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3VM Molded Case Circuit Breakers

SENTRON

Catalog LV 31

Edition 2018

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3VM Molded Case Circuit Breakers

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Catalog LV 31 · 2018

Supersedes:
Catalog LV 31 · 2016

Refer to the Industry Mall for current updates of this catalog:
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Introduction 1

3VM Molded Case Circuit Breakers up to 630 A, TM, 400 V, up to 55 kA 2

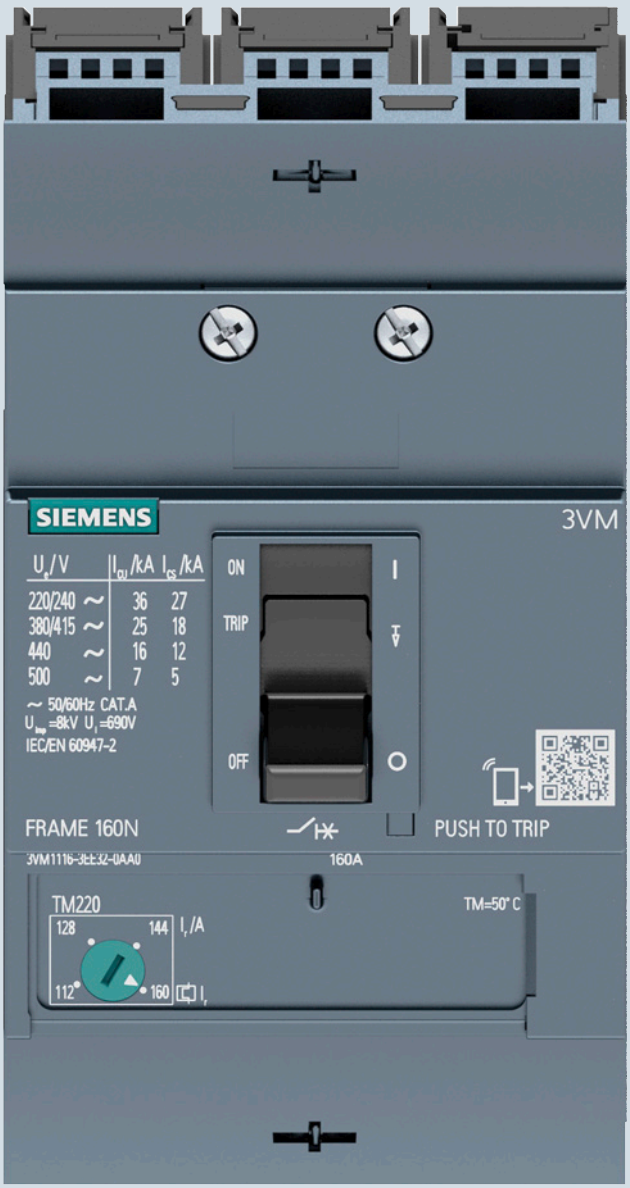
Accessories and Spare Parts 3

Appendix 4

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.

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Your economic solution



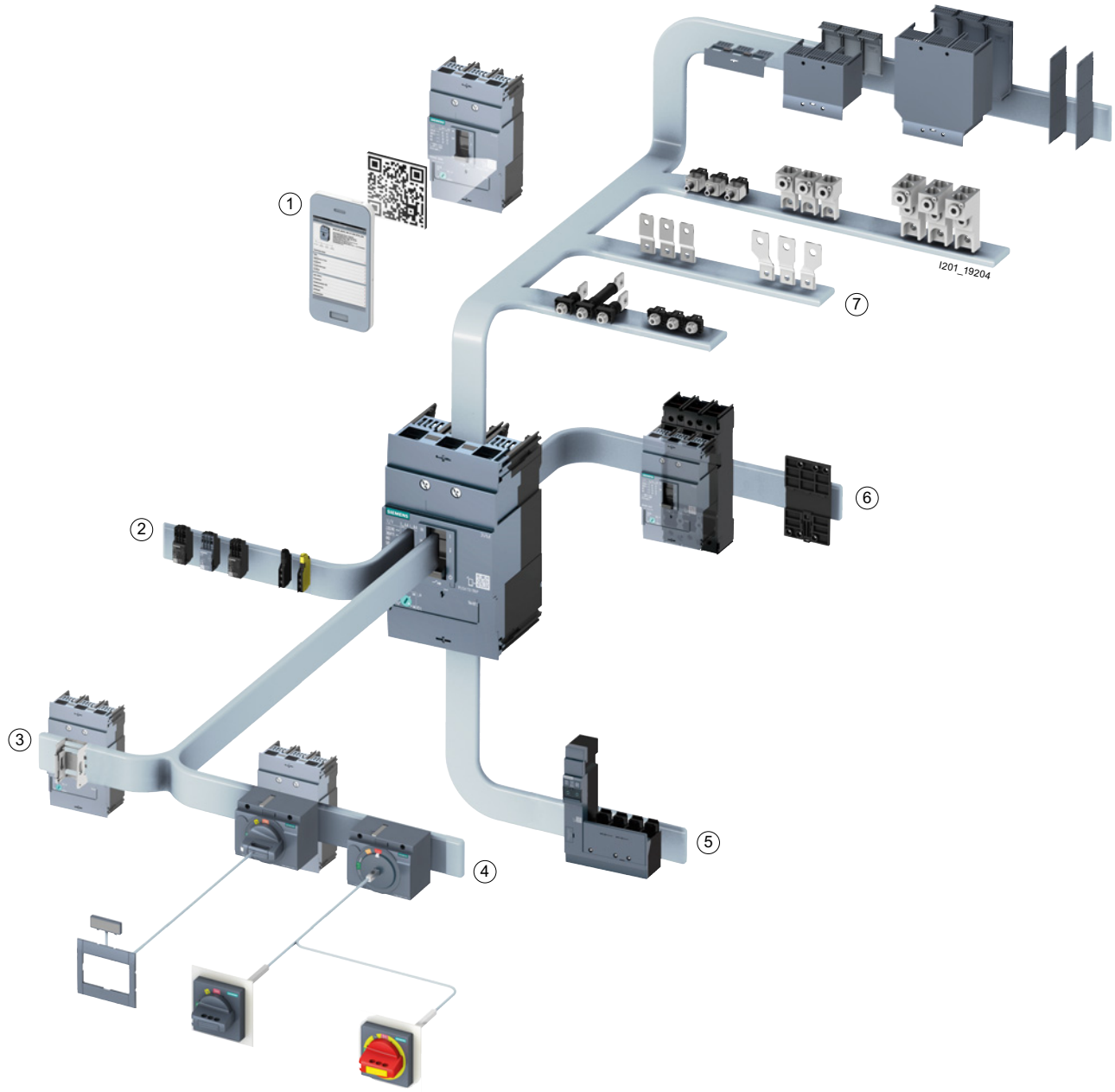
The 3VM molded case circuit breaker is ideally suited to basic applications in infrastructure requiring a reliable and economic solution. In addition to a selection of basic units, the compact product portfolio also encompasses the essential accessory components that perfectly cover your central requirements.

Rely on proven Siemens quality, and benefit at the same time from an excellent price-performance ratio. The 3VM molded case circuit breaker offers the following advantages:

- Compact portfolio for all basic applications
- Superior cost effectiveness – the right performance at the right price
- Global and comprehensive Service & Support – at any time, whatever your location
- Reliable quality and punctual delivery – thanks to the global standards of Siemens

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Wide range of accessories for flexible use



1 Knowledge Manager
2 Internal accessories
3 Locking and interlocking
4 Manual operators
5 Residual current device (RCD)
6 Plug-in technology, DIN rail adapter
7 Connection technology

The 3VM molded case circuit breakers from the portfolio of SENTRON protection, switching, measuring and monitoring devices ensure the reliable protection of people and property as integral components of efficient power distribution systems. With the help of essential accessory components, they can be adapted flexibly, quickly and simply to central customer requirements.

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Notes

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3VM Molded Case Circuit Breakers

1/2 General data
1/2 – Overview
1/9 – Design
1/17 – Application

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

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1

General data

Overview

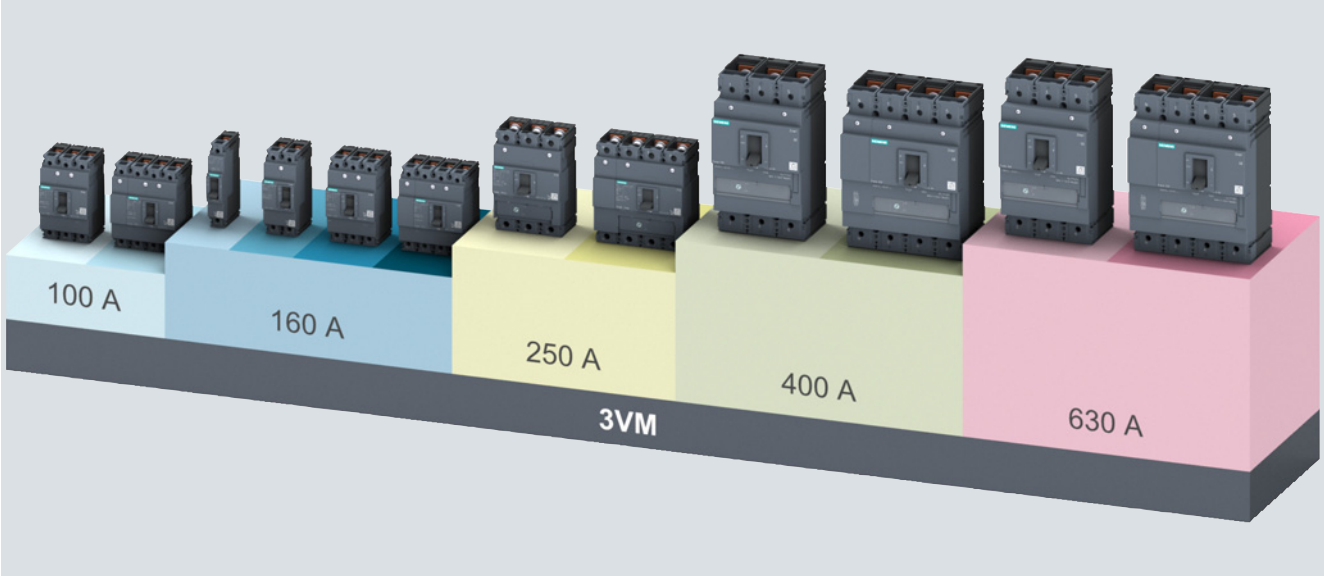
Frame Size

The 3VM molded case circuit breakers are an integral component of our cost-effective power distribution system, and they are used to protect personnel and property assets.

The new 3VM molded case circuit breakers set standards in the modularity of their internal and external accessories. The modularity of the accessory components across all sizes, and their speed of installation save time and cut costs.

The new molded case circuit breakers are available in 3 and 4-pole versions (100 A, 160 A, 250 A, 400 A and 630 A) as well as in 1 and 2-pole versions (160 A).

The circuit breakers are available with rated operational currents ranging from 16 A to 630 A and rated voltages up to 500 V, depending on the size.



Minimum order quantity (PS) or a multiple thereof can be ordered.

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Main features

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

Features

The key features of the 3VM series are:

- Compact design
- Depending on size: 1-pole to 4-pole versions
- Depending on size: breaking capacities of 16 kA … 55 kA at 415 V, 3 or 4-pole breakers and 36 kA at 240 V,1-pole breakers
- Fixed-mounted, plug-in version
- Thermal-magnetic trip units
- AC/DC applications
- No derating up to +50 °C
- Modular and easy-to-fit internal accessories with diverse functions
- Universal platform of accessories across all sizes

Compact dimension

Thanks to a mounting depth of 70 mm and a cover size of 45 mm, the 3VM molded case circuit breakers of sizes 100 A, 160 A and 250 A are predestined for protecting cables and lines in the plant area, especially for the electrical installation area. For these applications, there are also a wide range of accessories available such as adapters for installation on standard mounting rails, as well as residual current devices (RCD110 and RCD210) that can be side-mounted.

Trip unit

A thermal-magnetic principle trip unit is the basic trip unit for providing overload and short-circuit protection. This has been developed for implementing economical, cost-efficient installations. It is suitable for use in three-phase AC networks, 400 Hz applications, and DC applications.

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3VM up to 630 A



Type		3VM10	3VM11		
Number of poles		3, 4	1	2	3, 4
3VM molded case circuit breakers for line protection, standard applications					
Electrical characteristics according to IEC 60947-2					
Size		100 A	160 A	160 A	160 A
Rated operational current I_n at 50 °C ambient temperature	A	16 … 100	16 … 160	16 … 160	16 … 160
Rated operational voltage U_e 50/60 Hz AC	V	500	415	415	500
Rated insulation voltage U_i	V	690	500	500	690
Rated impulse withstand voltage U_{imp}	kV	8	8	8	8
Use in IT networks		✓	✓	✓	✓
Frequency	Hz	0 ... 400	0 ... 400	0 ... 400	0 ... 400

Breaking capacity		(B)	(N)	(S)	(N)	(S)	(N)	(S)	(N)	(S)	(M)
Rated ultimate short-circuit breaking capacity I_{cu} RMS value, according to IEC 60947-2											
220 - 240 V AC / 50/60 Hz	kA	25	36	55	25	36	36	55	36	55	85
380 - 415 V AC / 50/60 Hz	kA	16	25	36	5	6	25	36	25	36	55
440 V AC / 50/60 Hz	kA	8	16	25	--	--	--	--	16	25	36
500 V AC / 50/60 Hz	kA	5	5	7	--	--	--	--	7	7	10
125 V DC (1 switching pole)	kA	--	--	--	16	25	16	25	--	--	--
250 V DC (2 switching poles)	kA	25	36	55	--	--	36	55	36	55	85
500 V DC (3 switching poles)	kA	25[1)]	36[1)]	55[1)]	--	--	--	--	36	55	85
Rated service short-circuit breaking capacity I_{cs} RMS value, according to IEC 60947-2											
220 - 240 V AC / 50/60 Hz	kA	12	18	18	18	27	27	41	27	41	63
380 - 415 V AC / 50/60 Hz	kA	8	12	12	3	4	18	27	18	27	41
440 V AC / 50/60 Hz	kA	4	8	8	--	--	--	--	12	18	27
500 V AC / 50/60 Hz	kA	2.5	2.5	2.5	--	--	--	--	5	5	5
125 V DC (1 switching pole)	kA	--	--	--	16	25	16	25	--	--	--
250 V DC (2 switching poles)	kA	25	36	55	--	--	36	55	36	55	85
500 V DC (3 switching poles)	kA	25[1)]	36[1)]	55[1)]	--	--	--	--	36	55	85

✓ Available -- Not available

[1)] I_{cu} and I_{cs} data only valid for 4-pole breakers. Max. V DC for 3-pole breakers: 250 V DC.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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3VM up to 630 A







3VM12	3VM13 NEW	3VM14 NEW
3, 4	3, 4	3, 4

3VM molded case circuit breakers for line protection, standard applications

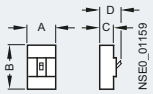
250 A	400 A	630 A
160 … 250	320 ... 400	500 ... 630
500	500	500
690	690	690
8	8	8
✓	✓	✓
0 ... 400	0 ... 400	0 ... 400

Ⓢ	Ⓜ	Ⓢ	Ⓜ	Ⓢ	Ⓜ
55	85	55	85	55	85
36	55	36	55	36	55
25	36	36	55	36	55
10	15	25	36	25	36
--	--	--	--	--	--
55	85	*)	*)	*)	*)
55	85	8	16	8	16
41	63	41	63	41	63
27	41	27	41	27	41
18	27	27	41	27	41
7	10	18	27	18	27
--	--	--	--	--	--
55	85	*)	*)	*)	*)
55	85	8	16	8	16

*) on request

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Type				3VM10	3VM11	3VM11	3VM11
Line protection							
Service life							
Mechanical				10000	12000	12000	12000
Electrical			380 ... 415 V	2000	6000	6000	6000
Trip units	FTFM	TM210		✓	✓	✓	✓
	ATFM	TM220		--	--	--	✓
Starter combinations (IEC 60947-4)							
Rated operational current I_n at 50 °C ambient temperature			A	--	--	--	32 … 125
Service life							
Mechanical				--	--	--	12000
Electrical			380 ... 415 V	--	--	--	6000
Trip units	AM	TM120M		--	--	--	✓
Switch disconnectors							
Electrical characteristics according to IEC 60947-3							
Number of poles				--	--	--	3, 4
Rated operational current I_n at 50 °C ambient temperature			A	--	--	--	63, 100, 125, 160
Rated operational voltage U_e AC 50/60 Hz			V	--	--	--	500
Rated operational voltage U_e DC			V	--	--	--	500
Rated short-circuit breaking capacity I_{cm} with upstream circuit breaker			kA	--	--	--	55 kA at 415 V
Rated short-time withstand current I_{cw}			kA (1s)	--	--	--	2
Dimensions							
			A B C D	mm mm mm mm	76.2 (3p)/101.6 (4p) 130 70 88	25.4 130 70 88	50.8 130 70 88	76.2 (3p)/101.6 (4p) 130 70 88
Weight	1-pole	Lug terminal	kg	--	0.35	--	--
	2-pole	Lug terminal	kg	--	--	0.60	--
	3-pole	Lug terminal	kg	0.90	--	--	0.90
	4-pole	Lug terminal	kg	1.15	--	--	1.15
General information							
Utilization category according to IEC 60947-2				A	A	A	A
Power infeed direction				Top and bottom	Top and bottom	Top and bottom	Top and bottom
Standard connection system				Lug terminal	Lug terminal	Lug terminal	Lug terminal
Isolating features according to IEC 60947				✓	✓	✓	✓

✓ Available -- Not available

*) available as of 2019

Minimum order quantity (PS) or a multiple thereof can be ordered.

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3VM12	3VM13 NEW	3VM14 NEW
12000	12000	12000
6000	6000	6000
✓	✓	✓
✓	✓	✓
160, 200	250, 320	400, 500
12000	12000	12000
6000	6000	6000
✓	✓	✓
3, 4	3, 4	3, 4*)
250	400	630
500	500	500
500	500	500
55 kA at 415 V	55 kA at 415 V	55 kA at 415 V
3	4, 8	4, 8
105 (3p)/140 (4p) 158 70 88	138 (3p)/184 (4p) 248 110 137	138 (3p)/184 (4p) 248 110 137
--	--	--
--	--	--
1, 8	4, 3	4, 3
2, 3	4, 8	4, 8
A	A	A
Top and bottom	Top and bottom	Top and bottom
Lug terminal	Lug terminal	Lug terminal
✓	✓	✓

*) available as of 2019

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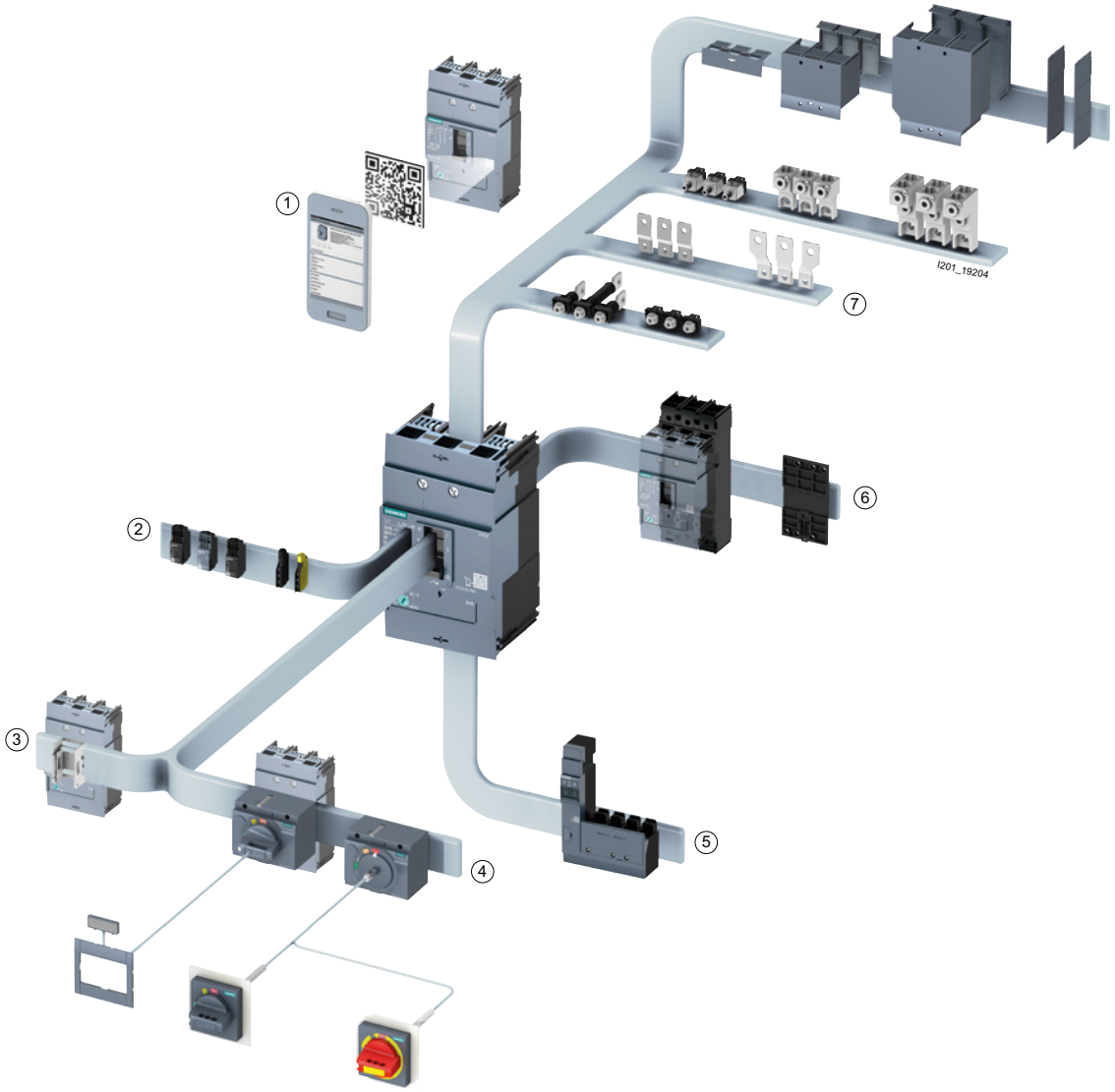
General data

Molded case circuit breakers and accessories in the system

The new 3VM molded case circuit breakers come with a tailor-made portfolio of internal and external accessories which 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	Molded case circuit breakers				
	3VM				
	100 A	160 A	250 A	400 A	630 A
Auxiliary switches and alarm switches	■	■	■	■	■
Auxiliary releases	■	■	■	■	■
Connection technology	■	■	■	■	■
Plug-in technology		■	■	■	■
Front mounted rotary operator	■	■	■	■	
Door mounted rotary operator	■	■	■	■	
Locking technology: padlock	■	■	■	■	
Residual current device, mounted on the side (4-pole)		■	■		
Masking frame	■	■	■	■	
DIN rail adapter	■	■			



1 Knowledge Manager
2 Internal accessories
3 Locking and interlocking
4 Manual operators
5 Residual current device (RCD)
6 Plug-in technology, DIN rail adapter
7 Connection technology

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Design

Integrated system

The 3VM molded case circuit breakers set new standards, not only regarding technical features and functional scope, but design ergonomics too.

When it comes to operation, functionality and installation, the new 3VM series 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 available for the 3VM molded case circuit breakers are:

- Standardized methods of operation
- Standardized functionality
- Standardized installation procedures
- Standardized accessories across all sizes 100 A ... 630 A (e.g. auxiliary switches, auxiliary releases, etc.)

The right circuit breaker for all operation conditions

The new series of molded case circuit breakers can be equipped with additional components enabling them to be installed as fully functional switches in any location, a feature which affords maximum flexibility to system planners.

The following components can be used to suit the installation location:

- Handle
- Front mounted rotary operator
- Door mounted rotary operator

When the 3VM molded case circuit breaker is in the OFF position, it reliably disconnects all current paths of the circuit in accordance with IEC 60947-2 and IEC 60204-1.

The main switch functionality is not diminished by installation of the following accessories:

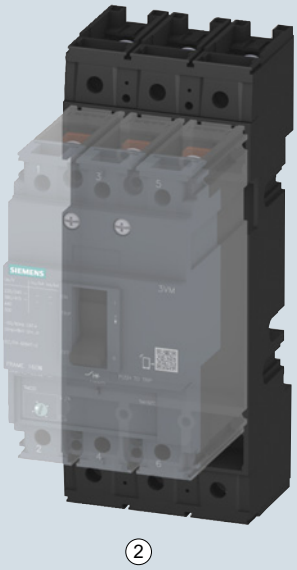
- Manual operator
- Residual current device

Installation versions

3VM molded case circuit breakers are available in the following installation versions:



① Fixed-mounted



② Plug-in technology



③ DIN rail adapter

All versions offer the full range of functions, e.g. they can be equipped with every kind of accessory. For maintenance purposes, the plug-in design also provides the option of quickly replacing the breaker, or establishing visible electrical isolation in the main circuit.

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General data

Ergonomic design of circuit breakers, control levers and control elements



Clear status indication

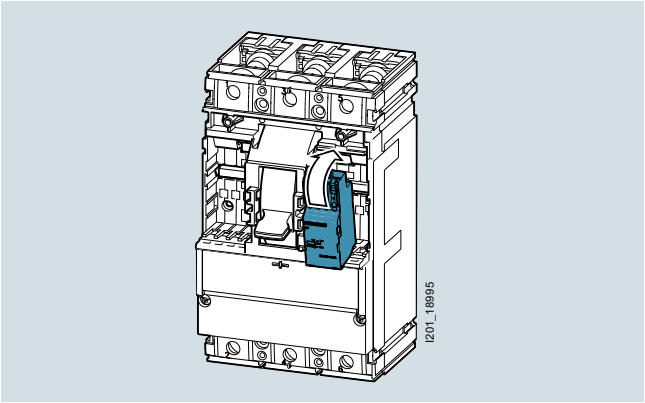
The possible switching positions of manual rotary operators are listed below:

- ON – Red marking
- TRIP – Yellow marking
- OFF – Green marking

The handle clearly engages in one of these positions depending on the status of the molded case circuit breaker. The switching positions are color-coded so that you can identify the status of the circuit breaker at a glance.

Broad range of accessories

The internal accessories (e.g. alarm and auxiliary switches, auxiliary releases, etc.) all belong to one family and can be installed on any size of circuit breaker. The accessories are designed for quick and easy installation. The components are coded to ensure that they are always installed at the correct position in the circuit breaker. The color recognizing system makes the functional selection easier than ever.



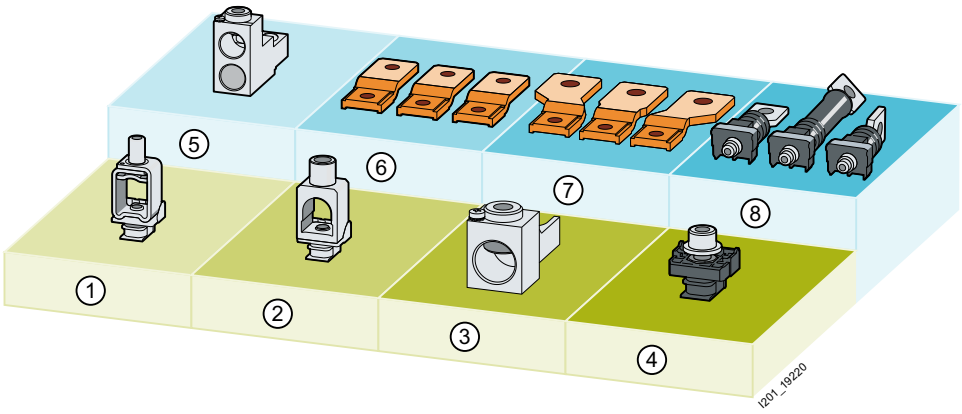
Connection technology

A large selection of connection systems is available for the new series of 3VM molded case circuit breakers.

The supported cable cross-sections are based on the frame size and the cable terminals used.

The connection accessories are easy to integrate in the new series of 3VM molded case circuit breakers.

You can implement various front and rear main conductor connections for the molded case circuit breakers in both types of installation (fixed-mounted and plug-in).



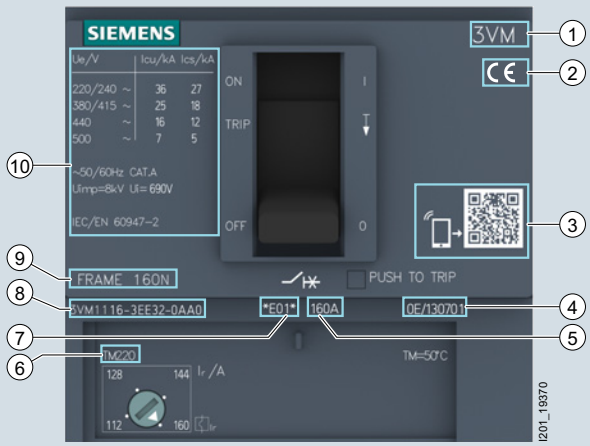
1 Box terminal
2 Circular conductor terminal
3 Circular conductor terminal, large
4 Lug terminal
5 Circular conductor terminal for 2 cables
6 Front connection bars extended
7 Front connection bars broadened
8 Rear terminal flat

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Technical details

Circuit breaker identification

Each 3VM molded case circuit breaker has labels displaying all the important technical information, enabling unique identification:



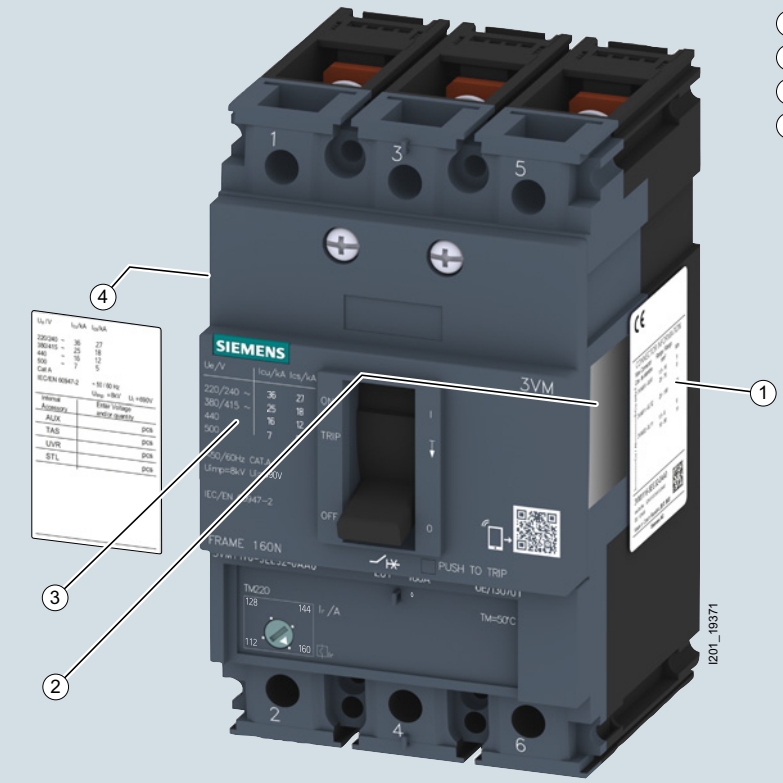
1 Circuit breaker designation
2 Approvals
3 Knowledge Manager
4 Production date
5 Rated current
6 ETU type
7 Product version
8 Article number
9 Size and breaking capacity class
10 Rating plate

Front: Labeling

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.



1 Connection information label
2 Label inserts (in accessories compartment)
3 Key electrical data
4 Internal accessories labels

Breaker labeling

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1

General data

Breaking capacity

The rated ultimate short-circuit breaking capacity I_{cu} is the maximum value of the short-circuit current which the protective device is capable of disconnecting in accordance with regulations. Up to this value, the protective device is also allowed to be used in a network.

The new 3VM molded case circuit breakers are available with various breaking capacity classes according to size and rated operational current range.

- Breaking capacity of the 3VM series, 2 to 4-pole at 415 V AC

Breaking capacity Class / I_{cu}	**Size** 3VM10 100 A 3 and 4-pole	3VM11 160 A 2, 3 and 4 pole	3VM12 250 A 3 and 4-pole	3VM13/14 400 A / 630 A 3 and 4-pole
B 16 kA	✓	--	--	--
N 25 kA	✓	✓	--	--
S 36 kA	✓	✓	✓	✓
M 55 kA	--	✓*)	✓	✓

*) only valid for 3- and 4- pole breakers

- Breaking capacity of the 3VM series, 1-pole at 240 V AC

Breaking capacity Class / I_{cu}	**Size** 3VM11 160 A 1-pole
N 25 kA	✓
S 36 kA	✓

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Standards and guidelines

The standards fulfilled by the 3VM molded case circuit breakers include:

- IEC / EN 60947-1
- IEC / EN 60947-2
- IEC / EN 60947-2, Appendix B, H and M
- IEC / EN 60947-3
- IEC / EN 60947-6-1

Electromagnetic compatibility

The 3VM molded case circuit breakers meet the requirements of the following standards:

- CISPR11, Class A and Class B
- IEC / EN 60947-1, Appendix S
- IEC / EN 60947-2, Appendix B, F, J and N

The 3VM molded case circuit breakers are adequately resistant to the following factors:

- Electrostatic charge
- Electrostatic discharge
- Electromagnetic waves, e.g. from transmission systems, mobile phones, radio telephone sets and radar systems
- Overvoltage, e.g. caused by lightning
- Voltage surges

Certificates

You can find information on the available certification (CE, CCC, FM, marine approvals) on the Internet (www.siemens.com/lowvoltage/product-support).

In the Entry List you can use the certificate type (general product approval, explosion protection, test certificates, shipbuilding, etc.) as a filter criterion.

Ambient conditions

- Pollution degree:
  Operation of the 3VM molded case circuit breakers is approved in accordance with IEC / EN 60947-1 and IEC / EN 60664-1 for pollution degree 3.
- Ambient temperature:
  - The 3VM molded case circuit breakers are used at ambient temperatures from -25 °C to +70 °C. At temperatures above +50 °C there are reductions in the rated operational current (derating).
  - The permissible storage temperature in original Siemens packaging lies between -40 °C and +80 °C.
- Special climatic requirements:
  The 3VM molded case circuit breakers can also be used in severe operating conditions.

  Severe conditions for storage, transport and stationary use:
  The molded case circuit breakers have passed the relevant special tests according to IEC / EN 60947-1, Appendix Q for use in Class E.
  This class covers the areas MC3 + CC2 + SC1:
  - Ambient temperature
  - Humidity
  - Vibration environment
  - Shock environment

  These ambient conditions can be referred to as "Open deck, damp and cold atmosphere without salt spray" or "Difficult, non-marine conditions".

  The following standards-related criteria are complied with:
  - IEC / EN 60068-2-2 "Bd" and IEC / EN 60068-2-1 "Ab":
    Temperature range: -25 °C … +70 °C
  - IEC / EN 60068-2-30 "Db":
    Humid heat up to 55 °C and air humidity up to 95 %
  - IEC / EN 60068-2-6 "Fc"
    Vibration test
  - IEC / EN 60068-2-27 "Ea"
    Shock resistance test

  Between the tests of compliance with the standards and at the end of the tests, the usability of the devices is assured with the "Verification of operation characteristics".
- Vibration resistance and shock resistance:
  - 3VM molded case circuit breakers are insensitive to vibrations and meet the requirements relating to mechanical and electromechanical vibration strength according to IEC / EN 60068 and the specifications of the shipbuilding societies.
  - The circuit breakers resist impacts without tripping of up to 10 g and are tested to withstand their operating conditions without damage, with shock impact according to IEC / EN 60068-2-27 "Ea" with 150 m/s²/11 ms.
- Installation altitudes:
  - When the 3VM molded case circuit breakers are used at up to 2000 m above sea level, the rated data will not change.
  - An installation altitude above 2000 m can lead to higher temperatures at the switching devices. The decreased air density can significantly reduce heat dissipation, in turn reducing rated operational voltage, rated uninterrupted current and short-circuit values.

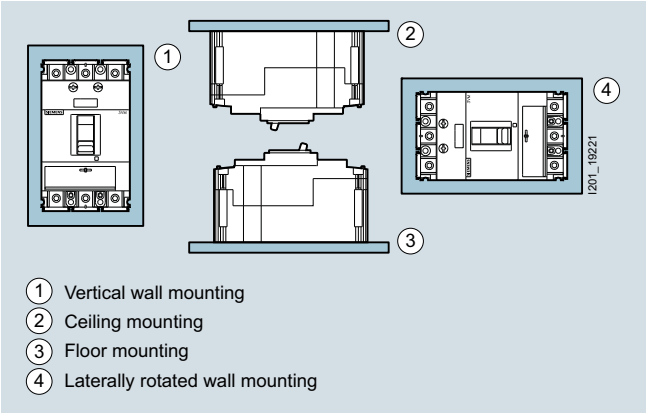
Refer to the table below for the calculation factor for determining the key values:

	Height			
	2000 m	3000 m	4000 m	5000 m
Breaking capacity I_{cu} / I_{cs}	1.00	0.90	0.80	0.70
Operating voltage U_{max}	1.00	0.90	0.80	0.70
Operating current I_{max} [1)]	1.00	0.96	0.92	0.88
Current setting I_r [2)]	1.00	1.02	1.04	1.06

2) At maximum ambient temperature 50 °C

3) Thermal-magnetic trip units only

Permissible mounting positions



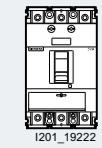
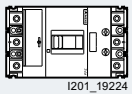
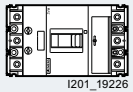
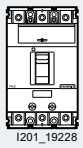
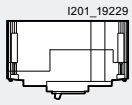
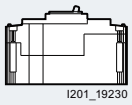
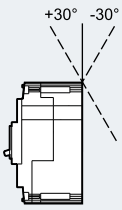
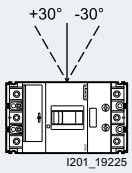
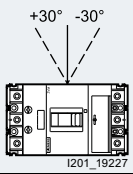
Positions in which the 3VM molded case circuit breakers are installed

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General data

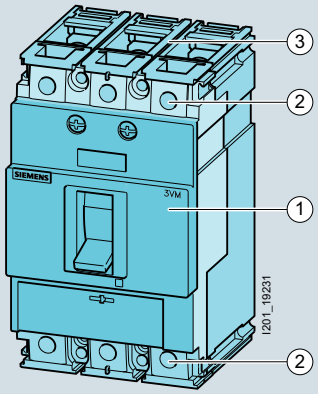
Further mounting positions, and mounting positions with accessories

The following table shows the possible variations on the mounting positions, as well as mounting positions with accessories:

	Wall mounting				Ceiling mounting	Floor mounting
	vertical upright	horizontal right	horizontal left	vertical rotated	suspended	recumbent
	 I201_19222	 I201_19224	 I201_19226	 I201_19228	 I201_19229	 I201_19230
	 I201_19223	 I201_19225	 I201_19227			
3VM molded case circuit breakers						
Basic circuit breaker (with internal accessories)	✓	✓	✓	✓	✓	✓
On DIN rail (with internal accessories)	✓	✓	✓	✓	--	✓
3VM molded case circuit breaker (3 and 4-pole) with accessories						
Connection technology	✓	✓	✓	✓	✓	✓
Plug-in technology	✓	✓	✓	✓	--	--
Front mounted rotary operator	✓	✓	✓	✓	✓	✓
Door mounted rotary operator	✓	✓	✓	✓	✓	✓
Side-mounted RCD basic type A (RCD110, RCD210)	✓	✓	✓	✓	✓	✓
3-pole on 60 mm busbar system (with internal accessories)	✓	--	--	--	--	--

Degrees of protection

3VM molded case circuit breakers comply with the following degrees of protection as defined by IEC 60529 and IEC 60947-1, Appendix C:



① Front panel without termination area
② Front panel termination area
③ Infeed/load ends

Level	Accessories cover		Terminal cover	
	Without	With	Without	With
①	--	IP4x	--	--
②	--	--	IP2x	IP4x
③	--	--	--	IP3x

A higher degree of protection up to IP65 can be achieved in combination with the following components:

- Door mounted rotary operator

Environmental protection

The 3VM molded case circuit breakers meet the specifications of the European Environment Guideline 2002/95/EC RoHS (Restriction of the use of certain hazardous substances in electrical and electronic equipment). As little impact on the environment as possible was emphasized in their development and production.

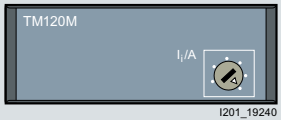
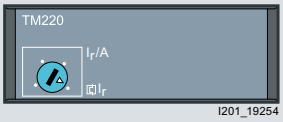
Minimum order quantity (PS) or a multiple thereof can be ordered.

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Protection system

Description of functions

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

		Thermal-magnetic			
		TM110M FM	**TM120M AM**	**TM210 FTFM**	**TM220 ATFM**
		 I201_19523	 I201_19240	 I201_19253	 I201_19254
Protection					
Starter protection		✓	✓	--	--
Line protection		--	--	✓	✓
Version available with					
100 A	3-pole	--	--	✓	--
	4-pole	--	--	✓	--
160 A	1-pole	--	--	✓	--
	2-pole	--	--	✓	--
	3-pole	✓	✓	✓	✓
	4-pole	--	--	✓	✓
250 A	3-pole	--	✓	✓	✓
	4-pole	--	--	✓	✓
400 A	3-pole	--	✓	✓	✓
	4-pole	--	--	✓	✓
630 A	3-pole	--	✓	✓	✓
	4-pole	--	--	✓	✓
Available protection parameters					
I_r adjustable		--	--	--	✓
I_i adjustable		--	✓	--	--
I_r fixed		--	--	✓	--
I_i fixed		✓	--	✓	✓
I_N [1]		--	--	✓	✓
Integrated functions					
Parameterizing		--	 Setting and reading the parameters in A	--	 Setting and reading the parameters in A

[1] 3VM10 only without N protection.
3VM11 to 3VM14 without N protection or with 100% N protection

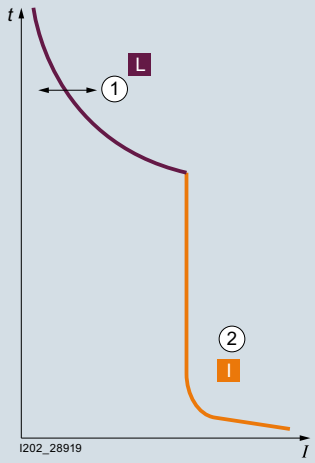
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Characteristic curves

To design a low-voltage switchboard in accordance with the valid rules, the system planner needs to dimension the protection settings of the molded case circuit breakers.

The settings selected for the trip unit of a molded case circuit breaker depend on the type of equipment to be protected. Tripping characteristics are represented graphically. In order to simplify the coordination of different protection devices, the current is specified as a multiple of the current setting value and the time is specified in seconds.

Low-voltage circuit breaker with TM trip unit



1 Response threshold of the long-time delayed protection, thermal
2 Response threshold of the instantaneous protection
L Overload range
I Instantaneous short-circuit protection

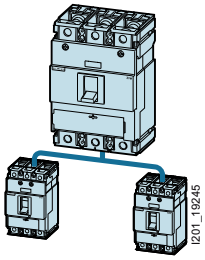
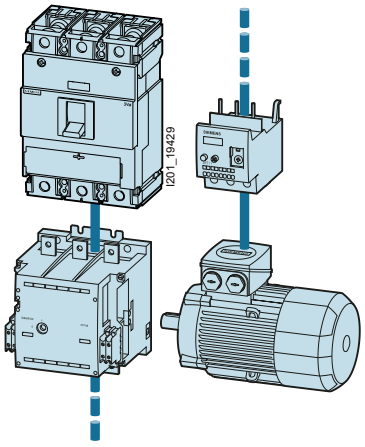
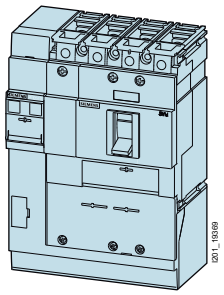
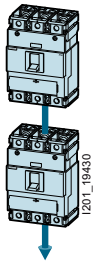
Tripping characteristics

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Application

Detailed information about applications and possible uses

Application	3VM	Description
Line protection		
	✓	The trip units for line protection are designed to provide overload and short-circuit protection for: • Cables • Lines • Non motorized loads
Protection for starter combinations (starter protection)		
	✓	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 the operational switching of the feeder. The overload relay handles overload protection that 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.
Residual current protection		
	✓	Residual current protective devices afford fault protection (formerly referred to as: protection in case of indirect contact) and supplementary protection (formerly referred to as: protection in case of direct contact) in low-voltage systems in the event of the basic insulation failing or live parts being touched. Their task is to prevent or reduce injury to personnel or livestock, or damage to property.
Switch disconnectors		
	✓	Switch disconnectors are deployed: • As main control switches • For on/off switching • For disconnection of loads • As switch disconnectors without overload and short-circuit protection The switch disconnectors correspond to IEC / EN 60947-3.

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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3VM Molded Case Circuit Breakers up to 630 A, TM, 400 V, up to 55 kA



2/2 **Line protection**
2/12 **Starter protection**
2/13 **Switch disconnectors**
2/14 **Dimensional drawings**

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

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Selection and ordering data

PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

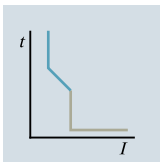


Connection technology	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	DT	I_{cu} up to 25 kA at 240 V, low breaking capacity N (N) See "Overview", p. 1/2 Article No. www.siemens.com/product?Article No.	Basic price per PU
		A	A	A			

1-pole, fixed-mounted, 3VM11, up to 160 A Thermal-magnetic trip unit

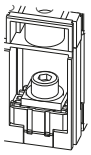


I201_19253



Line protection, 1-pole, TM210 FTFM

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



Connection with lug terminal

3VM11	16	16	320	**3VM1196-3ED12-0AA0**
	20	20	320	**3VM1120-3ED12-0AA0**
	25	25	320	**3VM1125-3ED12-0AA0**
	32	32	320	**3VM1132-3ED12-0AA0**
	40	40	400	**3VM1140-3ED12-0AA0**
	50	50	500	**3VM1150-3ED12-0AA0**
	63	63	630	**3VM1163-3ED12-0AA0**
	80	80	800	**3VM1180-3ED12-0AA0**
	100	100	1000	**3VM1110-3ED12-0AA0**
	125	125	1250	**3VM1112-3ED12-0AA0**
	160	160	1600	**3VM1116-3ED12-0AA0**

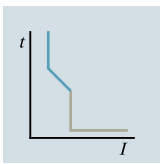


Connection technology	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	DT	I_{cu} up to 25 kA at 415 V, low breaking capacity N (N) See "Overview", p. 1/2 Article No. www.siemens.com/product?Article No.	Basic price per PU
		A	A	A			

2-pole, fixed-mounted, 3VM11, up to 160 A Thermal-magnetic trip unit

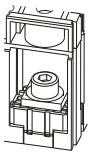


I201_19253



Line protection, 2-pole, TM210 FTFM

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



Connection with lug terminal

3VM11	16	16	320	**3VM1196-3ED22-0AA0**
	20	20	320	**3VM1120-3ED22-0AA0**
	25	25	320	**3VM1125-3ED22-0AA0**
	32	32	320	**3VM1132-3ED22-0AA0**
	40	40	400	**3VM1140-3ED22-0AA0**
	50	50	500	**3VM1150-3ED22-0AA0**
	63	63	630	**3VM1163-3ED22-0AA0**
	80	80	800	**3VM1180-3ED22-0AA0**
	100	100	1000	**3VM1110-3ED22-0AA0**
	125	125	1250	**3VM1112-3ED22-0AA0**
	160	160	1600	**3VM1116-3ED22-0AA0**

Minimum order quantity (PS) or a multiple thereof can be ordered.

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PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

Rated current I_n	DT	I_{cu} to 36 kA at 240 V, standard breaking capacity S (S) See "Overview", p. 1/2
		Article No. www.siemens.com/product?Article No. / Basic price per PU
A		

Line protection, 1-pole, TM210 FTFM

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

	Connection with lug terminal
16	**3VM1196-4ED12-0AA0**
20	**3VM1120-4ED12-0AA0**
25	**3VM1125-4ED12-0AA0**
32	**3VM1132-4ED12-0AA0**
40	**3VM1140-4ED12-0AA0**
50	**3VM1150-4ED12-0AA0**
63	**3VM1163-4ED12-0AA0**
80	**3VM1180-4ED12-0AA0**
100	**3VM1110-4ED12-0AA0**
125	**3VM1112-4ED12-0AA0**
160	**3VM1116-4ED12-0AA0**

Rated current I_n	DT	I_{cu} to 36 kA at 415 V, standard breaking capacity S (S) See "Overview", p. 1/2
		Article No. www.siemens.com/product?Article No. / Basic price per PU
A		

Line protection, 2-pole, TM210 FTFM

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

	Connection with lug terminal
16	**3VM1196-4ED22-0AA0**
20	**3VM1120-4ED22-0AA0**
25	**3VM1125-4ED22-0AA0**
32	**3VM1132-4ED22-0AA0**
40	**3VM1140-4ED22-0AA0**
50	**3VM1150-4ED22-0AA0**
63	**3VM1163-4ED22-0AA0**
80	**3VM1180-4ED22-0AA0**
100	**3VM1110-4ED22-0AA0**
125	**3VM1112-4ED22-0AA0**
160	**3VM1116-4ED22-0AA0**

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Line protection

PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

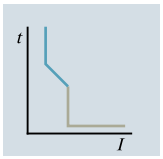


Connection technology	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instanta-neous short-circuit protection "I" I_i	DT	I_{cu} up to 16 kA at 415 V, very low breaking capacity B (B) See "Overview", p. 1/2	
		A	A	A		Article No. www.siemens.com/product?Article No.	Basic price per PU

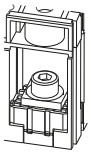
3-pole, fixed-mounted, 3VM10 to 3VM14, up to 630 A
Thermal-magnetic trip unit



I201_19253



Line protection, TM210 FTFM
With fixed overload protection I_r and fixed short-circuit protection I_i



Connection with lug terminal

3VM10	16	16	320	**3VM1096-2ED32-0AA0**
	20	20	320	**3VM1020-2ED32-0AA0**
	25	25	320	**3VM1025-2ED32-0AA0**
	32	32	320	**3VM1032-2ED32-0AA0**
	40	40	400	**3VM1040-2ED32-0AA0**
	50	50	500	**3VM1050-2ED32-0AA0**
	63	63	630	**3VM1063-2ED32-0AA0**
	80	80	800	**3VM1080-2ED32-0AA0**
	100	100	1000	**3VM1010-2ED32-0AA0**
3VM11	16	16	320	--
	20	20	320	--
	25	25	320	--
	32	32	320	--
	40	40	400	--
	50	50	500	--
	63	63	630	--
	80	80	800	--
	100	100	1000	--
	125	125	1250	--
	160	160	1600	--
3VM12	200	200	2000	--
	250	250	2500	--
3VM13 NEW	320	320	3200	--
	400	400	4000	--
3VM14 NEW	500	500	5000	--
	630	630	6300	--

Minimum order quantity (PS) or a multiple thereof can be ordered.

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PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

Rated current I_n	DT	I_{cu} up to 25 kA at 415 V, low breaking capacity N (N) See "Overview", p. 1/2		DT	I_{cu} to 36 kA at 415 V, standard breaking capacity S (S) See "Overview", p. 1/2		I_{cu} up to 55 kA at 415 V, medium breaking capacity M (M) See "Overview", p. 1/2	
		Article No. www.siemens.com/product?Article No.	Basic price per PU		Article No. www.siemens.com/product?Article No.	Basic price per PU	Article No. www.siemens.com/product?Article No.	Basic price per PU
A								
Line protection, TM210 FTFM With fixed overload protection I_r and fixed short-circuit protection I_i								
		Connection with lug terminal						
16		**3VM1096-3ED32-0AA0**			**3VM1096-4ED32-0AA0**		**--**	
20		**3VM1020-3ED32-0AA0**			**3VM1020-4ED32-0AA0**		**--**	
25		**3VM1025-3ED32-0AA0**			**3VM1025-4ED32-0AA0**		**--**	
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40		**3VM1040-3ED32-0AA0**			**3VM1040-4ED32-0AA0**		**--**	
50		**3VM1050-3ED32-0AA0**			**3VM1050-4ED32-0AA0**		**--**	
63		**3VM1063-3ED32-0AA0**			**3VM1063-4ED32-0AA0**		**--**	
80		**3VM1080-3ED32-0AA0**			**3VM1080-4ED32-0AA0**		**--**	
100		**3VM1010-3ED32-0AA0**			**3VM1010-4ED32-0AA0**		**--**	
16		**3VM1196-3ED32-0AA0**			**3VM1196-4ED32-0AA0**		**3VM1196-5ED32-0AA0**	
20		**3VM1120-3ED32-0AA0**			**3VM1120-4ED32-0AA0**		**3VM1120-5ED32-0AA0**	
25		**3VM1125-3ED32-0AA0**			**3VM1125-4ED32-0AA0**		**3VM1125-5ED32-0AA0**	
32		**3VM1132-3ED32-0AA0**			**3VM1132-4ED32-0AA0**		**3VM1132-5ED32-0AA0**	
40		**3VM1140-3ED32-0AA0**			**3VM1140-4ED32-0AA0**		**3VM1140-5ED32-0AA0**	
50		**3VM1150-3ED32-0AA0**			**3VM1150-4ED32-0AA0**		**3VM1150-5ED32-0AA0**	
63		**3VM1163-3ED32-0AA0**			**3VM1163-4ED32-0AA0**		**3VM1163-5ED32-0AA0**	
80		**3VM1180-3ED32-0AA0**			**3VM1180-4ED32-0AA0**		**3VM1180-5ED32-0AA0**	
100		**3VM1110-3ED32-0AA0**			**3VM1110-4ED32-0AA0**		**3VM1110-5ED32-0AA0**	
125		**3VM1112-3ED32-0AA0**			**3VM1112-4ED32-0AA0**		**3VM1112-5ED32-0AA0**	
160		**3VM1116-3ED32-0AA0**			**3VM1116-4ED32-0AA0**		**3VM1116-5ED32-0AA0**	
200		**--**			**3VM1220-4ED32-0AA0**		**3VM1220-5ED32-0AA0**	
250		**--**			**3VM1225-4ED32-0AA0**		**3VM1225-5ED32-0AA0**	
NEW 320		**--**			**3VM1332-4ED32-0AA0**		**3VM1332-5ED32-0AA0**	
400		**--**			**3VM1340-4ED32-0AA0**		**3VM1340-5ED32-0AA0**	
NEW 500		**--**			**3VM1450-4ED32-0AA0**		**3VM1450-5ED32-0AA0**	
630		**--**			**3VM1463-4ED32-0AA0**		**3VM1463-5ED32-0AA0**	

Minimum order quantity (PS) or a multiple thereof can be ordered.

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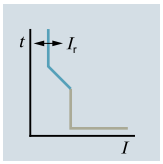
Line protection

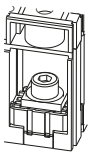


Connection technology	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instanta-neous short-circuit protection "I" I_i	DT	I_{cu} up to 16 kA at 415 V, very low breaking capacity B (B) See "Overview", p. 1/2 Article No. www.siemens.com/product?Article No.	Basic price per PU
		A	A	A			
3-pole, fixed-mounted, 3VM11 to 3VM14, up to 630 A Thermal-magnetic trip unit							
	Line protection, TM220 ATFM With adjustable overload protection I_r and fixed short-circuit protection I_i						
	Connection with lug terminal						
	3VM11	16	11 ... 16	320		--	
		20	14 ... 20	320		--	
		25	18 ... 25	320		--	
		32	22 ... 32	320		--	
		40	28 ... 40	400		--	
		50	35 ... 50	500		--	
		63	44 ... 63	630		--	
		80	56 ... 80	800		--	
		100	70 ... 100	1000		--	
		125	88 ... 125	1250		--	
		160	112 ... 160	1600		--	
	3VM12	200	140 ... 200	2000		--	
		250	175 ... 250	2500		--	
	3VM13 NEW	320	220 ... 320	3200		--	
		400	280 ... 400	4000		--	
	3VM14 NEW	500	350 ... 500	5000		--	
		630	440 ... 630	6300		--	



I201_19254





Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Rated current I_n	I_{cu} up to 25 kA at 415 V, low breaking capacity N (N) See "Overview", p. 1/2		DT	I_{cu} to 36 kA at 415 V, standard breaking capacity S (S) See "Overview", p. 1/2		DT	I_{cu} up to 55 kA at 415 V, medium breaking capacity M (M) See "Overview", p. 1/2	
		Article No. www.siemens.com/product?Article No.	Basic price per PU		Article No. www.siemens.com/product?Article No.	Basic price per PU		Article No. www.siemens.com/product?Article No.	Basic price per PU
	A								
	Line protection, TM220 ATFM With adjustable overload protection I_r and fixed short-circuit protection I_i								
		Connection with lug terminal							
	16	**3VM1196-3EE32-0AA0**			**3VM1196-4EE32-0AA0**			**3VM1196-5EE32-0AA0**	
	20	**3VM1120-3EE32-0AA0**			**3VM1120-4EE32-0AA0**			**3VM1120-5EE32-0AA0**	
	25	**3VM1125-3EE32-0AA0**			**3VM1125-4EE32-0AA0**			**3VM1125-5EE32-0AA0**	
	32	**3VM1132-3EE32-0AA0**			**3VM1132-4EE32-0AA0**			**3VM1132-5EE32-0AA0**	
	40	**3VM1140-3EE32-0AA0**			**3VM1140-4EE32-0AA0**			**3VM1140-5EE32-0AA0**	
	50	**3VM1150-3EE32-0AA0**			**3VM1150-4EE32-0AA0**			**3VM1150-5EE32-0AA0**	
	63	**3VM1163-3EE32-0AA0**			**3VM1163-4EE32-0AA0**			**3VM1163-5EE32-0AA0**	
	80	**3VM1180-3EE32-0AA0**			**3VM1180-4EE32-0AA0**			**3VM1180-5EE32-0AA0**	
	100	**3VM1110-3EE32-0AA0**			**3VM1110-4EE32-0AA0**			**3VM1110-5EE32-0AA0**	
	125	**3VM1112-3EE32-0AA0**			**3VM1112-4EE32-0AA0**			**3VM1112-5EE32-0AA0**	
	160	**3VM1116-3EE32-0AA0**			**3VM1116-4EE32-0AA0**			**3VM1116-5EE32-0AA0**	
	200	**--**			**3VM1220-4EE32-0AA0**			**3VM1220-5EE32-0AA0**	
	250	**--**			**3VM1225-4EE32-0AA0**			**3VM1225-5EE32-0AA0**	
NEW	320	**--**			**3VM1332-4EE32-0AA0**			**3VM1332-5EE32-0AA0**	
	400	**--**			**3VM1340-4EE32-0AA0**			**3VM1340-5EE32-0AA0**	
NEW	500	**--**			**3VM1450-4EE32-0AA0**			**3VM1450-5EE32-0AA0**	
	630	**--**			**3VM1463-4EE32-0AA0**			**3VM1463-5EE32-0AA0**	

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Line protection

PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

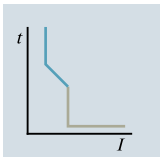


Connection technology	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	DT	I_{cu} up to 16 kA at 415 V, very low breaking capacity B (B) See "Overview", p. 1/2	
		A	A	A		Article No. www.siemens.com/product?Article No.	Basic price per PU

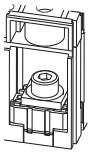
4-pole, fixed-mounted, 3VM10 to 3VM14, up to 630 A
Thermal-magnetic trip unit



I201_19253



Line protection, TM210 FTFM, without neutral conductor protection
With fixed overload protection I_r and fixed short-circuit protection I_i



Connection with lug terminal

3VM10	16	16	320	**3VM1096-2ED42-0AA0**
	20	20	320	**3VM1020-2ED42-0AA0**
	25	25	320	**3VM1025-2ED42-0AA0**
	32	32	320	**3VM1032-2ED42-0AA0**
	40	40	400	**3VM1040-2ED42-0AA0**
	50	50	500	**3VM1050-2ED42-0AA0**
	63	63	630	**3VM1063-2ED42-0AA0**
	80	80	800	**3VM1080-2ED42-0AA0**
	100	100	1000	**3VM1010-2ED42-0AA0**
3VM11	16	16	320	--
	20	20	320	--
	25	25	320	--
	32	32	320	--
	40	40	400	--
	50	50	500	--
	63	63	630	--
	80	80	800	--
	100	100	1000	--
	125	125	1250	--
	160	160	1600	--
3VM12	200	200	2000	--
	250	250	2500	--
3VM13 NEW	320	320	3200	--
	400	400	4000	--
3VM14 NEW	500	500	5000	--
	630	630	6300	--

Line protection, TM210 FTFM, 100 % neutral conductor protection
With fixed overload protection I_r and fixed short-circuit protection I_i

Connection with lug terminal

3VM11	16	16	320	--
	20	20	320	--
	25	25	320	--
	32	32	320	--
	40	40	400	--
	50	50	500	--
	63	63	630	--
	80	80	800	--
	100	100	1000	--
	125	125	1250	--
	160	160	1600	--
3VM12	200	200	2000	--
	250	250	2500	--
3VM13 NEW	320	320	3200	--
	400	400	4000	--
3VM14 NEW	500	500	5000	--
	630	630	6300	--

Minimum order quantity (PS) or a multiple thereof can be ordered.

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PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

Rated current I_n	DT	I_{cu} up to 25 kA at 415 V, low breaking capacity N (N) See "Overview", p. 1/2		DT	I_{cu} to 36 kA at 415 V, standard breaking capacity S (S) See "Overview", p. 1/2		I_{cu} up to 55 kA at 415 V, medium breaking capacity M (M) See "Overview", p. 1/2	
		Article No. www.siemens.com/product?Article No.	Basic price per PU		Article No. www.siemens.com/product?Article No.	Basic price per PU	Article No. www.siemens.com/product?Article No.	Basic price per PU
A								
Line protection, TM210 FTFM, without neutral conductor protection With fixed overload protection I_r and fixed short-circuit protection I_i								
		Connection with lug terminal						
16		**3VM1096-3ED42-0AA0**			**3VM1096-4ED42-0AA0**		**--**	
20		**3VM1020-3ED42-0AA0**			**3VM1020-4ED42-0AA0**		**--**	
25		**3VM1025-3ED42-0AA0**			**3VM1025-4ED42-0AA0**		**--**	
32		**3VM1032-3ED42-0AA0**			**3VM1032-4ED42-0AA0**		**--**	
40		**3VM1040-3ED42-0AA0**			**3VM1040-4ED42-0AA0**		**--**	
50		**3VM1050-3ED42-0AA0**			**3VM1050-4ED42-0AA0**		**--**	
63		**3VM1063-3ED42-0AA0**			**3VM1063-4ED42-0AA0**		**--**	
80		**3VM1080-3ED42-0AA0**			**3VM1080-4ED42-0AA0**		**--**	
100		**3VM1010-3ED42-0AA0**			**3VM1010-4ED42-0AA0**		**--**	
16		**3VM1196-3ED42-0AA0**			**3VM1196-4ED42-0AA0**		**3VM1196-5ED42-0AA0**	
20		**3VM1120-3ED42-0AA0**			**3VM1120-4ED42-0AA0**		**3VM1120-5ED42-0AA0**	
25		**3VM1125-3ED42-0AA0**			**3VM1125-4ED42-0AA0**		**3VM1125-5ED42-0AA0**	
32		**3VM1132-3ED42-0AA0**			**3VM1132-4ED42-0AA0**		**3VM1132-5ED42-0AA0**	
40		**3VM1140-3ED42-0AA0**			**3VM1140-4ED42-0AA0**		**3VM1140-5ED42-0AA0**	
50		**3VM1150-3ED42-0AA0**			**3VM1150-4ED42-0AA0**		**3VM1150-5ED42-0AA0**	
63		**3VM1163-3ED42-0AA0**			**3VM1163-4ED42-0AA0**		**3VM1163-5ED42-0AA0**	
80		**3VM1180-3ED42-0AA0**			**3VM1180-4ED42-0AA0**		**3VM1180-5ED42-0AA0**	
100		**3VM1110-3ED42-0AA0**			**3VM1110-4ED42-0AA0**		**3VM1110-5ED42-0AA0**	
125		**3VM1112-3ED42-0AA0**			**3VM1112-4ED42-0AA0**		**3VM1112-5ED42-0AA0**	
160		**3VM1116-3ED42-0AA0**			**3VM1116-4ED42-0AA0**		**3VM1116-5ED42-0AA0**	
200		**--**			**3VM1220-4ED42-0AA0**		**3VM1220-5ED42-0AA0**	
250		**--**			**3VM1225-4ED42-0AA0**		**3VM1225-5ED42-0AA0**	
NEW 320		**--**			**3VM1332-4ED42-0AA0**		**3VM1332-5ED42-0AA0**	
400		**--**			**3VM1340-4ED42-0AA0**		**3VM1340-5ED42-0AA0**	
NEW 500		**--**			**3VM1450-4ED42-0AA0**		**3VM1450-5ED42-0AA0**	
630		**--**			**3VM1463-4ED42-0AA0**		**3VM1463-5ED42-0AA0**	
Line protection, TM210 FTFM, 100 % neutral conductor protection With fixed overload protection I_r and fixed short-circuit protection I_i								
		Connection with lug terminal						
16		**3VM1196-3GD42-0AA0**			**3VM1196-4GD42-0AA0**		**3VM1196-5GD42-0AA0**	
20		**3VM1120-3GD42-0AA0**			**3VM1120-4GD42-0AA0**		**3VM1120-5GD42-0AA0**	
25		**3VM1125-3GD42-0AA0**			**3VM1125-4GD42-0AA0**		**3VM1125-5GD42-0AA0**	
32		**3VM1132-3GD42-0AA0**			**3VM1132-4GD42-0AA0**		**3VM1132-5GD42-0AA0**	
40		**3VM1140-3GD42-0AA0**			**3VM1140-4GD42-0AA0**		**3VM1140-5GD42-0AA0**	
50		**3VM1150-3GD42-0AA0**			**3VM1150-4GD42-0AA0**		**3VM1150-5GD42-0AA0**	
63		**3VM1163-3GD42-0AA0**			**3VM1163-4GD42-0AA0**		**3VM1163-5GD42-0AA0**	
80		**3VM1180-3GD42-0AA0**			**3VM1180-4GD42-0AA0**		**3VM1180-5GD42-0AA0**	
100		**3VM1110-3GD42-0AA0**			**3VM1110-4GD42-0AA0**		**3VM1110-5GD42-0AA0**	
125		**3VM1112-3GD42-0AA0**			**3VM1112-4GD42-0AA0**		**3VM1112-5GD42-0AA0**	
160		**3VM1116-3GD42-0AA0**			**3VM1116-4GD42-0AA0**		**3VM1116-5GD42-0AA0**	
200		**--**			**3VM1220-4GD42-0AA0**		**3VM1220-5GD42-0AA0**	
250		**--**			**3VM1225-4GD42-0AA0**		**3VM1225-5GD42-0AA0**	
NEW 320		**--**			**3VM1332-4GD42-0AA0**		**3VM1332-5GD42-0AA0**	
400		**--**			**3VM1340-4GD42-0AA0**		**3VM1340-5GD42-0AA0**	
NEW 500		**--**			**3VM1450-4GD42-0AA0**		**3VM1450-5GD42-0AA0**	
630		**--**			**3VM1463-4GD42-0AA0**		**3VM1463-5GD42-0AA0**	

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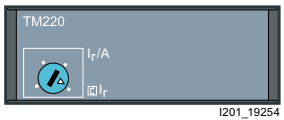
Line protection

PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

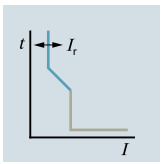


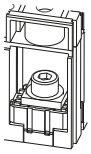
Connection technology	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instanta-neous short-circuit protection "I" I_i	DT	I_{cu} up to 25 kA at 415 V, low breaking capacity N (N) See "Overview", p. 1/2	
						Article No. www.siemens.com/product?Article No.	Basic price per PU
		A	A	A			

4-pole, fixed-mounted, 3VM11 to 3VM14, up to 630A Thermal-magnetic trip unit



I201_19254





Line protection, TM220 ATFM, without neutral conductor protection
With adjustable overload protection I_r and fixed short-circuit protection I_i

Connection with lug terminal

3VM11	16	11 ... 16	320	**3VM1196-3EE42-0AA0**
	20	14 ... 20	320	**3VM1120-3EE42-0AA0**
	25	18 ... 25	320	**3VM1125-3EE42-0AA0**
	32	22 ... 32	320	**3VM1132-3EE42-0AA0**
	40	28 ... 40	400	**3VM1140-3EE42-0AA0**
	50	35 ... 50	500	**3VM1150-3EE42-0AA0**
	63	44 ... 63	630	**3VM1163-3EE42-0AA0**
	80	56 ... 80	800	**3VM1180-3EE42-0AA0**
	100	70 ... 100	1000	**3VM1110-3EE42-0AA0**
	125	88 ... 125	1250	**3VM1112-3EE42-0AA0**
	160	112 ... 160	1600	**3VM1116-3EE42-0AA0**
3VM12	200	140 ... 200	2000	--
	250	175 ... 250	2500	--
3VM13 NEW	320	220 ... 320	3200	--
	400	280 ... 400	4000	--
3VM14 NEW	500	350 ... 500	5000	--
	630	440 ... 630	6300	--

Line protection, TM220 ATFM, 100 % neutral conductor protection
With adjustable overload protection I_r and fixed short-circuit protection I_i

Connection with lug terminal

3VM11	16	11 ... 16	320	**3VM1196-3GE42-0AA0**
	20	14 ... 20	320	**3VM1120-3GE42-0AA0**
	25	18 ... 25	320	**3VM1125-3GE42-0AA0**
	32	22 ... 32	320	**3VM1132-3GE42-0AA0**
	40	28 ... 40	400	**3VM1140-3GE42-0AA0**
	50	35 ... 50	500	**3VM1150-3GE42-0AA0**
	63	44 ... 63	630	**3VM1163-3GE42-0AA0**
	80	56 ... 80	800	**3VM1180-3GE42-0AA0**
	100	70 ... 100	1000	**3VM1110-3GE42-0AA0**
	125	88 ... 125	1250	**3VM1112-3GE42-0AA0**
	160	112 ... 160	1600	**3VM1116-3GE42-0AA0**
3VM12	200	140 ... 200	2000	--
	250	175 ... 250	2500	--
3VM13 NEW	320	220 ... 320	3200	--
	400	280 ... 400	4000	--
3VM14 NEW	500	350 ... 500	5000	--
	630	440 ... 630	6300	--

Minimum order quantity (PS) or a multiple thereof can be ordered.

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PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

Rated current I_n	DT	I_{cu} to 36 kA at 415 V, standard breaking capacity S (S) See "Overview", p. 1/2		DT	I_{cu} up to 55 kA at 415 V, medium breaking capacity M (M) See "Overview", p. 1/2	
		Article No. www.siemens.com/product?Article No.	Basic price per PU		Article No. www.siemens.com/product?Article No.	Basic price per PU
A						
Line protection, TM220 ATFM, without neutral conductor protection With adjustable overload protection I_r and fixed short-circuit protection I_i						
		Connection with lug terminal				
16		**3VM1196-4EE42-0AA0**			**3VM1196-5EE42-0AA0**	
20		**3VM1120-4EE42-0AA0**			**3VM1120-5EE42-0AA0**	
25		**3VM1125-4EE42-0AA0**			**3VM1125-5EE42-0AA0**	
32		**3VM1132-4EE42-0AA0**			**3VM1132-5EE42-0AA0**	
40		**3VM1140-4EE42-0AA0**			**3VM1140-5EE42-0AA0**	
50		**3VM1150-4EE42-0AA0**			**3VM1150-5EE42-0AA0**	
63		**3VM1163-4EE42-0AA0**			**3VM1163-5EE42-0AA0**	
80		**3VM1180-4EE42-0AA0**			**3VM1180-5EE42-0AA0**	
100		**3VM1110-4EE42-0AA0**			**3VM1110-5EE42-0AA0**	
125		**3VM1112-4EE42-0AA0**			**3VM1112-5EE42-0AA0**	
160		**3VM1116-4EE42-0AA0**			**3VM1116-5EE42-0AA0**	
200		**3VM1220-4EE42-0AA0**			**3VM1220-5EE42-0AA0**	
250		**3VM1225-4EE42-0AA0**			**3VM1225-5EE42-0AA0**	
NEW 320		**3VM1332-4EE42-0AA0**			**3VM1332-5EE42-0AA0**	
400		**3VM1340-4EE42-0AA0**			**3VM1340-5EE42-0AA0**	
NEW 500		**3VM1450-4EE42-0AA0**			**3VM1450-5EE42-0AA0**	
630		**3VM1463-4EE42-0AA0**			**3VM1463-5EE42-0AA0**	
Line protection, TM220 ATFM, 100 % neutral conductor protection With adjustable overload protection I_r and fixed short-circuit protection I_i						
		Connection with lug terminal				
16		**3VM1196-4GE42-0AA0**			**3VM1196-5GE42-0AA0**	
20		**3VM1120-4GE42-0AA0**			**3VM1120-5GE42-0AA0**	
25		**3VM1125-4GE42-0AA0**			**3VM1125-5GE42-0AA0**	
32		**3VM1132-4GE42-0AA0**			**3VM1132-5GE42-0AA0**	
40		**3VM1140-4GE42-0AA0**			**3VM1140-5GE42-0AA0**	
50		**3VM1150-4GE42-0AA0**			**3VM1150-5GE42-0AA0**	
63		**3VM1163-4GE42-0AA0**			**3VM1163-5GE42-0AA0**	
80		**3VM1180-4GE42-0AA0**			**3VM1180-5GE42-0AA0**	
100		**3VM1110-4GE42-0AA0**			**3VM1110-5GE42-0AA0**	
125		**3VM1112-4GE42-0AA0**			**3VM1112-5GE42-0AA0**	
160		**3VM1116-4GE42-0AA0**			**3VM1116-5GE42-0AA0**	
200		**3VM1220-4GE42-0AA0**			**3VM1220-5GE42-0AA0**	
250		**3VM1225-4GE42-0AA0**			**3VM1225-5GE42-0AA0**	
NEW 320		**3VM1332-4GE42-0AA0**			**3VM1332-5GE42-0AA0**	
400		**3VM1340-4GE42-0AA0**			**3VM1340-5GE42-0AA0**	
NEW 500		**3VM1450-4GE42-0AA0**			**3VM1450-5GE42-0AA0**	
630		**3VM1463-4GE42-0AA0**			**3VM1463-5GE42-0AA0**	

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

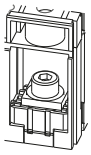
PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB

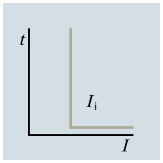


Connection technology	Type	Rated current I_n	Current setting of the inverse-time delayed overload protection "L" I_r	Operating current of the instantaneous short-circuit protection "I" I_i	DT	I_{cu} up to 55 kA at 415 V, medium breaking capacity M (M)	
		A	A	A		Article No. www.siemens.com/product?Article No.	Basic price per PU
3-pole, fixed-mounted, 3VM11 to 3VM14, up to 500 A Magnetic trip unit							
Starter protection, TM110M FM With fixed short-circuit protection I_i							
Connection with lug terminal							
3VM11		8	--	128			**3VM1108-5MG32-0AA0**
		12.5	--	200			**3VM1192-5MG32-0AA0**
Starter protection, TM120M AM With adjustable short-circuit protection I_i							
Connection with lug terminal							
3VM11		20	--	140 ... 320			**3VM1120-5MH32-0AA0**
		32	--	220 ... 510			**3VM1132-5MH32-0AA0**
		40	--	280 ... 640			**3VM1140-5MH32-0AA0**
		50	--	350 ... 800			**3VM1150-5MH32-0AA0**
		63	--	440 ... 1010			**3VM1163-5MH32-0AA0**
		80	--	560 ... 1280			**3VM1180-5MH32-0AA0**
		100	--	700 ... 1600			**3VM1110-5MH32-0AA0**
		125	--	875 ... 2000			**3VM1112-5MH32-0AA0**
3VM12		160	--	1120 ... 2560			**3VM1216-5MH32-0AA0**
		200	--	1200 ... 2800			**3VM1220-5MH32-0AA0**
3VM13	NEW	250	--	2000 ... 4000			**3VM1325-5MH32-0AA0**
		320	--	2240 ... 4480			**3VM1332-5MH32-0AA0**
3VM14	NEW	400	--	2400 ... 4800			**3VM1440-5MH32-0AA0**
		500	--	2500 ... 5000			**3VM1450-5MH32-0AA0**



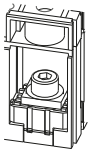
I201_19523

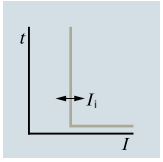






I201_19240





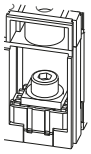
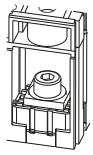
Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

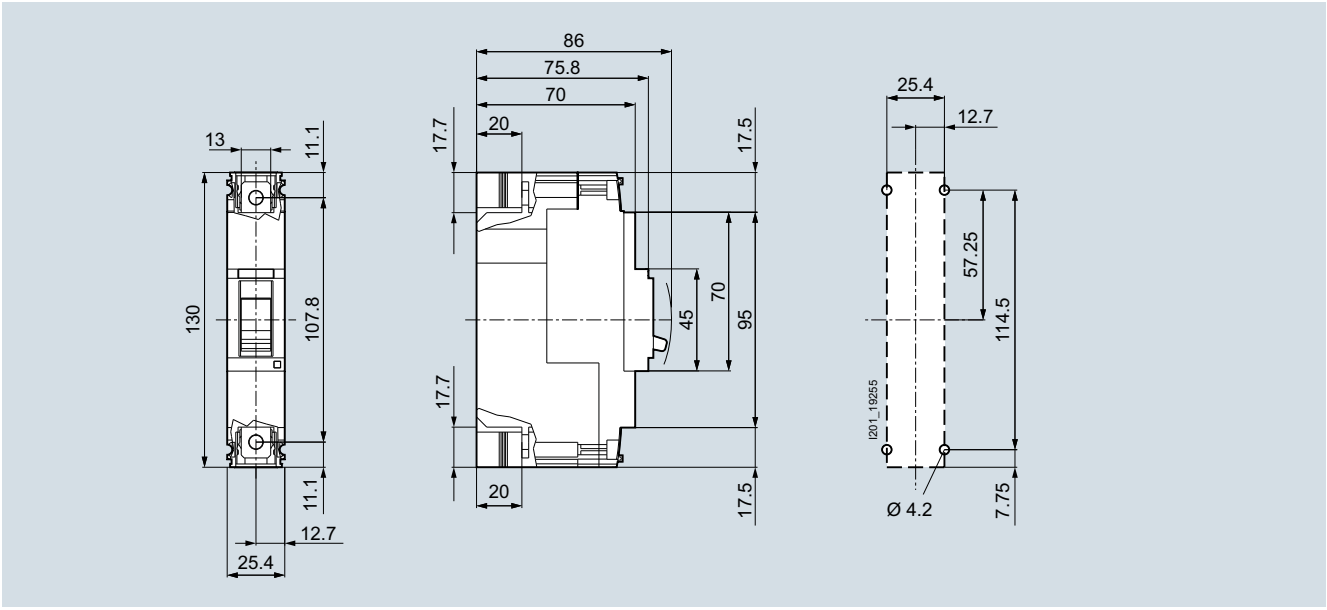
PU (UNIT, SET, M) = 1 PS*/P. unit = 1 UNIT PG = 1CB



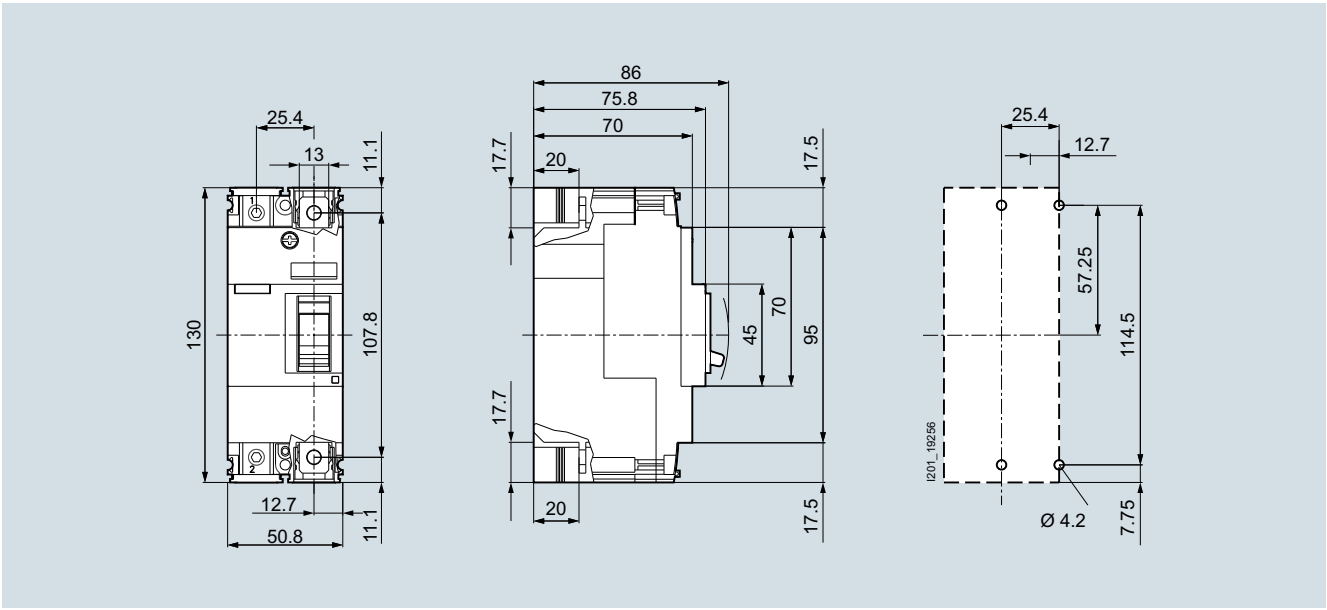
Connection technology	Type	Rated current I_n A	DT	Article No. www.siemens.com/product?Article No.	Basic price per PU
3-pole, fixed-mounted, 3VM11 to 3VM13, up to 400 A Without trip unit					
 I201_19742	***Switch disconnector SD100*** Without trip unit				
	**Connection with lug terminal**				
	3VM11	63		**3VM1163-1AA32-0AA0**	
		100		**3VM1110-1AA32-0AA0**	
		125		**3VM1112-1AA32-0AA0**	
		160		**3VM1116-1AA32-0AA0**	
	3VM12	250		**3VM1225-1AA32-0AA0**	
	3VM13 NEW	400		**3VM1340-1AA32-0AA0**	
4-pole, fixed-mounted, up to 400 A Without trip unit					
 I201_19742	***Switch disconnector SD100*** Without trip unit				
	**Connection with lug terminal**				
	3VM11	63		**3VM1163-1AA42-0AA0**	
		100		**3VM1110-1AA42-0AA0**	
		125		**3VM1112-1AA42-0AA0**	
		160		**3VM1116-1AA42-0AA0**	
	3VM12	250		**3VM1225-1AA42-0AA0**	
	3VM13 NEW	400		**3VM1340-1AA42-0AA0**	

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Overview



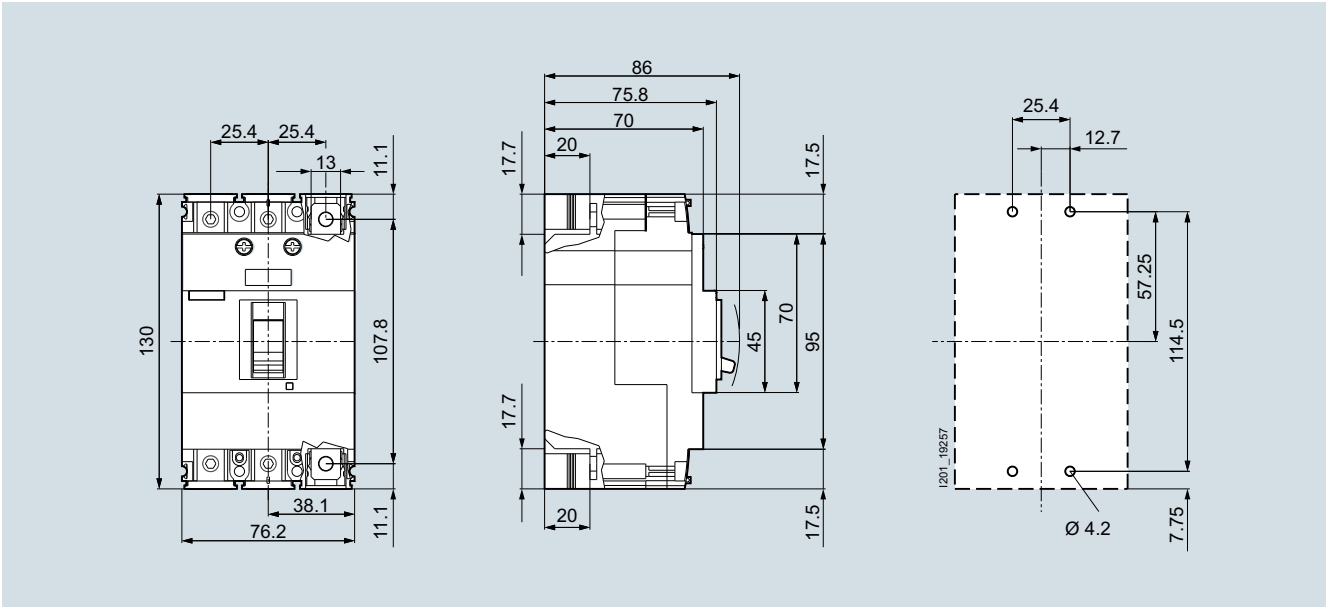
3VM11, 1-pole



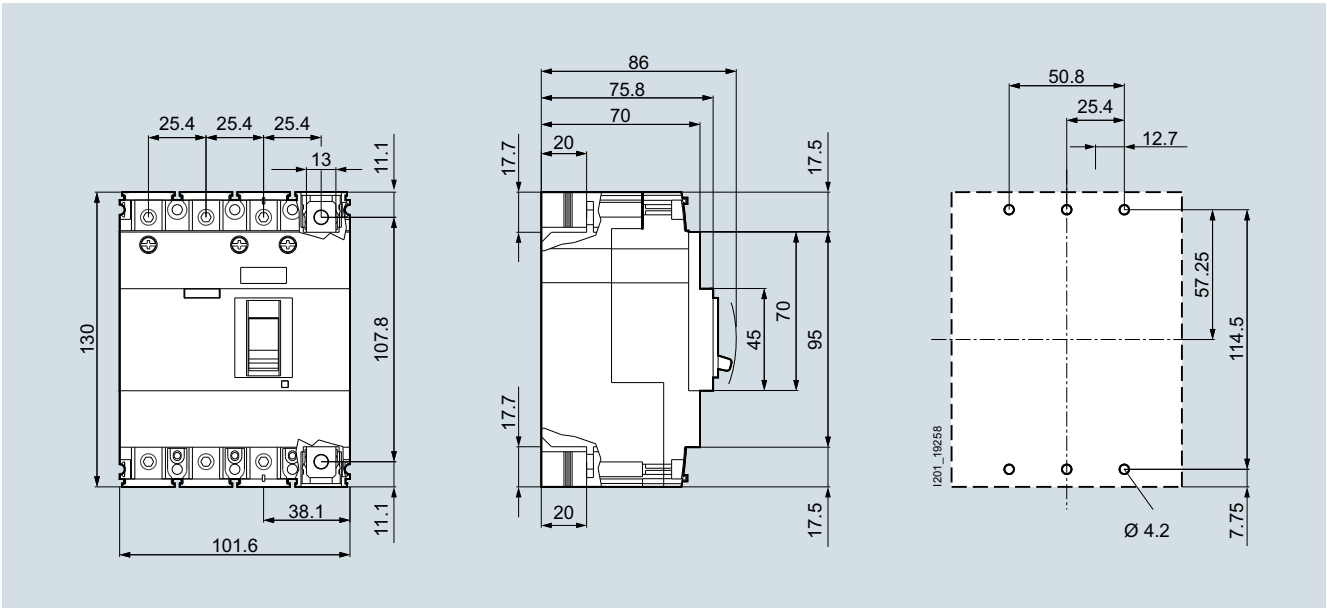
3VM11, 2-pole

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Overview



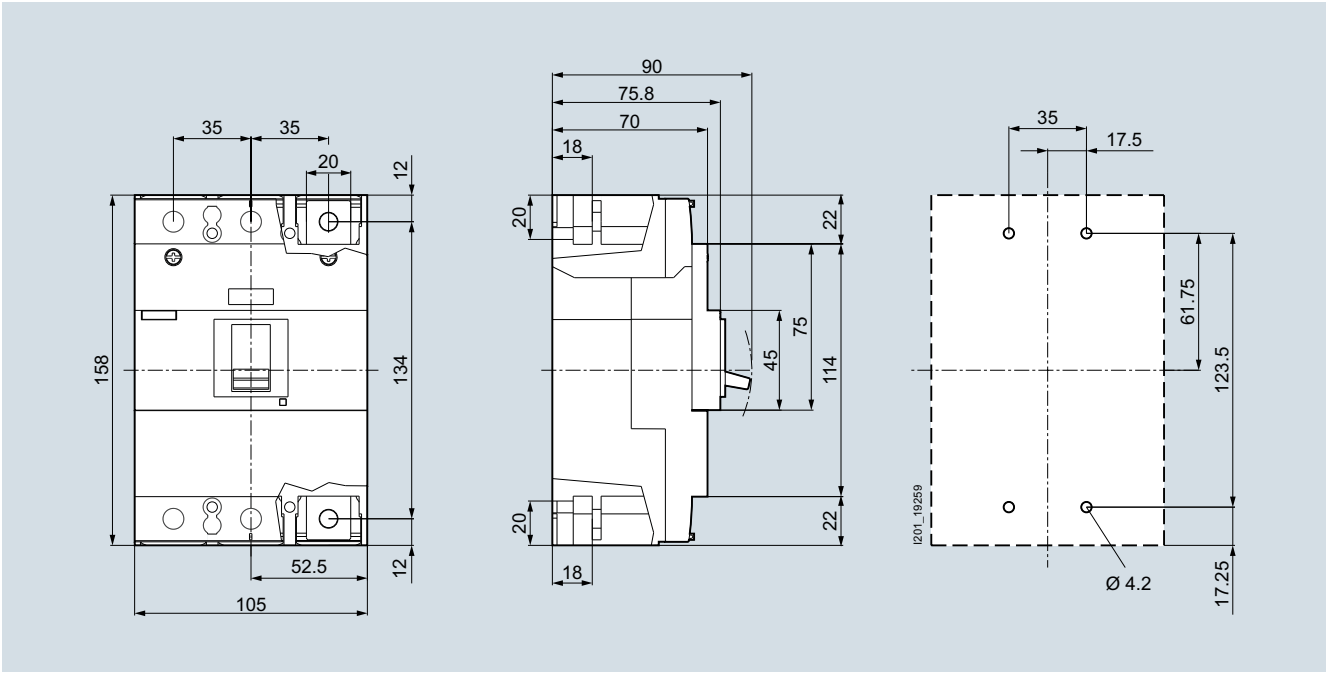
3VM10 and 3VM11, 3-pole



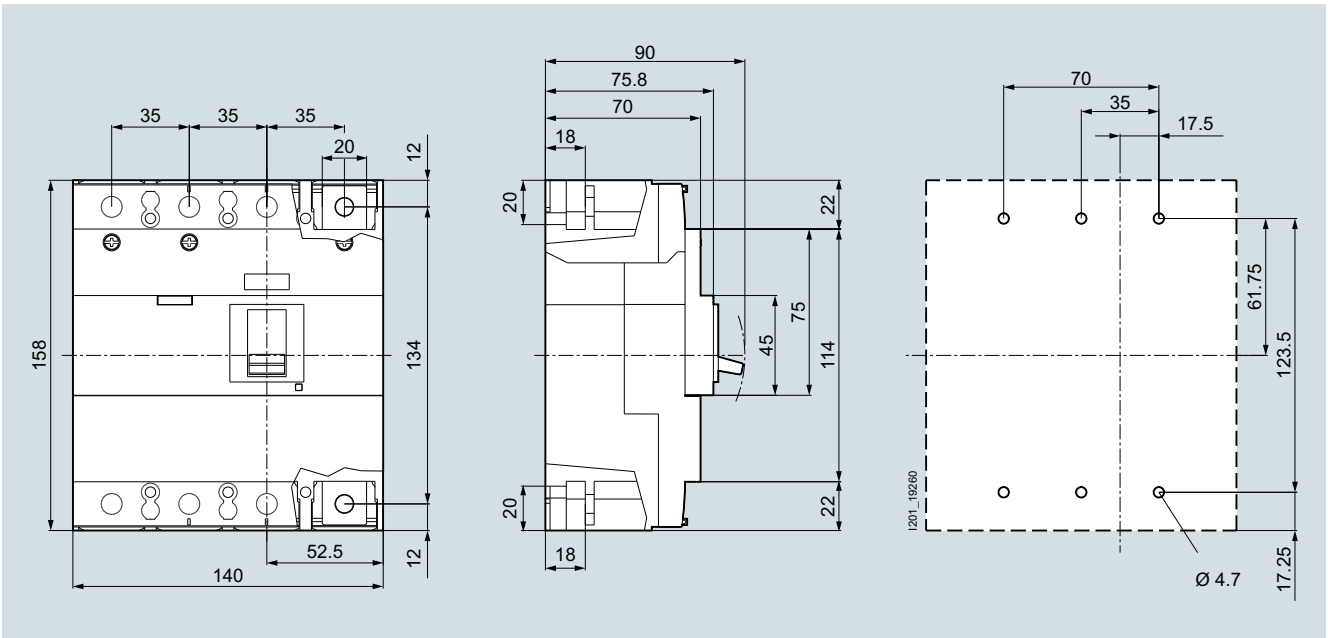
3VM10 and 3VM11, 4-pole

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Overview

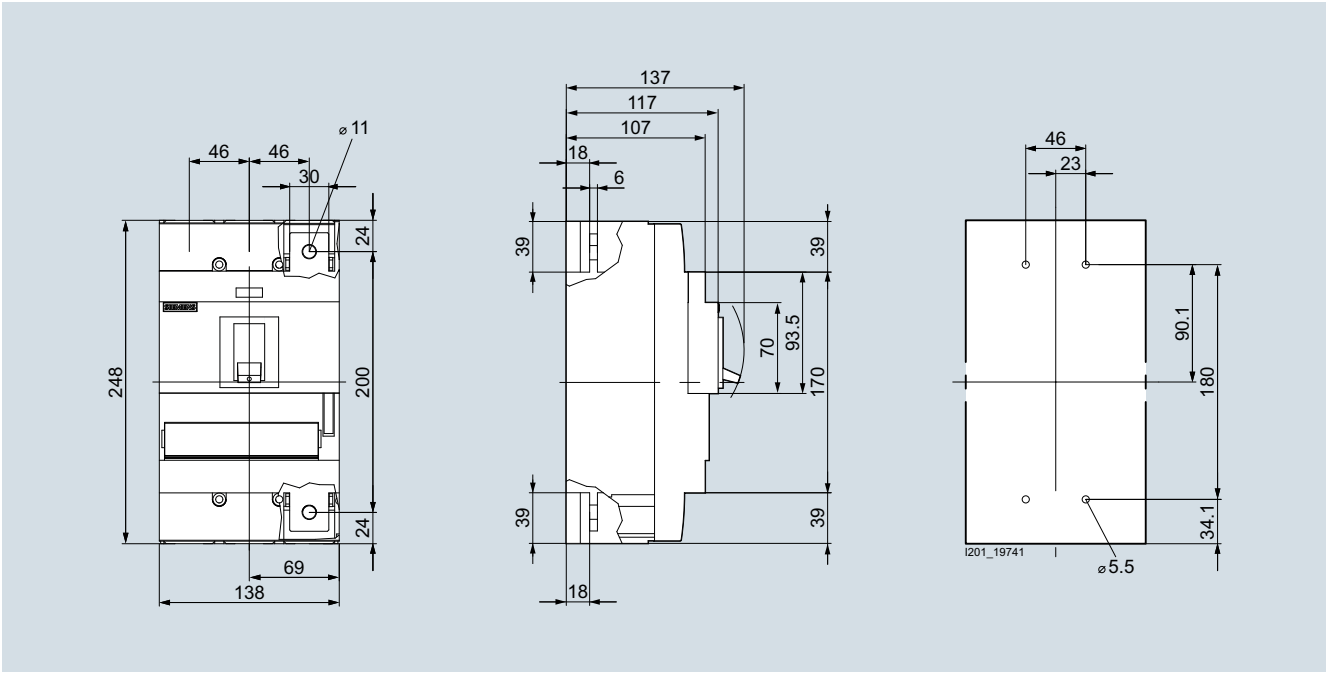


3VM12, 3-pole

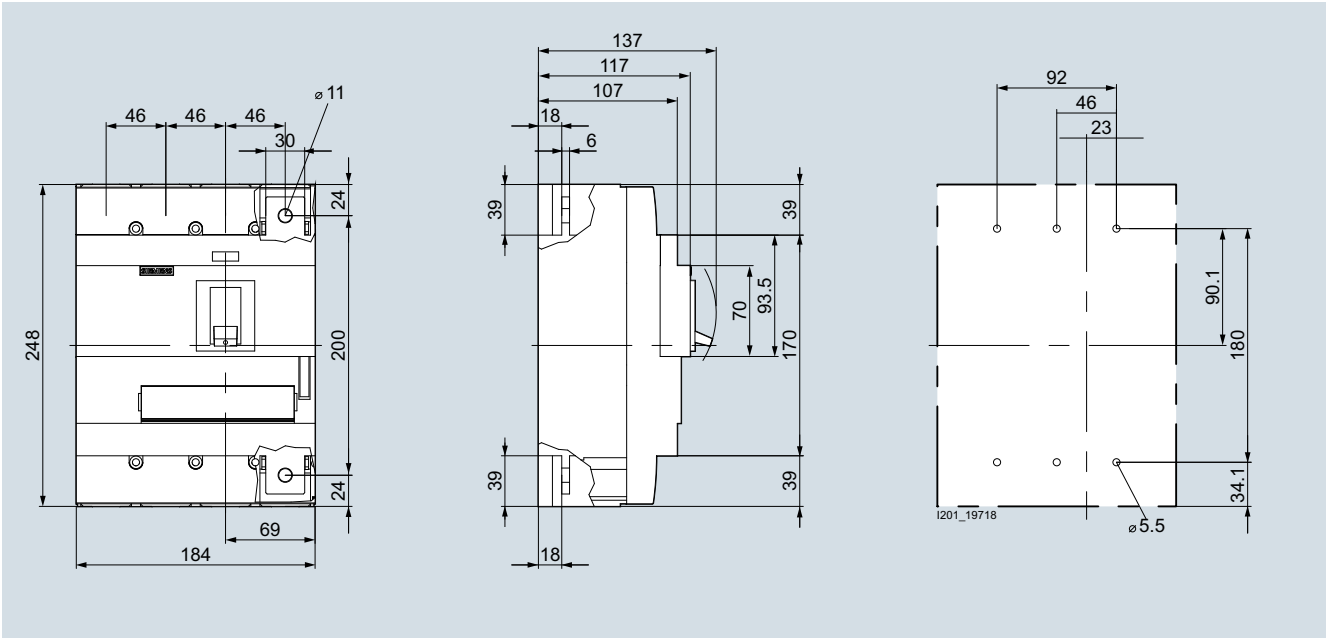


3VM12, 4-pole

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3VM13/14, 3-pole NEW



3VM13/14, 4-pole NEW

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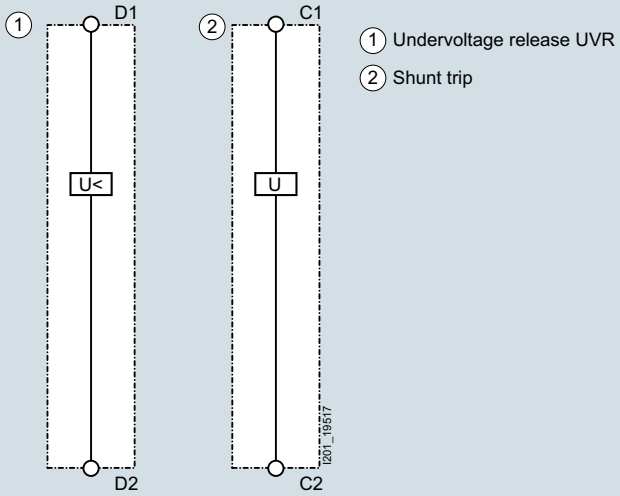
Dimensional drawings

Auxiliary switches, alarm switches and position signaling contacts



Changeover contacts for auxiliary switches AUX, trip alarm switches TAS, position signaling switches for plug-in units

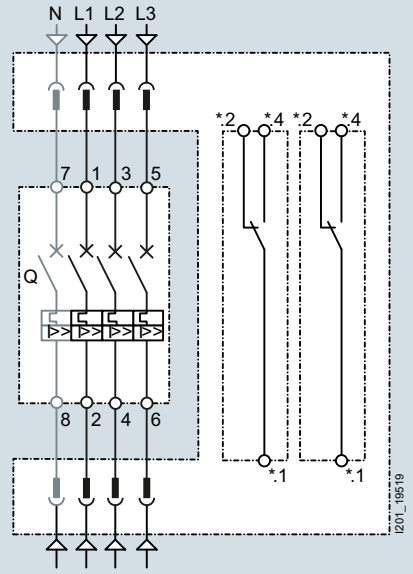
Undervoltage release and shunt trip release



Minimum order quantity (PS) or a multiple thereof can be ordered.

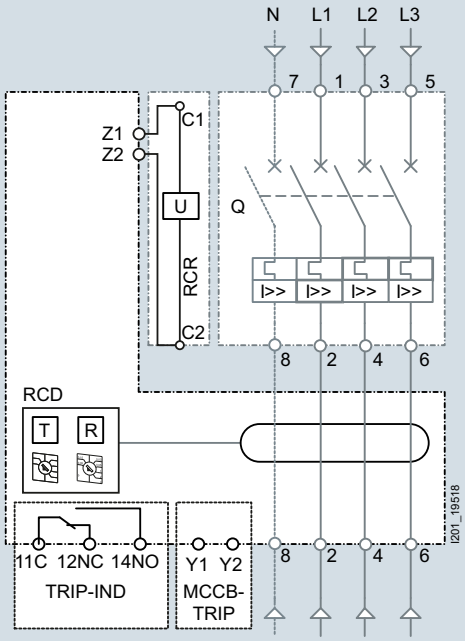
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Plug-in units



Plug-in units, 3-pole and 4-pole, with two optionally integrated position signaling switches for signaling "Plug-in unit - MCCB correctly bolted to plug-in socket"

RCD basic

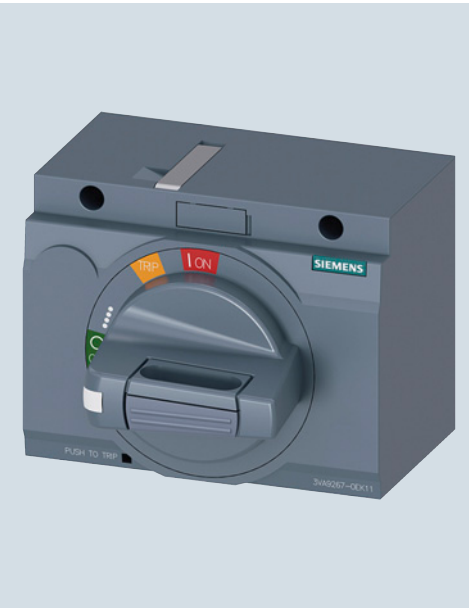


Side mounted RCD basic, 4-pole

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Notizen

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3/2 Internal accessories
3/6 Manual operators
3/9 Connection technology
3/21 Plug-in technology
3/26 Residual current devices
3/28 Locking technology
3/29 Other

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

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Overview

Auxiliary switches

All auxiliary and alarm switches for the 3VM molded case circuit breakers and switch disconnectors 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.

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.

Special electronic-compatible Versions are available for applications which require the auxiliary switch signals to be linked to automation 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 3VM 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 3VM molded case circuit breaker remotely.

Benefits

- The internal accessories are extremely easy to install. No tools are required 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 2.5 mm^2. 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.
- Symbols engraved in the lid of the accessories compartment indicate the possible mounting positions of the internal accessories.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Design

Internal accessories Optional equipment		3VM 160 A 2-pole	3VM 100/160 A 3-pole	3VM 250 A 3-pole	3VM 400/630 A 3-pole
Slot-No:		23 22 21	23 22 21 11 12 13	24 23 22 21 11 12 13 14	25 24 23 22 21 11 12 13 14 15
Auxiliary switch	**Type**				
Auxiliary switch	AUX_HQ	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 x x
	AUX_HQ_el	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 x x
Alarm switch	**Type**				
Trip alarm switch	TAS_HQ	x x	x x x x	x x x x	x x x x
	TAS_HQ_el	x x	x x x x	x x x x	x x x x
Auxiliary release	**Type**				
Shunt trip left	STL	x	x	x	x
Residual current release	RCR [1]				
Undervoltage release	UVR	x	x	x	x

[1] Included in the scope of supply for side mounted RCDs

I201_19232

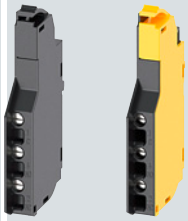
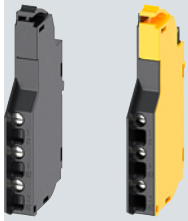
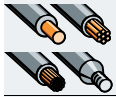
Internal accessories Optional equipment		3VM 100 A 4-pole	3VM 160 A 4-pole	3VM 250 A 4-pole	3VM 400/630 A 4-pole
Slot-No:		23 22 21 11 12 13	23 22 21 11 12 13	24 23 22 21 11 12 13 14	25 24 23 22 21 11 12 13 14 15
Auxiliary switch	**Type**				
Auxiliary switch	AUX_HQ	x x x x x x	x x x x x x	x x x x x x x x	x x x x x x x x x x
	AUX_HQ_el	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 x x x x x
Alarm switch	**Type**				
Trip alarm switch	TAS_HQ	x x x x	x x x x	x x x x	x x x x
	TAS_HQ_el	x x x x	x x x x	x x x x	x x x x
Auxiliary release	**Type**				
Shunt trip left	STL	x	x	x	x
Residual current release	RCR [1]				
Undervoltage release	UVR	x	x	x	x

[1] Included in the scope of supply for side mounted RCDs

I201_19233

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Technical specifications

				Auxiliary switches and alarm switches HQ	Auxiliary switches and alarm switches HQ_electronic
					
				AUX TAS	AUX TAS
Width			mm	7	7
Conductor cross-sections	Solid, stranded and 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)
	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)
	Tightening torque (connection cables)	Nm		0.4 $^{+0.1}$	0.4 $^{+0.1}$
	Stripped length 	mm		15	15
Rated operating voltage		U_e	V AC 50 Hz	240	24
			V DC	250	24
Conventional free-air thermal current		$I_{th} = I_e$	A	6	0.3
Rated operational current	AC-12	12 V	A	6	0.3
		24 V	A	6	0.3
		48 V	A	6	--
		125 V	A	6	--
		220/240 V	A	6	--
		380/440 V	A	--	--
		600 V	A	--	--
	AC-15	12 V	A	3	0.3
		24 V	A	3	0.3
		48 V	A	3	--
		125 V	A	3	--
		220/240 V	A	3	--
		380/440 V	A	--	--
		600 V	A	--	--
	DC-12	12 V	A	6	0.1
		24 V	A	4	0.1
		48 V	A	2	--
		110 V	A	0.5	--
		250 V	A	0.25	--
	DC-13	12 V	A	1	0.07
		24 V	A	0.8	0.07
		48 V	A	0.4	--
		110 V	A	0.2	--
		250 V	A	0.1	--
Minimum load		At 24 V DC	mA	70	0.5
		At 5 V DC	mA	--	1

3

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Version		DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Auxiliary switches and alarm switches								
 3VM9988-0AA12	**Auxiliary switch AUX**							
	Type/switching capacity/size	Electronic-compatible						
	HQ/compact size/1 slot	--		**3VM9988-0AA12**		1	1 unit	1CB
	HQ_el/compact size/1 slot	✓		**3VM9988-0AA13**		1	1 unit	1CB
 3VM9988-0AB12	**Trip alarm switch TAS**							
	Type/switching capacity/size	Electronic-compatible						
	HQ/compact size/1 slot	--		**3VM9988-0AB12**		1	1 unit	1CB
	HQ_el/compact size/1 slot	✓		**3VM9988-0AB13**		1	1 unit	1CB
Undervoltage releases								
 3VM9908-0BB15	**Undervoltage release UVR**							
	50/60 Hz V AC	V DC						
	--	12		**3VM9908-0BB10**		1	1 unit	1CB
	--	24		**3VM9908-0BB11**		1	1 unit	1CB
	--	48		**3VM9908-0BB12**		1	1 unit	1CB
	--	60		**3VM9908-0BB13**		1	1 unit	1CB
	--	125 ... 127		**3VM9908-0BB14**		1	1 unit	1CB
	--	220 ... 230		**3VM9908-0BB15**		1	1 unit	1CB
	--	250		**3VM9908-0BB16**		1	1 unit	1CB
	24	--		**3VM9908-0BB20**		1	1 unit	1CB
	48	--		**3VM9908-0BB21**		1	1 unit	1CB
	60	--		**3VM9908-0BB22**		1	1 unit	1CB
	110	--		**3VM9908-0BB23**		1	1 unit	1CB
	120 ... 127	--		**3VM9908-0BB24**		1	1 unit	1CB
	208 ... 230	--		**3VM9908-0BB25**		1	1 unit	1CB
	380 ... 400	--		**3VM9908-0BB26**		1	1 unit	1CB
	440 ... 480	--		**3VM9908-0BB27**		1	1 unit	1CB
Shunt trip left								
 3VM9908-0BL33	**Shunt trip left STL**							
	50/60 Hz V AC	V DC						
	--	12		**3VM9908-0BL10**		1	1 unit	1CB
	24	24 ... 30		**3VM9908-0BL30**		1	1 unit	1CB
	48 ... 60	48 ... 60		**3VM9908-0BL31**		1	1 unit	1CB
	110 ... 127	110 ... 127		**3VM9908-0BL32**		1	1 unit	1CB
	208 ... 277	220 ... 250		**3VM9908-0BL33**		1	1 unit	1CB
	380 ... 600	--		**3VM9908-0BL20**		1	1 unit	1CB

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Overview

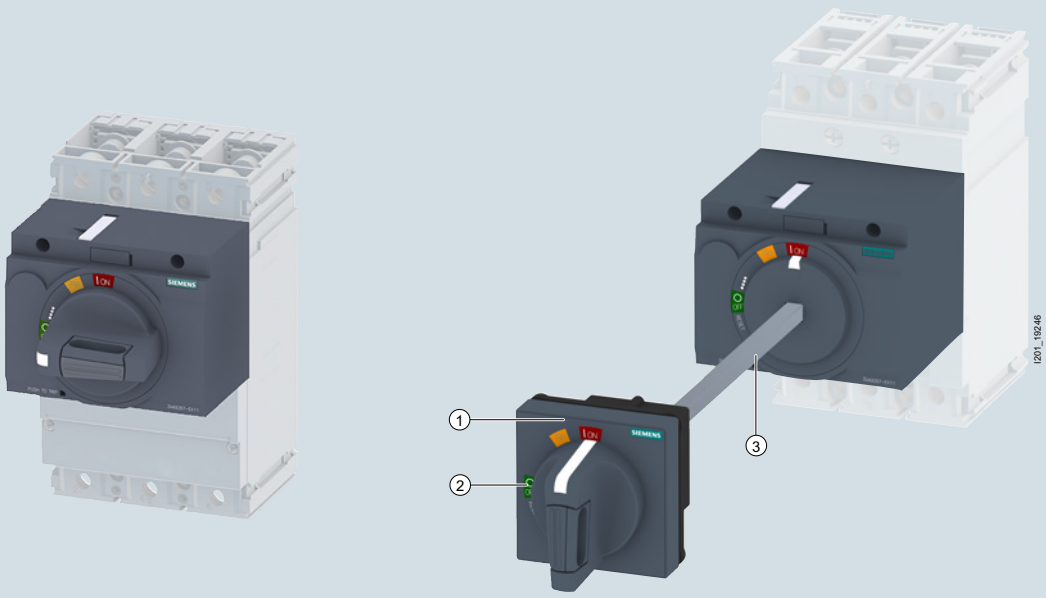
Manual operators are provided to facilitate manual operation of the 3VM molded case circuit breakers, either directly at the circuit breaker or through the cubicle door.

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 IP30. The 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 IP65 and features a door interlocking system and tolerance compensation.



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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Version		For molded case circuit breakers/ frame size 3VM10/ 3VM11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Front mounted rotary operators											
 3VM9217-0EK11	**Front mounted rotary operator** • For 3- and 4-pole breakers • Rotary operator • Handle • For IEC • Degree of protection IP30										
	Type	Color									
	• Standard	gray	✓	--	--		**3VM9117-0EK11**		1	1 unit	1CB
			--	✓	--		**3VM9217-0EK11**		1	1 unit	1CB
			--	--	✓ NEW		**3VM9417-0EK11**		1	1 unit	1CB
	• EMERGENCY-STOP	yellow-red	✓	--	--		**3VM9117-0EK15**		1	1 unit	1CB
			--	✓	--		**3VM9217-0EK15**		1	1 unit	1CB
			--	--	✓ NEW		**3VM9417-0EK15**		1	1 unit	1CB
	• Standard, with door interlock	gray	✓	--	--		**3VM9117-0EK21**		1	1 unit	1CB
			--	✓	--		**3VM9217-0EK21**		1	1 unit	1CB
			--	--	✓ NEW		**3VM9417-0FK21**		1	1 unit	1CB
	• EMERGENCY-STOP, with door interlock	yellow-red	✓	--	--		**3VM9117-0EK25**		1	1 unit	1CB
			--	✓	--		**3VM9217-0EK25**		1	1 unit	1CB
			--	--	✓ NEW		**3VM9417-0EK25**		1	1 unit	1CB
Door mounted rotary operator											
 3VM9217-0FK21	**Door mounted rotary operator** • for 3- and 4-pole breakers • Rotary operator • Shaft 300 mm • Mounting tolerance compensation • Handle with masking plate 75 x 75 mm • Degree of protection IP65										
	Type	Color									
	• Standard	gray	✓	--	--		**3VM9117-0FK21**		1	1 unit	1CB
			--	✓	--		**3VM9217-0FK21**		1	1 unit	1CB
			--	--	✓ NEW		**3VM9417-0FK21**		1	1 unit	1CB
	• EMERGENCY-STOP	yellow-red	✓	--	--		**3VM9117-0FK25**		1	1 unit	1CB
			--	✓	--		**3VM9217-0FK25**		1	1 unit	1CB
			--	--	✓ NEW		**3VM9417-0FK25**		1	1 unit	1CB
 8UD1900-2WB00	**Shaft** 8 mm										
	Versions										
	• 300 mm long		✓	✓	✓		**8UD1900-2WA00**		1	1 unit	1CB
	• 600 mm long		✓	✓	✓		**8UD1900-2WB00**		1	1 unit	1CB
 8UD1900-2DA00	**Adapter for shaft 8 mm x 8 mm** for door mounted rotary operator		✓	✓	✓		**8UD1900-2DA00**		1	1 unit	1CB
 3VM9217-0GA80	**Fixing bracket for shaft**		✓	✓	--		**3VM9217-0GA80**		1	1 unit	1CB
			--	--	✓ NEW		**3VM9417-0GA80**		1	1 unit	1CB

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Manual operators

Handles



8UD1721-0AB11

Handles
• With masking plate

Type	Color	Tolerance compensation	For molded case circuit breakers/ frame size 3VM10/ 3VM11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
• Standard	gray	without	✓	✓	--		**8UD1721-0AB11**		1	1 unit	1CB
			--	--	✓ NEW		**8UD1731-0AB11**		1	1 unit	1CB
		with	✓	✓	--		**8UD1721-0AB15**		1	1 unit	1CB
			--	--	✓ NEW		**8UD1731-0AB21**		1	1 unit	1CB
• EMERGENCY-STOP	yellow-red	without	✓	✓	--		**8UD1721-0AB15**		1	1 unit	1CB
			--	--	✓ NEW		**8UD1731-0AB15**		1	1 unit	1CB
		with	✓	✓	--		**8UD1721-0AB25**		1	1 unit	1CB
			--	--	✓ NEW		**8UD1731-0AB25**		1	1 unit	1CB

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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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 safe, properly functioning connection to the 3VM molded case circuit breakers:

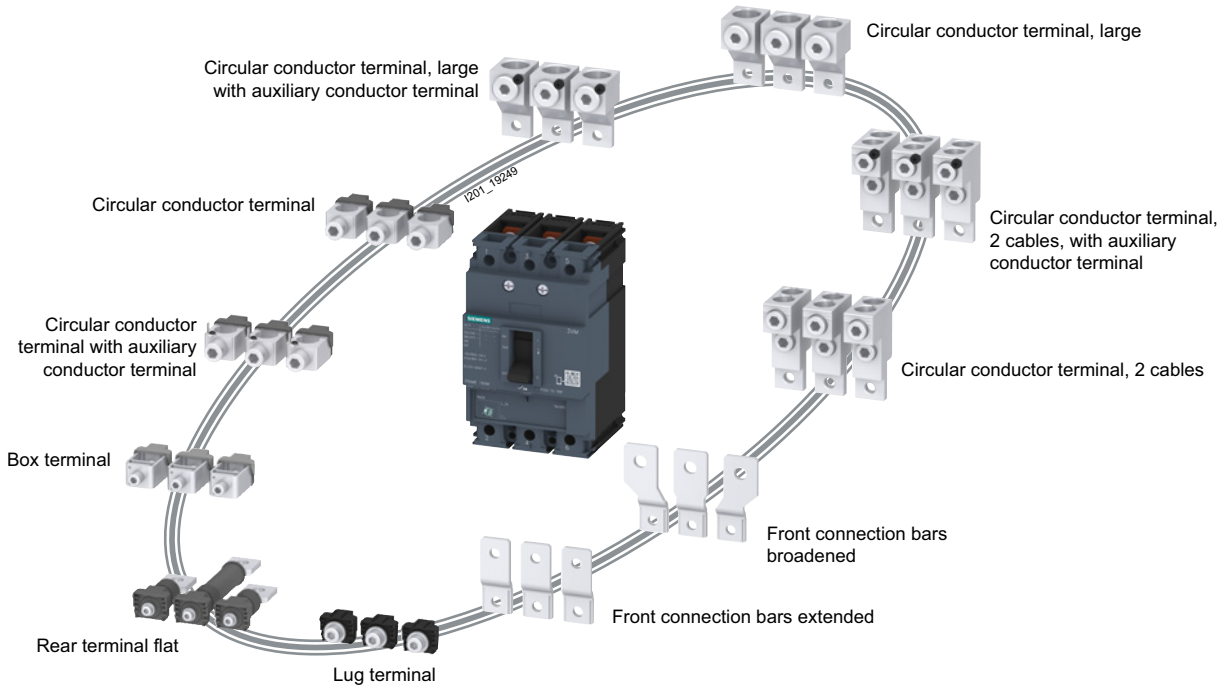
- Installation, e.g. connection to cables or busbars
- Dimensioning of the cables and busbars
- Installation medium, e.g. rigid or flexible

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

Connection technology for the 3VM molded case circuit breaker

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

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



Front terminals

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

Connection technology available from/installed at the factory

All 3VM molded case circuit breakers are available as standard with a lug terminal (clip-in nut and clamping screw) at the infeed and load ends.

Connection technology	Illustration	3VM				
		100	160	250	400	630
Lug terminal		✓	✓	✓	✓	✓

✓ Available

Insulated busbars and cables with cable lugs can be connected directly to the lug terminal. Furthermore, all connection bar extensions are assembled at the molded case circuit breaker using the lug terminal:

- Front connection bars extended (phase barriers included in scope of supply)
- Front connection bars broadened (phase barriers included in scope of supply)

The implementation of insulation measures (phase barriers or terminal covers) is recommended. With some accessory components, insulation measures are essential (and these are included in the scope of supply of the relevant component).

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Connection technology

In addition to the factory-mounted connection technology included in the scope of the supply of the breaker, the following front connection components are available as accessories:

		Cable medium			
					
Front terminals	**Illustration**	**Solid, stranded and finely stranded cables**	**Cable lugs**	**Busbars**	**Flexible busbars**
Box terminal		✓ Cu cable	--	--	✓
Circular conductor terminal of aluminum		✓ Cu/Al cable	--	--	--
Circular conductor terminal of aluminum with auxiliary conductor terminal		✓ Cu/Al cable	--	--	--
Circular conductor terminal of aluminum, large (extended terminal cover included in scope of supply)		✓ Cu/Al cable	--	--	--
Circular conductor terminal of aluminum, large with auxiliary conductor terminal (extended terminal cover included in scope of supply)		✓ Cu/Al cable	--	--	--
Circular conductor terminal of aluminum, 2 cables (extended terminal cover included in scope of supply)		✓ Cu/Al cable	--	--	--
Circular conductor terminal of aluminum, 2 cables with auxiliary conductor terminal (extended terminal cover included in scope of supply)		✓ Cu/Al cable	--	--	--
Lug terminal		--	✓	✓	✓
Front connection bars extended (phase barriers included in scope of supply)		--	✓	✓	✓
Front connection bars broadened (phase barriers included in scope of supply)		--	✓	✓	✓

✓ Available -- Not available

The circular conductor terminals, large and circular conductor terminals, 2cables are delivered as standard with extended terminal covers.

Minimum order quantity (PS) or a multiple thereof can be ordered.

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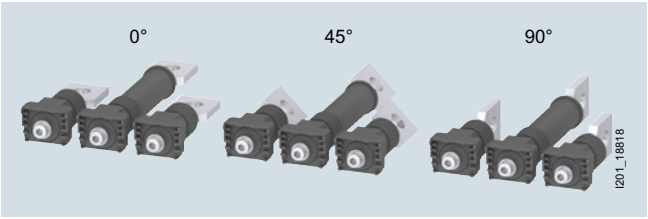
Rear terminals

The following connection components are available for implementing a rear terminal:

		Cable medium			
					
Rear terminals	**Illustration**	**Solid, stranded and finely stranded cables**	**Cable lugs**	**Busbars**	**Flexible busbars**
Rear terminal flat		--	✓	✓	✓

✓ Available -- Not available

The rear terminal flat can be mounted at an angle in increments of 45°:



Insulated busbars and cables with cable lugs can be connected to the right-angled lug terminal. A box terminal can be mounted to allow direct connection of a cable to the right-angled lug terminal.

General note about connection technology

All connection components are available in the following sets:

- Set with 3 units
- Set with 4 units

The rear terminal is an exception as it can also be ordered individually (1 unit).

All connection systems offered for the molded case circuit breaker can be used unmodified in the plug-in technology (plug-in socket) applications.

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Connection technology

Conductor cross-sections

Connection technology	Cable medium	Cables and busbars	Dimensions	3VM10/11	3VM12	3VM13/14
				100 A/160 A	250 A	400 A/630 A
Box terminal 	Solid cable	Cu cable	mm^2	1 x 1.5 ... 16	1 x 6 ... 16	--
	Stranded cable	Cu cable	mm^2	1 x 1.5 ... 70	1 x 6 ... 120 1 x 50 ... 185	1 x 35 ... 300[1)]
	Finely stranded cable	Cu cable	mm^2	1 x 1.5 ... 50	1 x 10 ... 95 1 x 95 ... 150	1 x 25 ... 240[1)]
	Finely stranded with insulated end sleeve	Cu cable	mm^2	1 x 1.5 ... 50	1 x 6 ... 95 1 x 50 ... 150	1 x 25 ... 240[1)]
	Flexible copper busbar	Flexible busbar	mm x mm	1 x 2x ..6 x [13 x 0.5] ... 1 x 2x ..9x [9 x 0.8]	1 x 2x .. 6x [13 x 0.5] ... 1 x 2x .. 6x [15.5 x 0.8] ... 1 x 2x .. 6x [20 x 1]	1 x 2 ... 10x [20 x 1]... 1 x 2x ... 10x [24 x 1]
Circular conductor terminal with and without auxiliary conductor terminal 	Solid cable	Cu/Al cable	mm^2	1 x 2.5/4 ... 16	--	--
	Stranded cable	Cu/Al cable	mm^2	1 x 1.5/4 ... 95	1 x 35 ... 185	1 x 50 ... 300[1)]
	Finely stranded cable	Cu cable	mm^2	1 x 1.5 ... 35	1 x 35 ... 150	1 x 50. .. 240[1)]
	Finely stranded with insulated end sleeve	Cu cable	mm^2	1 x 1.5 ... 35	1 x 35 ... 150	1 x 50 ... 240[1)]
Circular conductor terminal, large with and without auxiliary conductor terminal 	Solid cable			--	--	--
	Stranded cable	Cu/Al cable	mm^2	1 x 25 ... 150	1 x 50 ... 240	--
	Finely stranded cable	Cu cable	mm^2	1 x 25 ... 120	1 x 50 ... 185	--
	Finely stranded with insulated end sleeve	Cu cable	mm^2	1 x 25 ... 95	1 x 50 ... 185	--
Circular conductor terminal for 2 cables with and without auxiliary conductor terminal 	Solid cable		mm^2	--	--	--
	Stranded cable	Cu/Al cable	mm^2	--	2 x 25 ... 150	2 x 70 ... 300
	Finely stranded cable	Cu cable	mm^2	--	2 x 25 ... 150	2 x 70 ... 240
	Finely stranded with insulated end sleeve	Cu cable	mm^2	--	2 x 25 ... 70	2 x 70 ... 185
Busbar connection	Direct (width x height)	Busbar	mm x mm	17 x 6.5	25 x 8	35 x 10
	Front connection bars extended	Busbar	mm x mm	22 x 8	32 x 10	40 x 12.5
	Front connection bars broadened	Busbar	mm x mm	30 x 8	35 x 10	60 x 12.5

[1)] only approved up to I_n = 400 A

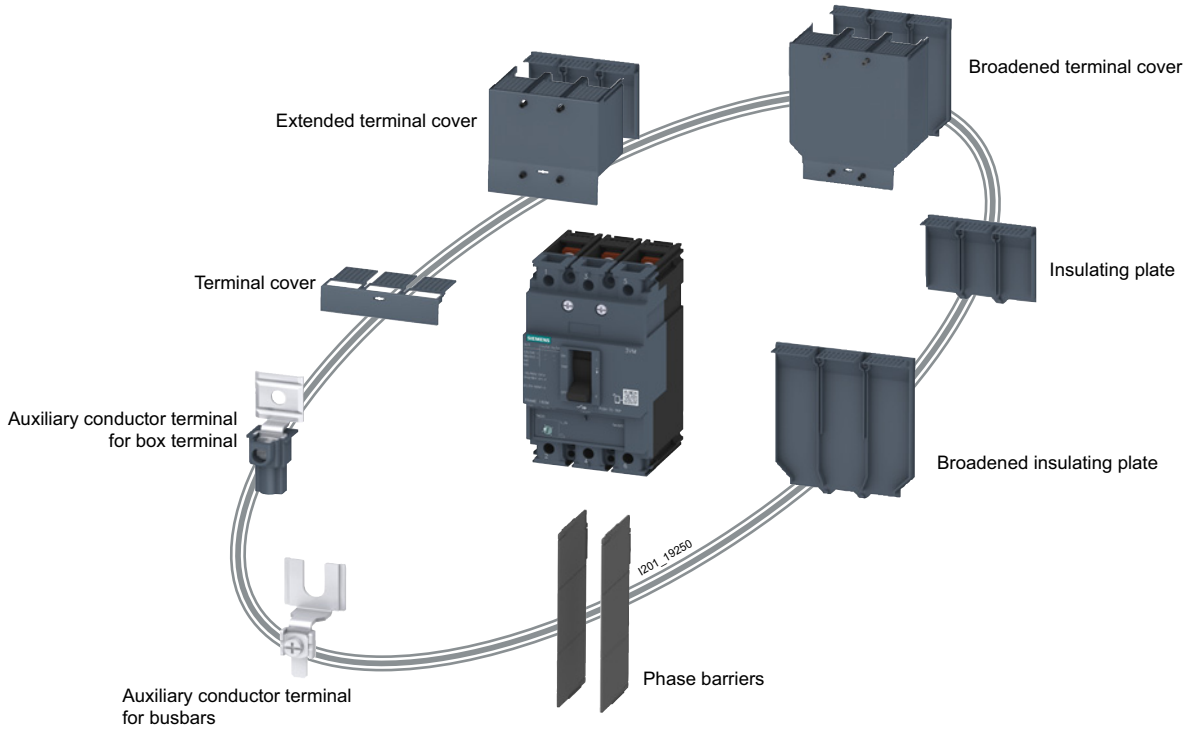
Minimum order quantity (PS) or a multiple thereof can be ordered.

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Further connection accessories

Insulation / auxiliary conductor connections

The connection accessories portfolio includes an extensive selection of insulating components (phase barriers, terminal covers, etc.). Auxiliary conductor connections 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. When mounted on the circuit breaker, terminal covers at the front provide degree of protection IP4x and when correctly installed at the infeed and load ends of the breaker, degree of protection IP2x. All terminal covers have a recess on the inside face which can be drilled out if necessary so that safe isolation can be afforded by commercially available voltage detectors.

- Short terminal covers are normally installed for all types of front termination which do not exceed the geometric dimensions of the molded case circuit breaker (the termination area) (e.g. box terminal, lug terminal, etc.).
- Extended terminal covers are required when bar extensions or external terminals (i.e. terminals which 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 bar extensions, for example
- Insulating plate broadened: in combination with broadened connection bars, for example

Auxiliary conductor terminals

All circular conductor terminals can be ordered with or without auxiliary conductor terminal (see page 3/10, Front terminals). The following accessories are available to allow the implementation of an auxiliary conductor terminal in combination with a box terminal or busbar connection:

- Auxiliary conductor terminal for box terminal: This terminal is fastened by screws in the box terminal with the cable.
- Auxiliary conductor terminal for busbars: This terminal is attached by screws directly to the busbar.

All auxiliary conductor terminals are rated for a maximum load of 6 A. Cables of up to 2.5 mm^2 can be connected.

Benefits

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

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Version	Minimum mm² for stranded cable	Maximum mm² for stranded cable	For molded case circuit breakers/ frame size 3VM 10/11	3VM 12	3VM 13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Box terminals suitable for all installation types (fixed mounted and plug-in version)												
 3VM9253-0JA12	**Box terminal** • Connection of Cu cable • Included in scope of supply: 3 single terminals	1.5 mm²	70 mm²	✓	--	--		**3VM9153-0JA11**		1	1 unit	1CB
		6 mm²	120 mm²	--	✓	--		**3VM9253-0JA11**		1	1 unit	1CB
		50 mm²	185 mm²	--	✓	--		**3VM9253-0JA12**		1	1 unit	1CB
		35 mm²	300 mm²	--	--	✓[1] NEW		**3VM9483-0JA13**		1	1 unit	1CB
 3VM9254-0JA12	**Box terminal** • Connection of Cu cable • Included in scope of supply: 4 single terminals	1.5 mm²	70 mm²	✓	--	--		**3VM9154-0JA11**		1	1 unit	1CB
		6 mm²	120 mm²	--	✓	--		**3VM9254-0JA11**		1	1 unit	1CB
		50 mm²	185 mm²	--	✓	--		**3VM9254-0JA12**		1	1 unit	1CB
		35 mm²	300 mm²	--	--	✓[1] NEW		**3VM9484-0JA13**		1	1 unit	1CB
Wire connectors suitable for all installation types (fixed mounted and plug-in version)												
 3VM9113-0JB11	**Circular conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals	1.5 mm²	95 mm²	✓	--	--		**3VM9113-0JB11**		1	1 unit	1CB
		35 mm²	185 mm²	--	✓	--		**3VM9253-0JB12**		1	1 unit	1CB
		50 mm²	300 mm²	--	--	✓[1]		**3VM9383-0JB13**				
 3VM9114-0JB11	**Circular conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals	1.5 mm²	95 mm²	✓	--	--		**3VM9114-0JB11**		1	1 unit	1CB
		35 mm²	185 mm²	--	✓	--		**3VM9254-0JB12**		1	1 unit	1CB
		50 mm²	300 mm²	--	--	✓[1] NEW		**3VM9384-0JB13**		1	1 unit	1CB
 3VM9113-0JG11	**Circular conductor terminal with auxiliary conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals	1.5 mm²	95 mm²	✓	--	--		**3VM9113-0JG11**		1	1 unit	1CB
		35 mm²	185 mm²	--	✓	--		**3VM9253-0JG12**		1	1 unit	1CB
		50 mm²	300 mm²	--	--	✓[1] NEW		**3VM9383-0JG13**				
 3VM9114-0JG11	**Circular conductor terminal with auxiliary conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals	1.5 mm²	95 mm²	✓	--	--		**3VM9114-0JG11**		1	1 unit	1CB
		35 mm²	185 mm²	--	✓	--		**3VM9254-0JG12**		1	1 unit	1CB
		50 mm²	300 mm²	--	--	✓[1] NEW		**3VM9383-0JG13**		1	1 unit	1CB
 3VM9112-0JJ12	**Circular conductor terminal, large** • Connection of Cu/Al cable • Included in scope of supply: 2 single terminals and 1 extended terminal cover, 1 insulating plate	25 mm²	150 mm²	✓ only for 160 A	--	--		**3VM9112-0JJ12**		1	1 unit	1CB
 3VM9113-0JJ12	**Circular conductor terminal, large** • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover, 1 insulating plate	25 mm²	150 mm²	✓	--	--		**3VM9113-0JJ12**		1	1 unit	1CB
		50 mm²	240 mm²	--	✓	--		**3VM9213-0JJ13**		1	1 unit	1CB

[1] only approved up to I_n = 400 A

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Version	Minimum mm² for stranded cable	Maximum mm² for stranded cable	For molded case circuit breakers/ frame size 3VM 10/11	3VM 12	3VM 13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
 3VM9114-0JJ12	**Circular conductor terminal, large** • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover, 1 insulating plate	25 mm²	150 mm²	✓	--	--		**3VM9114-0JJ12**		1	1 unit	1CB
		50 mm²	240 mm²	--	✓	--		**3VM9214-0JJ13**		1	1 unit	1CB
 3VM9112-0JC12	**Circular conductor terminal, large, with auxiliary conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 2 single terminals and 1 extended terminal cover, 1 insulating plate	25 mm²	150 mm²	✓ only for 160 A	--	--		**3VM9112-0JC12**		1	1 unit	1CB
 3VM9113-0JC12	**Circular conductor terminal, large, with auxiliary conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover, 1 insulating plate	25 mm²	150 mm²	✓	--	--		**3VM9113-0JC12**		1	1 unit	1CB
		50 mm²	240 mm²	--	✓	--		**3VM9213-0JC13**		1	1 unit	1CB
 3VM9114-0JC12	**Circular conductor terminal, large, with auxiliary conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover, 1 insulating plate	25 mm²	150 mm²	✓	--	--		**3VM9114-0JC12**		1	1 unit	1CB
		50 mm²	240 mm²	--	✓	--		**3VM9214-0JC13**		1	1 unit	1CB
 3VM9213-0JJ22	**Circular conductor terminal, 2 cables** • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover, 1 insulating plate	2 x 25 mm²	2 x 150 mm²	--	✓	--		**3VM9213-0JJ22**		1	1 unit	1CB
		2 x 70 mm²	2 x 300 mm²	--	--	✓ NEW		**3VM9403-0JJ23**		1	1 unit	1CB
 3VM9214-0JJ22	**Circular conductor terminal, 2 cables** • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover, 1 insulating plate	2 x 25 mm²	2 x 150 mm²	--	✓	--		**3VM9214-0JJ22**		1	1 unit	1CB
		2 x 70 mm²	2 x 300 mm²	--	--	✓ NEW		**3VM9404-0JJ23**		1	1 unit	1CB

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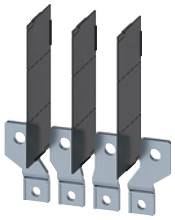
Connection technology

	Version	Minimum mm² for stranded cable	Maximum mm² for stranded cable	For molded case circuit breakers/ frame size			DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
				3VM 10/11	3VM 12	3VM 13/14						
 3VM9213-0JC22	**Circular conductor terminal, 2 cables, with auxiliary conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 3 single terminals and 1 extended terminal cover, 1 insulating plate	2 x 25 mm²	2 x 150 mm²	--	✓	--		**3VM9213-0JC22**		1	1 unit	1CB
		2 x 70 mm²	2 x 300 mm²	--	--	✓ NEW		**3VM9403-0JC23**		1	1 unit	1CB
 3VM9214-0JC22	**Circular conductor terminal, 2 cables, with auxiliary conductor terminal** • Connection of Cu/Al cable • Included in scope of supply: 4 single terminals and 1 extended terminal cover, 1 insulating plate	2 x 25 mm²	2 x 150 mm²	--	✓	--		**3VM9214-0JC22**		1	1 unit	1CB
		2 x 70 mm²	2 x 300 mm²	--	--	✓ NEW		**3VM9403-0JC23**		1	1 unit	1CB

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Minimum order quantity (PS) or a multiple thereof can be ordered.

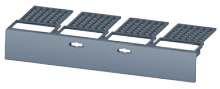
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	Version	Max. terminal width	Max. busbar thickness	For molded case circuit breakers/ frame size 3VM 10/11	3VM 12	3VM 13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Nut keeper kits suitable for all installation types (fixed-mounted and plug-in version)												
 3VM9113-0QA00	**Lug terminal** Included in scope of supply: • 3 single terminals	17 mm	6.5 mm	✓	--	--		**3VM9113-0QA00**		1	1 unit	1CB
		25 mm	8 mm	--	✓	--		**3VM9213-0QA00**		1	1 unit	1CB
		35 mm	10 mm	--	--	✓ NEW		**3VM9403-0QA00**		1	1 unit	1CB
 3VM9114-0QA00	**Lug terminal** Included in scope of supply: • 4 single terminals	17 mm	6.5 mm	✓	--	--		**3VM9114-0QA00**		1	1 unit	1CB
		25 mm	8 mm	--	✓	--		**3VM9214-0QA00**		1	1 unit	1CB
		35 mm	10 mm	--	--	✓ NEW		**3VM9404-0QA00**		1	1 unit	1CB
Bus connectors extended specially for fixed-mounted version												
 3VM9151-0QB00	**Front bus connectors extended** Included in scope of supply: • 1 single terminal 1-pole version only	22 mm	8 mm	✓ only for 160 A	--	--		**3VM9151-0QB00**		1	1 unit	1CB
Bus connectors extended suitable for all installation types (fixed-mounted and plug-in version)												
 3VM9253-0QB00	**Front connection bars extended** Included in scope of supply: • 3 single terminals • 2 phase barriers	22 mm	8 mm	✓	--	--		**3VM9153-0QB00**		1	1 unit	1CB
		32 mm	10 mm	--	✓	--		**3VM9253-0QB00**		1	1 unit	1CB
		40 mm	12.5 mm	--	--	✓ NEW		**3VM9483-0QB00**		1	1 unit	1CB
 3VM9254-0QB00	**Front connection bars extended** Included in scope of supply: • 4 single terminals • 3 phase barriers	22 mm	8 mm	✓	--	--		**3VM9154-0QB00**		1	1 unit	1CB
		32 mm	10 mm	--	✓	--		**3VM9254-0QB00**		1	1 unit	1CB
		40 mm	12.5 mm	--	--	✓ NEW		**3VM9484-0QB00**		1	1 unit	1CB
 3VM9253-0QC00	**Front connection bars broadened** Included in scope of supply: • 3 single terminals • 2 phase barriers Note: Distance between pole centers: • 100/160 A = 35 mm • 250 A = 45 mm • 400/630 A = 70 mm	30 mm	8 mm	✓	--	--		**3VM9153-0QC00**		1	1 unit	1CB
		35 mm	10 mm	--	✓	--		**3VM9253-0QC00**		1	1 unit	1CB
		60 mm	12.5 mm	--	--	✓ NEW		**3VM9483-0QC00**		1	1 unit	1CB
 3VM9254-0QC00	**Front connection bars broadened** Included in scope of supply: • 4 single terminals • 3 phase barriers Note: Distance between pole centers: • 100/160 A = 35 mm • 250 A = 45 mm • 400/630 A = 70 mm	30 mm	8 mm	✓	--	--		**3VM9154-0QC00**		1	1 unit	1CB
		35 mm	10 mm	--	✓	--		**3VM9254-0QC00**		1	1 unit	1CB
		60 mm	12.5 mm	--	--	✓ NEW		**3VM9484-0QC00**		1	1 unit	1CB

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Connection technology

	Version	For molded case circuit breakers/ frame size 3VM 10/11	3VM 12	3VM 13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Rear connection studs flat suitable for all installation types (fixed-mounted and plug-in versions)										
 3VM9213-0QE00	**Rear terminal flat** Included in scope of supply: • 2 short terminals flat • 1 long terminal flat	✓	--	--		**3VM9113-0QE00**		1	1 unit	1CB
		--	✓	--		**3VM9213-0QE00**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9403-0QE00**		1	1 unit	1CB
 3VM9214-0QE00	**Rear terminal flat** Included in scope of supply: • 2 short terminals flat • 2 long terminals flat	✓	--	--		**3VM9114-0QE00**		1	1 unit	1CB
		--	✓	--		**3VM9214-0QE00**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9404-0QE00**		1	1 unit	1CB
 3VM9211-0QE10	**Rear terminal flat** Included in scope of supply: • 1 short terminal flat	✓	--	--		**3VM9111-0QE10**		1	1 unit	1CB
		--	✓	--		**3VM9211-0QE10**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9401-0QE10**		1	1 unit	1CB
 3VM9211-0QE20	**Rear terminal flat** Included in scope of supply: • 1 long terminal flat	✓	--	--		**3VM9111-0QE20**		1	1 unit	1CB
		--	✓	--		**3VM9211-0QE20**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9401-0QE20**		1	1 unit	1CB
Phase barriers suitable for all installation types (fixed-mounted and plug-in versions)										
 3VM9252-0WA00	**Phase barriers** Included in scope of supply: • 2 phase barriers	✓	--	--		**3VM9152-0WA00**		1	1 unit	1CB
		--	✓	--		**3VM9252-0WA00**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9482-0WA00**		1	1 unit	1CB
Terminal covers specially for fixed mounted versions										
 3VM9111-0WD10	**Terminal cover for 1-pole breakers**	✓ only for 160 A	--	--		**3VM9111-0WD10**		1	1 unit	1CB
 3VM9111-0WD20	**Terminal cover for 2-pole breakers**	✓ only for 160 A	--	--		**3VM9111-0WD20**		1	1 unit	1CB
 3VM9211-0WD30	**Terminal cover for 3-pole breakers**	✓	--	--		**3VM9111-0WD30**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WD30**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WD30**		1	1 unit	1CB
 3VM9211-0WD40	**Terminal cover for 4-pole breakers**	✓	--	--		**3VM9111-0WD40**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WD40**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WD40**		1	1 unit	1CB

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Version	For molded case circuit breakers/ frame size			DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
		3VM 10/11	3VM 12	3VM 13/14						
 3VM9111-0WF20	**Extended terminal cover, for 2-pole breakers** including insulating plate	✓ only for 160 A	--	--		**3VM9111-0WF20**		1	1 unit	1CB
 3VM9211-0WF30	**Extended terminal cover for 3-pole breakers** including insulating plate	✓	--	--		**3VM9111-0WF30**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WF30**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WF30**		1	1 unit	1CB
 3VM9211-0WF40	**Extended terminal cover for 4-pole breakers** including insulating plate	✓	--	--		**3VM9111-0WF40**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WF40**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WF40**		1	1 unit	1CB
 3VM9211-0WG30	**Broadened terminal cover for 3-pole breakers** including insulating plate	✓	--	--		**3VM9111-0WG30**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WG30**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9401-0WG30**		1	1 unit	1CB
 3VM9211-0WG40	**Broadened terminal cover for 4-pole breakers** including insulating plate	✓	--	--		**3VM9111-0WG40**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WG40**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9401-0WG40**		1	1 unit	1CB
Insulating plates specially for fixed mounted versions										
 3VM9111-0WJ20	**Insulating plate, 2-pole**	✓ only for 160 A	--	--		**3VM9111-0WJ20**		1	1 unit	1CB
 3VM9211-0WJ30	**Insulating plate, 3-pole**	✓	--	--		**3VM9111-0WJ30**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WJ30**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WJ30**		1	1 unit	1CB
 3VM9211-0WJ40	**Insulating plate, 4-pole**	✓	--	--		**3VM9111-0WJ40**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WJ40**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WJ40**		1	1 unit	1CB
 3VM9211-0WK30	**Insulating plate broadened, 3-pole**	✓	--	--		**3VM9111-0WK30**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WK30**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WK30**		1	1 unit	1CB

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Minimum order quantity (PS) or a multiple thereof can be ordered.

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Connection technology

	Version	For molded case circuit breakers/ frame size 3VM 10/11	3VM 12	3VM 13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
 3VM9211-0WK40	**Insulating plate broadened, 4-pole**	✓	--	--		**3VM9111-0WK40**		1	1 unit	1CB
		--	✓	--		**3VM9211-0WK40**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9481-0WK40**		1	1 unit	1CB
DC Insulating plates specially for fixed mounted versions										
 3VM9113-0SG10	**DC insulating plate for 3VM**									
	Versions									
	• For fixed-mounted molded case circuit breakers									
	- 3-pole	✓	--	--		**3VM9113-0SG10**		1	10 units	1CB
	- 4-pole	✓	--	--		**3VM9114-0SG10**		1	10 units	1CB
Side plate specially for fixed mounted versions										
 3VM9112-0SG20	**Side plate for 3VM**									
	Version									
	• For fixed-mounted molded case circuit breakers									
	- 2-pole	✓	--	--		**3VM9112-0SG20**		1	5 units	1CB
Control wire taps for fixed mounted versions										
 3VM9280-0WB00	**Control wire tap for box terminal**	✓	--	--		**3VM9110-0WB00**		1	10 units	1CB
		--	✓	--		**3VM9200-0WB00**		1	10 units	1CB
		--	--	✓ NEW		**3VM9480-0WB00**		1	10 units	1CB
 3VM9280-0WC00	**Control wire tap for busbar**	✓	--	--		**3VM9110-0WC00**		1	10 units	1CB
		--	✓	--		**3VM9200-0WC00**		1	10 units	1CB
		--	--	✓ NEW		**3VM9480-0WC00**		1	10 units	1CB

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Overview

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

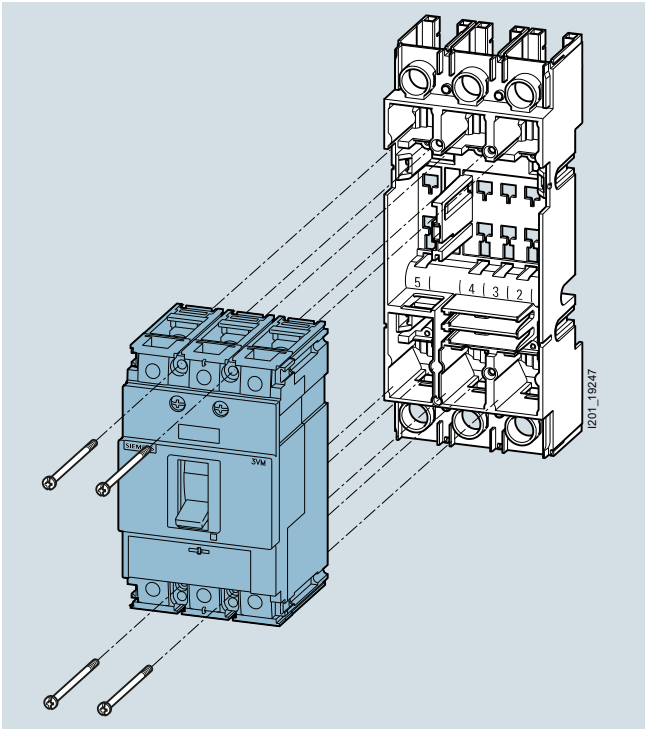
The termination areas of the sockets for these versions are designed in the same way as those of the molded case circuit breakers but, due to the different requirements for creepages and clearances, have slightly different dimensions.

This means the available connection technology is also available for the plug-in socket in the same way.

Connections with insulating measures have their own article numbers and are listed below.

Plug-in technology is a low-cost but also space-saving solution that enables fast replacement of the breaker. The main current paths are connected to the connectors of the plug-in socket. The molded case circuit breaker is equipped with plug-in contacts on the rear. When the circuit breaker is plugged 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 plug-in unit can be supplied as a complete kit or as a conversion kit for breakers including screw-fastened terminal covers.



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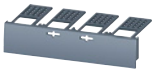
Selection and ordering data

	Version	For molded case circuit breakers/ frame size 3VM11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Plug-in socket										
	Plug-in unit, complete kit Comprising: • Plug-in socket • Conversion kit • Mounting screw kit									
	Versions									
 3VM9113-0KP00	• 3-pole	✓	--	--		**3VM9113-0KP00**		1	1 unit	1CB
		--	✓	--		**3VM9213-0KP00**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9313-0KP00**		1	1 unit	1CB
 3VM9114-0KP00	• 4-pole	✓	--	--		**3VM9114-0KP00**		1	1 unit	1CB
		--	✓	--		**3VM9214-0KP00**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9314-0KP00**		1	1 unit	1CB
	Plug-in unit, conversion kit Comprising: • Screw-fastened terminal covers for molded case circuit breakers • Plug-in contacts • Cable cage • Autotrip plunger									
	Versions									
 3VM9113-0KP10	• 3-pole	✓	--	--		**3VM9113-0KP10**		1	1 unit	1CB
		--	✓	--		**3VM9213-0KP10**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9313-0KP10**		1	1 unit	1CB
 3VM9114-0KP10	• 4-pole	✓	--	--		**3VM9114-0KP10**		1	1 unit	1CB
		--	✓	--		**3VM9214-0KP10**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9314-0KP10**		1	1 unit	1CB

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	Version	For molded case circuit breakers/ frame size 3VM11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Auxiliary circuit connector										
 3VM9987-0KP80	**Auxiliary circuit connector** for all plug-in units Note: Each auxiliary circuit connector is designed for 4 cables					**3VM9987-0KP80**		1	1 unit	1CB
Cable cage										
 3VM9117-0KB02	**Cable cage for plug-in 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	✓	--	--		**3VM9117-0KB02**		1	1 unit	1CB
		--	✓	--		**3VM9217-0KB02**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9317-0KB02**		1	1 unit	1CB
Spare part: Auto trip plunger NEW										
 3VM9117-0KB81	**Plug-in auto trip plunger** Accessory for plug-in unit	✓	--	--		**3VM9117-0KP81**		1	1 unit	1CB
		--	✓	--		**3VM9217-0KP81**		1	1 unit	1CB
		--	--	✓		**3VM9417-0KP81**		1	1 unit	1CB
Terminal cover specially for plug-in units										
	Terminal cover for plug-in unit (spare part) • To provide circuit breaker touch protection • For mounting on the molded case circuit breaker									
	Versions									
  3VM9113-0KB01	• 3-pole - Included in scope of supply: Cover for infeed and outgoing side	✓	--	--		**3VM9113-0KB01**		1	1 unit	1CB
		--	✓	--		**3VM9213-0KB01**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9313-0KB01**		1	1 unit	1CB
 3VM9114-0KB01	• 4-pole - Included in scope of supply: Cover for infeed and outgoing side	✓	--	--		**3VM9114-0KB01**		1	1 unit	1CB
		--	✓	--		**3VM9214-0KB01**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9314-0KB01**		1	1 unit	1CB
	Terminal cover for plug-in socket • For touch protection in the termination area of the plug-in socket • For mounting on the plug-in socket									
	Versions									
 3VM9113-0KB03	• 3-pole	✓	--	--		**3VM9113-0KB03**		1	1 unit	1CB
		--	✓	--		**3VM9213-0KB03**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9313-0KB03**		1	1 unit	1CB
 3VM9114-0KB03	• 4-pole	✓	--	--		**3VM9114-0KB03**		1	1 unit	1CB
		--	✓			**3VM9214-0KB03**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9314-0KB03**		1	1 unit	1CB

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Plug-in technology

	Version	For molded case circuit breakers/ frame size 3VM11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
	Terminal cover extended for plug-in socket • For touch protection in the termination area of the plug-in socket • For mounting on the plug-in socket • Included in scope of supply: - 1 external terminal cover - 1 insulating plate									
	Versions									
 3VM9113-0KB04	• 3-pole	✓	--	--		**3VM9113-0KB04**		1	1 unit	1CB
		--	✓	--		**3VM9213-0KB04**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9313-0KB04**		1	1 unit	1CB
 3VM9114-0KB04	• 4-pole	✓	--			**3VM9114-0KB04**		1	1 unit	1CB
		--	✓			**3VM9214-0KB04**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9314-0KB04**		1	1 unit	1CB
	Terminal cover broadened for plug-in socket • For touch protection in the termination area of the plug-in socket • For mounting on the plug-in socket • Included in scope of supply: - 1 external terminal cover - 1 insulating plate									
	Versions									
 3VM9113-0KB05	• 3-pole	✓	--	--		**3VM9113-0KB05**		1	1 unit	1CB
		--	✓	--		**3VM9213-0KB05**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9313-0KB05**		1	1 unit	1CB
 3VM9114-0KB05	• 4-pole	✓	--	--		**3VM9114-0KB05**		1	1 unit	1CB
		--	✓	--		**3VM9214-0KB05**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9314-0KB05**		1	1 unit	1CB

Minimum order quantity (PS) or a multiple thereof can be ordered.

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	Version	Minimum mm² for stranded cable	Maximum mm² for stranded cable	For molded case circuit breakers/ frame size 3VM11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Wire connectors specially for plug-in units												
 3VM9153-0JC12	**Wire connector, large, with control wire tap** Included in scope of supply: 3 single terminals 1 extended terminal cover 1 insulating plate	25 mm²	150 mm²	✓	--	--		**3VM9153-0JC12**		1	1 unit	1CB
		50 mm²	240 mm²	--	✓	--		**3VM9253-0JC13**		1	1 unit	1CB
 3VM9154-0JC12	**Wire connector, large, with control wire tap** Included in scope of supply: 4 single terminals 1 extended terminal cover 1 insulating plate	25 mm²	150 mm²	✓	--	--		**3VM9154-0JC12**		1	1 unit	1CB
		50 mm²	240 mm²	--	✓	--		**3VM9254-0JC13**		1	1 unit	1CB
 3VM9253-0JC22	**Wire connector, 2 cables, with control wire tap** Included in scope of supply: 3 single terminals 1 extended terminal cover 1 insulating plate	2 x 25 mm²	2 x 150 mm²	--	✓	--		**3VM9253-0JC22**		1	1 unit	1CB
		2 x 70 mm²	2 x 300 mm²	--	--	✓ NEW		**3VM9483-0JC23**		1	1 unit	1CB
 3VM9254-0JC22	**Wire connector, 2 cables, with control wire tap** Included in scope of supply: 4 single terminals 1 extended terminal cover 1 insulating plate	2 x 25 mm²	2 x 150 mm²	--	✓	--		**3VM9254-0JC22**		1	1 unit	1CB
		2 x 70 mm²	2 x 300 mm²	--	--	✓ NEW		**3VM9484-0JC23**		1	1 unit	1CB

	Version	For molded case circuit breakers/ frame size 3VM11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Control wire taps specially for plug-in units										
 3VM9280-0WB00	**Control wire tap for box terminal**	✓	--	--		**3VM9150-0WB00**		1	10 units	1CB
		--	✓	--		**3VM9280-0WB00**		1	10 units	1CB
		--	--	✓ NEW		**3VM9480-0WB00**		1	10 units	1CB
 3VM9280-0WC00	**Control wire tap for busbar**	✓	--	--		**3VM9150-0WC00**		1	10 units	1CB
		--	✓	--		**3VM9280-0WC00**		1	10 units	1CB
		--	--	✓ NEW		**3VM9480-0WC00**		1	10 units	1CB

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Overview

Residual current devices can be used to prevent or reduce hazardous residual currents that could cause injury to personnel and livestock, and damage to property. These are available as accessory components for the 3VM series up to the largest circuit breaker size. All residual current devices detect both purely sinusoidal AC residual currents as well as pulsating DC residual currents (type A), and the combination of molded case circuit breakers or switch disconnectors with mounted residual current devices complies with IEC 60947-2 Annex B.

The residual current devices are characterized by the following features:

- Compact design
- 45 mm cover size
- LEDs for signaling "ready" state and pre-alarms
- Tripped signal at device and via electrical contacts
- Deliberate acknowledgment following a trip via a reset push-button on the residual current device

The RCD110 and RCD210 units are specially designed for the infrastructure market. This is reflected in the design: they have a compact L-shaped design, the operator controls and displays are in a 45 mm cover size, DIN rail mounting is possible, and the combination of breaker and residual current device has a depth of 70 mm and thus fits optimally into a distribution board.

The residual current devices are mounted on the left side of the breaker. Through-hole technology enables direct connection of the cable to the box terminal. There is no need for time-consuming wiring of the breaker-residual current device combination. In the event of a residual current, the breaker is tripped by an RCR (residual current release) built into the left accessories compartment of the breaker and is included in the scope of delivery. However, this RCR can also be used by means of a floating contact as a shunt trip independently of the residual current device.

On the residual current devices of the 2-series (RCD210) tripping can be delayed by up to three seconds so that in the event of a fault, only the branch containing the fault is switched off by means of appropriate selective grading of the series-switched residual current devices. The RCD110 is an instantaneous version, in other words, it trips immediately. Both versions can be supplied as 4-pole versions.



RCD210

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Version	For molded case circuit breakers/ frame size 3VM11	3VM12	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Side mounted residual current devices RCD for 3VM									
	Type A (pulse current sensitive) • Mounted on the side (left) • Trip element (RCR) included in the scope of delivery • Can be mounted on molded case circuit breakers and switch disconnectors • U_e = 127 - 480 V AC, 50/60 Hz Note NEW • 1 set of box terminals (4 pieces) is included in the delivery package of the RCD110 or RCD210								
 3VM9114-0RS10	**RCD110** • 4-pole • Rated residual response current, adjustable: $I_{\Delta n}$ = 0.03 - 0.05 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5 A; default: 30 mA • Delay time, permanently set: Δt = instantaneous (INS)	✓	--		**3VM9114-0RS10**		1	1 unit	1CB
 3VM9114-0RS20	**RCD210** • 4-pole • Rated residual response current, adjustable: $I_{\Delta n}$ = 0.03 - 0.05 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5 A; default: 30 mA • Delay time, adjustable: Δt = instantaneous (INS) - 0.06 - 0.15 - 0.3 - 0.5 - 1 - 2 - 3 s; default: instantaneous (INS)	✓	--		**3VM9114-0RS20**		1	1 unit	1CB
		--	✓		**3VM9214-0RS20**		1	1 unit	1CB
Spare part: Residual Current Release NEW									
 3VM9988-0BR10	**Residual Current Release (RCR)** • Accessory for side mounted RCD110 and RCD210 • Scope of delivery: RCR, RCR-RCD cable Note • for all side mounted residual current devices				**3VM9988-0BR10**		1	1 unit	1CB

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Locking technology

Overview

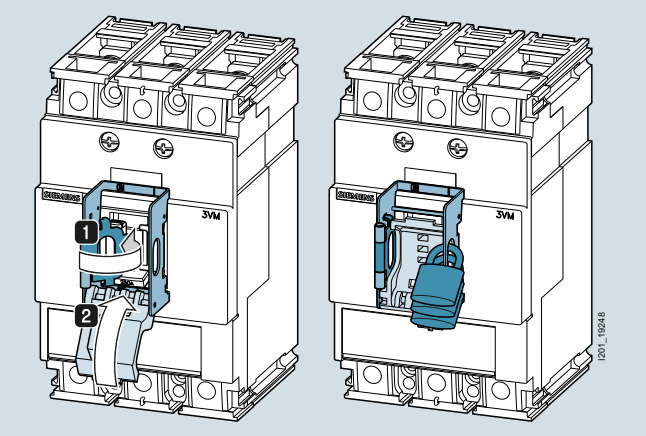
The padlock devices make it possible to lock the 3VM molded case circuit breaker in either the OFF or the ON operating position. Once the molded case circuit breaker is locked in position, it cannot be operated again.

Locking technology

Padlock device for the handle

A padlock device mounted and latched on the handle allows the 3VM molded case circuit breaker to be locked in the ON or the OFF position.

In this position, up to 3 padlocks with diameters ranging from 4.5 mm to 8.5 mm can be fitted in order to prevent the handle from being moved.



3

Selection and ordering data

	Version	For molded case circuit breakers/ frame size 3VM10/11	3VM12	3VM13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Accessories for locking										
 3VM9188-0LB10	**Locking devices for handles**	✓	✓	--		**3VM9188-0LB10**		1	1 unit	1CB
		--	--	✓ NEW		**3VM9388-0LB10**		1	1 unit	1CB

Minimum order quantity (PS) or a multiple thereof can be ordered.

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Selection and ordering data

	Version	For molded case circuit breakers/ frame size 3VM 10	11	12	13/14	DT	Article No. www.siemens.com/product?Article No.	Price per PU	PU (UNIT, SET, M)	PS*/ P. unit	PG
Adapter for DIN rails for 3VM molded case circuit breakers											
 3VM9187-0SH10	**Adapter for DIN rails for 3VM molded case circuit breakers**										
	Versions										
	• 1-pole[1)]	--	✓	--	--		**3VM9181-0SH10**		1	1 unit	1CB
	• 2-pole	--	✓	--	--		**3VM9182-0SH10**		1	1 unit	1CB
	• 3 and 4-pole	✓	✓	--	--		**3VM9187-0SH10**		1	1 unit	1CB
	• 4-pole in conjunction with RCD110 or RCD210	--	✓	--	--		**3VM9187-0SH20**		1	1 unit	1CB
Adapter for 60 mm busbar system (8US)											
 8US1213-4AP03	**Adapter for 60mm busbar system (8US)**										
	Versions										
	• 3-pole	✓	✓	--	--		**8US1213-4AU01**		1	1 unit	1CU
		--	--	✓	--		**8US1213-4AP03**		1	1 unit	1CU
Mounting screw kit											
 3VM9111-0SS10	**Mounting screw kit**										
	Versions										
	• For fixed-mounted molded case circuit breakers										
	- 1-pole	--	✓	--	--		**3VM9111-0SS10**		1	1 unit	1CB
	- 2 and 3-pole (apart from 125 A/160 A with 55 kA)	✓	✓	✓	--		**3VM9116-0SS10**		1	1 unit	1CB
	- 3-pole (125 A/160 A with 55 kA) and 4-pole	✓	✓	✓	--		**3VM9114-0SS10**		1	1 unit	1CB
		--	--	--	✓	NEW	**3VM9317-0SS10**				
	• For plug-in technology	--	✓	✓	--		**3VM9114-0SS10**		1	1 unit	1CB
		--	--	--	✓	NEW	**3VM9317-0SS10**		1	1 unit	1CB
Transparent TMTU cover, sealable											
	**Transparent TMTU cover** For covering and sealing the trip unit for the TM120M and TM220 ATFM trip unit types										
	Versions										
	• 3 and 4-pole	--	✓	--	--		**3VM9157-0SA10**		1	5 units	1CB
		--	--	✓	--		**3VM9257-0SA10**		1	5 units	1CB
		--	--	--	✓	NEW	**3VM9457-0SA10**		1	5 units	1CB

[1)] For 3VM molded case circuit breakers, 160 A 1- pole up to 25 kA

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Notes

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Appendix



4/2 Catalog notes

4/3 Ordering notes

4/5 Further documentation

4/9 Quality management

4/10 Standards and approvals

4/12 Siemens contacts

4/13 Service & Support

4/14 Comprehensive support from A to Z

4/15 Article No. index incl. export markings

4/16 Conditions of sale and delivery

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Catalog notes

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 at
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

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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.

We are proud of our personal consulting service, on-time deliveries and one-day transport within Germany.

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

We regard the 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 article number (Instr.-Order-No.) is also specified. It can be obtained from your local Siemens representative (for a list of your Siemens contacts, see 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.

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Ordering notes

Overview

Ordering special versions

When ordering products that differ from the standard versions listed in the catalog, **"–Z"** must be added to the Article No. indicated and the required features must be specified using alphanumeric order codes or plain text.

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 € 250 we charge an € 20 supplement to cover our order processing and invoicing costs.

Explanations of Selection and Ordering Data

X On request	In such cases, the delivery time can be queried.
Price units (PU)	
	The price unit defines the number of units, sets or meters to which the specified price applies.
Packaging size (PS)	
	The packaging size defines the number of units, sets or meters, for example, for outer packaging. Only the quantity defined by the packaging size or a multiple thereof can be ordered.
Price group (PG)	
	Each product is allocated to a price group.
Example	
	5TT3400 SD: Preferred type PG: 1BK Ordering quantity 1 unit or a multiple thereof 8US1923-5CA02 PG: 1CU Ordering quantity 10 units or a multiple thereof 8WH9000-1GA00 PG: 1BT Ordering quantity 50 units or a multiple thereof

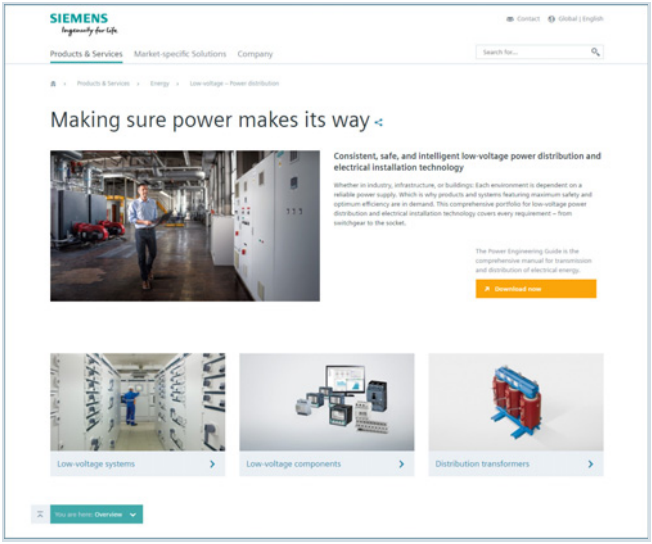
SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
d					
	5TT3400		1	1 unit	1BK
	8US1923-5CA02		1	10 units	1CU
	8WH9000-1GA00		100	50 units	1BT

Note:
The article numbers shown here and the specifications regarding selection and ordering data are examples only. When ordering, always use the selection and ordering data in the product chapters.

Metal surcharges/export markings	
To compensate fluctuating prices of raw materials (for example silver, copper, aluminum, lead, gold, dysprosium and neodymium), surcharges are calculated on a daily basis for products containing these raw materials using the metal factor. A surcharge for the particular raw material is added to the price of a product if the basic quotations for this raw material are exceeded.	Each product's metal factor dictates for which raw materials the metal surcharges are calculated, from which quotation and with which calculation method (weight or percentage method). An exact explanation of the metal factor can be found at www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf A product's export markings/metal surcharges are updated daily at www.siemens.com/industrymall.

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



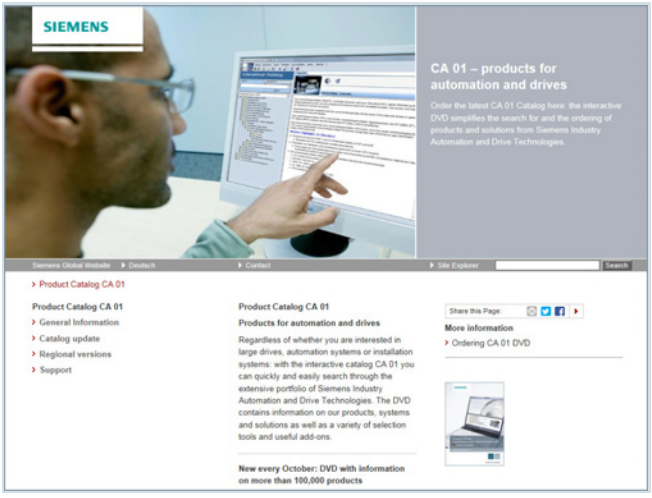
On the Internet you will find a host of information all about low-voltage power distribution and electrical installation technology products, such as:

- Overview of our product portfolio
- Background information, news and dates
- Videos, podcasts and newsletters
- Links to blogs and Twitter
- Brochures, catalogs, operating instructions and manuals for direct download

Visit us online and get to know our product range!

www.siemens.com/lowvoltage

Product selection using the interactive catalog CA 01



Detailed information together with user-friendly interactive functions

The interactive catalog CA 01 covers more than 100 000 products, thus providing a comprehensive overview of the product range provided by Siemens.

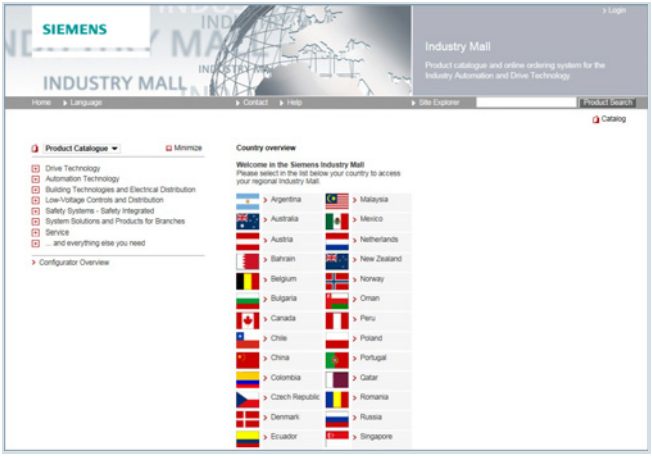
You can find everything you need here for solving automation, switching, installation and drive technology tasks. All information is provided over a user interface that is both user-friendly and intuitive.

Information about the interactive catalog CA 01 can be found on the Internet at:

www.siemens.com/automation/ca01

or on DVD.

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

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Further documentation

Industry Online Support

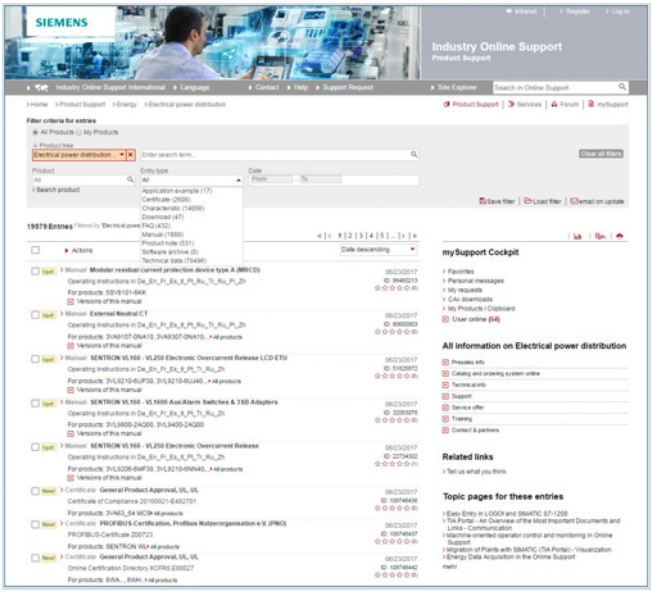


Comprehensive support – at any time, whatever your location

- 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



In the "Entry type" selection box in Product Support, you will find the following:

- Application example
- Certificate
- Characteristic
- Download
- FAQ
- Manual
- Product note
- Software archive
- Technical data

www.siemens.com/lowvoltage/product-support

In addition, the Low-Voltage Power Distribution and Electrical Installation Technology catalogs are also available there.

www.siemens.com/lowvoltage/catalogs

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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).
- Delivery 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 6 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

SIEMENS

Android:

GET IT ON Google Play

Industry Online Support App ANDROID

Apple iOS:

Download on the App Store

Industry Online Support App iOS

Windows:

Get it from Microsoft

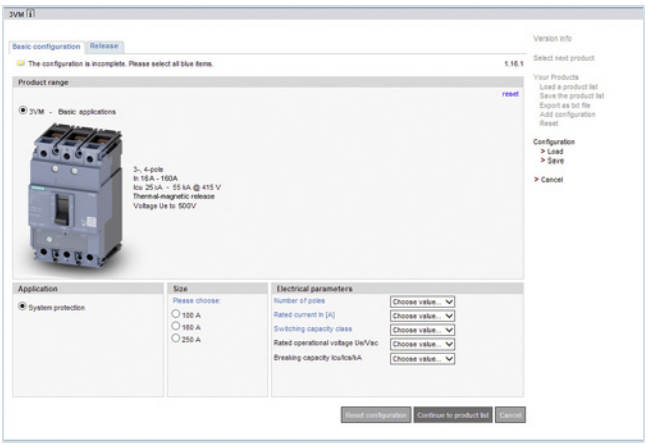
Industry Online Support App WINDOWS

4

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Further documentation

Product configurator



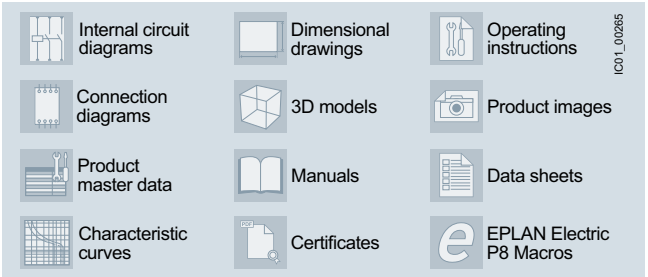
Finding the right product faster

- 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

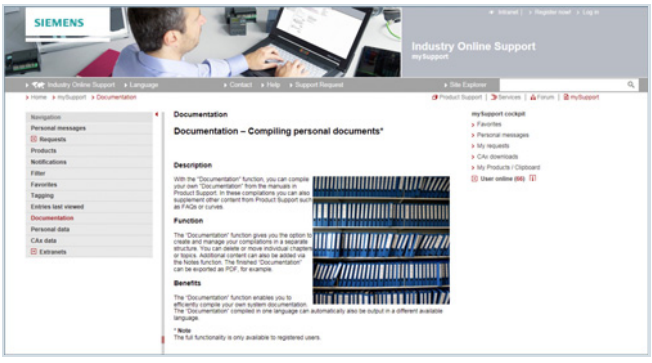
Time savings of up to 80% with universal product data for your CAE and CAD systems

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. The data contained in the files is continuously updated. The whole process involves only four selection steps and is free of charge. All your selected files are packed into a zip file which you can download for further use.

Siemens makes available up to 12 file types to support your mechanical (CAD) and electrical (CAE) planning processes for you to download at any time of the day.

- 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

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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.

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Appendix

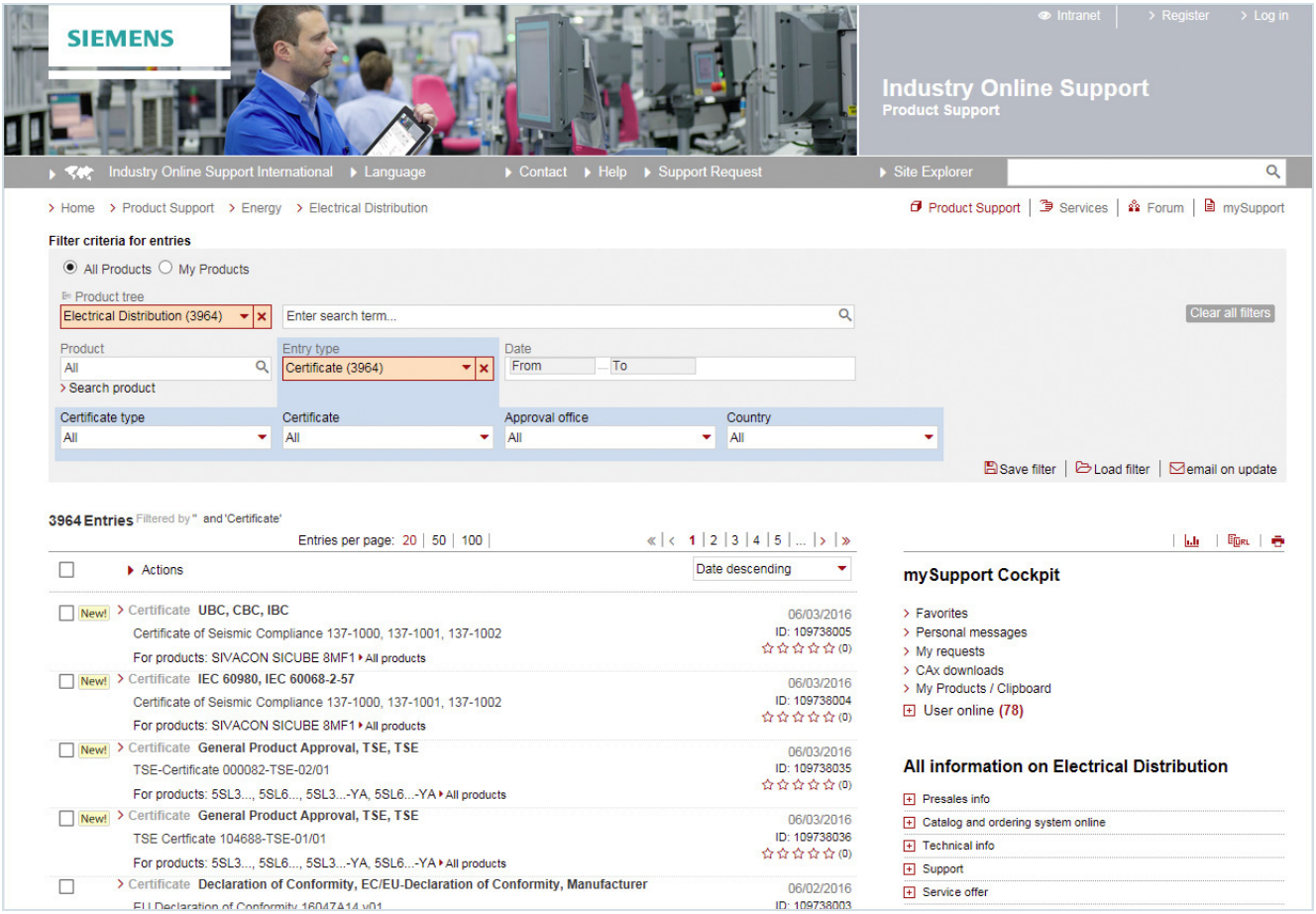
Standards and approvals

Overview

Certificates

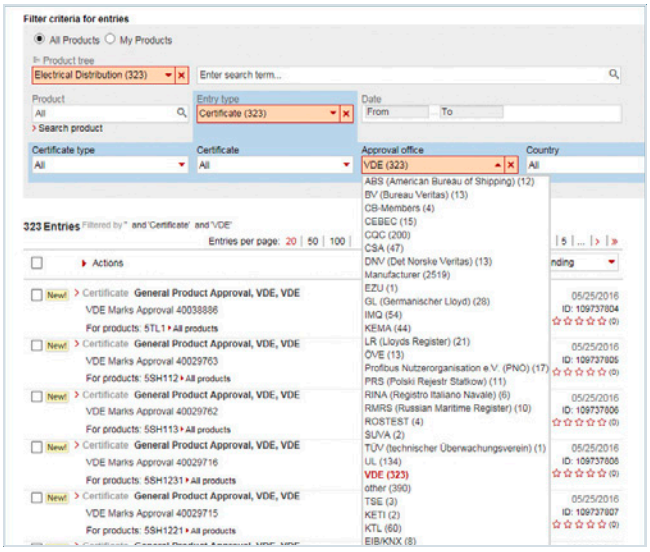
An overview, updated on a daily basis, of our products certified in accordance with CE, UL, CSA, FM, shipping authorizations etc. for low-voltage power distribution and electrical installation products can be found on the Internet at

www.siemens.com/lowvoltage/certificates



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



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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

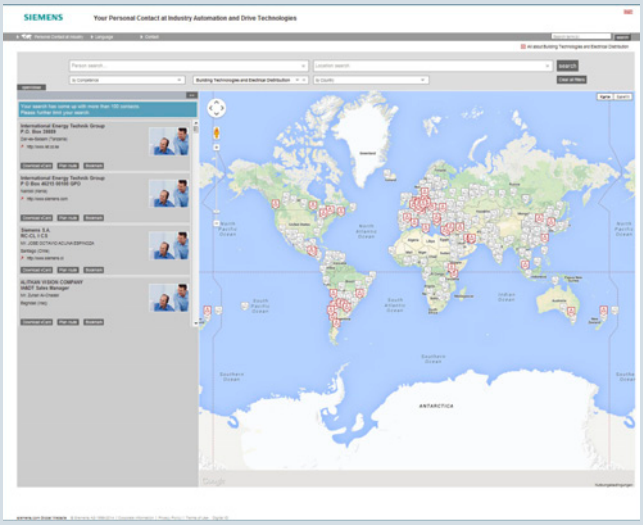
www.siemens.com/applicationconsulting/ul

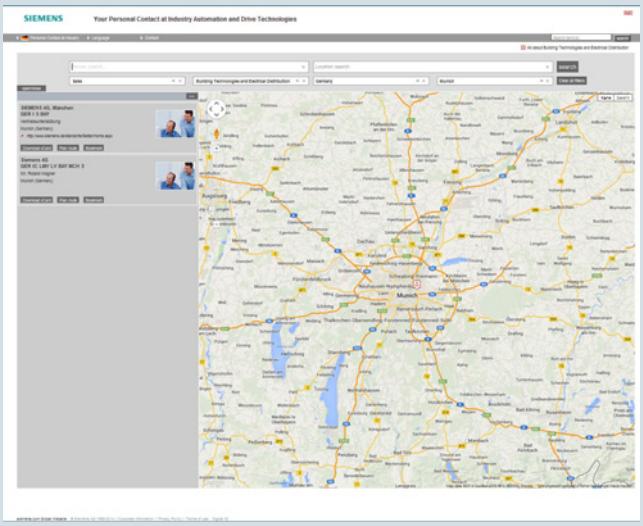
If you have any questions concerning UL/CSA approvals, please contact Technical Support:
www.siemens.com/lowvoltage/contact

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Siemens contacts

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.

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Unrivaled complete range of services over the entire life cycle

Online Support



Our comprehensive online information platform covers every aspect of our Service & Support and is available whenever, wherever.

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/com/lowvoltage/contact

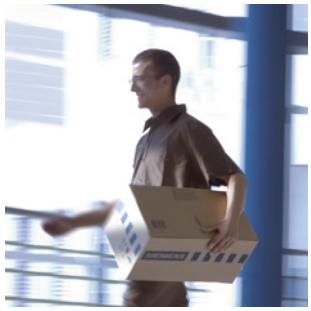
Technical Support



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

Assistance with technical queries is provided at
www.siemens.com/lowvoltage/support-request
You can find your local contacts 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 practice-related 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

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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	
Siemens Industry Online Support	Low-Voltage Power Distribution and Electrical Installation Technology catalogs www.siemens.com/lowvoltage/catalogs
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 the electrical power distribution: www.siemens.com/simaris
SIMARIS configuration configuration software	Support throughout the entire configuration cycle from the configuration of SIVACON S8 switchboards, ALPHA 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 in all technical queries about our products: www.siemens.com/lowvoltage/contact www.siemens.com/lowvoltage/support-request

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Conditions of sale and delivery

1. General standards

By using this catalog you can acquire hardware and software products described therein from Siemens AG subject to these conditions of sale and delivery (hereinafter: CSD). Please note: the scope, the quality and the conditions for supplies and services, including software products, by any Siemens group or Regional Company having a registered office outside of Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. These CSD apply exclusively for orders placed with Siemens AG, Germany.

1.1 For customers with a seat or registered office in Germany

For customers with a seat or registered office in Germany, the following shall be subordinate to these CSD

- the "General Terms of Payment"[1)] and
- for software products, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or Registered Office in Germany"[1)] and
- the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"[1)] for other deliveries and services.

1.2 For customers with a seat or registered office outside of Germany

For customers with a seat or registered office outside of Germany, the following shall be subordinate to these CSD

- the "General Terms of Payment"[1)] and
- for software products, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or Registered Office outside of Germany"[1)] and
- the "General Conditions for Supplies of Siemens Industry for Customers with a Seat or Registered Office outside of Germany"[1)] for other deliveries and services.

2. Prices

The prices are in € (Euro) ex works, excluding packaging.

The sales tax (value added tax) is not included in the prices. It shall be debited separately at the respective rate according to the applicable legal regulations.

Prices are subject to change without prior notice. We will debit the prices valid at the time of delivery.

To compensate fluctuating prices of raw materials (for example silver, copper, aluminum, lead, gold, dysprosium and neodymium), surcharges are calculated on a daily basis for products containing these raw materials using the metal factor. A surcharge for the particular raw material is added to the price of a product if the basic quotations for this raw material are exceeded.

Each product's metal factor dictates for which raw materials the metal surcharges are calculated, from which quotation and with which calculation method (weight or percentage method).

An exact explanation of the metal factor can be found at www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

The surcharge will be calculated (except in the case of dysprosium and neodymium) on the basis of the official price on the day prior to receipt of the order or prior to the release order for calculation of the surcharge.

In the event of placement of an order, the relevant three-month average price from the quarter prior to order receipt or the release order shall be used with a one-month buffer to calculate the dysprosium and neodymium surcharge ("rare earths") (you will find details in the aforementioned explanation of the metal factor).

3. Additional terms and conditions

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

Illustrations are not binding.

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

4. Export regulations

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

Export of the products listed in this catalog may be subject to authorization. In delivery information, we label authorization obligations according to German, European and US export lists. Goods labeled with an "AL" not equal to "N" are subject to European or German export authorization when being exported out of the EU. Goods labeled with "ECCN" not equal to "N" are subject to a US re-export authorization.

Please note that you can also preview the export designations in the respective product description via our "Industry Mall" online catalog system. The deciding factors, however, are the AL or ECCN export designations indicated on order confirmations, delivery notes and invoices.

Even if goods are not labeled, or labeled "AL:N" or "ECCN:N", they may still be subject to export authorization based on the final destination and end use of the goods.

If you transfer goods (hardware and/or software and/or technology as well as corresponding documentation, regardless of the mode of provision) delivered by us or works and services (including all kinds of technical support) performed by us to a third party worldwide, you shall comply with all applicable national and international (re-) export control regulations.

If required to conduct export control checks, you, at our request, shall promptly provide us with all information pertaining to particular end customers, destination and intended use of goods, works and services provided by us, as well as any relevant export control restrictions.

The products listed in this catalog may be subject to European/German and/or US export regulations. Therefore, any export requiring a license is subject to approval by the competent authorities.

Errors excepted and subject to change without prior notice.

[1)] You can download the text of the Siemens AG terms and conditions of trade at www.siemens.com/automation/salesmaterial-as/catalog/en/terms_of_trade_en.pdf

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Catalogs

Digital Factory, Process Industries and Drives and Energy Management

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GAMMA Building Control	ET G1
Drive Systems	
SINAMICS G130 Drive Converter Chassis Units SINAMICS G150 Drive Converter Cabinet Units	D 11
Digital: SINAMICS PERFECT HARMONY GH180 Medium-Voltage Air-Cooled Drives (Germany Edition)	*D 15.1*
SINAMICS G180 Converters – Compact Units, Cabinet Systems, Cabinet Units Air-Cooled and Liquid-Cooled	D 18.1
SINAMICS S120 Chassis Format Converter Units SINAMICS S120 Cabinet Modules SINAMICS S150 Converter Cabinet Units	D 21.3
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LOHER VARIO High Voltage Motors Flameproof, Type Series 1PS4, 1PS5, 1MV4 and 1MV5 Frame Size 355 to 1000, Power Range 80 to 7100 kW	D 83.2
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Subject to change without prior notice
PDF (E86060-K1831-A101-A4-7600)
KG 1018 88 EN
Produced in Germany
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