110-5KL41-2AA0	3/30	EAR99	N
3VA6110-5KM31-0AA0	3/6	EAR99	N
3VA6110-5KM31-2AA0	3/22	EAR99	N
3VA6110-5KM41-0AA0	3/14	EAR99	N
3VA6110-5KM41-2AA0	3/30	EAR99	N
3VA6110-5KP31-0AA0	3/8	EAR99	N
3VA6110-5KP31-2AA0	3/24	EAR99	N
3VA6110-5KP41-0AA0	3/16	EAR99	N
3VA6110-5KP41-2AA0	3/32	EAR99	N
3VA6110-5KQ31-0AA0	3/8	EAR99	N
3VA6110-5KQ31-2AA0	3/24	EAR99	N
3VA6110-5KQ41-0AA0	3/16	EAR99	N
3VA6110-5KQ41-2AA0	3/32	EAR99	N
3VA6110-5KT31-0AA0	3/8	EAR99	N
3VA6110-5KT31-2AA0	3/24	EAR99	N
3VA6110-5KT41-0AA0	3/16	EAR99	N
3VA6110-5KT41-2AA0	3/32	EAR99	N
3VA6110-6HL31-0AA0	3/3	EAR99	N
3VA6110-6HL31-2AA0	3/19	EAR99	N
3VA6110-6HL41-0AA0	3/11	EAR99	N
3VA6110-6HL41-2AA0	3/27	EAR99	N
3VA6110-6HM31-0AA0	3/3	EAR99	N
3VA6110-6HM31-2AA0	3/19	EAR99	N
3VA6110-6HM41-0AA0	3/11	EAR99	N
3VA6110-6HM41-2AA0	3/27	EAR99	N
3VA6110-6HN31-0AA0	3/3	EAR99	N
3VA6110-6HN31-2AA0	3/19	EAR99	N
3VA6110-6HN41-0AA0	3/11	EAR99	N
3VA6110-6HN41-2AA0	3/27	EAR99	N
3VA6110-6JP31-0AA0	3/5	EAR99	N
3VA6110-6JP31-2AA0	3/21	EAR99	N
3VA6110-6JP41-0AA0	3/13	EAR99	N
3VA6110-6JP41-2AA0	3/29	EAR99	N
3VA6110-6JQ31-0AA0	3/5	EAR99	N
3VA6110-6JQ31-2AA0	3/21	EAR99	N
3VA6110-6JQ41-0AA0	3/13	EAR99	N
3VA6110-6JQ41-2AA0	3/29	EAR99	N
3VA6110-6JT31-0AA0	3/5	EAR99	N
3VA6110-6JT31-2AA0	3/21	EAR99	N
3VA6110-6JT41-0AA0	3/13	EAR99	N
3VA6110-6JT41-2AA0	3/29	EAR99	N
3VA6110-6KL31-0AA0	3/7	EAR99	N
3VA6110-6KL31-2AA0	3/23	EAR99	N
3VA6110-6KL41-0AA0	3/15	EAR99	N

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		ECCN	AL
3VA6110-6KL41-2AA0	3/31	EAR99	N
3VA6110-6KM31-0AA0	3/7	EAR99	N
3VA6110-6KM31-2AA0	3/23	EAR99	N
3VA6110-6KM41-0AA0	3/15	EAR99	N
3VA6110-6KM41-2AA0	3/31	EAR99	N
3VA6110-6KP31-0AA0	3/9	EAR99	N
3VA6110-6KP31-2AA0	3/25	EAR99	N
3VA6110-6KP41-0AA0	3/17	EAR99	N
3VA6110-6KP41-2AA0	3/33	EAR99	N
3VA6110-6KQ31-0AA0	3/9	EAR99	N
3VA6110-6KQ31-2AA0	3/25	EAR99	N
3VA6110-6KQ41-0AA0	3/17	EAR99	N
3VA6110-6KQ41-2AA0	3/33	EAR99	N
3VA6110-6KT31-0AA0	3/9	EAR99	N
3VA6110-6KT31-2AA0	3/25	EAR99	N
3VA6110-6KT41-0AA0	3/17	EAR99	N
3VA6110-6KT41-2AA0	3/33	EAR99	N
3VA6110-7HL31-0AA0	3/3	EAR99	N
3VA6110-7HL31-2AA0	3/19	EAR99	N
3VA6110-7HL41-0AA0	3/11	EAR99	N
3VA6110-7HL41-2AA0	3/27	EAR99	N
3VA6110-7HM31-0AA0	3/3	EAR99	N
3VA6110-7HM31-2AA0	3/19	EAR99	N
3VA6110-7HM41-0AA0	3/11	EAR99	N
3VA6110-7HM41-2AA0	3/27	EAR99	N
3VA6110-7HN31-0AA0	3/3	EAR99	N
3VA6110-7HN31-2AA0	3/19	EAR99	N
3VA6110-7HN41-0AA0	3/11	EAR99	N
3VA6110-7HN41-2AA0	3/27	EAR99	N
3VA6110-7JP31-0AA0	3/5	EAR99	N
3VA6110-7JP31-2AA0	3/21	EAR99	N
3VA6110-7JP41-0AA0	3/13	EAR99	N
3VA6110-7JP41-2AA0	3/29	EAR99	N
3VA6110-7JQ31-0AA0	3/5	EAR99	N
3VA6110-7JQ31-2AA0	3/21	EAR99	N
3VA6110-7JQ41-0AA0	3/13	EAR99	N
3VA6110-7JQ41-2AA0	3/29	EAR99	N
3VA6110-7JT31-0AA0	3/5	EAR99	N
3VA6110-7JT31-2AA0	3/21	EAR99	N
3VA6110-7JT41-0AA0	3/13	EAR99	N
3VA6110-7JT41-2AA0	3/29	EAR99	N
3VA6110-7KL31-0AA0	3/7	EAR99	N
3VA6110-7KL31-2AA0	3/23	EAR99	N
3VA6110-7KL41-0AA0	3/15	EAR99	N
3VA6110-7KL41-2AA0	3/31	EAR99	N
3VA6110-7KM31-0AA0	3/7	EAR99	N
3VA6110-7KM31-2AA0	3/23	EAR99	N
3VA6110-7KM41-0AA0	3/15	EAR99	N
3VA6110-7KM41-2AA0	3/31	EAR99	N
3VA6110-7KP31-0AA0	3/9	EAR99	N
3VA6110-7KP31-2AA0	3/25	EAR99	N
3VA6110-7KP41-0AA0	3/17	EAR99	N
3VA6110-7KP41-2AA0	3/33	EAR99	N
3VA6110-7KQ31-0AA0	3/9	EAR99	N
3VA6110-7KQ31-2AA0	3/25	EAR99	N
3VA6110-7KQ41-0AA0	3/17	EAR99	N
3VA6110-7KQ41-2AA0	3/33	EAR99	N
3VA6110-7KT31-0AA0	3/9	EAR99	N

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		ECCN	AL
3VA6110-7KT31-2AA0	3/25	EAR99	N
3VA6110-7KT41-0AA0	3/17	EAR99	N
3VA6110-7KT41-2AA0	3/33	EAR99	N
3VA6110-8HL31-0AA0	3/3	EAR99	N
3VA6110-8HL31-2AA0	3/19	EAR99	N
3VA6110-8HL41-0AA0	3/11	EAR99	N
3VA6110-8HL41-2AA0	3/27	EAR99	N
3VA6110-8HM31-0AA0	3/3	EAR99	N
3VA6110-8HM31-2AA0	3/19	EAR99	N
3VA6110-8HM41-0AA0	3/11	EAR99	N
3VA6110-8HM41-2AA0	3/27	EAR99	N
3VA6110-8HN31-0AA0	3/3	EAR99	N
3VA6110-8HN31-2AA0	3/19	EAR99	N
3VA6110-8HN41-0AA0	3/11	EAR99	N
3VA6110-8HN41-2AA0	3/27	EAR99	N
3VA6110-8JP31-0AA0	3/5	EAR99	N
3VA6110-8JP31-2AA0	3/21	EAR99	N
3VA6110-8JP41-0AA0	3/13	EAR99	N
3VA6110-8JP41-2AA0	3/29	EAR99	N
3VA6110-8JQ31-0AA0	3/5	EAR99	N
3VA6110-8JQ31-2AA0	3/21	EAR99	N
3VA6110-8JQ41-0AA0	3/13	EAR99	N
3VA6110-8JQ41-2AA0	3/29	EAR99	N
3VA6110-8JT31-0AA0	3/5	EAR99	N
3VA6110-8JT31-2AA0	3/21	EAR99	N
3VA6110-8JT41-0AA0	3/13	EAR99	N
3VA6110-8JT41-2AA0	3/29	EAR99	N
3VA6110-8KL31-0AA0	3/7	EAR99	N
3VA6110-8KL31-2AA0	3/23	EAR99	N
3VA6110-8KL41-0AA0	3/15	EAR99	N
3VA6110-8KL41-2AA0	3/31	EAR99	N
3VA6110-8KM31-0AA0	3/7	EAR99	N
3VA6110-8KM31-2AA0	3/23	EAR99	N
3VA6110-8KM41-0AA0	3/15	EAR99	N
3VA6110-8KM41-2AA0	3/31	EAR99	N
3VA6110-8KP31-0AA0	3/9	EAR99	N
3VA6110-8KP31-2AA0	3/25	EAR99	N
3VA6110-8KP41-0AA0	3/17	EAR99	N
3VA6110-8KP41-2AA0	3/33	EAR99	N
3VA6110-8KQ31-0AA0	3/9	EAR99	N
3VA6110-8KQ31-2AA0	3/25	EAR99	N
3VA6110-8KQ41-0AA0	3/17	EAR99	N
3VA6110-8KQ41-2AA0	3/33	EAR99	N
3VA6110-8KT31-0AA0	3/9	EAR99	N
3VA6110-8KT31-2AA0	3/25	EAR99	N
3VA6110-8KT41-0AA0	3/17	EAR99	N
3VA6110-8KT41-2AA0	3/33	EAR99	N
3VA6115-5HL31-0AA0	3/2	EAR99	N
3VA6115-5HL31-2AA0	3/18	EAR99	N
3VA6115-5HL41-0AA0	3/10	EAR99	N
3VA6115-5HL41-2AA0	3/26	EAR99	N
3VA6115-5HM31-0AA0	3/2	EAR99	N
3VA6115-5HM31-2AA0	3/18	EAR99	N
3VA6115-5HM41-0AA0	3/10	EAR99	N
3VA6115-5HM41-2AA0	3/26	EAR99	N
3VA6115-5HN31-0AA0	3/2	EAR99	N
3VA6115-5HN31-2AA0	3/18	EAR99	N
3VA6115-5HN41-0AA0	3/10	EAR99	N

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		ECCN	AL
3VA6115-5HN41-2AA0	3/26	EAR99	N
3VA6115-5JP31-0AA0	3/4	EAR99	N
3VA6115-5JP31-2AA0	3/20	EAR99	N
3VA6115-5JP41-0AA0	3/12	EAR99	N
3VA6115-5JP41-2AA0	3/28	EAR99	N
3VA6115-5JQ31-0AA0	3/4	EAR99	N
3VA6115-5JQ31-2AA0	3/20	EAR99	N
3VA6115-5JQ41-0AA0	3/12	EAR99	N
3VA6115-5JQ41-2AA0	3/28	EAR99	N
3VA6115-5JT31-0AA0	3/4	EAR99	N
3VA6115-5JT31-2AA0	3/20	EAR99	N
3VA6115-5JT41-0AA0	3/12	EAR99	N
3VA6115-5JT41-2AA0	3/28	EAR99	N
3VA6115-5KL31-0AA0	3/6	EAR99	N
3VA6115-5KL31-2AA0	3/22	EAR99	N
3VA6115-5KL41-0AA0	3/14	EAR99	N
3VA6115-5KL41-2AA0	3/30	EAR99	N
3VA6115-5KM31-0AA0	3/6	EAR99	N
3VA6115-5KM31-2AA0	3/22	EAR99	N
3VA6115-5KM41-0AA0	3/14	EAR99	N
3VA6115-5KM41-2AA0	3/30	EAR99	N
3VA6115-5KP31-0AA0	3/8	EAR99	N
3VA6115-5KP31-2AA0	3/24	EAR99	N
3VA6115-5KP41-0AA0	3/16	EAR99	N
3VA6115-5KP41-2AA0	3/32	EAR99	N
3VA6115-5KQ31-0AA0	3/8	EAR99	N
3VA6115-5KQ31-2AA0	3/24	EAR99	N
3VA6115-5KQ41-0AA0	3/16	EAR99	N
3VA6115-5KQ41-2AA0	3/32	EAR99	N
3VA6115-5KT31-0AA0	3/8	EAR99	N
3VA6115-5KT31-2AA0	3/24	EAR99	N
3VA6115-5KT41-0AA0	3/16	EAR99	N
3VA6115-5KT41-2AA0	3/32	EAR99	N
3VA6115-6HL31-0AA0	3/3	EAR99	N
3VA6115-6HL31-2AA0	3/19	EAR99	N
3VA6115-6HL41-0AA0	3/11	EAR99	N
3VA6115-6HL41-2AA0	3/27	EAR99	N
3VA6115-6HM31-0AA0	3/3	EAR99	N
3VA6115-6HM31-2AA0	3/19	EAR99	N
3VA6115-6HM41-0AA0	3/11	EAR99	N
3VA6115-6HM41-2AA0	3/27	EAR99	N
3VA6115-6HN31-0AA0	3/3	EAR99	N
3VA6115-6HN31-2AA0	3/19	EAR99	N
3VA6115-6HN41-0AA0	3/11	EAR99	N
3VA6115-6HN41-2AA0	3/27	EAR99	N
3VA6115-6JP31-0AA0	3/5	EAR99	N
3VA6115-6JP31-2AA0	3/21	EAR99	N
3VA6115-6JP41-0AA0	3/13	EAR99	N
3VA6115-6JP41-2AA0	3/29	EAR99	N
3VA6115-6JQ31-0AA0	3/5	EAR99	N
3VA6115-6JQ31-2AA0	3/21	EAR99	N
3VA6115-6JQ41-0AA0	3/13	EAR99	N
3VA6115-6JQ41-2AA0	3/29	EAR99	N
3VA6115-6JT31-0AA0	3/5	EAR99	N
3VA6115-6JT31-2AA0	3/21	EAR99	N
3VA6115-6JT41-0AA0	3/13	EAR99	N
3VA6115-6JT41-2AA0	3/29	EAR99	N
3VA6115-6KL31-0AA0	3/7	EAR99	N

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		ECCN	AL
3VA6115-6KL31-2AA0	3/23	EAR99	N
3VA6115-6KL41-0AA0	3/15	EAR99	N
3VA6115-6KL41-2AA0	3/31	EAR99	N
3VA6115-6KM31-0AA0	3/7	EAR99	N
3VA6115-6KM31-2AA0	3/23	EAR99	N
3VA6115-6KM41-0AA0	3/15	EAR99	N
3VA6115-6KM41-2AA0	3/31	EAR99	N
3VA6115-6KP31-0AA0	3/9	EAR99	N
3VA6115-6KP31-2AA0	3/25	EAR99	N
3VA6115-6KP41-0AA0	3/17	EAR99	N
3VA6115-6KP41-2AA0	3/33	EAR99	N
3VA6115-6KQ31-0AA0	3/9	EAR99	N
3VA6115-6KQ31-2AA0	3/25	EAR99	N
3VA6115-6KQ41-0AA0	3/17	EAR99	N
3VA6115-6KQ41-2AA0	3/33	EAR99	N
3VA6115-6KT31-0AA0	3/9	EAR99	N
3VA6115-6KT31-2AA0	3/25	EAR99	N
3VA6115-6KT41-0AA0	3/17	EAR99	N
3VA6115-6KT41-2AA0	3/33	EAR99	N
3VA6115-7HL31-0AA0	3/3	EAR99	N
3VA6115-7HL31-2AA0	3/19	EAR99	N
3VA6115-7HL41-0AA0	3/11	EAR99	N
3VA6115-7HL41-2AA0	3/27	EAR99	N
3VA6115-7HM31-0AA0	3/3	EAR99	N
3VA6115-7HM31-2AA0	3/19	EAR99	N
3VA6115-7HM41-0AA0	3/11	EAR99	N
3VA6115-7HM41-2AA0	3/27	EAR99	N
3VA6115-7HN31-0AA0	3/3	EAR99	N
3VA6115-7HN31-2AA0	3/19	EAR99	N
3VA6115-7HN41-0AA0	3/11	EAR99	N
3VA6115-7HN41-2AA0	3/27	EAR99	N
3VA6115-7JP31-0AA0	3/5	EAR99	N
3VA6115-7JP31-2AA0	3/21	EAR99	N
3VA6115-7JP41-0AA0	3/13	EAR99	N
3VA6115-7JP41-2AA0	3/29	EAR99	N
3VA6115-7JQ31-0AA0	3/5	EAR99	N
3VA6115-7JQ31-2AA0	3/21	EAR99	N
3VA6115-7JQ41-0AA0	3/13	EAR99	N
3VA6115-7JQ41-2AA0	3/29	EAR99	N
3VA6115-7JT31-0AA0	3/5	EAR99	N
3VA6115-7JT31-2AA0	3/21	EAR99	N
3VA6115-7JT41-0AA0	3/13	EAR99	N
3VA6115-7JT41-2AA0	3/29	EAR99	N
3VA6115-7KL31-0AA0	3/7	EAR99	N
3VA6115-7KL31-2AA0	3/23	EAR99	N
3VA6115-7KL41-0AA0	3/15	EAR99	N
3VA6115-7KL41-2AA0	3/31	EAR99	N
3VA6115-7KM31-0AA0	3/7	EAR99	N
3VA6115-7KM31-2AA0	3/23	EAR99	N
3VA6115-7KM41-0AA0	3/15	EAR99	N
3VA6115-7KM41-2AA0	3/31	EAR99	N
3VA6115-7KP31-0AA0	3/9	EAR99	N
3VA6115-7KP31-2AA0	3/25	EAR99	N
3VA6115-7KP41-0AA0	3/17	EAR99	N
3VA6115-7KP41-2AA0	3/33	EAR99	N
3VA6115-7KQ31-0AA0	3/9	EAR99	N
3VA6115-7KQ31-2AA0	3/25	EAR99	N
3VA6115-7KQ41-0AA0	3/17	EAR99	N

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		ECCN	AL
3VA6115-7KQ41-2AA0	3/33	EAR99	N
3VA6115-7KT31-0AA0	3/9	EAR99	N
3VA6115-7KT31-2AA0	3/25	EAR99	N
3VA6115-7KT41-0AA0	3/17	EAR99	N
3VA6115-7KT41-2AA0	3/33	EAR99	N
3VA6115-8HL31-0AA0	3/3	EAR99	N
3VA6115-8HL31-2AA0	3/19	EAR99	N
3VA6115-8HL41-0AA0	3/11	EAR99	N
3VA6115-8HL41-2AA0	3/27	EAR99	N
3VA6115-8HM31-0AA0	3/3	EAR99	N
3VA6115-8HM31-2AA0	3/19	EAR99	N
3VA6115-8HM41-0AA0	3/11	EAR99	N
3VA6115-8HM41-2AA0	3/27	EAR99	N
3VA6115-8HN31-0AA0	3/3	EAR99	N
3VA6115-8HN31-2AA0	3/19	EAR99	N
3VA6115-8HN41-0AA0	3/11	EAR99	N
3VA6115-8HN41-2AA0	3/27	EAR99	N
3VA6115-8JP31-0AA0	3/5	EAR99	N
3VA6115-8JP31-2AA0	3/21	EAR99	N
3VA6115-8JP41-0AA0	3/13	EAR99	N
3VA6115-8JP41-2AA0	3/29	EAR99	N
3VA6115-8JQ31-0AA0	3/5	EAR99	N
3VA6115-8JQ31-2AA0	3/21	EAR99	N
3VA6115-8JQ41-0AA0	3/13	EAR99	N
3VA6115-8JQ41-2AA0	3/29	EAR99	N
3VA6115-8JT31-0AA0	3/5	EAR99	N
3VA6115-8JT31-2AA0	3/21	EAR99	N
3VA6115-8JT41-0AA0	3/13	EAR99	N
3VA6115-8JT41-2AA0	3/29	EAR99	N
3VA6115-8KL31-0AA0	3/7	EAR99	N
3VA6115-8KL31-2AA0	3/23	EAR99	N
3VA6115-8KL41-0AA0	3/15	EAR99	N
3VA6115-8KL41-2AA0	3/31	EAR99	N
3VA6115-8KM31-0AA0	3/7	EAR99	N
3VA6115-8KM31-2AA0	3/23	EAR99	N
3VA6115-8KM41-0AA0	3/15	EAR99	N
3VA6115-8KM41-2AA0	3/31	EAR99	N
3VA6115-8KP31-0AA0	3/9	EAR99	N
3VA6115-8KP31-2AA0	3/25	EAR99	N
3VA6115-8KP41-0AA0	3/17	EAR99	N
3VA6115-8KP41-2AA0	3/33	EAR99	N
3VA6115-8KQ31-0AA0	3/9	EAR99	N
3VA6115-8KQ31-2AA0	3/25	EAR99	N
3VA6115-8KQ41-0AA0	3/17	EAR99	N
3VA6115-8KQ41-2AA0	3/33	EAR99	N
3VA6115-8KT31-0AA0	3/9	EAR99	N
3VA6115-8KT31-2AA0	3/25	EAR99	N
3VA6115-8KT41-0AA0	3/17	EAR99	N
3VA6115-8KT41-2AA0	3/33	EAR99	N
3VA6125-1MS31-0AA0	3/34	EAR99	N
3VA6130-1MS31-0AA0	3/34	EAR99	N
3VA6140-1MS31-0AA0	3/34	EAR99	N
3VA6140-5HL31-0AA0	3/2	EAR99	N
3VA6140-5HL31-2AA0	3/18	EAR99	N
3VA6140-5HL41-0AA0	3/10	EAR99	N
3VA6140-5HL41-2AA0	3/26	EAR99	N
3VA6140-5HM31-0AA0	3/2	EAR99	N
3VA6140-5HM31-2AA0	3/18	EAR99	N

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		ECCN	AL
3VA6140-5HM41-0AA0	3/10	EAR99	N
3VA6140-5HM41-2AA0	3/26	EAR99	N
3VA6140-5HN31-0AA0	3/2	EAR99	N
3VA6140-5HN31-2AA0	3/18	EAR99	N
3VA6140-5HN41-0AA0	3/10	EAR99	N
3VA6140-5HN41-2AA0	3/26	EAR99	N
3VA6140-5JP31-0AA0	3/4	EAR99	N
3VA6140-5JP31-2AA0	3/20	EAR99	N
3VA6140-5JP41-0AA0	3/12	EAR99	N
3VA6140-5JP41-2AA0	3/28	EAR99	N
3VA6140-5JQ31-0AA0	3/4	EAR99	N
3VA6140-5JQ31-2AA0	3/20	EAR99	N
3VA6140-5JQ41-0AA0	3/12	EAR99	N
3VA6140-5JQ41-2AA0	3/28	EAR99	N
3VA6140-5JT31-0AA0	3/4	EAR99	N
3VA6140-5JT31-2AA0	3/20	EAR99	N
3VA6140-5JT41-0AA0	3/12	EAR99	N
3VA6140-5JT41-2AA0	3/28	EAR99	N
3VA6140-5KL31-0AA0	3/6	EAR99	N
3VA6140-5KL31-2AA0	3/22	EAR99	N
3VA6140-5KL41-0AA0	3/14	EAR99	N
3VA6140-5KL41-2AA0	3/30	EAR99	N
3VA6140-5KM31-0AA0	3/6	EAR99	N
3VA6140-5KM31-2AA0	3/22	EAR99	N
3VA6140-5KM41-0AA0	3/14	EAR99	N
3VA6140-5KM41-2AA0	3/30	EAR99	N
3VA6140-5KP31-0AA0	3/8	EAR99	N
3VA6140-5KP31-2AA0	3/24	EAR99	N
3VA6140-5KP41-0AA0	3/16	EAR99	N
3VA6140-5KP41-2AA0	3/32	EAR99	N
3VA6140-5KQ31-0AA0	3/8	EAR99	N
3VA6140-5KQ31-2AA0	3/24	EAR99	N
3VA6140-5KQ41-0AA0	3/16	EAR99	N
3VA6140-5KQ41-2AA0	3/32	EAR99	N
3VA6140-5KT31-0AA0	3/8	EAR99	N
3VA6140-5KT31-2AA0	3/24	EAR99	N
3VA6140-5KT41-0AA0	3/16	EAR99	N
3VA6140-5KT41-2AA0	3/32	EAR99	N
3VA6140-6HL31-0AA0	3/3	EAR99	N
3VA6140-6HL31-2AA0	3/19	EAR99	N
3VA6140-6HL41-0AA0	3/11	EAR99	N
3VA6140-6HL41-2AA0	3/27	EAR99	N
3VA6140-6HM31-0AA0	3/3	EAR99	N
3VA6140-6HM31-2AA0	3/19	EAR99	N
3VA6140-6HM41-0AA0	3/11	EAR99	N
3VA6140-6HM41-2AA0	3/27	EAR99	N
3VA6140-6HN31-0AA0	3/3	EAR99	N
3VA6140-6HN31-2AA0	3/19	EAR99	N
3VA6140-6HN41-0AA0	3/11	EAR99	N
3VA6140-6HN41-2AA0	3/27	EAR99	N
3VA6140-6JP31-0AA0	3/5	EAR99	N
3VA6140-6JP31-2AA0	3/21	EAR99	N
3VA6140-6JP41-0AA0	3/13	EAR99	N
3VA6140-6JP41-2AA0	3/29	EAR99	N
3VA6140-6JQ31-0AA0	3/5	EAR99	N
3VA6140-6JQ31-2AA0	3/21	EAR99	N
3VA6140-6JQ41-0AA0	3/13	EAR99	N
3VA6140-6JQ41-2AA0	3/29	EAR99	N

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		ECCN	AL
3VA6140-6JT31-0AA0	3/5	EAR99	N
3VA6140-6JT31-2AA0	3/21	EAR99	N
3VA6140-6JT41-0AA0	3/13	EAR99	N
3VA6140-6JT41-2AA0	3/29	EAR99	N
3VA6140-6KL31-0AA0	3/7	EAR99	N
3VA6140-6KL31-2AA0	3/23	EAR99	N
3VA6140-6KL41-0AA0	3/15	EAR99	N
3VA6140-6KL41-2AA0	3/31	EAR99	N
3VA6140-6KM31-0AA0	3/7	EAR99	N
3VA6140-6KM31-2AA0	3/23	EAR99	N
3VA6140-6KM41-0AA0	3/15	EAR99	N
3VA6140-6KM41-2AA0	3/31	EAR99	N
3VA6140-6KP31-0AA0	3/9	EAR99	N
3VA6140-6KP31-2AA0	3/25	EAR99	N
3VA6140-6KP41-0AA0	3/17	EAR99	N
3VA6140-6KP41-2AA0	3/33	EAR99	N
3VA6140-6KQ31-0AA0	3/9	EAR99	N
3VA6140-6KQ31-2AA0	3/25	EAR99	N
3VA6140-6KQ41-0AA0	3/17	EAR99	N
3VA6140-6KQ41-2AA0	3/33	EAR99	N
3VA6140-6KT31-0AA0	3/9	EAR99	N
3VA6140-6KT31-2AA0	3/25	EAR99	N
3VA6140-6KT41-0AA0	3/17	EAR99	N
3VA6140-6KT41-2AA0	3/33	EAR99	N
3VA6140-7HL31-0AA0	3/3	EAR99	N
3VA6140-7HL31-2AA0	3/19	EAR99	N
3VA6140-7HL41-0AA0	3/11	EAR99	N
3VA6140-7HL41-2AA0	3/27	EAR99	N
3VA6140-7HM31-0AA0	3/3	EAR99	N
3VA6140-7HM31-2AA0	3/19	EAR99	N
3VA6140-7HM41-0AA0	3/11	EAR99	N
3VA6140-7HM41-2AA0	3/27	EAR99	N
3VA6140-7HN31-0AA0	3/3	EAR99	N
3VA6140-7HN31-2AA0	3/19	EAR99	N
3VA6140-7HN41-0AA0	3/11	EAR99	N
3VA6140-7HN41-2AA0	3/27	EAR99	N
3VA6140-7JP31-0AA0	3/5	EAR99	N
3VA6140-7JP31-2AA0	3/21	EAR99	N
3VA6140-7JP41-0AA0	3/13	EAR99	N
3VA6140-7JP41-2AA0	3/29	EAR99	N
3VA6140-7JQ31-0AA0	3/5	EAR99	N
3VA6140-7JQ31-2AA0	3/21	EAR99	N
3VA6140-7JQ41-0AA0	3/13	EAR99	N
3VA6140-7JQ41-2AA0	3/29	EAR99	N
3VA6140-7JT31-0AA0	3/5	EAR99	N
3VA6140-7JT31-2AA0	3/21	EAR99	N
3VA6140-7JT41-0AA0	3/13	EAR99	N
3VA6140-7JT41-2AA0	3/29	EAR99	N
3VA6140-7KL31-0AA0	3/7	EAR99	N
3VA6140-7KL31-2AA0	3/23	EAR99	N
3VA6140-7KL41-0AA0	3/15	EAR99	N
3VA6140-7KL41-2AA0	3/31	EAR99	N
3VA6140-7KM31-0AA0	3/7	EAR99	N
3VA6140-7KM31-2AA0	3/23	EAR99	N
3VA6140-7KM41-0AA0	3/15	EAR99	N
3VA6140-7KM41-2AA0	3/31	EAR99	N
3VA6140-7KP31-0AA0	3/9	EAR99	N
3VA6140-7KP31-2AA0	3/25	EAR99	N

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		ECCN	AL
3VA6140-7KP41-0AA0	3/17	EAR99	N
3VA6140-7KP41-2AA0	3/33	EAR99	N
3VA6140-7KQ31-0AA0	3/9	EAR99	N
3VA6140-7KQ31-2AA0	3/25	EAR99	N
3VA6140-7KQ41-0AA0	3/17	EAR99	N
3VA6140-7KQ41-2AA0	3/33	EAR99	N
3VA6140-7KT31-0AA0	3/9	EAR99	N
3VA6140-7KT31-2AA0	3/25	EAR99	N
3VA6140-7KT41-0AA0	3/17	EAR99	N
3VA6140-7KT41-2AA0	3/33	EAR99	N
3VA6140-8HL31-0AA0	3/3	EAR99	N
3VA6140-8HL31-2AA0	3/19	EAR99	N
3VA6140-8HL41-0AA0	3/11	EAR99	N
3VA6140-8HL41-2AA0	3/27	EAR99	N
3VA6140-8HM31-0AA0	3/3	EAR99	N
3VA6140-8HM31-2AA0	3/19	EAR99	N
3VA6140-8HM41-0AA0	3/11	EAR99	N
3VA6140-8HM41-2AA0	3/27	EAR99	N
3VA6140-8HN31-0AA0	3/3	EAR99	N
3VA6140-8HN31-2AA0	3/19	EAR99	N
3VA6140-8HN41-0AA0	3/11	EAR99	N
3VA6140-8HN41-2AA0	3/27	EAR99	N
3VA6140-8JP31-0AA0	3/5	EAR99	N
3VA6140-8JP31-2AA0	3/21	EAR99	N
3VA6140-8JP41-0AA0	3/13	EAR99	N
3VA6140-8JP41-2AA0	3/29	EAR99	N
3VA6140-8JQ31-0AA0	3/5	EAR99	N
3VA6140-8JQ31-2AA0	3/21	EAR99	N
3VA6140-8JQ41-0AA0	3/13	EAR99	N
3VA6140-8JQ41-2AA0	3/29	EAR99	N
3VA6140-8JT31-0AA0	3/5	EAR99	N
3VA6140-8JT31-2AA0	3/21	EAR99	N
3VA6140-8JT41-0AA0	3/13	EAR99	N
3VA6140-8JT41-2AA0	3/29	EAR99	N
3VA6140-8KL31-0AA0	3/7	EAR99	N
3VA6140-8KL31-2AA0	3/23	EAR99	N
3VA6140-8KL41-0AA0	3/15	EAR99	N
3VA6140-8KL41-2AA0	3/31	EAR99	N
3VA6140-8KM31-0AA0	3/7	EAR99	N
3VA6140-8KM31-2AA0	3/23	EAR99	N
3VA6140-8KM41-0AA0	3/15	EAR99	N
3VA6140-8KM41-2AA0	3/31	EAR99	N
3VA6140-8KP31-0AA0	3/9	EAR99	N
3VA6140-8KP31-2AA0	3/25	EAR99	N
3VA6140-8KP41-0AA0	3/17	EAR99	N
3VA6140-8KP41-2AA0	3/33	EAR99	N
3VA6140-8KQ31-0AA0	3/9	EAR99	N
3VA6140-8KQ31-2AA0	3/25	EAR99	N
3VA6140-8KQ41-0AA0	3/17	EAR99	N
3VA6140-8KQ41-2AA0	3/33	EAR99	N
3VA6140-8KT31-0AA0	3/9	EAR99	N
3VA6140-8KT31-2AA0	3/25	EAR99	N
3VA6140-8KT41-0AA0	3/17	EAR99	N
3VA6140-8KT41-2AA0	3/33	EAR99	N
3VA6150-1MS31-0AA0	3/34	EAR99	N
3VA6170-1MS31-0AA0	3/34	EAR99	N
3VA6180-1MS31-0AA0	3/34	EAR99	N
3VA6190-1MS31-0AA0	3/34	EAR99	N

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		ECCN	AL
3VA6210-5HL31-0AA0	3/2	EAR99	N
3VA6210-5HL31-2AA0	3/18	EAR99	N
3VA6210-5HL41-0AA0	3/10	EAR99	N
3VA6210-5HL41-2AA0	3/26	EAR99	N
3VA6210-5HM31-0AA0	3/2	EAR99	N
3VA6210-5HM31-2AA0	3/18	EAR99	N
3VA6210-5HM41-0AA0	3/10	EAR99	N
3VA6210-5HM41-2AA0	3/26	EAR99	N
3VA6210-5HN31-0AA0	3/2	EAR99	N
3VA6210-5HN31-2AA0	3/18	EAR99	N
3VA6210-5HN41-0AA0	3/10	EAR99	N
3VA6210-5HN41-2AA0	3/26	EAR99	N
3VA6210-5JP31-0AA0	3/4	EAR99	N
3VA6210-5JP31-2AA0	3/20	EAR99	N
3VA6210-5JP41-0AA0	3/12	EAR99	N
3VA6210-5JP41-2AA0	3/28	EAR99	N
3VA6210-5JQ31-0AA0	3/4	EAR99	N
3VA6210-5JQ31-2AA0	3/20	EAR99	N
3VA6210-5JQ41-0AA0	3/12	EAR99	N
3VA6210-5JQ41-2AA0	3/28	EAR99	N
3VA6210-5JT31-0AA0	3/4	EAR99	N
3VA6210-5JT31-2AA0	3/20	EAR99	N
3VA6210-5JT41-0AA0	3/12	EAR99	N
3VA6210-5JT41-2AA0	3/28	EAR99	N
3VA6210-5KL31-0AA0	3/6	EAR99	N
3VA6210-5KL31-2AA0	3/22	EAR99	N
3VA6210-5KL41-0AA0	3/14	EAR99	N
3VA6210-5KL41-2AA0	3/30	EAR99	N
3VA6210-5KM31-0AA0	3/6	EAR99	N
3VA6210-5KM31-2AA0	3/22	EAR99	N
3VA6210-5KM41-0AA0	3/14	EAR99	N
3VA6210-5KM41-2AA0	3/30	EAR99	N
3VA6210-5KP31-0AA0	3/8	EAR99	N
3VA6210-5KP31-2AA0	3/24	EAR99	N
3VA6210-5KP41-0AA0	3/16	EAR99	N
3VA6210-5KP41-2AA0	3/32	EAR99	N
3VA6210-5KQ31-0AA0	3/8	EAR99	N
3VA6210-5KQ31-2AA0	3/24	EAR99	N
3VA6210-5KQ41-0AA0	3/16	EAR99	N
3VA6210-5KQ41-2AA0	3/32	EAR99	N
3VA6210-5KT31-0AA0	3/8	EAR99	N
3VA6210-5KT31-2AA0	3/24	EAR99	N
3VA6210-5KT41-0AA0	3/16	EAR99	N
3VA6210-5KT41-2AA0	3/32	EAR99	N
3VA6210-6HL31-0AA0	3/3	EAR99	N
3VA6210-6HL31-2AA0	3/19	EAR99	N
3VA6210-6HL41-0AA0	3/11	EAR99	N
3VA6210-6HL41-2AA0	3/27	EAR99	N
3VA6210-6HM31-0AA0	3/3	EAR99	N
3VA6210-6HM31-2AA0	3/19	EAR99	N
3VA6210-6HM41-0AA0	3/11	EAR99	N
3VA6210-6HM41-2AA0	3/27	EAR99	N
3VA6210-6HN31-0AA0	3/3	EAR99	N
3VA6210-6HN31-2AA0	3/19	EAR99	N
3VA6210-6HN41-0AA0	3/11	EAR99	N
3VA6210-6HN41-2AA0	3/27	EAR99	N
3VA6210-6JP31-0AA0	3/5	EAR99	N
3VA6210-6JP31-2AA0	3/21	EAR99	N

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		ECCN	AL
3VA6210-6JP41-0AA0	3/13	EAR99	N
3VA6210-6JP41-2AA0	3/29	EAR99	N
3VA6210-6JQ31-0AA0	3/5	EAR99	N
3VA6210-6JQ31-2AA0	3/21	EAR99	N
3VA6210-6JQ41-0AA0	3/13	EAR99	N
3VA6210-6JQ41-2AA0	3/29	EAR99	N
3VA6210-6JT31-0AA0	3/5	EAR99	N
3VA6210-6JT31-2AA0	3/21	EAR99	N
3VA6210-6JT41-0AA0	3/13	EAR99	N
3VA6210-6JT41-2AA0	3/29	EAR99	N
3VA6210-6KL31-0AA0	3/7	EAR99	N
3VA6210-6KL31-2AA0	3/23	EAR99	N
3VA6210-6KL41-0AA0	3/15	EAR99	N
3VA6210-6KL41-2AA0	3/31	EAR99	N
3VA6210-6KM31-0AA0	3/7	EAR99	N
3VA6210-6KM31-2AA0	3/23	EAR99	N
3VA6210-6KM41-0AA0	3/15	EAR99	N
3VA6210-6KM41-2AA0	3/31	EAR99	N
3VA6210-6KP31-0AA0	3/9	EAR99	N
3VA6210-6KP31-2AA0	3/25	EAR99	N
3VA6210-6KP41-0AA0	3/17	EAR99	N
3VA6210-6KP41-2AA0	3/33	EAR99	N
3VA6210-6KQ31-0AA0	3/9	EAR99	N
3VA6210-6KQ31-2AA0	3/25	EAR99	N
3VA6210-6KQ41-0AA0	3/17	EAR99	N
3VA6210-6KQ41-2AA0	3/33	EAR99	N
3VA6210-6KT31-0AA0	3/9	EAR99	N
3VA6210-6KT31-2AA0	3/25	EAR99	N
3VA6210-6KT41-0AA0	3/17	EAR99	N
3VA6210-6KT41-2AA0	3/33	EAR99	N
3VA6210-7HL31-0AA0	3/3	EAR99	N
3VA6210-7HL31-2AA0	3/19	EAR99	N
3VA6210-7HL41-0AA0	3/11	EAR99	N
3VA6210-7HL41-2AA0	3/27	EAR99	N
3VA6210-7HM31-0AA0	3/3	EAR99	N
3VA6210-7HM31-2AA0	3/19	EAR99	N
3VA6210-7HM41-0AA0	3/11	EAR99	N
3VA6210-7HM41-2AA0	3/27	EAR99	N
3VA6210-7HN31-0AA0	3/3	EAR99	N
3VA6210-7HN31-2AA0	3/19	EAR99	N
3VA6210-7HN41-0AA0	3/11	EAR99	N
3VA6210-7HN41-2AA0	3/27	EAR99	N
3VA6210-7JP31-0AA0	3/5	EAR99	N
3VA6210-7JP31-2AA0	3/21	EAR99	N
3VA6210-7JP41-0AA0	3/13	EAR99	N
3VA6210-7JP41-2AA0	3/29	EAR99	N
3VA6210-7JQ31-0AA0	3/5	EAR99	N
3VA6210-7JQ31-2AA0	3/21	EAR99	N
3VA6210-7JQ41-0AA0	3/13	EAR99	N
3VA6210-7JQ41-2AA0	3/29	EAR99	N
3VA6210-7JT31-0AA0	3/5	EAR99	N
3VA6210-7JT31-2AA0	3/21	EAR99	N
3VA6210-7JT41-0AA0	3/13	EAR99	N
3VA6210-7JT41-2AA0	3/29	EAR99	N
3VA6210-7KL31-0AA0	3/7	EAR99	N
3VA6210-7KL31-2AA0	3/23	EAR99	N
3VA6210-7KL41-0AA0	3/15	EAR99	N
3VA6210-7KL41-2AA0	3/31	EAR99	N

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		ECCN	AL
3VA6210-7KM31-0AA0	3/7	EAR99	N
3VA6210-7KM31-2AA0	3/23	EAR99	N
3VA6210-7KM41-0AA0	3/15	EAR99	N
3VA6210-7KM41-2AA0	3/31	EAR99	N
3VA6210-7KP31-0AA0	3/9	EAR99	N
3VA6210-7KP31-2AA0	3/25	EAR99	N
3VA6210-7KP41-0AA0	3/17	EAR99	N
3VA6210-7KP41-2AA0	3/33	EAR99	N
3VA6210-7KQ31-0AA0	3/9	EAR99	N
3VA6210-7KQ31-2AA0	3/25	EAR99	N
3VA6210-7KQ41-0AA0	3/17	EAR99	N
3VA6210-7KQ41-2AA0	3/33	EAR99	N
3VA6210-7KT31-0AA0	3/9	EAR99	N
3VA6210-7KT31-2AA0	3/25	EAR99	N
3VA6210-7KT41-0AA0	3/17	EAR99	N
3VA6210-7KT41-2AA0	3/33	EAR99	N
3VA6210-8HL31-0AA0	3/3	EAR99	N
3VA6210-8HL31-2AA0	3/19	EAR99	N
3VA6210-8HL41-0AA0	3/11	EAR99	N
3VA6210-8HL41-2AA0	3/27	EAR99	N
3VA6210-8HM31-0AA0	3/3	EAR99	N
3VA6210-8HM31-2AA0	3/19	EAR99	N
3VA6210-8HM41-0AA0	3/11	EAR99	N
3VA6210-8HM41-2AA0	3/27	EAR99	N
3VA6210-8HN31-0AA0	3/3	EAR99	N
3VA6210-8HN31-2AA0	3/19	EAR99	N
3VA6210-8HN41-0AA0	3/11	EAR99	N
3VA6210-8HN41-2AA0	3/27	EAR99	N
3VA6210-8JP31-0AA0	3/5	EAR99	N
3VA6210-8JP31-2AA0	3/21	EAR99	N
3VA6210-8JP41-0AA0	3/13	EAR99	N
3VA6210-8JP41-2AA0	3/29	EAR99	N
3VA6210-8JQ31-0AA0	3/5	EAR99	N
3VA6210-8JQ31-2AA0	3/21	EAR99	N
3VA6210-8JQ41-0AA0	3/13	EAR99	N
3VA6210-8JQ41-2AA0	3/29	EAR99	N
3VA6210-8JT31-0AA0	3/5	EAR99	N
3VA6210-8JT31-2AA0	3/21	EAR99	N
3VA6210-8JT41-0AA0	3/13	EAR99	N
3VA6210-8JT41-2AA0	3/29	EAR99	N
3VA6210-8KL31-0AA0	3/7	EAR99	N
3VA6210-8KL31-2AA0	3/23	EAR99	N
3VA6210-8KL41-0AA0	3/15	EAR99	N
3VA6210-8KL41-2AA0	3/31	EAR99	N
3VA6210-8KM31-0AA0	3/7	EAR99	N
3VA6210-8KM31-2AA0	3/23	EAR99	N
3VA6210-8KM41-0AA0	3/15	EAR99	N
3VA6210-8KM41-2AA0	3/31	EAR99	N
3VA6210-8KP31-0AA0	3/9	EAR99	N
3VA6210-8KP31-2AA0	3/25	EAR99	N
3VA6210-8KP41-0AA0	3/17	EAR99	N
3VA6210-8KP41-2AA0	3/33	EAR99	N
3VA6210-8KQ31-0AA0	3/9	EAR99	N
3VA6210-8KQ31-2AA0	3/25	EAR99	N
3VA6210-8KQ41-0AA0	3/17	EAR99	N
3VA6210-8KQ41-2AA0	3/33	EAR99	N
3VA6210-8KT31-0AA0	3/9	EAR99	N
3VA6210-8KT31-2AA0	3/25	EAR99	N

Article No.	Page	Export markings	
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3VA6210-8KT41-2AA0	3/33	EAR99	N
3VA6211-1MS31-0AA0	3/34	EAR99	N
3VA6212-1MS31-0AA0	3/34	EAR99	N
3VA6215-1MS31-0AA0	3/34	EAR99	N
3VA6220-1MS31-0AA0	3/34	EAR99	N
3VA6225-5HL31-0AA0	3/2	EAR99	N
3VA6225-5HL31-2AA0	3/18	EAR99	N
3VA6225-5HL41-0AA0	3/10	EAR99	N
3VA6225-5HL41-2AA0	3/26	EAR99	N
3VA6225-5HM31-0AA0	3/2	EAR99	N
3VA6225-5HM31-2AA0	3/18	EAR99	N
3VA6225-5HM41-0AA0	3/10	EAR99	N
3VA6225-5HM41-2AA0	3/26	EAR99	N
3VA6225-5HN31-0AA0	3/2	EAR99	N
3VA6225-5HN31-2AA0	3/18	EAR99	N
3VA6225-5HN41-0AA0	3/10	EAR99	N
3VA6225-5HN41-2AA0	3/26	EAR99	N
3VA6225-5JP31-0AA0	3/4	EAR99	N
3VA6225-5JP31-2AA0	3/20	EAR99	N
3VA6225-5JP41-0AA0	3/12	EAR99	N
3VA6225-5JP41-2AA0	3/28	EAR99	N
3VA6225-5JQ31-0AA0	3/4	EAR99	N
3VA6225-5JQ31-2AA0	3/20	EAR99	N
3VA6225-5JQ41-0AA0	3/12	EAR99	N
3VA6225-5JQ41-2AA0	3/28	EAR99	N
3VA6225-5JT31-0AA0	3/4	EAR99	N
3VA6225-5JT31-2AA0	3/20	EAR99	N
3VA6225-5JT41-0AA0	3/12	EAR99	N
3VA6225-5JT41-2AA0	3/28	EAR99	N
3VA6225-5KL31-0AA0	3/6	EAR99	N
3VA6225-5KL31-2AA0	3/22	EAR99	N
3VA6225-5KL41-0AA0	3/14	EAR99	N
3VA6225-5KL41-2AA0	3/30	EAR99	N
3VA6225-5KM31-0AA0	3/6	EAR99	N
3VA6225-5KM31-2AA0	3/22	EAR99	N
3VA6225-5KM41-0AA0	3/14	EAR99	N
3VA6225-5KM41-2AA0	3/30	EAR99	N
3VA6225-5KP31-0AA0	3/8	EAR99	N
3VA6225-5KP31-2AA0	3/24	EAR99	N
3VA6225-5KP41-0AA0	3/16	EAR99	N
3VA6225-5KP41-2AA0	3/32	EAR99	N
3VA6225-5KQ31-0AA0	3/8	EAR99	N
3VA6225-5KQ31-2AA0	3/24	EAR99	N
3VA6225-5KQ41-0AA0	3/16	EAR99	N
3VA6225-5KQ41-2AA0	3/32	EAR99	N
3VA6225-5KT31-0AA0	3/8	EAR99	N
3VA6225-5KT31-2AA0	3/24	EAR99	N
3VA6225-5KT41-0AA0	3/16	EAR99	N
3VA6225-5KT41-2AA0	3/32	EAR99	N
3VA6225-6HL31-0AA0	3/3	EAR99	N
3VA6225-6HL31-2AA0	3/19	EAR99	N
3VA6225-6HL41-0AA0	3/11	EAR99	N
3VA6225-6HL41-2AA0	3/27	EAR99	N
3VA6225-6HM31-0AA0	3/3	EAR99	N
3VA6225-6HM31-2AA0	3/19	EAR99	N
3VA6225-6HM41-0AA0	3/11	EAR99	N
3VA6225-6HM41-2AA0	3/27	EAR99	N

Appendix

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Article No.	Page	Export markings	
		ECCN	AL
3VA6225-6HN31-0AA0	3/3	EAR99	N
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3VA6225-6HN41-0AA0	3/11	EAR99	N
3VA6225-6HN41-2AA0	3/27	EAR99	N
3VA6225-6JP31-0AA0	3/5	EAR99	N
3VA6225-6JP31-2AA0	3/21	EAR99	N
3VA6225-6JP41-0AA0	3/13	EAR99	N
3VA6225-6JP41-2AA0	3/29	EAR99	N
3VA6225-6JQ31-0AA0	3/5	EAR99	N
3VA6225-6JQ31-2AA0	3/21	EAR99	N
3VA6225-6JQ41-0AA0	3/13	EAR99	N
3VA6225-6JQ41-2AA0	3/29	EAR99	N
3VA6225-6JT31-0AA0	3/5	EAR99	N
3VA6225-6JT31-2AA0	3/21	EAR99	N
3VA6225-6JT41-0AA0	3/13	EAR99	N
3VA6225-6JT41-2AA0	3/29	EAR99	N
3VA6225-6KL31-0AA0	3/7	EAR99	N
3VA6225-6KL31-2AA0	3/23	EAR99	N
3VA6225-6KL41-0AA0	3/15	EAR99	N
3VA6225-6KL41-2AA0	3/31	EAR99	N
3VA6225-6KM31-0AA0	3/7	EAR99	N
3VA6225-6KM31-2AA0	3/23	EAR99	N
3VA6225-6KM41-0AA0	3/15	EAR99	N
3VA6225-6KM41-2AA0	3/31	EAR99	N
3VA6225-6KP31-0AA0	3/9	EAR99	N
3VA6225-6KP31-2AA0	3/25	EAR99	N
3VA6225-6KP41-0AA0	3/17	EAR99	N
3VA6225-6KP41-2AA0	3/33	EAR99	N
3VA6225-6KQ31-0AA0	3/9	EAR99	N
3VA6225-6KQ31-2AA0	3/25	EAR99	N
3VA6225-6KQ41-0AA0	3/17	EAR99	N
3VA6225-6KQ41-2AA0	3/33	EAR99	N
3VA6225-6KT31-0AA0	3/9	EAR99	N
3VA6225-6KT31-2AA0	3/25	EAR99	N
3VA6225-6KT41-0AA0	3/17	EAR99	N
3VA6225-6KT41-2AA0	3/33	EAR99	N
3VA6225-7HL31-0AA0	3/3	EAR99	N
3VA6225-7HL31-2AA0	3/19	EAR99	N
3VA6225-7HL41-0AA0	3/11	EAR99	N
3VA6225-7HL41-2AA0	3/27	EAR99	N
3VA6225-7HM31-0AA0	3/3	EAR99	N
3VA6225-7HM31-2AA0	3/19	EAR99	N
3VA6225-7HM41-0AA0	3/11	EAR99	N
3VA6225-7HM41-2AA0	3/27	EAR99	N
3VA6225-7HN31-0AA0	3/3	EAR99	N
3VA6225-7HN31-2AA0	3/19	EAR99	N
3VA6225-7HN41-0AA0	3/11	EAR99	N
3VA6225-7HN41-2AA0	3/27	EAR99	N
3VA6225-7JP31-0AA0	3/5	EAR99	N
3VA6225-7JP31-2AA0	3/21	EAR99	N
3VA6225-7JP41-0AA0	3/13	EAR99	N
3VA6225-7JP41-2AA0	3/29	EAR99	N
3VA6225-7JQ31-0AA0	3/5	EAR99	N
3VA6225-7JQ31-2AA0	3/21	EAR99	N
3VA6225-7JQ41-0AA0	3/13	EAR99	N
3VA6225-7JQ41-2AA0	3/29	EAR99	N
3VA6225-7JT31-0AA0	3/5	EAR99	N
3VA6225-7JT31-2AA0	3/21	EAR99	N

Article No.	Page	Export markings	
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3VA6225-7JT41-2AA0	3/29	EAR99	N
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3VA6225-7KL31-2AA0	3/23	EAR99	N
3VA6225-7KL41-0AA0	3/15	EAR99	N
3VA6225-7KL41-2AA0	3/31	EAR99	N
3VA6225-7KM31-0AA0	3/7	EAR99	N
3VA6225-7KM31-2AA0	3/23	EAR99	N
3VA6225-7KM41-0AA0	3/15	EAR99	N
3VA6225-7KM41-2AA0	3/31	EAR99	N
3VA6225-7KP31-0AA0	3/9	EAR99	N
3VA6225-7KP31-2AA0	3/25	EAR99	N
3VA6225-7KP41-0AA0	3/17	EAR99	N
3VA6225-7KP41-2AA0	3/33	EAR99	N
3VA6225-7KQ31-0AA0	3/9	EAR99	N
3VA6225-7KQ31-2AA0	3/25	EAR99	N
3VA6225-7KQ41-0AA0	3/17	EAR99	N
3VA6225-7KQ41-2AA0	3/33	EAR99	N
3VA6225-7KT31-0AA0	3/9	EAR99	N
3VA6225-7KT31-2AA0	3/25	EAR99	N
3VA6225-7KT41-0AA0	3/17	EAR99	N
3VA6225-7KT41-2AA0	3/33	EAR99	N
3VA6225-8HL31-0AA0	3/3	EAR99	N
3VA6225-8HL31-2AA0	3/19	EAR99	N
3VA6225-8HL41-0AA0	3/11	EAR99	N
3VA6225-8HL41-2AA0	3/27	EAR99	N
3VA6225-8HM31-0AA0	3/3	EAR99	N
3VA6225-8HM31-2AA0	3/19	EAR99	N
3VA6225-8HM41-0AA0	3/11	EAR99	N
3VA6225-8HM41-2AA0	3/27	EAR99	N
3VA6225-8HN31-0AA0	3/3	EAR99	N
3VA6225-8HN31-2AA0	3/19	EAR99	N
3VA6225-8HN41-0AA0	3/11	EAR99	N
3VA6225-8HN41-2AA0	3/27	EAR99	N
3VA6225-8JP31-0AA0	3/5	EAR99	N
3VA6225-8JP31-2AA0	3/21	EAR99	N
3VA6225-8JP41-0AA0	3/13	EAR99	N
3VA6225-8JP41-2AA0	3/29	EAR99	N
3VA6225-8JQ31-0AA0	3/5	EAR99	N
3VA6225-8JQ31-2AA0	3/21	EAR99	N
3VA6225-8JQ41-0AA0	3/13	EAR99	N
3VA6225-8JQ41-2AA0	3/29	EAR99	N
3VA6225-8JT31-0AA0	3/5	EAR99	N
3VA6225-8JT31-2AA0	3/21	EAR99	N
3VA6225-8JT41-0AA0	3/13	EAR99	N
3VA6225-8JT41-2AA0	3/29	EAR99	N
3VA6225-8KL31-0AA0	3/7	EAR99	N
3VA6225-8KL31-2AA0	3/23	EAR99	N
3VA6225-8KL41-0AA0	3/15	EAR99	N
3VA6225-8KL41-2AA0	3/31	EAR99	N
3VA6225-8KM31-0AA0	3/7	EAR99	N
3VA6225-8KM31-2AA0	3/23	EAR99	N
3VA6225-8KM41-0AA0	3/15	EAR99	N
3VA6225-8KM41-2AA0	3/31	EAR99	N
3VA6225-8KP31-0AA0	3/9	EAR99	N
3VA6225-8KP31-2AA0	3/25	EAR99	N
3VA6225-8KP41-0AA0	3/17	EAR99	N
3VA6225-8KP41-2AA0	3/33	EAR99	N

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3VA6225-8KQ31-2AA0	3/25	EAR99	N
3VA6225-8KQ41-0AA0	3/17	EAR99	N
3VA6225-8KQ41-2AA0	3/33	EAR99	N
3VA6225-8KT31-0AA0	3/9	EAR99	N
3VA6225-8KT31-2AA0	3/25	EAR99	N
3VA6225-8KT41-0AA0	3/17	EAR99	N
3VA6225-8KT41-2AA0	3/33	EAR99	N
3VA6320-1MS31-0AA0	3/34	EAR99	N
3VA6325-1MS31-0AA0	3/34	EAR99	N
3VA6325-5HL31-0AA0	3/2	EAR99	N
3VA6325-5HL31-2AA0	3/18	EAR99	N
3VA6325-5HL41-0AA0	3/10	EAR99	N
3VA6325-5HL41-2AA0	3/26	EAR99	N
3VA6325-5HM31-0AA0	3/2	EAR99	N
3VA6325-5HM31-2AA0	3/18	EAR99	N
3VA6325-5HM41-0AA0	3/10	EAR99	N
3VA6325-5HM41-2AA0	3/26	EAR99	N
3VA6325-5HN31-0AA0	3/2	EAR99	N
3VA6325-5HN31-2AA0	3/18	EAR99	N
3VA6325-5HN41-0AA0	3/10	EAR99	N
3VA6325-5HN41-2AA0	3/26	EAR99	N
3VA6325-5JP31-0AA0	3/4	EAR99	N
3VA6325-5JP31-2AA0	3/20	EAR99	N
3VA6325-5JP41-0AA0	3/12	EAR99	N
3VA6325-5JP41-2AA0	3/28	EAR99	N
3VA6325-5JQ31-0AA0	3/4	EAR99	N
3VA6325-5JQ31-2AA0	3/20	EAR99	N
3VA6325-5JQ41-0AA0	3/12	EAR99	N
3VA6325-5JQ41-2AA0	3/28	EAR99	N
3VA6325-5JT31-0AA0	3/4	EAR99	N
3VA6325-5JT31-2AA0	3/20	EAR99	N
3VA6325-5JT41-0AA0	3/12	EAR99	N
3VA6325-5JT41-2AA0	3/28	EAR99	N
3VA6325-5KL31-0AA0	3/6	EAR99	N
3VA6325-5KL31-2AA0	3/22	EAR99	N
3VA6325-5KL41-0AA0	3/14	EAR99	N
3VA6325-5KL41-2AA0	3/30	EAR99	N
3VA6325-5KM31-0AA0	3/6	EAR99	N
3VA6325-5KM31-2AA0	3/22	EAR99	N
3VA6325-5KM41-0AA0	3/14	EAR99	N
3VA6325-5KM41-2AA0	3/30	EAR99	N
3VA6325-5KP31-0AA0	3/8	EAR99	N
3VA6325-5KP31-2AA0	3/24	EAR99	N
3VA6325-5KP41-0AA0	3/16	EAR99	N
3VA6325-5KP41-2AA0	3/32	EAR99	N
3VA6325-5KQ31-0AA0	3/8	EAR99	N
3VA6325-5KQ31-2AA0	3/24	EAR99	N
3VA6325-5KQ41-0AA0	3/16	EAR99	N
3VA6325-5KQ41-2AA0	3/32	EAR99	N
3VA6325-5KT31-0AA0	3/8	EAR99	N
3VA6325-5KT31-2AA0	3/24	EAR99	N
3VA6325-5KT41-0AA0	3/16	EAR99	N
3VA6325-5KT41-2AA0	3/32	EAR99	N
3VA6325-6HL31-0AA0	3/3	EAR99	N
3VA6325-6HL31-2AA0	3/19	EAR99	N
3VA6325-6HL41-0AA0	3/11	EAR99	N
3VA6325-6HL41-2AA0	3/27	EAR99	N

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3VA6325-6HM31-2AA0	3/19	EAR99	N
3VA6325-6HM41-0AA0	3/11	EAR99	N
3VA6325-6HM41-2AA0	3/27	EAR99	N
3VA6325-6HN31-0AA0	3/3	EAR99	N
3VA6325-6HN31-2AA0	3/19	EAR99	N
3VA6325-6HN41-0AA0	3/11	EAR99	N
3VA6325-6HN41-2AA0	3/27	EAR99	N
3VA6325-6JP31-0AA0	3/5	EAR99	N
3VA6325-6JP31-2AA0	3/21	EAR99	N
3VA6325-6JP41-0AA0	3/13	EAR99	N
3VA6325-6JP41-2AA0	3/29	EAR99	N
3VA6325-6JQ31-0AA0	3/5	EAR99	N
3VA6325-6JQ31-2AA0	3/21	EAR99	N
3VA6325-6JQ41-0AA0	3/13	EAR99	N
3VA6325-6JQ41-2AA0	3/29	EAR99	N
3VA6325-6JT31-0AA0	3/5	EAR99	N
3VA6325-6JT31-2AA0	3/21	EAR99	N
3VA6325-6JT41-0AA0	3/13	EAR99	N
3VA6325-6JT41-2AA0	3/29	EAR99	N
3VA6325-6KL31-0AA0	3/7	EAR99	N
3VA6325-6KL31-2AA0	3/23	EAR99	N
3VA6325-6KL41-0AA0	3/15	EAR99	N
3VA6325-6KL41-2AA0	3/31	EAR99	N
3VA6325-6KM31-0AA0	3/7	EAR99	N
3VA6325-6KM31-2AA0	3/23	EAR99	N
3VA6325-6KM41-0AA0	3/15	EAR99	N
3VA6325-6KM41-2AA0	3/31	EAR99	N
3VA6325-6KP31-0AA0	3/9	EAR99	N
3VA6325-6KP31-2AA0	3/25	EAR99	N
3VA6325-6KP41-0AA0	3/17	EAR99	N
3VA6325-6KP41-2AA0	3/33	EAR99	N
3VA6325-6KQ31-0AA0	3/9	EAR99	N
3VA6325-6KQ31-2AA0	3/25	EAR99	N
3VA6325-6KQ41-0AA0	3/17	EAR99	N
3VA6325-6KQ41-2AA0	3/33	EAR99	N
3VA6325-6KT31-0AA0	3/9	EAR99	N
3VA6325-6KT31-2AA0	3/25	EAR99	N
3VA6325-6KT41-0AA0	3/17	EAR99	N
3VA6325-6KT41-2AA0	3/33	EAR99	N
3VA6325-7HL31-0AA0	3/3	EAR99	N
3VA6325-7HL31-2AA0	3/19	EAR99	N
3VA6325-7HL41-0AA0	3/11	EAR99	N
3VA6325-7HL41-2AA0	3/27	EAR99	N
3VA6325-7HM31-0AA0	3/3	EAR99	N
3VA6325-7HM31-2AA0	3/19	EAR99	N
3VA6325-7HM41-0AA0	3/11	EAR99	N
3VA6325-7HM41-2AA0	3/27	EAR99	N
3VA6325-7HN31-0AA0	3/3	EAR99	N
3VA6325-7HN31-2AA0	3/19	EAR99	N
3VA6325-7HN41-0AA0	3/11	EAR99	N
3VA6325-7HN41-2AA0	3/27	EAR99	N
3VA6325-7JP31-0AA0	3/5	EAR99	N
3VA6325-7JP31-2AA0	3/21	EAR99	N
3VA6325-7JP41-0AA0	3/13	EAR99	N
3VA6325-7JP41-2AA0	3/29	EAR99	N
3VA6325-7JQ31-0AA0	3/5	EAR99	N
3VA6325-7JQ31-2AA0	3/21	EAR99	N

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Article No.	Page	Export markings	
		ECCN	AL
3VA6325-7JQ41-0AA0	3/13	EAR99	N
3VA6325-7JQ41-2AA0	3/29	EAR99	N
3VA6325-7JT31-0AA0	3/5	EAR99	N
3VA6325-7JT31-2AA0	3/21	EAR99	N
3VA6325-7JT41-0AA0	3/13	EAR99	N
3VA6325-7JT41-2AA0	3/29	EAR99	N
3VA6325-7KL31-0AA0	3/7	EAR99	N
3VA6325-7KL31-2AA0	3/23	EAR99	N
3VA6325-7KL41-0AA0	3/15	EAR99	N
3VA6325-7KL41-2AA0	3/31	EAR99	N
3VA6325-7KM31-0AA0	3/7	EAR99	N
3VA6325-7KM31-2AA0	3/23	EAR99	N
3VA6325-7KM41-0AA0	3/15	EAR99	N
3VA6325-7KM41-2AA0	3/31	EAR99	N
3VA6325-7KP31-0AA0	3/9	EAR99	N
3VA6325-7KP31-2AA0	3/25	EAR99	N
3VA6325-7KP41-0AA0	3/17	EAR99	N
3VA6325-7KP41-2AA0	3/33	EAR99	N
3VA6325-7KQ31-0AA0	3/9	EAR99	N
3VA6325-7KQ31-2AA0	3/25	EAR99	N
3VA6325-7KQ41-0AA0	3/17	EAR99	N
3VA6325-7KQ41-2AA0	3/33	EAR99	N
3VA6325-7KT31-0AA0	3/9	EAR99	N
3VA6325-7KT31-2AA0	3/25	EAR99	N
3VA6325-7KT41-0AA0	3/17	EAR99	N
3VA6325-7KT41-2AA0	3/33	EAR99	N
3VA6325-8HL31-0AA0	3/3	EAR99	N
3VA6325-8HL31-2AA0	3/19	EAR99	N
3VA6325-8HL41-0AA0	3/11	EAR99	N
3VA6325-8HL41-2AA0	3/27	EAR99	N
3VA6325-8HM31-0AA0	3/3	EAR99	N
3VA6325-8HM31-2AA0	3/19	EAR99	N
3VA6325-8HM41-0AA0	3/11	EAR99	N
3VA6325-8HM41-2AA0	3/27	EAR99	N
3VA6325-8HN31-0AA0	3/3	EAR99	N
3VA6325-8HN31-2AA0	3/19	EAR99	N
3VA6325-8HN41-0AA0	3/11	EAR99	N
3VA6325-8HN41-2AA0	3/27	EAR99	N
3VA6325-8JP31-0AA0	3/5	EAR99	N
3VA6325-8JP31-2AA0	3/21	EAR99	N
3VA6325-8JP41-0AA0	3/13	EAR99	N
3VA6325-8JP41-2AA0	3/29	EAR99	N
3VA6325-8JQ31-0AA0	3/5	EAR99	N
3VA6325-8JQ31-2AA0	3/21	EAR99	N
3VA6325-8JQ41-0AA0	3/13	EAR99	N
3VA6325-8JQ41-2AA0	3/29	EAR99	N
3VA6325-8JT31-0AA0	3/5	EAR99	N
3VA6325-8JT31-2AA0	3/21	EAR99	N
3VA6325-8JT41-0AA0	3/13	EAR99	N
3VA6325-8JT41-2AA0	3/29	EAR99	N
3VA6325-8KL31-0AA0	3/7	EAR99	N
3VA6325-8KL31-2AA0	3/23	EAR99	N
3VA6325-8KL41-0AA0	3/15	EAR99	N
3VA6325-8KL41-2AA0	3/31	EAR99	N
3VA6325-8KM31-0AA0	3/7	EAR99	N
3VA6325-8KM31-2AA0	3/23	EAR99	N
3VA6325-8KM41-0AA0	3/15	EAR99	N
3VA6325-8KM41-2AA0	3/31	EAR99	N

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3VA6325-8KP31-0AA0	3/9	EAR99	N
3VA6325-8KP31-2AA0	3/25	EAR99	N
3VA6325-8KP41-0AA0	3/17	EAR99	N
3VA6325-8KP41-2AA0	3/33	EAR99	N
3VA6325-8KQ31-0AA0	3/9	EAR99	N
3VA6325-8KQ31-2AA0	3/25	EAR99	N
3VA6325-8KQ41-0AA0	3/17	EAR99	N
3VA6325-8KQ41-2AA0	3/33	EAR99	N
3VA6325-8KT31-0AA0	3/9	EAR99	N
3VA6325-8KT31-2AA0	3/25	EAR99	N
3VA6325-8KT41-0AA0	3/17	EAR99	N
3VA6325-8KT41-2AA0	3/33	EAR99	N
3VA6340-1BB31-0AA0	3/34	EAR99	N
3VA6340-5HL31-0AA0	3/2	EAR99	N
3VA6340-5HL41-0AA0	3/10	EAR99	N
3VA6340-5HM31-0AA0	3/2	EAR99	N
3VA6340-5HM41-0AA0	3/10	EAR99	N
3VA6340-5HN31-0AA0	3/2	EAR99	N
3VA6340-5HN41-0AA0	3/10	EAR99	N
3VA6340-5JP31-0AA0	3/4	EAR99	N
3VA6340-5JP41-0AA0	3/12	EAR99	N
3VA6340-5JQ31-0AA0	3/4	EAR99	N
3VA6340-5JQ41-0AA0	3/12	EAR99	N
3VA6340-5JT31-0AA0	3/4	EAR99	N
3VA6340-5JT41-0AA0	3/12	EAR99	N
3VA6340-5KL31-0AA0	3/6	EAR99	N
3VA6340-5KL41-0AA0	3/14	EAR99	N
3VA6340-5KM31-0AA0	3/6	EAR99	N
3VA6340-5KM41-0AA0	3/14	EAR99	N
3VA6340-5KP31-0AA0	3/8	EAR99	N
3VA6340-5KP41-0AA0	3/16	EAR99	N
3VA6340-5KQ31-0AA0	3/8	EAR99	N
3VA6340-5KQ41-0AA0	3/16	EAR99	N
3VA6340-5KT31-0AA0	3/8	EAR99	N
3VA6340-5KT41-0AA0	3/16	EAR99	N
3VA6340-6HL31-0AA0	3/3	EAR99	N
3VA6340-6HL41-0AA0	3/11	EAR99	N
3VA6340-6HM31-0AA0	3/3	EAR99	N
3VA6340-6HM41-0AA0	3/11	EAR99	N
3VA6340-6HN31-0AA0	3/3	EAR99	N
3VA6340-6HN41-0AA0	3/11	EAR99	N
3VA6340-6JP31-0AA0	3/5	EAR99	N
3VA6340-6JP41-0AA0	3/13	EAR99	N
3VA6340-6JQ31-0AA0	3/5	EAR99	N
3VA6340-6JQ41-0AA0	3/13	EAR99	N
3VA6340-6JT31-0AA0	3/5	EAR99	N
3VA6340-6JT41-0AA0	3/13	EAR99	N
3VA6340-6KL31-0AA0	3/7	EAR99	N
3VA6340-6KL41-0AA0	3/15	EAR99	N
3VA6340-6KM31-0AA0	3/7	EAR99	N
3VA6340-6KM41-0AA0	3/15	EAR99	N
3VA6340-6KP31-0AA0	3/9	EAR99	N
3VA6340-6KP41-0AA0	3/17	EAR99	N
3VA6340-6KQ31-0AA0	3/9	EAR99	N
3VA6340-6KQ41-0AA0	3/17	EAR99	N
3VA6340-6KT31-0AA0	3/9	EAR99	N
3VA6340-6KT41-0AA0	3/17	EAR99	N
3VA6340-7HL31-0AA0	3/3	EAR99	N

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		ECCN	AL
3VA6340-7HL41-0AA0	3/11	EAR99	N
3VA6340-7HM31-0AA0	3/3	EAR99	N
3VA6340-7HM41-0AA0	3/11	EAR99	N
3VA6340-7HN31-0AA0	3/3	EAR99	N
3VA6340-7HN41-0AA0	3/11	EAR99	N
3VA6340-7JP31-0AA0	3/5	EAR99	N
3VA6340-7JP41-0AA0	3/13	EAR99	N
3VA6340-7JQ31-0AA0	3/5	EAR99	N
3VA6340-7JQ41-0AA0	3/13	EAR99	N
3VA6340-7JT31-0AA0	3/5	EAR99	N
3VA6340-7JT41-0AA0	3/13	EAR99	N
3VA6340-7KL31-0AA0	3/7	EAR99	N
3VA6340-7KL41-0AA0	3/15	EAR99	N
3VA6340-7KM31-0AA0	3/7	EAR99	N
3VA6340-7KM41-0AA0	3/15	EAR99	N
3VA6340-7KP31-0AA0	3/9	EAR99	N
3VA6340-7KP41-0AA0	3/17	EAR99	N
3VA6340-7KQ31-0AA0	3/9	EAR99	N
3VA6340-7KQ41-0AA0	3/17	EAR99	N
3VA6340-7KT31-0AA0	3/9	EAR99	N
3VA6340-7KT41-0AA0	3/17	EAR99	N
3VA6340-8HL31-0AA0	3/3	EAR99	N
3VA6340-8HL41-0AA0	3/11	EAR99	N
3VA6340-8HM31-0AA0	3/3	EAR99	N
3VA6340-8HM41-0AA0	3/11	EAR99	N
3VA6340-8HN31-0AA0	3/3	EAR99	N
3VA6340-8HN41-0AA0	3/11	EAR99	N
3VA6340-8JP31-0AA0	3/5	EAR99	N
3VA6340-8JP41-0AA0	3/13	EAR99	N
3VA6340-8JQ31-0AA0	3/5	EAR99	N
3VA6340-8JQ41-0AA0	3/13	EAR99	N
3VA6340-8JT31-0AA0	3/5	EAR99	N
3VA6340-8JT41-0AA0	3/13	EAR99	N
3VA6340-8KL31-0AA0	3/7	EAR99	N
3VA6340-8KL41-0AA0	3/15	EAR99	N
3VA6340-8KM31-0AA0	3/7	EAR99	N
3VA6340-8KM41-0AA0	3/15	EAR99	N
3VA6340-8KP31-0AA0	3/9	EAR99	N
3VA6340-8KP41-0AA0	3/17	EAR99	N
3VA6340-8KQ31-0AA0	3/9	EAR99	N
3VA6340-8KQ41-0AA0	3/17	EAR99	N
3VA6340-8KT31-0AA0	3/9	EAR99	N
3VA6340-8KT41-0AA0	3/17	EAR99	N
3VA6440-1MS31-0AA0	3/34	EAR99	N
3VA6440-5HL31-0AA0	3/2	EAR99	N
3VA6440-5HL31-2AA0	3/18	EAR99	N
3VA6440-5HL41-0AA0	3/10	EAR99	N
3VA6440-5HL41-2AA0	3/26	EAR99	N
3VA6440-5HM31-0AA0	3/2	EAR99	N
3VA6440-5HM31-2AA0	3/18	EAR99	N
3VA6440-5HM41-0AA0	3/10	EAR99	N
3VA6440-5HM41-2AA0	3/26	EAR99	N
3VA6440-5HN31-0AA0	3/2	EAR99	N
3VA6440-5HN31-2AA0	3/18	EAR99	N
3VA6440-5HN41-0AA0	3/10	EAR99	N
3VA6440-5HN41-2AA0	3/26	EAR99	N
3VA6440-5JP31-0AA0	3/4	EAR99	N
3VA6440-5JP31-2AA0	3/20	EAR99	N

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3VA6440-5JP41-0AA0	3/12	EAR99	N
3VA6440-5JP41-2AA0	3/28	EAR99	N
3VA6440-5JQ31-0AA0	3/4	EAR99	N
3VA6440-5JQ31-2AA0	3/20	EAR99	N
3VA6440-5JQ41-0AA0	3/12	EAR99	N
3VA6440-5JQ41-2AA0	3/28	EAR99	N
3VA6440-5JT31-0AA0	3/4	EAR99	N
3VA6440-5JT31-2AA0	3/20	EAR99	N
3VA6440-5JT41-0AA0	3/12	EAR99	N
3VA6440-5JT41-2AA0	3/28	EAR99	N
3VA6440-5KL31-0AA0	3/6	EAR99	N
3VA6440-5KL31-2AA0	3/22	EAR99	N
3VA6440-5KL41-0AA0	3/14	EAR99	N
3VA6440-5KL41-2AA0	3/30	EAR99	N
3VA6440-5KM31-0AA0	3/6	EAR99	N
3VA6440-5KM31-2AA0	3/22	EAR99	N
3VA6440-5KM41-0AA0	3/14	EAR99	N
3VA6440-5KM41-2AA0	3/30	EAR99	N
3VA6440-5KP31-0AA0	3/8	EAR99	N
3VA6440-5KP31-2AA0	3/24	EAR99	N
3VA6440-5KP41-0AA0	3/16	EAR99	N
3VA6440-5KP41-2AA0	3/32	EAR99	N
3VA6440-5KQ31-0AA0	3/8	EAR99	N
3VA6440-5KQ31-2AA0	3/24	EAR99	N
3VA6440-5KQ41-0AA0	3/16	EAR99	N
3VA6440-5KQ41-2AA0	3/32	EAR99	N
3VA6440-5KT31-0AA0	3/8	EAR99	N
3VA6440-5KT31-2AA0	3/24	EAR99	N
3VA6440-5KT41-0AA0	3/16	EAR99	N
3VA6440-5KT41-2AA0	3/32	EAR99	N
3VA6440-6HL31-0AA0	3/3	EAR99	N
3VA6440-6HL31-2AA0	3/19	EAR99	N
3VA6440-6HL41-0AA0	3/11	EAR99	N
3VA6440-6HL41-2AA0	3/27	EAR99	N
3VA6440-6HM31-0AA0	3/3	EAR99	N
3VA6440-6HM31-2AA0	3/19	EAR99	N
3VA6440-6HM41-0AA0	3/11	EAR99	N
3VA6440-6HM41-2AA0	3/27	EAR99	N
3VA6440-6HN31-0AA0	3/3	EAR99	N
3VA6440-6HN31-2AA0	3/19	EAR99	N
3VA6440-6HN41-0AA0	3/11	EAR99	N
3VA6440-6HN41-2AA0	3/27	EAR99	N
3VA6440-6JP31-0AA0	3/5	EAR99	N
3VA6440-6JP31-2AA0	3/21	EAR99	N
3VA6440-6JP41-0AA0	3/13	EAR99	N
3VA6440-6JP41-2AA0	3/29	EAR99	N
3VA6440-6JQ31-0AA0	3/5	EAR99	N
3VA6440-6JQ31-2AA0	3/21	EAR99	N
3VA6440-6JQ41-0AA0	3/13	EAR99	N
3VA6440-6JQ41-2AA0	3/29	EAR99	N
3VA6440-6JT31-0AA0	3/5	EAR99	N
3VA6440-6JT31-2AA0	3/21	EAR99	N
3VA6440-6JT41-0AA0	3/13	EAR99	N
3VA6440-6JT41-2AA0	3/29	EAR99	N
3VA6440-6KL31-0AA0	3/7	EAR99	N
3VA6440-6KL31-2AA0	3/23	EAR99	N
3VA6440-6KL41-0AA0	3/15	EAR99	N
3VA6440-6KL41-2AA0	3/31	EAR99	N

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Article No.	Page	Export markings	
		ECCN	AL
3VA6440-6KM31-0AA0	3/7	EAR99	N
3VA6440-6KM31-2AA0	3/23	EAR99	N
3VA6440-6KM41-0AA0	3/15	EAR99	N
3VA6440-6KM41-2AA0	3/31	EAR99	N
3VA6440-6KP31-0AA0	3/9	EAR99	N
3VA6440-6KP31-2AA0	3/25	EAR99	N
3VA6440-6KP41-0AA0	3/17	EAR99	N
3VA6440-6KP41-2AA0	3/33	EAR99	N
3VA6440-6KQ31-0AA0	3/9	EAR99	N
3VA6440-6KQ31-2AA0	3/25	EAR99	N
3VA6440-6KQ41-0AA0	3/17	EAR99	N
3VA6440-6KQ41-2AA0	3/33	EAR99	N
3VA6440-6KT31-0AA0	3/9	EAR99	N
3VA6440-6KT31-2AA0	3/25	EAR99	N
3VA6440-6KT41-0AA0	3/17	EAR99	N
3VA6440-6KT41-2AA0	3/33	EAR99	N
3VA6440-7HL31-0AA0	3/3	EAR99	N
3VA6440-7HL31-2AA0	3/19	EAR99	N
3VA6440-7HL41-0AA0	3/11	EAR99	N
3VA6440-7HL41-2AA0	3/27	EAR99	N
3VA6440-7HM31-0AA0	3/3	EAR99	N
3VA6440-7HM31-2AA0	3/19	EAR99	N
3VA6440-7HM41-0AA0	3/11	EAR99	N
3VA6440-7HM41-2AA0	3/27	EAR99	N
3VA6440-7HN31-0AA0	3/3	EAR99	N
3VA6440-7HN31-2AA0	3/19	EAR99	N
3VA6440-7HN41-0AA0	3/11	EAR99	N
3VA6440-7HN41-2AA0	3/27	EAR99	N
3VA6440-7JP31-0AA0	3/5	EAR99	N
3VA6440-7JP31-2AA0	3/21	EAR99	N
3VA6440-7JP41-0AA0	3/13	EAR99	N
3VA6440-7JP41-2AA0	3/29	EAR99	N
3VA6440-7JQ31-0AA0	3/5	EAR99	N
3VA6440-7JQ31-2AA0	3/21	EAR99	N
3VA6440-7JQ41-0AA0	3/13	EAR99	N
3VA6440-7JQ41-2AA0	3/29	EAR99	N
3VA6440-7JT31-0AA0	3/5	EAR99	N
3VA6440-7JT31-2AA0	3/21	EAR99	N
3VA6440-7JT41-0AA0	3/13	EAR99	N
3VA6440-7JT41-2AA0	3/29	EAR99	N
3VA6440-7KL31-0AA0	3/7	EAR99	N
3VA6440-7KL31-2AA0	3/23	EAR99	N
3VA6440-7KL41-0AA0	3/15	EAR99	N
3VA6440-7KL41-2AA0	3/31	EAR99	N
3VA6440-7KM31-0AA0	3/7	EAR99	N
3VA6440-7KM31-2AA0	3/23	EAR99	N
3VA6440-7KM41-0AA0	3/15	EAR99	N
3VA6440-7KM41-2AA0	3/31	EAR99	N
3VA6440-7KP31-0AA0	3/9	EAR99	N
3VA6440-7KP31-2AA0	3/25	EAR99	N
3VA6440-7KP41-0AA0	3/17	EAR99	N
3VA6440-7KP41-2AA0	3/33	EAR99	N
3VA6440-7KQ31-0AA0	3/9	EAR99	N
3VA6440-7KQ31-2AA0	3/25	EAR99	N
3VA6440-7KQ41-0AA0	3/17	EAR99	N
3VA6440-7KQ41-2AA0	3/33	EAR99	N
3VA6440-7KT31-0AA0	3/9	EAR99	N
3VA6440-7KT31-2AA0	3/25	EAR99	N

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		ECCN	AL
3VA6440-7KT41-0AA0	3/17	EAR99	N
3VA6440-7KT41-2AA0	3/33	EAR99	N
3VA6440-8HL31-0AA0	3/3	EAR99	N
3VA6440-8HL31-2AA0	3/19	EAR99	N
3VA6440-8HL41-0AA0	3/11	EAR99	N
3VA6440-8HL41-2AA0	3/27	EAR99	N
3VA6440-8HM31-0AA0	3/3	EAR99	N
3VA6440-8HM31-2AA0	3/19	EAR99	N
3VA6440-8HM41-0AA0	3/11	EAR99	N
3VA6440-8HM41-2AA0	3/27	EAR99	N
3VA6440-8HN31-0AA0	3/3	EAR99	N
3VA6440-8HN31-2AA0	3/19	EAR99	N
3VA6440-8HN41-0AA0	3/11	EAR99	N
3VA6440-8HN41-2AA0	3/27	EAR99	N
3VA6440-8JP31-0AA0	3/5	EAR99	N
3VA6440-8JP31-2AA0	3/21	EAR99	N
3VA6440-8JP41-0AA0	3/13	EAR99	N
3VA6440-8JP41-2AA0	3/29	EAR99	N
3VA6440-8JQ31-0AA0	3/5	EAR99	N
3VA6440-8JQ31-2AA0	3/21	EAR99	N
3VA6440-8JQ41-0AA0	3/13	EAR99	N
3VA6440-8JQ41-2AA0	3/29	EAR99	N
3VA6440-8JT31-0AA0	3/5	EAR99	N
3VA6440-8JT31-2AA0	3/21	EAR99	N
3VA6440-8JT41-0AA0	3/13	EAR99	N
3VA6440-8JT41-2AA0	3/29	EAR99	N
3VA6440-8KL31-0AA0	3/7	EAR99	N
3VA6440-8KL31-2AA0	3/23	EAR99	N
3VA6440-8KL41-0AA0	3/15	EAR99	N
3VA6440-8KL41-2AA0	3/31	EAR99	N
3VA6440-8KM31-0AA0	3/7	EAR99	N
3VA6440-8KM31-2AA0	3/23	EAR99	N
3VA6440-8KM41-0AA0	3/15	EAR99	N
3VA6440-8KM41-2AA0	3/31	EAR99	N
3VA6440-8KP31-0AA0	3/9	EAR99	N
3VA6440-8KP31-2AA0	3/25	EAR99	N
3VA6440-8KP41-0AA0	3/17	EAR99	N
3VA6440-8KP41-2AA0	3/33	EAR99	N
3VA6440-8KQ31-0AA0	3/9	EAR99	N
3VA6440-8KQ31-2AA0	3/25	EAR99	N
3VA6440-8KQ41-0AA0	3/17	EAR99	N
3VA6440-8KQ41-2AA0	3/33	EAR99	N
3VA6440-8KT31-0AA0	3/9	EAR99	N
3VA6440-8KT31-2AA0	3/25	EAR99	N
3VA6440-8KT41-0AA0	3/17	EAR99	N
3VA6440-8KT41-2AA0	3/33	EAR99	N
3VA6450-1MS31-0AA0	3/34	EAR99	N
3VA6460-1BB31-0AA0	3/34	EAR99	N
3VA6460-5HL31-0AA0	3/2	EAR99	N
3VA6460-5HL41-0AA0	3/10	EAR99	N
3VA6460-5HM31-0AA0	3/2	EAR99	N
3VA6460-5HM41-0AA0	3/10	EAR99	N
3VA6460-5HN31-0AA0	3/2	EAR99	N
3VA6460-5HN41-0AA0	3/10	EAR99	N
3VA6460-5JP31-0AA0	3/4	EAR99	N
3VA6460-5JP41-0AA0	3/12	EAR99	N
3VA6460-5JQ31-0AA0	3/4	EAR99	N
3VA6460-5JQ41-0AA0	3/12	EAR99	N

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Article No.	Page	Export markings	
		ECCN	AL
3VA6460-5JT31-0AA0	3/4	EAR99	N
3VA6460-5JT41-0AA0	3/12	EAR99	N
3VA6460-5KL31-0AA0	3/6	EAR99	N
3VA6460-5KL41-0AA0	3/14	EAR99	N
3VA6460-5KM31-0AA0	3/6	EAR99	N
3VA6460-5KM41-0AA0	3/14	EAR99	N
3VA6460-5KP31-0AA0	3/8	EAR99	N
3VA6460-5KP41-0AA0	3/16	EAR99	N
3VA6460-5KQ31-0AA0	3/8	EAR99	N
3VA6460-5KQ41-0AA0	3/16	EAR99	N
3VA6460-5KT31-0AA0	3/8	EAR99	N
3VA6460-5KT41-0AA0	3/16	EAR99	N
3VA6460-6HL31-0AA0	3/3	EAR99	N
3VA6460-6HL41-0AA0	3/11	EAR99	N
3VA6460-6HM31-0AA0	3/3	EAR99	N
3VA6460-6HM41-0AA0	3/11	EAR99	N
3VA6460-6HN31-0AA0	3/3	EAR99	N
3VA6460-6HN41-0AA0	3/11	EAR99	N
3VA6460-6JP31-0AA0	3/5	EAR99	N
3VA6460-6JP41-0AA0	3/13	EAR99	N
3VA6460-6JQ31-0AA0	3/5	EAR99	N
3VA6460-6JQ41-0AA0	3/13	EAR99	N
3VA6460-6JT31-0AA0	3/5	EAR99	N
3VA6460-6JT41-0AA0	3/13	EAR99	N
3VA6460-6KL31-0AA0	3/7	EAR99	N
3VA6460-6KL41-0AA0	3/15	EAR99	N
3VA6460-6KM31-0AA0	3/7	EAR99	N
3VA6460-6KM41-0AA0	3/15	EAR99	N
3VA6460-6KP31-0AA0	3/9	EAR99	N
3VA6460-6KP41-0AA0	3/17	EAR99	N
3VA6460-6KQ31-0AA0	3/9	EAR99	N
3VA6460-6KQ41-0AA0	3/17	EAR99	N
3VA6460-6KT31-0AA0	3/9	EAR99	N
3VA6460-6KT41-0AA0	3/17	EAR99	N
3VA6460-7HL31-0AA0	3/3	EAR99	N
3VA6460-7HL41-0AA0	3/11	EAR99	N
3VA6460-7HM31-0AA0	3/3	EAR99	N
3VA6460-7HM41-0AA0	3/11	EAR99	N
3VA6460-7HN31-0AA0	3/3	EAR99	N
3VA6460-7HN41-0AA0	3/11	EAR99	N
3VA6460-7JP31-0AA0	3/5	EAR99	N
3VA6460-7JP41-0AA0	3/13	EAR99	N
3VA6460-7JQ31-0AA0	3/5	EAR99	N
3VA6460-7JQ41-0AA0	3/13	EAR99	N
3VA6460-7JT31-0AA0	3/5	EAR99	N
3VA6460-7JT41-0AA0	3/13	EAR99	N
3VA6460-7KL31-0AA0	3/7	EAR99	N
3VA6460-7KL41-0AA0	3/15	EAR99	N
3VA6460-7KM31-0AA0	3/7	EAR99	N
3VA6460-7KM41-0AA0	3/15	EAR99	N
3VA6460-7KP31-0AA0	3/9	EAR99	N
3VA6460-7KP41-0AA0	3/17	EAR99	N
3VA6460-7KQ31-0AA0	3/9	EAR99	N
3VA6460-7KQ41-0AA0	3/17	EAR99	N
3VA6460-7KT31-0AA0	3/9	EAR99	N
3VA6460-7KT41-0AA0	3/17	EAR99	N
3VA6460-8HL31-0AA0	3/3	EAR99	N
3VA6460-8HL41-0AA0	3/11	EAR99	N

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		ECCN	AL
3VA6460-8HM31-0AA0	3/3	EAR99	N
3VA6460-8HM41-0AA0	3/11	EAR99	N
3VA6460-8HN31-0AA0	3/3	EAR99	N
3VA6460-8HN41-0AA0	3/11	EAR99	N
3VA6460-8JP31-0AA0	3/5	EAR99	N
3VA6460-8JP41-0AA0	3/13	EAR99	N
3VA6460-8JQ31-0AA0	3/5	EAR99	N
3VA6460-8JQ41-0AA0	3/13	EAR99	N
3VA6460-8JT31-0AA0	3/5	EAR99	N
3VA6460-8JT41-0AA0	3/13	EAR99	N
3VA6460-8KL31-0AA0	3/7	EAR99	N
3VA6460-8KL41-0AA0	3/15	EAR99	N
3VA6460-8KM31-0AA0	3/7	EAR99	N
3VA6460-8KM41-0AA0	3/15	EAR99	N
3VA6460-8KP31-0AA0	3/9	EAR99	N
3VA6460-8KP41-0AA0	3/17	EAR99	N
3VA6460-8KQ31-0AA0	3/9	EAR99	N
3VA6460-8KQ41-0AA0	3/17	EAR99	N
3VA6460-8KT31-0AA0	3/9	EAR99	N
3VA6460-8KT41-0AA0	3/17	EAR99	N
3VA9			
3VA9033-OSB10	4/47	EAR99	N
3VA9033-OSB20	4/47	EAR99	N
3VA9034-OSB10	4/47	EAR99	N
3VA9034-OSB20	4/47	EAR99	N
3VA9038-OLB10	4/45	EAR99	N
3VA9078-OVK10	4/46	EAR99	N
3VA9078-OVM10	4/45	EAR99	N
3VA9078-OVM30	4/45	EAR99	N
3VA9087-OSX10	4/16, 4/47	EAR99	N
3VA9114-OSS10	4/48	EAR99	N
3VA9116-OSS10	4/48	N	N
3VA9124-OSS10	4/48	N	N
3VA9126-OSS10	4/48	N	N
3VA9130-OWC00	4/30	EAR99	N
3VA9131-QOB00	4/27	EAR99	N
3VA9131-OQE10	4/28	N	N
3VA9131-OQE20	4/28	EAR99	N
3VA9131-OQF10	4/28	EAR99	N
3VA9131-OQF20	4/28	N	N
3VA9131-OWD10	4/29	EAR99	N
3VA9131-OWD30	4/29	EAR99	N
3VA9131-OWF30	4/29	EAR99	N
3VA9131-OWJ30	4/30	EAR99	N
3VA9132-OWA00	4/28	EAR99	N
3VA9133-OJA11	4/24	N	N
3VA9133-OJB11	4/24	EAR99	N
3VA9133-OJC12	4/25	EAR99	N
3VA9133-OJD11	4/26	EAR99	N
3VA9133-OJF60	4/26	EAR99	N
3VA9133-OJG11	4/24	EAR99	N
3VA9133-OJJ12	4/24	EAR99	N
3VA9133-OJK11	4/26	EAR99	N
3VA9133-OQA00	4/27	EAR99	N
3VA9133-QOB00	4/27	EAR99	N
3VA9133-OQE00	4/28	EAR99	N
3VA9133-OQF00	4/28	N	N
3VA9137-OEK11	4/13	N	N

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Article No.	Page	Export markings	
		ECCN	AL
3VA9137-0EK13	4/13	N	N
3VA9137-0EK15	4/13	N	N
3VA9137-0EK17	4/13	N	N
3VA9137-0EK21	4/13	N	N
3VA9137-0EK23	4/13	N	N
3VA9137-0EK25	4/13	N	N
3VA9137-0EK27	4/13	N	N
3VA9137-0EK31	4/13	N	N
3VA9137-0EK33	4/13	N	N
3VA9137-0EK35	4/13	N	N
3VA9137-0EK37	4/13	N	N
3VA9137-0FK21	4/14	N	N
3VA9137-0FK23	4/14	N	N
3VA9137-0FK25	4/14	N	N
3VA9137-0FK27	4/14	N	N
3VA9137-0FK31	4/14	N	N
3VA9137-0FK33	4/14	N	N
3VA9137-0FK35	4/14	N	N
3VA9137-0FK37	4/14	N	N
3VA9137-0FK41	4/14	N	N
3VA9137-0FK43	4/14	N	N
3VA9137-0FK45	4/14	N	N
3VA9137-0FK47	4/14	N	N
3VA9137-0GA80	4/15	N	N
3VA9137-0GC01	4/14	N	N
3VA9137-0GC05	4/14	N	N
3VA9137-0GK00	4/13	N	N
3VA9137-0HA10	4/19	EAR99	N
3VA9137-0HA20	4/19	EAR99	N
3VA9137-0LF10	4/45	EAR99	N
3VA9137-0VF10	4/45	EAR99	N
3VA9138-0CB10	4/17	EAR99	N
3VA9138-0CK12	4/17	EAR99	N
3VA9138-0DK74	4/18	EAR99	N
3VA9138-0DK82	4/18	EAR99	N
3VA9138-0VF30	4/45	EAR99	N
3VA9138-0VK20	4/46	EAR99	N
3VA9143-0JA12	4/24	N	N
3VA9143-0JB11	4/24	EAR99	N
3VA9143-0JD11	4/26	EAR99	N
3VA9143-0JG11	4/24	EAR99	N
3VA9143-0JK11	4/26	EAR99	N
3VA9143-0KB01	4/34	EAR99	N
3VA9143-0KD00	4/33	EAR99	N
3VA9143-0KD10	4/33	EAR99	N
3VA9143-0KP00	4/32	EAR99	N
3VA9143-0KP10	4/32	EAR99	N
3VA9143-0SB10	4/47	EAR99	N
3VA9143-0SB20	4/47	EAR99	N
3VA9144-0JA12	4/24	N	N
3VA9144-0JB11	4/24	EAR99	N
3VA9144-0JD11	4/26	EAR99	N
3VA9144-0JG11	4/24	EAR99	N
3VA9144-0JK11	4/26	EAR99	N
3VA9144-0KB01	4/34	EAR99	N
3VA9144-0KD00	4/33	EAR99	N
3VA9144-0KD10	4/33	EAR99	N
3VA9144-0KP00	4/32	EAR99	N

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		ECCN	AL
3VA9144-0KP10	4/32	EAR99	N
3VA9144-0SB10	4/47	EAR99	N
3VA9144-0SB20	4/47	EAR99	N
3VA9147-0KT00	4/34	EAR99	N
3VA9147-0LF10	4/45	EAR99	N
3VA9147-0VF10	4/45	EAR99	N
3VA9148-0VF30	4/45	EAR99	N
3VA9151-0SS10	4/48	EAR99	N
3VA9167-0KB02	4/34	EAR99	N
3VA9177-0TB10	4/40	EAR99	N
3VA9177-0TB50	4/40	EAR99	N
3VA9231-0QE10	4/28	N	N
3VA9231-0QE20	4/28	N	N
3VA9231-0QF10	4/28	N	N
3VA9231-0QF20	4/28	N	N
3VA9233-0JA11	4/24	N	N
3VA9233-0JA12	4/24	N	N
3VA9233-0JB12	4/24	EAR99	N
3VA9233-0JC13	4/25	EAR99	N
3VA9233-0JC22	4/25	EAR99	N
3VA9233-0JD12	4/26	EAR99	N
3VA9233-0JF60	4/26	EAR99	N
3VA9233-0JG12	4/24	EAR99	N
3VA9233-0JJ13	4/24	EAR99	N
3VA9233-0JJ22	4/25	EAR99	N
3VA9233-0JK12	4/26	EAR99	N
3VA9233-0QA00	4/27	N	N
3VA9233-0QE00	4/28	N	N
3VA9233-0QF00	4/28	N	N
3VA9233-0SB20	4/47	EAR99	N
3VA9234-0SB20	4/47	EAR99	N
3VA9237-0LF10	4/45	EAR99	N
3VA9237-0SB30	4/47	EAR99	N
3VA9237-0VF10	4/45	EAR99	N
3VA9238-0VF30	4/45	EAR99	N
3VA9238-0VK20	4/46	EAR99	N
3VA9241-0QE10	4/28	EAR99	N
3VA9241-0QE20	4/28	EAR99	N
3VA9241-0QF10	4/28	EAR99	N
3VA9241-0QF20	4/28	EAR99	N
3VA9243-0JA12	4/24	EAR99	N
3VA9243-0JB12	4/24	EAR99	N
3VA9243-0JC13	4/25	EAR99	N
3VA9243-0JC22	4/25	EAR99	N
3VA9243-0JD12	4/26	EAR99	N
3VA9243-0JF60	4/26	EAR99	N
3VA9243-0JG12	4/24	EAR99	N
3VA9243-0JJ13	4/24	EAR99	N
3VA9243-0JJ22	4/25	EAR99	N
3VA9243-0JK12	4/26	EAR99	N
3VA9243-0QA00	4/27	EAR99	N
3VA9243-0QE00	4/28	EAR99	N
3VA9243-0QF00	4/28	EAR99	N
3VA9244-0JA12	4/24	EAR99	N
3VA9244-0JB12	4/24	EAR99	N
3VA9244-0JC13	4/25	EAR99	N
3VA9244-0JC22	4/25	EAR99	N
3VA9244-0JD12	4/26	EAR99	N

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		ECCN	AL
3VA9244-OJF60	4/26	EAR99	N
3VA9244-OJG12	4/24	EAR99	N
3VA9244-OJJ13	4/24	EAR99	N
3VA9244-OJJ22	4/25	EAR99	N
3VA9244-OJK12	4/26	EAR99	N
3VA9244-OQA00	4/27	EAR99	N
3VA9244-OQE00	4/28	EAR99	N
3VA9244-OQF00	4/28	EAR99	N
3VA9248-OVK20	4/46	EAR99	N
3VA9267-OKD81	4/34	N	N
3VA9267-OKP81	4/34	N	N
3VA9270-OWC00	4/30	EAR99	N
3VA9271-OWD30	4/29	EAR99	N
3VA9271-OWD40	4/29	EAR99	N
3VA9271-OWF30	4/29	EAR99	N
3VA9271-OWF40	4/29	EAR99	N
3VA9271-OWJ30	4/30	EAR99	N
3VA9271-OWJ40	4/30	EAR99	N
3VA9272-OWA00	4/28	EAR99	N
3VA9273-OQB00	4/27	EAR99	N
3VA9274-OQB00	4/27	EAR99	N
3VA9277-OEK11	4/13	N	N
3VA9277-OEK13	4/13	N	N
3VA9277-OEK15	4/13	N	N
3VA9277-OEK17	4/13	N	N
3VA9277-OEK21	4/13	N	N
3VA9277-OEK23	4/13	N	N
3VA9277-OEK25	4/13	N	N
3VA9277-OEK27	4/13	N	N
3VA9277-OEK31	4/13	N	N
3VA9277-OEK33	4/13	N	N
3VA9277-OEK35	4/13	N	N
3VA9277-OEK37	4/13	N	N
3VA9277-OFK21	4/14	N	N
3VA9277-OFK23	4/14	N	N
3VA9277-OFK25	4/14	N	N
3VA9277-OFK27	4/14	N	N
3VA9277-OFK31	4/14	N	N
3VA9277-OFK33	4/14	N	N
3VA9277-OFK35	4/14	N	N
3VA9277-OFK37	4/14	N	N
3VA9277-OFK41	4/14	N	N
3VA9277-OFK43	4/14	N	N
3VA9277-OFK45	4/14	N	N
3VA9277-OFK47	4/14	N	N
3VA9277-OGK00	4/13	N	N
3VA9277-OHA10	4/19	EAR99	N
3VA9277-OHA20	4/19	EAR99	N
3VA9278-OCB10	4/17	EAR99	N
3VA9278-OCC10	4/17	EAR99	N
3VA9278-OCC20	4/17	EAR99	N
3VA9278-OCC30	4/17	EAR99	N
3VA9278-OCC40	4/17	EAR99	N
3VA9278-OCC50	4/17	EAR99	N
3VA9278-OCC60	4/17	EAR99	N
3VA9278-OCC70	4/17	EAR99	N
3VA9278-OCC80	4/17	EAR99	N
3VA9278-OCK12	4/17	EAR99	N

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		ECCN	AL
3VA9278-ODK74	4/18	N	N
3VA9278-ODK82	4/18	N	N
3VA9328-OSS10	4/48	EAR99	N
3VA9333-OSB20	4/47	EAR99	N
3VA9343-OSB20	4/47	EAR99	N
3VA9344-OSB20	4/47	EAR99	N
3VA9347-OLF10	4/45	EAR99	N
3VA9347-OVF10	4/45	EAR99	N
3VA9348-OVF30	4/45	EAR99	N
3VA9373-OJB13	4/24	EAR99	N
3VA9373-OJD13	4/26	EAR99	N
3VA9373-OJF60	4/26	EAR99	N
3VA9373-OJG13	4/24	EAR99	N
3VA9373-OJK13	4/26	N	N
3VA9373-OSB10	4/47	EAR99	N
3VA9374-OJB13	4/24	EAR99	N
3VA9374-OJD13	4/26	N	N
3VA9374-OJF60	4/26	EAR99	N
3VA9374-OJG13	4/24	EAR99	N
3VA9374-OJK13	4/26	N	N
3VA9374-OSB10	4/47	EAR99	N
3VA9377-OSB30	4/47	EAR99	N
3VA9377-OTB10	4/40	EAR99	N
3VA9377-OTB50	4/40	EAR99	N
3VA9378-OLB10	4/45	EAR99	N
3VA9447-OEK11	4/13	EAR99	N
3VA9447-OEK13	4/13	N	N
3VA9447-OEK15	4/13	EAR99	N
3VA9447-OEK17	4/13	N	N
3VA9447-OEK21	4/13	EAR99	N
3VA9447-OEK23	4/13	N	N
3VA9447-OEK25	4/13	EAR99	N
3VA9447-OEK27	4/13	N	N
3VA9447-OEK31	4/13	N	N
3VA9447-OEK33	4/13	N	N
3VA9447-OEK35	4/13	N	N
3VA9447-OEK37	4/13	N	N
3VA9447-OFK21	4/14	EAR99	N
3VA9447-OFK23	4/14	N	N
3VA9447-OFK25	4/14	EAR99	N
3VA9447-OFK27	4/14	N	N
3VA9447-OFK31	4/14	N	N
3VA9447-OFK33	4/14	N	N
3VA9447-OFK35	4/14	N	N
3VA9447-OFK37	4/14	N	N
3VA9447-OFK41	4/14	N	N
3VA9447-OFK43	4/14	N	N
3VA9447-OFK45	4/14	N	N
3VA9447-OFK47	4/14	N	N
3VA9447-OGK00	4/13	EAR99	N
3VA9447-OHA10	4/19	EAR99	N
3VA9447-OHA20	4/19	EAR99	N
3VA9448-OCB10	4/17	EAR99	N
3VA9448-OCK12	4/17	EAR99	N
3VA9448-ODK74	4/18	N	N
3VA9448-ODK82	4/18	N	N
3VA9448-OVK20	4/46	EAR99	N
3VA9470-OWC00	4/30	EAR99	N

Appendix

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Article No.	Page	Export markings	
		ECCN	AL
3VA9471-OQE10	4/28	EAR99	N
3VA9471-OQE20	4/28	EAR99	N
3VA9471-OQF10	4/28	EAR99	N
3VA9471-OQF20	4/28	EAR99	N
3VA9471-OWD30	4/29	EAR99	N
3VA9471-OWD40	4/29	EAR99	N
3VA9471-OWF30	4/29	EAR99	N
3VA9471-OWF40	4/29	EAR99	N
3VA9471-OWG30	4/29	EAR99	N
3VA9471-OWG40	4/29	EAR99	N
3VA9471-OWJ30	4/30	EAR99	N
3VA9471-OWJ40	4/30	EAR99	N
3VA9471-OWK30	4/30	EAR99	N
3VA9471-OWK40	4/30	EAR99	N
3VA9472-OWA00	4/28	EAR99	N
3VA9473-OJA13	4/24	EAR99	N
3VA9473-OJC23	4/25	EAR99	N
3VA9473-OJE23	4/26	EAR99	N
3VA9473-OJJ23	4/25	EAR99	N
3VA9473-OQA00	4/27	EAR99	N
3VA9473-OQB00	4/27	EAR99	N
3VA9473-OQC00	4/27	EAR99	N
3VA9473-OQE00	4/28	EAR99	N
3VA9473-OQF00	4/28	EAR99	N
3VA9474-OJA13	4/24	EAR99	N
3VA9474-OJC23	4/25	EAR99	N
3VA9474-OJE23	4/26	N	N
3VA9474-OJJ23	4/25	N	N
3VA9474-OQA00	4/27	EAR99	N
3VA9474-OQB00	4/27	EAR99	N
3VA9474-OQC00	4/27	EAR99	N
3VA9474-OQE00	4/28	EAR99	N
3VA9474-OQF00	4/28	EAR99	N
3VA9477-OGA80	4/15	EAR99	N
3VA9477-OGC01	4/14	EAR99	N
3VA9477-OGC05	4/14	EAR99	N
3VA9477-OGC11	4/14	N	N
3VA9477-OGC15	4/14	N	N
3VA9478-OCX10	4/18	EAR99	N
3VA9478-OCX20	4/18	EAR99	N
3VA9487-0GB10	4/15	EAR99	N
3VA9578-0CC10	4/17	EAR99	N
3VA9578-0CC20	4/17	EAR99	N
3VA9578-0CC30	4/17	EAR99	N
3VA9578-0CC40	4/17	EAR99	N
3VA9578-0CC50	4/17	EAR99	N
3VA9578-0CC60	4/17	EAR99	N
3VA9578-0CC70	4/17	EAR99	N
3VA9578-0CC80	4/17	EAR99	N
3VA9970-OLF40	4/35	EAR99	N
3VA9977-OKB00	4/35	EAR99	N
3VA9977-OKC00	4/35	EAR99	N
3VA9977-OKD80	4/35	EAR99	N
3VA9977-OKP80	4/35	EAR99	N
3VA9977-OMA10	4/42	EAR99	N
3VA9977-OMB10	4/42	EAR99	N
3VA9977-OMY10	4/42	EAR99	N
3VA9977-OTA10	4/40	EAR99	N

Article No.	Page	Export markings	
		ECCN	AL
3VA9977-OTA20	4/40	N	N
3VA9977-OTD10	4/41	EAR99	N
3VA9977-OJA10	4/41	EAR99	N
3VA9978-OAA11	4/10	EAR99	N
3VA9978-OAA12	4/10	EAR99	N
3VA9978-OAA13	4/10	EAR99	N
3VA9978-OAA21	4/10	EAR99	N
3VA9978-OAA22	4/10	EAR99	N
3VA9978-OAA23	4/10	EAR99	N
3VA9978-OAB11	4/10	EAR99	N
3VA9978-OAB12	4/10	EAR99	N
3VA9978-OAB13	4/10	EAR99	N
3VA9978-OAB22	4/10	EAR99	N
3VA9978-OAB23	4/10	EAR99	N
3VA9978-OBA20	4/11	EAR99	N
3VA9978-OBA21	4/11	EAR99	N
3VA9978-OBA22	4/11	EAR99	N
3VA9978-OBA23	4/11	EAR99	N
3VA9978-OBA24	4/11	EAR99	N
3VA9978-OBA25	4/11	EAR99	N
3VA9978-0BB10	4/10	EAR99	N
3VA9978-0BB11	4/10	EAR99	N
3VA9978-0BB12	4/10	EAR99	N
3VA9978-0BB14	4/10	EAR99	N
3VA9978-0BB16	4/10	EAR99	N
3VA9978-0BB20	4/10	EAR99	N
3VA9978-0BB24	4/10	EAR99	N
3VA9978-0BB25	4/10	EAR99	N
3VA9978-0BB27	4/10	EAR99	N
3VA9978-0BD11	4/11	EAR99	N
3VA9978-0BD12	4/11	EAR99	N
3VA9978-0BD13	4/11	EAR99	N
3VA9978-0BF22	4/11	N	N
3VA9978-0BF23	4/11	N	N
3VA9978-0BL10	4/11	EAR99	N
3VA9978-0BL20	4/11	EAR99	N
3VA9978-0BL30	4/11	EAR99	N
3VA9978-0BL31	4/11	EAR99	N
3VA9978-0BL32	4/11	EAR99	N
3VA9978-0BL33	4/11	EAR99	N
3VA9978-0CH72	4/17	EAR99	N
3VA9978-0CH74	4/17	EAR99	N
3VA9978-0CH82	4/17	EAR99	N
3VA9980-OLF20	4/16	EAR99	N
3VA9980-OVC10	4/46	EAR99	N
3VA9980-OVC20	4/46	EAR99	N
3VA9980-OVC30	4/46	EAR99	N
3VA9980-OVL10	4/16, 4/35, 4/45	EAR99	N
3VA9980-OVL20	4/16, 4/35, 4/45	EAR99	N
3VA9980-OVL30	4/16, 4/35, 4/45	EAR99	N
3VA9980-OVL40	4/16, 4/35, 4/45	EAR99	N
3VA9987-OKC10	4/35	EAR99	N
3VA9987-OKD81	4/35	EAR99	N
3VA9987-OMX10	4/42	EAR99	N
3VA9987-OTC10	4/41	EAR99	N
3VA9987-OTC20	4/41	EAR99	N
3VA9987-OTC30	4/41	EAR99	N
3VA9987-OTC40	4/41	EAR99	N

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		ECCN	AL
3VA9987-OTE10	4/41	EAR99	N
3VA9987-OTF10	4/41	N	N
3VA9987-OTF20	4/41	N	N
3VA9987-OTG10	4/41	EAR99	N
3VA9987-OTG11	4/41	EAR99	N
3VA9987-OUB10	4/41	EAR99	N
3VA9987-OUB20	4/41	EAR99	N
3VA9987-OUB30	4/41	N	N
3VA9987-OUC10	4/41	EAR99	N
7KM9			
7KM9300-0AB01-0AA0	4/40	EAR99	N
7KM9300-0AE01-0AA0	4/40	EAR99	N
7KM9300-0AM00-0AA0	4/40	EAR99	N
8UD1			
8UD1721-0AB11	4/15	EAR99	N
8UD1721-0AB15	4/15	EAR99	N
8UD1721-0AB21	4/15	EAR99	N
8UD1721-0AB25	4/15	EAR99	N
8UD1721-0AC11	4/15	N	N
8UD1721-0AC15	4/15	N	N
8UD1721-0AC21	4/15	N	N
8UD1721-0AC25	4/15	N	N
8UD1731-0AB11	4/15	N	N
8UD1731-0AB15	4/15	N	N
8UD1731-0AB21	4/15	N	N
8UD1731-0AB25	4/15	N	N
8UD1731-0AC11	4/15	N	N
8UD1731-0AC15	4/15	N	N
8UD1731-0AC21	4/15	N	N
8UD1731-0AC25	4/15	N	N
8UD1900-0KA10	4/16	N	N
8UD1900-0KA20	4/16	EAR99	N
8UD1900-0MB01	4/16	EAR99	N
8UD1900-0MB05	4/16	EAR99	N
8UD1900-0MC01	4/16	EAR99	N
8UD1900-0MC05	4/16	EAR99	N
8UD1900-0NB01	4/16	EAR99	N
8UD1900-0NB05	4/16	EAR99	N
8UD1900-0NC01	4/16	EAR99	N
8UD1900-0NC05	4/16	EAR99	N
8UD1900-0PB01	4/16	EAR99	N
8UD1900-0PB05	4/16	EAR99	N
8UD1900-0PC01	4/16	EAR99	N
8UD1900-0PC05	4/16	EAR99	N
8UD1900-0QB01	4/16	EAR99	N
8UD1900-0QB05	4/16	EAR99	N
8UD1900-0QC01	4/16	EAR99	N
8UD1900-0QC05	4/16	EAR99	N
8UD1900-2DA00	4/15	EAR99	N
8UD1900-2GA00	4/15	EAR99	N
8UD1900-2HA00	4/15	EAR99	N
8UD1900-2WA00	4/15	EAR99	N
8UD1900-2WB00	4/15	EAR99	N
8US1			
8US1211-4SS00	4/48	N	N
8US1213-4AH04	4/48	N	N
8US1213-4AP03	4/48	N	N

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3VA Molded Case Circuit Breakers

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