



Catalog
LV 35

Edition
2022

SENTRON

3WT Air Circuit Breakers up to 4000 A

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3WT Air Circuit Breakers up to 4000 A

SENTRON**Catalog LV 35 · 2022**

Supersedes:
Catalog LV 35 · 2021

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

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Introduction**1****3WT Air Circuit Breakers up to 4000 A (AC)****2****Appendix****3**

The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with EN ISO 9001 (for the Certified Registration Nos., see www.siemens.com/system-certificates/ep). The certificate is recognized by all IQNet countries.

Ordering notes

Catalog contains all selection and order-relevant data.



Ordering notes

Ordering special versions

For ordering products that differ from the versions listed in the catalog, the article number specified in the catalog must be supplemented with "-Z"; the required features must be specified by means of the alphanumeric order codes or in plain text.

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When small orders are placed, the costs associated with order processing are greater than the order value. We recommend therefore that you combine several small orders. Where this is not possible, we unfortunately have to charge a processing supplement of 20.00 € to cover our costs for order processing and invoicing for all orders with a net goods value of less than 250.00 €.

Price units (PU)

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

Price groups (PG)

Each product is assigned to a price group.

Dimensions

All dimensions in mm.

Standard delivery time (SD)

SD in days (d); ► Preferred type; X On request

Preferred types are available immediately from stock, i.e. are dispatched within 24 hours. Normal quantities of the products are usually delivered within the specified time following receipt of your order at our branch.

In exceptional cases, the actual delivery time may differ from that specified. The delivery times apply up to the ramp at Siemens AG (products ready for dispatch).

The transport times depend on the destination and type of shipping. The standard transport time for Germany is one day.

The standard delivery times specified here are only examples. They are continuously optimized. For more up-to-the-minute information, please visit www.siemens.com/lowvoltage/mall.

Packaging sizes (PS)

The packaging size defines the number, e.g. of units, sets or meters, contained in an outer packaging. Only the quantity defined by the packaging size or a multiple thereof can be ordered.

Example

5TT3400

SD: Preferred type

PG: 1BK

Order quantity 1 unit or a multiple thereof

8US1923-5CA02

PG: 1CU

Order quantity 10 units or a multiple thereof

8WH9000-1GA00

PG: 1BT

Order 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



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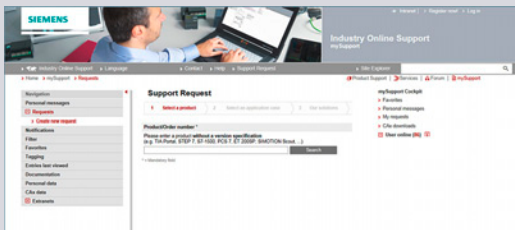
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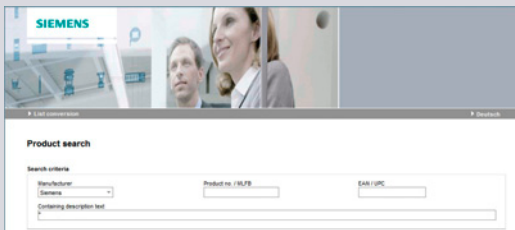
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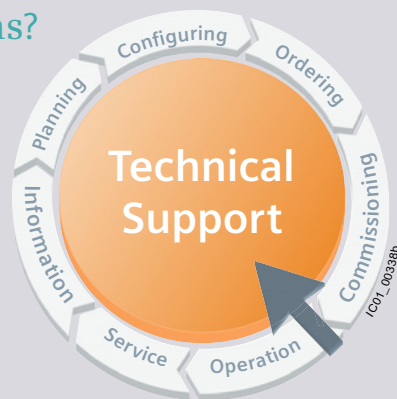


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- Conversion from old to new
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- Special versions
- Particular requirements
- Commissioning
- Maintenance

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Introduction



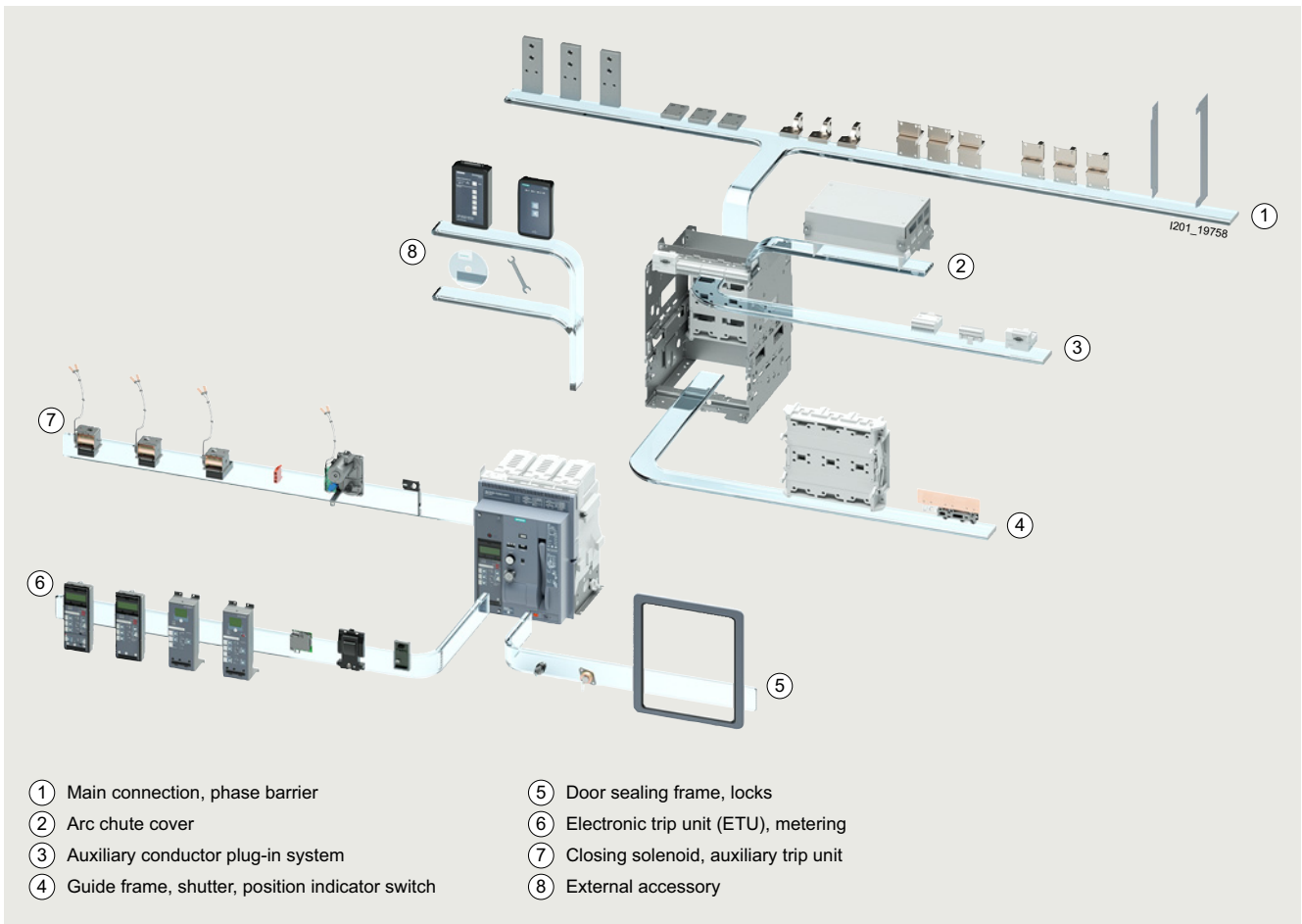
1/2

3WT air circuit breakers

Introduction

3WT air circuit breakers

Introduction Overview



Benefits

Flexibility

- Electronic trip units (ETU) with outstanding features
- Only two frame sizes cover a broad range of applications from 400 A to 4000 A, with a breaking capacity up to 66 kA up to 690 V, 3- or 4-pole version, fixed-mounted, withdrawable version
- Modbus RTU communication
- Metering with internal voltage tap
- All components can be combined in a modular way

Ease of use

- User friendliness in planning, configuration, installation and operation
- Wide range of accessories for both frame sizes can be easily retrofitted
- Displays for all electronic trip units (ETU)

Safety and reliability

- International and standardized processes ensure highest product quality
- Conforms to international standards and approvals

3WT Air Circuit Breakers up to 4000 A (AC)



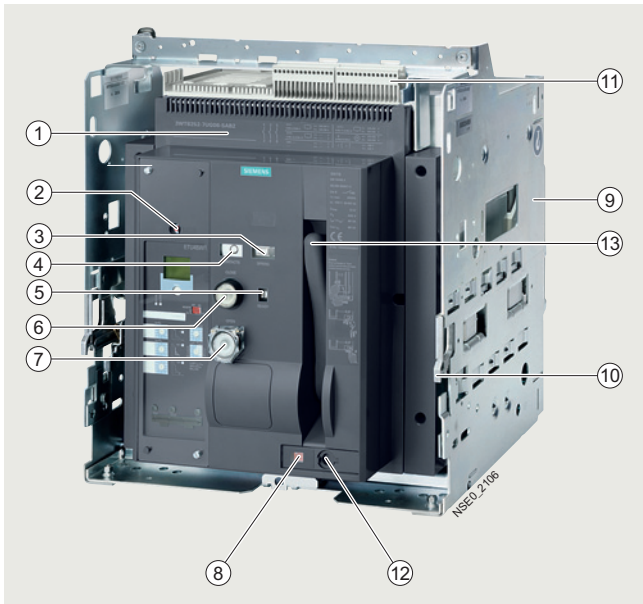
2/2	General data
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3WT Air Circuit Breakers up to 4000 A (AC)

General data

Overview

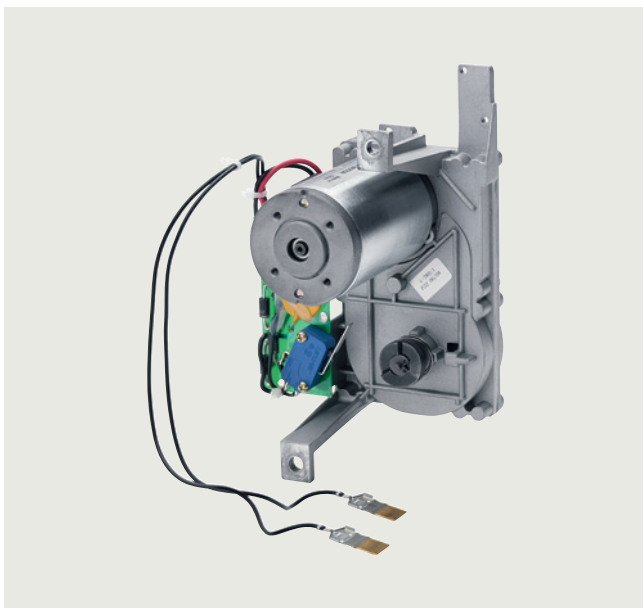
2



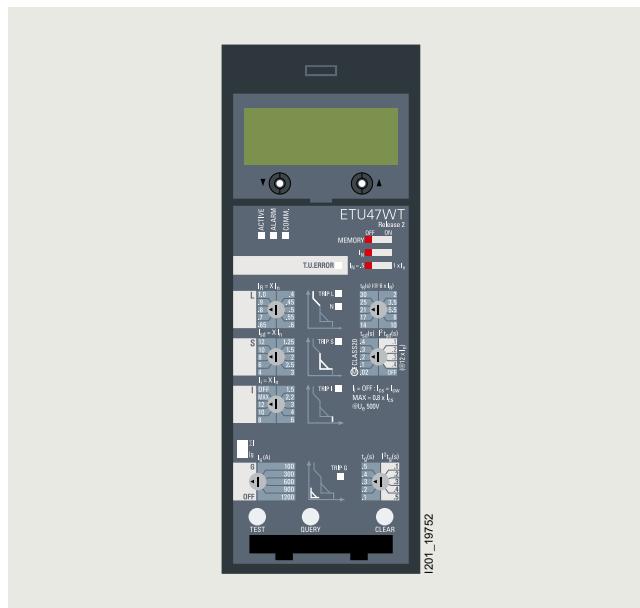
3WT circuit breaker, withdrawable version, size II, 3-pole

3WT circuit breaker, fixed-mounted version, size II, 3-pole

- ① Withdrawable circuit breaker
- ② Indication and reset button after tripping for
– tripped signaling switch and
– manual reset reclosing lockout
- ③ Stored-energy indicator
- ④ Switching position indicator
- ⑤ Ready-to-close indicator
- ⑥ ON button, mechanical
- ⑦ OFF button, mechanical
- ⑧ Indication of circuit breaker position
- ⑨ Guide frame
- ⑩ Guide rails
- ⑪ Auxiliary circuit plug-in system
- ⑫ Crank hole
- ⑬ Hand lever



Motorized operating mechanism



Electronic trip unit

Benefits**Safety and reliability**

- High degree of protection with door sealing frame in the case of exclusively local operation of the circuit breaker
- Infeed supply from above or below, as required
- Locking of the withdrawable circuit breaker against moving, as standard
- Locking of the guide frame with the circuit breaker removed, as standard
- Signaling switch for overload and short-circuit tripping with mechanical reclosing lockout
- High degree of protection with cover IP55
- Mechanical reclosing lockout after overload or short-circuit tripping as standard
- The circuit breaker is always equipped with the required number of auxiliary supply connectors

Easy to operate

- Unambiguous ON-OFF indicator with auxiliary switch for signal
- Ready-to-close indicator with signaling switch as safety standard.

Modular

Many components, such as auxiliary releases, motorized operating mechanisms, electronic trip units and current transformers can be replaced or retrofitted to adapt the circuit breaker to changing requirements.

Minimal power loss and therefore low energy consumption

The low power consumption of the electrical components also saves money when it comes to purchasing the control-power transformers. Where space is at a premium or ventilation is limited.

Application

IEC 60947-2,
GB 14048.2,
CCC approval,
climate-proof to IEC 60068-2-30, IEC 60068-2-6, Fc

Operating conditions

The 3WT circuit breakers are climate-proof in accordance with IEC 60068-2-30, IEC 60068-2-6, Fc.

They are intended for use in enclosed areas where no severe operating conditions (e.g. dust, corrosive vapors, damaging gases) are present.

When installed in dusty or damp areas, suitable enclosures must be provided. If damaging gases (e.g. hydrogen sulfide) are present in the surrounding air, sufficient incoming fresh air must be supplied.

The permissible ambient temperatures and the associated rated currents are listed in the technical specifications.

Design**Versions**

Breaking capacity: 55/66/85 kA at 440 V/500 V/690 V
Rated current: from 400 A to 4000 A
Rated operating voltage: up to AC 690V

The 3WT circuit breakers are supplied complete with an operating mechanism, electronic trip unit and auxiliary switches and are fitted with auxiliary releases.

The non-automatic circuit breakers are supplied without electronic trip unit

Standard version

- Electronic trip unit with LSI protection, LCD display with backlight, LEDs for the cause of tripping, LED status indicator, query and test button
- Auxiliary supply connector: The circuit breaker is equipped with the required number of connectors
- Mechanical ON and OFF pushbutton
- Door sealing frame IP41
- Tripped signaling switch (1 NO)
- Ready-to-close indicator with signaling switch
- Stored-energy indicator
- Auxiliary switches (2NO + 2NC)
- Rear horizontal main circuit connections for fixed mounted and withdrawable versions
- For 4-pole circuit breakers, the fourth pole (N) is installed on the left and is 100 % loadable
- Indication and reset button after tripping for
 - tripped signaling switch and
 - mechanical reclosing lockout
- User manual in English/Chinese/Spanish/Portuguese/Turkish

Additional features of the withdrawable version:

- Main contacts: Laminated receptacles in the guide frame, penetration blades on the withdrawable circuit breaker
- Position indicator in the control panel of the withdrawable circuit breaker
- Guide frame with guide rails for easy moving of the withdrawable circuit breaker
- The withdrawable circuit breaker can be locked to prevent it being pushed out of position

Standard version for non-automatic circuit breaker

- Same features as the circuit breaker, see "Standard version" but
- No electronic trip unit

3WT Air Circuit Breakers up to 4000 A (AC)

General data

Function

Operating mechanisms (see illustration "Motorized operating mechanism")

The circuit breakers are available with various optional operating mechanisms:

- Manual operating mechanism with memory, with mechanical closing
- Manual operating mechanism with mechanical and electrical closing
- Motorized operating mechanism that can also be operated manually, with mechanical and electrical closing.

The operating mechanisms with electrical closing can be used for synchronization tasks.

EMERGENCY-STOP facility

The 3WT circuit breakers can be used as an EMERGENCY-STOP facility to IEC 60204-1 if the circuit breaker is equipped with an undervoltage release and is used in conjunction with an EMERGENCY-STOP control device.

Auxiliary and signaling switches

- Ready-to-close
If all the conditions are fulfilled, so that the circuit breaker is ready to close, this is indicated visually on the operator panel.
- The circuit breakers are supplied with 2 NO and 2 NC contacts or with 2 NO and 2 NC and 2 CO contacts or 4 NO and 4 NC contacts or 5 NO and 3 NC or 6 NO and 2 NC contacts according to order.
- "Tripped" signaling switch and mechanical reclosing lockout
As standard, the circuit breaker is equipped with an S11 signaling switch and a mechanical reclosing lockout for the common overload and short-circuit signal and, depending on the setting and version of the electronic trip unit, the ground-fault signal.
The tripped signal and the standard mechanical mechanism to prevent closing remain active until the reset button is operated on the circuit breaker. When the circuit breaker has tripped, this is indicated by the protruding reset button.
The electrical signal from the „tripped“ switch S11 has to be reset by operating the Reset button.

Auxiliary supply connections

The type of connection for the auxiliary switches depends on the type of installation:

- Withdrawable version:
The internal auxiliary switches are connected to the male connector on the circuit breaker side. When fully inserted, the connector makes a connection with the sliding module in the guide frame.
- Fixed mounting:
In this case the auxiliary supply connectors are engaged directly onto the circuit breaker.

Fixed-mounted and withdrawable version

Fixed-mounted and withdrawable circuit breakers

- Protective measures against arcing gases
For 3WT circuit breakers with voltages up to AC 690 V, screening from vertical busbars is not necessary. Electrical add-on devices on the side of the circuit breaker must be separately covered. Also see notes under "Project planning aids", "Dimensional drawings".
- Operator panel
The operator panel is designed to protrude from a cutout in the door providing access to all operator controls and displays with the door closed.
The operator panels for all circuit breakers (fixed-mounted/withdrawable versions, 3-pole, 4-pole) are identical. The operator panel ensures degree of protection IP41.
- Door sealing frame
The door sealing frame seals the cabinet door with the operator panel. With the cabinet door closed, the IP degree of protection is achieved for the circuit breaker.

Withdrawable circuit breaker

The withdrawable version comprises a withdrawable circuit breaker, a guide frame and a hand crank for moving the withdrawable circuit breaker. The guide frames are fitted with guide rails as standard for easy handling of the withdrawable circuit breaker.

- Auxiliary supply connections
The auxiliary supply connections make contact automatically when the circuit breaker slides into the guide frame (test position, connected position).
- Circuit breaker positions in the guide frame
The withdrawable version has three switch positions in the switchgear cabinet behind the cabinet door:
 - Connected position
(main circuit and auxiliary circuit ready)
 - Test position
(main circuit disconnected, auxiliary circuit ready)
 - Disconnected position
(main circuit and auxiliary circuit disconnected)

In the disconnected position, the withdrawable circuit breaker complies with the "protective separation condition" with a visible isolating distance in the main circuit and auxiliary circuit. The circuit breaker must always be switched off before it is moved. The "OFF" button must be held down when the slide in the crank hole is opened.

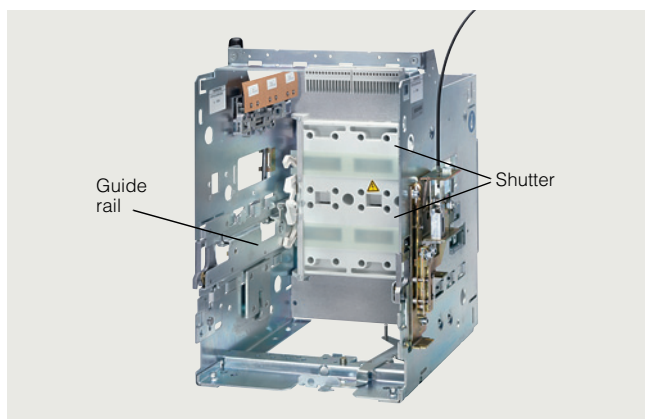
Guide frames

Closing of the crank hole is only possible in the circuit breaker positions (connected, test or disconnected position). The circuit breaker position is shown on a display on the circuit breaker.

The circuit breaker is moved with the help of a hand crank. The connected position as well as the disconnected position is achieved by moving the circuit breaker to the end stop.

- Shutters

Inadvertent touching of live main contacts or busbars is prevented by covering with a shutter. The shutter is constructed in two parts and allows the upper or lower connection areas to be opened separately for the purpose of checking that they are not live. The divided shutter can be interlocked in the open or closed position and two padlocks can be fitted.



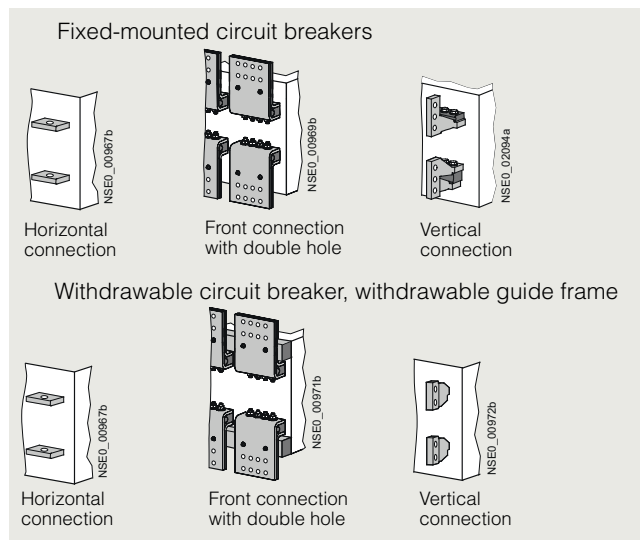
Guide frame

Main circuit connections

All circuit breakers are equipped with horizontal main circuit connections on the rear for up to 3200 A as standard (horizontal connection to busbars). Exception: Circuit breakers of size II with max. rated current 4000 A. They are equipped with vertical main connections (for upright busbars).

The following options are available, with combinations of top and bottom connections possible:

- Accessible from the front, double hole (holes according to DIN 43673) (for vertically installed busbars)
- At the rear, vertical (for vertically installed busbars)



Main circuit connections

3WT Air Circuit Breakers up to 4000 A (AC)

General data

Opening, closing and locking devices

- ON and OFF buttons
 - Mechanical ON button
In the standard version, the mechanical ON button is a push-button.
 - Mechanical OFF button
In the standard version, the mechanical OFF button is a pushbutton. As an alternative to a pushbutton, a safety lock (CES) can also be supplied.
If the key is removed in the "0" position, it is no longer possible to close the circuit breaker mechanically.
- Locking device against moving the withdrawable circuit breaker
Access to the crank hole and application of the crank is prevented by means of one or more padlocks. This also prevents movement of the withdrawable circuit breaker in the guide frame.

Auxiliary releases

Up to two auxiliary releases can be installed at the same time. The following are available:

- 1 shunt release or
- 1 undervoltage release or
- 2 shunt releases or
- 1 shunt release +
- 1 undervoltage releases.

Undervoltage releases

The undervoltage release causes the circuit breaker to be opened if the operational voltage falls below a certain value or is not applied. The circuit breaker cannot be closed manually or by means of an electrical ON command if the undervoltage release is not connected to the operational voltage. The undervoltage release has no delay as standard. A delay can be set by the customer in the range between $t_d < 80$ ms and $t_d < 200$ ms.

In addition, an undervoltage release with a delay in the range from 0.2 to 3.2 s is available.

Closing solenoid

The closing solenoid is used to close the circuit breaker electrically by means of a local electrical ON command or by a remote unit.

Motorized operating mechanisms

The operating mechanism is used to load the storage spring automatically.

The operating mechanism is activated if the storage spring has been unloaded and the control voltage is available.

It is switched off automatically after loading. This does not affect manual operation of the storage spring.

Indicators, signals and control elements

Operating cycles counter

The motorized operating mechanism can be supplied with a 5-digit operating cycles counter. The display is incremented by "1" as soon as the storage spring is fully loaded.

Electronic trip units - ETU



Electronic trip units – ETU35WT, ETU37WT, ETU45WT, ETU47WT

The electronic trip unit is controlled by a microprocessor and operates independently of an auxiliary voltage. It enables systems to be adapted to the different protection required of distribution systems, motors, transformers and generators.

In all electronic trip units, the following high-grade features are always included as standard:

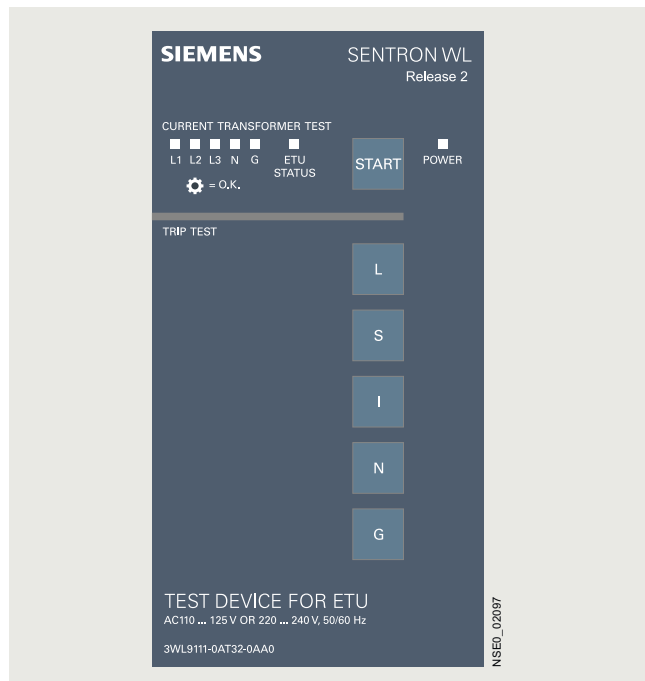
- Display with back light
- LSI protection as minimum configuration
- Integrated function test
The test button can be used to test the electronic trip unit using an integrated test function with or without tripping of the circuit breaker (the solid-state trip unit, trip solenoid and breaker mechanism are tested).
- Active LED
Correct operation of the electronic trip unit is indicated by a flashing of a green LED.
When the operating current exceeds the response threshold of the overload protection, it is indicated by rapid flashing of the green LED.
- Cause of tripping
The cause of tripping can be queried locally and displayed (by pressing the "Query" button).
- T. U. Error
A microprocessor fault or overtemperature inside of the electronic trip unit is signaled by a warning indicator LED.

Communication/measuring functions

The use of modern communication-capable circuit breakers opens up completely new possibilities in terms of start-up, parameterization, diagnostics, maintenance and operation. This allows many different ways of reducing costs and improving productivity in industrial plants, buildings and infrastructure projects to be achieved:

- Fast and reliable parameterization
- Timely information and response can prevent plant stoppages
- Effective diagnostics management
- Measured values are the basis for efficient load management, for drawing up power demand profiles and for allocating energy to cost centers
- Preventive maintenance reduces the risk of expensive plant downtimes
- Measurement function with a very wide range of measured values, such as current, voltage, energy, power etc.
- Can be used in 690 V networks

Manual function tester for Electronic trip unit ETU



Manual function tester

The manual function tester is used to verify the proper operation of the electronic trip unit, the energy transformers and current transformers as well as the tripping solenoid F5 and the data display.

Ground-fault protection

Description

Ground-fault releases "G" sense fault currents that flow to ground and that can cause fire in the plant. Multiple circuit breakers connected in series can have their delay times adjusted so as to provide time-graded discrimination.

The reason for tripping is indicated by means of an LED when the query button is activated.

Measurement method

Vectorial summation current formation (measurement method 1)

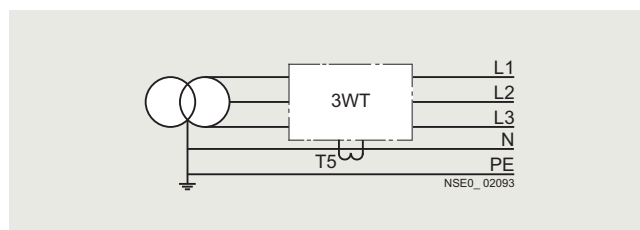
The three phase currents and the N-conductor current are measured directly.

The electronic trip unit determines the ground-fault current by means of vectorial summation current formation for the three phase currents and the N-conductor current.

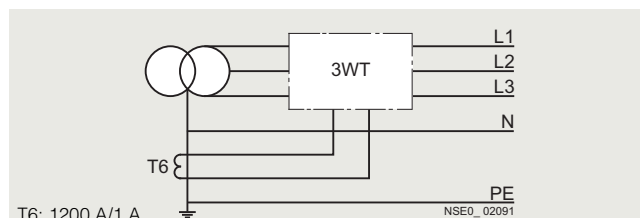
Direct measurement of the ground-fault current (measurement method 2, only for ETU47WT)

A standard transformer with the following data is used for measurement of the ground-fault current:

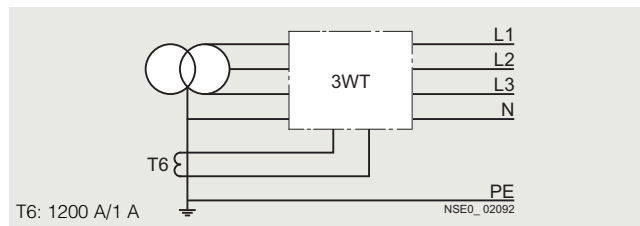
1200 A/1 A, Class 1 (the internal load of 3WT is 0.11 Ω). The transformer can be installed directly in the grounded neutral point of a transformer.



3-pole circuit breakers, current transformers in the neutral conductor



3-pole circuit breakers, current transformers in the grounded neutral point of the transformer



4-pole circuit breakers, current transformers in the grounded neutral point of the transformer

Setting

How the ground fault protection is set depends on the measurements method used (see above):

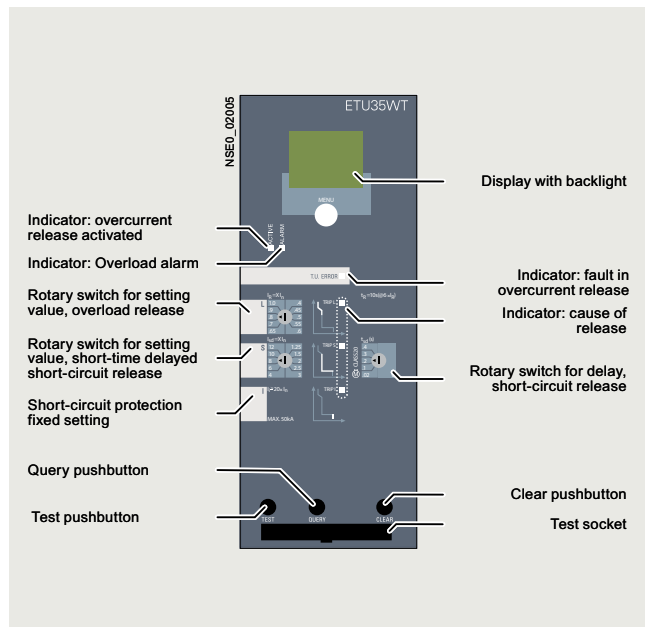
Measurement method 1: in position ΣI .

Measurement method 2: in position \square_g .

3WT Air Circuit Breakers up to 4000 A (AC)

General data

ETU35WT electronic trip unit



Application:

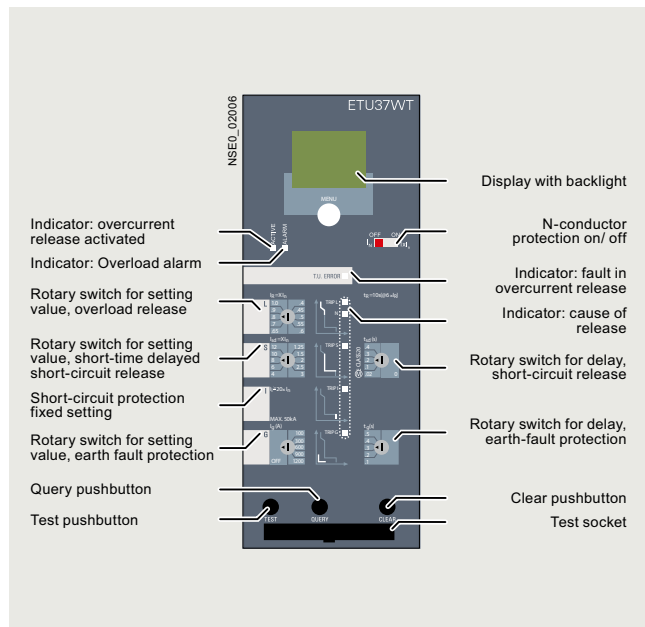
Classical building, motor and system protection with time-selective coordination for up to 4000 A

Features:

- Adjustable overload protection with I^2t characteristic curve
Delay time
 $t_R = 10$ seconds at $6 \times I_R$
- Short-time delayed short-circuit protection adjustable in the range $1.25 \dots 12 \times I_n$ and
- Instantaneous short-circuit protection preset to $20 \times I_n$, max. 50 kA
- Overload display
- Indicates the reason for tripping by means of an LED
- Test facility for the release
- Protection functions are set by means of the rotary coding switch
- Display with back light

For technical details [see page 2/10](#).

ETU37WT electronic trip unit



Application:

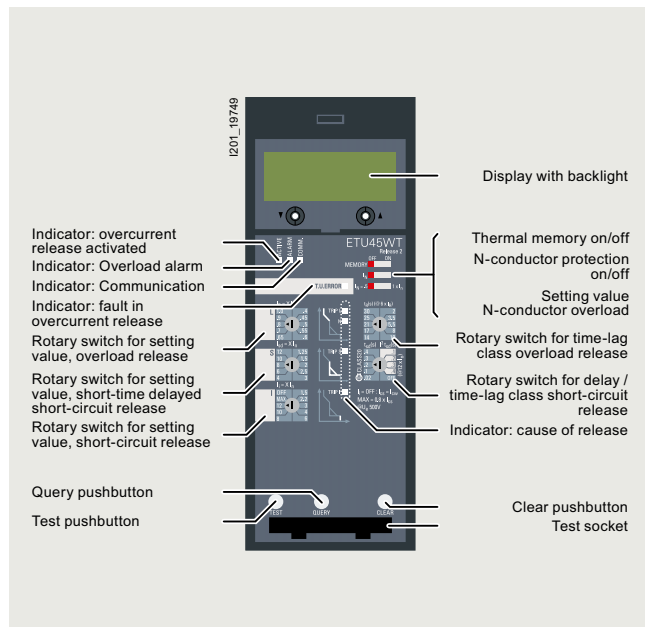
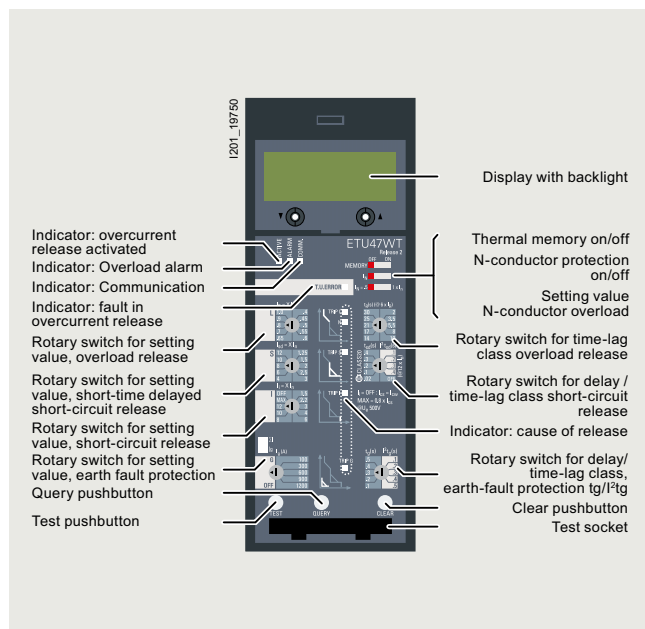
Classical building, motor and system protection with time-selective coordination for up to 4000 A

Features:

The same as ETU35WT but also

- Reversible neutral conductor protection
- Permanently integrated ground-fault protection. Calculation of the ground-fault current through vectorial summation current formation

For technical details [see page 2/10](#).

ETU45WT electronic trip unit (Release 2)**ETU47WT electronic trip unit (Release 2)**Application:

Economical all-round system for intelligent buildings and all types of industrial applications

Features:

The same as ETU35WT but also

- Adjustable time-lag class for overload protection
- Selectable characteristic for overload and short-delayed short-circuit range (current discrimination) for more accurate discrimination adaptation to upstream fuses and protective devices
- Thermal image as restart protection for tripped motor outgoing feeders
- Reversible and adjustable (incl. turn off) neutral conductor protection
- The protection functions can be set by means of a rotary coding switch or slide switch
- Communication capability with COM16WT
- Optional metering

For technical details [see page 2/10](#).

Application:

Economical all-round system for intelligent buildings and all types of industrial applications

Features:

The same as ETU45WT but also

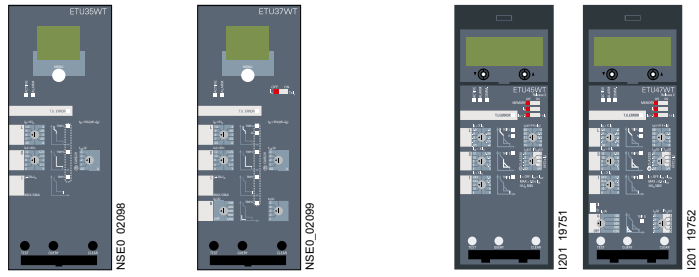
- Ground-fault protection with tripping functions which can be adjusted separately

For technical details [see page 2/10](#).

3WT Air Circuit Breakers up to 4000 A (AC)

General data

2



Protection functions Parameterization by	ETU35WT D	ETU37WT D & S	ETU45WT/ETU47WT D & S			
Functional overview of the electronic trip unit system						
 NSE0_00888b	L	Overload protection Function can be switched on/off	✓	✓	✓	
		Setting range $I_R = I_n \times \dots$	0.4-0.45-0.5-0.55-0.6-0.65-0.7-0.8-0.9-1	0.4-0.45-0.5-0.55-0.6-0.65-0.7-0.8-0.9-1	0.4-0.45-0.5-0.55-0.6-0.65-0.7-0.8-0.9-1	
		Setting range for time-lag class t_R at I^2t	10 s fixed	10 s fixed	2-3-5-5.5-8-10-14-17-21-25-30 s	
		Thermal image can be switched on/off	--	--	✓	
		Phase failure sensitivity	at $t_{sd} = 20$ ms (M)	at $t_{sd} = 20$ ms (M)	at $t_{sd} = 20$ ms (M)	
	 NSE0_00889a	N	Neutral conductor protection Function can be switched on/off	--	✓	✓
			N conductor setting range $I_N = I_n \times \dots$	--	1	0.5-1
			S	Short-time delayed short-circuit protection Function can be switched on/off	✓	✓
		Setting range $I_{sd} = I_n \times \dots$	1.25-1.5-2-2.5-3-4-6-8-10-12	1.25-1.5-2-2.5-3-4-6-8-10-12	1.25-1.5-2-2.5-3-4-6-8-10-12	
		Setting range for delay time t_{sd}	0-M-100-200-300-400 ms	0-M-100-200-300-400 ms	M-100-200-300-400 ms	
	Switchable short-time delayed short-circuit protection (I^2t -dependent function)	--	--	✓		
	Setting range for delay time t_{sd} at I^2t	--	--	100-200-300-400 ms		
 NSE0_00889b	I	Instantaneous short-circuit protection Function can be switched on/off	✓	✓	✓	
		Setting range $I_i = I_n \times \dots$	fixed for $I_i \geq 20 \times I_n$, max. 50 kA	fixed for $I_i \geq 20 \times I_n$, max. 50 kA	1.5-2.2-3-4-6-8-10-12-0.8 $\times I_{cs}$	
		G	Ground-fault protection Tripping function can be switched on/off	--	✓	✓ (only ETU47WT)
	Detection of the ground-fault current through summation current formation with internal or external neutral conductor transformer	--	3	✓ (only ETU47WT)		
	Detection of ground-fault current through external transformer	--	--	3 (only ETU47WT)		
	Setting range of the operating current I_g for release	--	OFF-100-300-600-900-1200	OFF-100-300-600-900-1200 (only ETU47WT)		
	Setting range of the delay time t_g	--	100-200-300-400-500 ms	100-200-300-400-500 ms (only ETU47WT)		
	Switchable ground-fault protection characteristic curve (I^2t -dependent function)	--	--	✓ (only ETU47WT)		
	Setting range for delay time t_g at I^2t	--	--	100-200-300-400-500 ms (only ETU47WT)		
LCD	LCD, with backlight	✓	✓	✓		
Watchdog	Watchdog	✓	✓	✓		
Communication	Modbus RTU with COM16WT	--	--	✓		
Metering	Metering with internal voltage tap	--	--	✓		
 NSE00890	LED display					
	Electronic trip unit active	✓	✓	✓		
	Alarm	✓	✓	✓		
	ETU fault	✓	✓	✓		
	L-release	✓	✓	✓		
	S-release	✓	✓	✓		
	I-release	✓	✓	✓		
N-release	--	✓	✓			
G-release	--	✓	✓			

Delay time figures given in ms. ✓ Available.
 M = Motor protection, corresponds to 20 ms. -- Not available.
 D = Rotary coding switch.
 D & S = Rotary coding and slide switch.

Module for mutual mechanical interlocking

The module for mutual mechanical interlocking can be used for one or two 3WT circuit breakers and can be adapted easily to the corresponding versions.

The fixed-mounted and withdrawable circuit breaker versions are fully compatible and can therefore be used in a mixed configuration in an installation.

The circuit breakers can be mounted alongside each other or one above the other, whereby the spacing of the circuit breakers is determined solely by the length of the Bowden wire. The Bowden wires are supplied in standard lengths of 2 m (length: 2 m/3 m/4.5 m). Interlock signals are looped through via the Bowden wires. Interlocking is only effective in the connected position in the case of withdrawable circuit breakers.

The mechanical endurance of the Bowden wires is 10000 operating cycles.

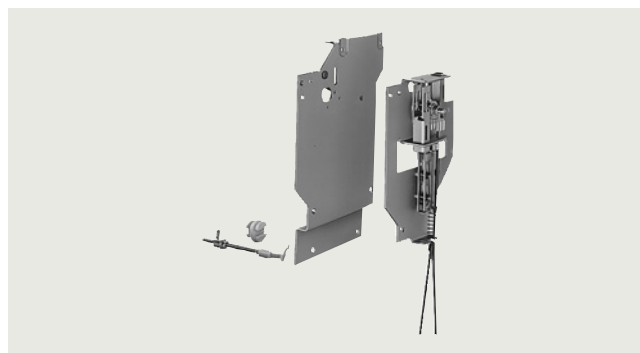
The interlocking module is mounted on the right-hand side of the fixed-mounted circuit breaker (see illustration) or the guide frame.

Minimum requirements must be fulfilled in the switchgear for the interlocking to function:

- Bowden wires must be installed as far as possible in a straight line with minimum bending.
- The bending radii of the Bowden wire must be greater than 500 mm.
- The sum of all bending angles along the Bowden wire must not exceed 640°.
- In a vertical arrangement of circuit breakers to be interlocked, the interlocking mechanisms must be in line.
- Circuit breakers to be interlocked must be arranged so that Bowden wires can be optimally installed in compliance with the conditions mentioned in the above points.
- The installed Bowden wire must be fixed (with cable ties or the like) before the interlock is adjusted.
- Select the width of switchgear cubicle to allow enough freedom of movement for adjusting the interlock!
- Openings and cut-outs in system elements must be designed so that Bowden wires are not changed in direction or obstructed when they are passed through.



3WT circuit breaker, 3-pole, with interlocking module and Bowden wire



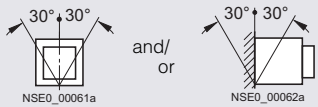
Interlocking module with Bowden wire

Example	Version	Switch status	Description																								
	1	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> </tr> </tbody> </table>	A	B	0	0	1	0	0	1	<p>2 circuit breakers alongside each other: One circuit breaker can only be closed when the other has been switched off. Each circuit breaker has an interlocking module and a Bowden wire.</p>																
A	B																										
0	0																										
1	0																										
0	1																										
	2	<table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> </tbody> </table>	A	B	C	0	0	0	1	0	0	0	1	0	0	0	1	1	1	0	0	1	1	1	0	1	<p>3 circuit breakers one above the other: Any two circuit breakers can always be closed, with the third one being interlocked. Each circuit breaker has an interlocking module and a Bowden wire. An additional Bowden wire must be ordered separately for each circuit breaker.</p>
A	B	C																									
0	0	0																									
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	4	<table border="1"> <thead> <tr> <th>A1</th> <th>B</th> <th>A2</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> </tr> </tbody> </table>	A1	B	A2	0	0	0	1	0	0	0	0	1	1	0	1	0	1	0	<p>3 circuit breakers alongside each other: Two circuit breakers can be closed and opened independently of each other, while the third is only ready to close when the two others are open. If the third circuit breaker is closed, the other two circuit breakers cannot be closed. All three circuit breakers each have an interlocking module and a Bowden wire. A Bowden wire must be ordered separately.</p>						
A1	B	A2																									
0	0	0																									
1	0	0																									
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0	1	0																									

3WT Air Circuit Breakers up to 4000 A (AC)

General data

Technical specifications

Size		I							
		3WT804	3WT806	3WT808	3WT810	3WT812	3WT816		
Type	Main conductor	A	400	630	800	1000	1250	1600	
	Neutral conductor (only on 4-pole version)	A	400	630	800	1000	1250	1600	
Rated current I_n at 50 °C, at 50/60 Hz									
Rated operating voltage U_e at 50/60 Hz		AC V	up to 690						
Rated impulse withstand voltage U_{imp}	Main circuits ¹⁾	kV	12						
	Auxiliary circuits	kV	4						
Utilization category			B						
Rated short-circuit making capacity I_{cm} (peak value)	Breaking		up to						
	N		500 V AC						
	S		500 V AC						
Rated service short-circuit breaking capacity I_{cs} (rms value)	Breaking capacity	N	up to						
			500 V AC	kA	55				
			Z-Opt. A12	kA	66				
			500 V AC	kA	66				
Rated ultimate short-circuit breaking capacity I_{cu} (rms value)	Breaking capacity	S	up to						
			500 V AC	kA	66				
			Z-Opt. A12	kA	66				
			500 V AC	kA	66				
Permissible ambient temperatures	Operation	Storage	°C	-20 ... +70					
			°C	-40 ... +80					
	Rated short-time withstand current I_{cw} at 50/60 Hz. At a rated voltage of 690 V, the I_{cw} value of the circuit breaker cannot be greater than the I_{cu} or I_{cs} value at 690 V.	0.5 s		kA	50				
		1 s		kA	35 ²⁾ /50/66 ⁷⁾				
2 s			kA	25 ²⁾ /30					
3 s			kA	20 ²⁾ /25					
4 s			kA	17 ²⁾ /20					
Permissible load for fixed-mounted and withdrawable circuit breakers at cabinet interior temperature ³⁾⁴⁾	up to 50 °C	A	400	630	800	1000	1250	1600	
	at 60 °C	A	400	630	800	950	1120	1500	
	at 70 °C	A	400	600	700	800	1000	1350	
Rated rotor operating voltage U_{er}		V	2000						
Power loss at I_n with 3-phase symmetr. load (without line-side busbars and metal components ⁴⁾)	Fixed-mounted circuit breaker	W	25	40	60	90	120	140	
	Withdrawable circuit breaker including guide frame	W	50	80	130	205	255	310	
Endurance without maintenance	mechanical	Operating cycles	10000						
			6000						
	electrical up to 690 V AC ⁶⁾	Operating cycles	18000						
			12000						
with maintenance ⁵⁾	mechanical	Operating cycles	12000						
Operating frequency	mechanical	1/h	60						
	electrical	1/h	60						
Minimum interval between tripping operation by electronic trip unit and next making operation of the circuit breaker (only with automatic mechanical resetting of the lockout device)		ms	80						
Service position									
Degree of protection			Circuit breaker IP20, when fitted in cabinet or frame Operator panel with door sealing frame IP41						
Main conductor minimum cross-sections	Copper bars, bare	Qty, mm ²	1 x 50 x 10	1 x 50 x 10	1 x 60 x 10	2 x 40 x 10	2 x 60 x 10	2 x 60 x 10	
	Copper bars, painted black	Qty, mm ²	1 x 40 x 10	1 x 40 x 10	1 x 50 x 10	1 x 60 x 10	2 x 40 x 10	2 x 50 x 10	
Auxiliary conductors (Cu) Max. no. of aux. conductors x cross-section	solid and finely stranded with end sleeves		1 x 0.5 ... 2.5 mm ² ; 1 x AWG 14 2 x 1.0 mm ²						
Weights 3-pole circuit breakers • Fixed-mounted circuit breaker • Withdrawable circuit breaker • Guide frame 4-pole circuit breakers • Fixed-mounted circuit breaker • Withdrawable circuit breaker • Guide frame		approx. kg	34	34	34	34	34	36	
		approx. kg	36	36	36	36	36	38	
		approx. kg	22	22	22	22	22	23	
		approx. kg	47	47	47	47	47	49	
		approx. kg	49	49	49	49	49	51	
		approx. kg	27	27	27	27	27	28	

1) Rated insulation voltage $U_i = 1000$ V AC.

2) Breaking capacity N.

3) The temperatures apply to the air surrounding the upper third of the circuit breaker.

4) These values apply in the case of sinusoidal current (50/60 Hz). The heat-

ing/losses increase in the event of harmonics and higher frequencies.

5) Maintenance: replacement of the contact set and arc chute.

6) Per contact set. Disconnect. of the rated current I_n and power factor = 0.8.

7) Z-opt. A12.

3WT Air Circuit Breakers up to 4000 A (AC)

General data

Size Type	II							
	3WT806	3WT808	3WT810	3WT812	3WT816			
Rated current I_n at 50 °C, at 50/60 Hz ¹⁾	Main conductor	A	630	800	1000	1250	1600	
	Neutral conductor (only on 4-pole version)	A	630	800	1000	1250	1600	
Rated operating voltage U_e at 50/60 Hz	AC V	up to 690						
Rated impulse withstand voltage U_{imp}	Main circuits ²⁾	kV	12					
	Auxiliary circuits	kV	4					
Utilization category	B							
Rated short-circuit making capacity I_{cm} (peak value)	Breaking capacity	up to						
	N	500 V AC	kA	--				
	S	440 V AC	kA	187				
		500 V AC	kA	145				
		690 V AC	kA	105				
Rated service short-circuit breaking capacity I_{cs} (rms value)	Breaking capacity	up to						
	N	500 V AC	kA	--				
	S	Z-Opt. A12 440 V AC	kA	85				
		500 V AC	kA	66				
		Z-Opt. A04 / A08 690 V AC	kA	50/66				
Rated ultimate short-circuit breaking capacity I_{cu} (rms value)	Breaking capacity	up to						
	N	500 V AC	kA	--				
	S	Z-Opt. A12 440 V AC	kA	85				
		500 V AC	kA	66				
		Z-Opt. A04 / A08 690 V AC	kA	50/66				
Permissible ambient temperatures	Operation	°C	-20 ... +70					
	Storage	°C	-40 ... +80					
Rated short-time withstand current I_{cw} at 50/60 Hz At a rated voltage of 690 V, the I_{cw} value of the circuit breaker cannot be greater than the I_{cu} or I_{cs} value at 690 V.	0.5 s		66					
	1 s	kA	66/85 ⁷⁾					
	2 s	kA	55					
	3 s	kA	50					
	4 s	kA	35					
Permissible load for fixed-mounted and withdrawable circuit breakers at cabinet interior temperature ³⁾⁴⁾	up to 50 °C ¹⁾	A	630	800	1000	1250	1600	
	at 60 °C	A	630	800	1000	1250	1600	
	at 70 °C	A	630	800	1000	1250	1600	
Rated rotor operating voltage U_{er}	V	2000						
Power loss at I_n with 3-phase symmetr. load (without line-side busbars and metal components ⁴⁾)	Fixed-mounted circuit breaker	W	20	30	45	70	110	
	Withdrawable circuit breaker including guide frame	W	40	60	90	140	225	
Endurance without maintenance	mechanical	Oper.	10000					
	electrical up to 690 V AC ⁶⁾	cycles	6000					
with maintenance ⁵⁾	mechanical	Oper.	12000					
	electrical up to 690 V AC ⁶⁾	cycles	12000					
Operating frequency	mechanical	1/h	60					
	electrical up to 690 V AC ⁶⁾	1/h	20					
Minimum interval between tripping operation by electronic trip unit and next making operation of the circuit breaker (only with automatic mechanical resetting of the lockout device)	ms	80						
Service position								
Degree of protection	Circuit breaker IP20, when fitted in cabinet or frame Operator panel with door sealing frame IP41							
Main conductor minimum cross-sections	Copper bars, bare	Qty, mm ²	1 x 50 x 10	1 x 60 x 10	2 x 40 x 10	2 x 60 x 10	2 x 60 x 10	
	Copper bars, painted black	Qty, mm ²	1 x 40 x 10	1 x 50 x 10	1 x 60 x 10	2 x 40 x 10	2 x 50 x 10	
Auxiliary conductors (Cu) Max. no. of aux. conductors x cross-section	solid and finely stranded with end sleeves	1 x 0.5 ... 2,5 mm ² ; 1 x AWG 14 2 x 1.0 mm ²						
Weights								
3-pole circuit breakers								
• Fixed-mounted circuit breaker	approx. kg	57						
• Withdrawable circuit breaker	approx. kg	59						
• Guide frame	approx. kg	35						
4-pole circuit breakers								
• Fixed-mounted circuit breaker	approx. kg	70						
• Withdrawable circuit breaker	approx. kg	72						
• Guide frame	approx. kg	46						

1) At 3WT840: 40 °C.

2) Rated insulation voltage $U_i = 1000$ V AC.

3) The temperatures apply to the air surrounding the upper third of the circuit breaker.

4) These values apply in the case of sinusoidal current (50/60 Hz). The heat-

ing/losses increase in the event of harmonics and higher frequencies.

5) Maintenance: replacement of the contact set and arc chute.

6) Per contact set. Disconnect. of the rated current I_n and power factor = 0.8.

7) Z-Option A12.

3WT Air Circuit Breakers up to 4000 A (AC)

General data

Size Type		II				
		3WT820	3WT825	3WT832	3WT840	
Rated current I_n at 50 °C, at 50/60 Hz ¹⁾	Main conductor	A	2000	2500	3200	4000
	Neutral conductor (only on 4-pole version)	A	2000	2500	3200	4000
Rated operating voltage U_e at 50/60 Hz		AC V	up to 690			
Rated impulse withstand voltage U_{imp}	Main circuits ²⁾	kV	12			
	Auxiliary circuits	kV	4			
Utilization category			B			
Rated short-circuit making capacity I_{cm} (peak value)	Breaking capacity	up to				
	N	500 V AC	kA	--		
	S	Z-Opt. A12 440 V AC	kA	85		
		500 V AC	kA	145		
	Z-Opt. A04 / A08 690 V AC	kA	105/145			
Rated service short-circuit breaking capacity I_{cs} (rms value)	Breaking capacity	up to				
	N	500 V AC	kA	--		
	S	Z-Opt. A12 440 V AC	kA	85		
		500 V AC	kA	66		
	Z-Opt. A04 / A08 690 V AC	kA	50/66	50/66	50/66	--/66
Rated ultimate short-circuit breaking capacity I_{cu} (rms value)	Breaking capacity					
	N	500 V AC	kA	--		
	S	500 V AC	kA	66		
	Z-Opt. A04 / A08 690 V AC	kA	50/66	50/66	50/66	--/66
Permissible ambient temperatures	Operation	°C	-20 ... +70			
	Storage	°C	-40 ... +80			
Rated short-time withstand current I_{cw} at 50/60 Hz At a rated voltage of 690 V, the I_{cw} value of the circuit breaker cannot be greater than the I_{cu} or I_{cs} value at 690 V.	0.5 s		66			
	1 s	kA	66/85 ⁹⁾			
	2 s	kA	55			
	3 s	kA	50			
	4 s	kA	35			
Permissible load for fixed-mounted and withdrawable circuit breakers at cabinet interior temperature ³⁾⁴⁾	up to 50 °C ¹⁾	A	2000	2500	3200	4000
	at 60 °C	A	1950	2150	2900	4000
	at 70 °C	A	1800	1950	2700	3870
Rated rotor operating voltage U_{er}		V	2000			
Power loss at I_n with 3-phase symmetr. load (without line-side busbars and metal components ⁴⁾)	Fixed-mounted circuit breaker	W	170	325	420	720
	Withdrawable circuit breaker including guide frame	W	310	535	760	--
Endurance without maintenance	mechanical	Oper.	10000			
	electrical up to 690 V AC ⁶⁾	cycles	6000		4000	2000
with maintenance ⁵⁾	mechanical	Oper.	12000			
	electrical up to 690 V AC ⁶⁾	cycles	12000		10000	6000
Operating frequency	mechanical	1/h	60			
	electrical up to 690 V AC ⁶⁾	1/h	20	20	10	60
Minimum interval between tripping operation by electronic trip unit and next making operation of the circuit breaker (only with automatic mechanical resetting of the lockout device)		ms	80			
Service position						
Degree of protection		Circuit breaker IP20, when fitted in cabinet or frame Operator panel with door sealing frame IP41				
Main conductor minimum cross-sections	Copper bars, bare	Qty, mm ²	2 x 100 x 10	3 x 100 x 10	3 x 100 x 10	4 x 120 x 10
	Copper bars, painted black	Qty, mm ²	2 x 80 x 10	2 x 100 x 10	3 x 100 x 10	
Auxiliary conductors (Cu) Max. no. of aux. conductors x cross-section		solid and finely stranded with end sleeves				
Weights		3- / 4-pole				
3-pole / 4-pole circuit breakers • Fixed-mounted circuit breaker • Withdrawable circuit breaker • Guide frame		approx. kg	57 / 70	57 / 70	61 / 74	85 ⁷⁾ / 107 ⁷⁾
		approx. kg	59 / 72	59 / 72	63 / 76	-- / --
		approx. kg	35 / 46	35 / 46	37 / 48	-- / --

1) At 3WT840: 40 °C for drawout circuit breaker.

2) Rated insulation voltage $U_i = 1000$ V AC.

3) The temperatures apply to the air surrounding the upper third of the circuit breaker.

4) These values apply in the case of sinusoidal current (50/60 Hz). The heating/losses increase in the event of harmonics and higher frequencies.

5) Maintenance: replacement of the contact set and arc chute.

6) Per contact set. Disconnect. of the rated current I_n and power factor = 0.8.

7) Including vertical busbars.

8) Up to 500 V AC only.

9) Z-Option A12.

				3WT
Operating mechanisms				
Manual operating mechanism with mechanical closing				
Closing	Max. force required to operate the hand lever		N	210
Charging stored-energy feature	Required number of strokes on the hand lever			5
Manual operating mechanism with mechanical and electrical closing				
Charging stored-energy feature	see "Manual operating mechanism with mechanical closing"			
Closing solenoid (Y1)	Operating range			$0.7 \dots 1.1 \times U_s$
	Extended operating range for battery operation ¹⁾	for 24 V DC, 110 V DC, 220 V DC		$0.7 \dots 1.26 \times U_s$
	Power input	AC/DC	VAW	15
	Minimum command duration at U_s for the activation solenoid			ms 60
	Total closing time at U_s after start of closing command for the activation solenoid, suitable for synchronizing tasks			ms 80
	Short-circuit protection			
	Smallest permissible DIAZED fuse (operational class gL)/miniature circuit breaker with C-characteristic			
				1 A TDz (time-lag)/1 A
Manual/motor operating mechanism with mechanical and electrical closing				
Manual operating mechanism	see "Manual operating mechanism with mechanical closing"			
Motor	Operating range			$0.7 \dots 1.1 \times U_s$
	Extended operating range for battery operation ¹⁾	for 24 V DC, 110 V DC, 220 V DC		$0.7 \dots 1.26 \times U_s$
	Power input to motor	AC/DC	VAW	40
	Time required to charge the stored-energy mechanism $1 \times U_s$		s	20
Closing solenoid	see "Manual operating mechanism with mechanical and electrical closing"			
	Short-circuit protection			
	Motor and activation solenoid for the <u>same</u> rated control supply voltages:			
For motor and closing solenoid	Smallest permissible DIAZED fuse (operational class gL)/miniature circuit breaker with C-characteristic	at $U_s = 24$ V		2 A TDz (time-lag)/2 A
		at $U_s = 110 \dots 127$ V		1 A TDz (time-lag)/1 A
		at $U_s = 220 \dots 250$ V		1 A TDz (time-lag)/1 A
Auxiliary releases				
Shunt release "f" (F1, F2)	Operating value	pickup		$\geq 0.7 \times U_s$ (circuit breaker is tripped)
	Operating range			$0.7 \dots 1.1 \times U_s$
	For continuous command (100 % duty ratio), locks out on momentary-contact commands			
	Extended operating range for battery operation ¹⁾	for 24 V DC, 110 V DC, 220 V DC		$0.7 \dots 1.26 \times U_s$
	Rated control supply voltage U_s	AC 50/60 Hz	V	110 ... 127, 220 ... 240
		DC	V	24, 110 ... 125, 220 ... 250
	Power input	AC/DC	VA/W	15
	Minimum command duration at U_s			ms 60
	Opening time of circuit breaker at $U_s = 100$ %	AC/DC	ms	≤ 80

¹⁾ The operating range is only permissible for the specified rated voltages and corresponds to the battery charging voltage.

3WT Air Circuit Breakers up to 4000 A (AC)

General data

			3WT				
Auxiliary releases							
Undervoltage release "r" (F3) and "rc" (F8)	Operating values	pickup	$\geq 0.85 \times U_s$ (circuit breaker can be closed)				
		dropout	$(0.35 \dots 0.7) \times U_s$ (circuit breaker is tripped)				
	Operating range		$0.85 \dots 1.1 \times U_s$				
	Extended operating range in battery operation ¹⁾	for 24 V DC, 110 V DC, 220 V DC	$0.7 \dots 1.26 \times U_s$				
	Rated control supply voltage U_s	AC 50/60 Hz	V	110 ... 127, 220 ... 240, 380 ... 415			
		DC	V	24, 110 ... 125, 220 ... 250			
	Power input	AC	VA	15			
		DC	W	15			
	Opening time of circuit breaker at $U_s = 0$						
	Version "r" (F3)						
Instantaneous		ms	≤ 100				
With 100 ms delay		ms	≤ 300				
Version "rc" (F8)							
With delay, $t_d = 0.2 \dots 3.2$ s		s	0.2 ... 3.2				
Reset via additional NC contact – direct switching-off		ms	≤ 100				
Short-circuit protection							
Smallest permissible DIAZED fuse (operational class gL)/miniature circuit breaker with C-characteristic			1 A TDz (time-lag) 1 A				
Contact position-driven auxiliary switches (S1, S2, S3, S4, S5, S6, S60, S61)							
Rated insulation voltage U_i		AC/DC V	400				
Rated operating voltage U_e		V	400				
Switching capacity	AC, 50/60 Hz	Rated operating voltage U_e	V	up to 24	110	220/230	380/400
		Rated operating current I_e /AC-12	A	10	10	10	10
		Rated operating current I_e /AC-15	A	6	6	6	4
	DC	Rated operating voltage U_e	V	24	110	220	
		Rated operating current I_e /DC-12	A	10	3.5	1	
		Rated operating current I_e /DC-15	A	10	1.2	0.4	
Short-circuit protection²⁾		Largest permissible DIAZED fuse (operational class gL/gG)		10 A TDz, 16 A Dz			
		Largest permissible miniature circuit breaker with C-characteristic		10 A			
Ready-to-close signaling switch (S7) and "tripped" signaling switch (S11)							
Switching capacity	AC, 50/60 Hz	Rated operating voltage U_e	V	110	220		
		Rated operating current I_e	A	0.14	0.1		
	DC	Rated operating voltage U_e	V	24	220		
		Rated operating current I_e	A	0.2	0.1		
Short-circuit protection²⁾		Largest permissible DIAZED fuse (operational class gL)		2 A Dz (quick)			
"Tripped" signaling switch (S11)		Signal duration after tripping		continuous, until reset			

¹⁾ The operating range is only permissible for the specified rated voltages and corresponds to the battery charging voltage.

²⁾ Without any welding of the contacts only at $I_k \leq 1$ kA in accordance with IEC 60947-5-1.

3WT Air Circuit Breakers up to 4000 A (AC)

3- and 4-pole, withdrawable version inclusive standard accessories

Selection and ordering data

Size	Rated current I_n	Short-circuit breaking capacity $I_{cu}/500\text{ V}$	Short-time withstand current, $I_{cw}/500\text{ V}$ 1 s ¹⁾	3-pole		4-pole	
				Article No.	Weight approx.	Article No.	Weight approx.
	A	kA	kA		kg		kg
ETU35WT, horizontal main circuit connection (breaking capacity N)							
I	400	55	50	3WT8040-5UA34-5AB2	58.000	3WT8044-5UA34-5AB2	76.000
I	630	55	50	3WT8060-5UA34-5AB2	58.000	3WT8064-5UA34-5AB2	76.000
I	800	55	50	3WT8080-5UA34-5AB2	58.000	3WT8084-5UA34-5AB2	76.000
I	1000	55	50	3WT8100-5UA34-5AB2	58.000	3WT8104-5UA34-5AB2	76.000
I	1250	55	50	3WT8120-5UA34-5AB2	58.000	3WT8124-5UA34-5AB2	76.000
I	1600	55	50	3WT8160-5UA34-5AB2	61.000	3WT8164-5UA34-5AB2	79.000
ETU35WT, horizontal main circuit connection (breaking capacity S)							
I	400	66	50	3WT8041-5UA34-5AB2	58.000	3WT8045-5UA34-5AB2	76.000
I	630	66	50	3WT8061-5UA34-5AB2	58.000	3WT8065-5UA34-5AB2	76.000
I	800	66	50	3WT8081-5UA34-5AB2	58.000	3WT8085-5UA34-5AB2	76.000
I	1000	66	50	3WT8101-5UA34-5AB2	58.000	3WT8105-5UA34-5AB2	76.000
I	1250	66	50	3WT8121-5UA34-5AB2	58.000	3WT8125-5UA34-5AB2	76.000
I	1600	66	50	3WT8161-5UA34-5AB2	61.000	3WT8165-5UA34-5AB2	79.000
II	630	66	66	3WT8062-5UA34-5AB2	94.000	3WT8066-5UA34-5AB2	118.000
II	800	66	66	3WT8082-5UA34-5AB2	94.000	3WT8086-5UA34-5AB2	118.000
II	1000	66	66	3WT8102-5UA34-5AB2	94.000	3WT8106-5UA34-5AB2	118.000
II	1250	66	66	3WT8122-5UA34-5AB2	94.000	3WT8126-5UA34-5AB2	118.000
II	1600	66	66	3WT8162-5UA34-5AB2	94.000	3WT8166-5UA34-5AB2	118.000
II	2000	66	66	3WT8202-5UA34-5AB2	94.000	3WT8206-5UA34-5AB2	118.000
II	2500	66	66	3WT8252-5UA34-5AB2	94.000	3WT8256-5UA34-5AB2	118.000
II	3200	66	66	3WT8322-5UA34-5AB2	100.000	3WT8326-5UA34-5AB2	124.000
ETU35WT, vertical main circuit connection (breaking capacity S)							
II	4000	66	66	3WT8402-5UA35-5AB2	100.000	3WT8406-5UA35-5AB2	141.000
ETU37WT, horizontal main circuit connection (breaking capacity N)							
I	400	55	50	3WT8040-6UA34-5AB2	58.000	3WT8044-6UA34-5AB2	76.000
I	630	55	50	3WT8060-6UA34-5AB2	58.000	3WT8064-6UA34-5AB2	76.000
I	800	55	50	3WT8080-6UA34-5AB2	58.000	3WT8084-6UA34-5AB2	76.000
I	1000	55	50	3WT8100-6UA34-5AB2	58.000	3WT8104-6UA34-5AB2	76.000
I	1250	55	50	3WT8120-6UA34-5AB2	58.000	3WT8124-6UA34-5AB2	76.000
I	1600	55	50	3WT8160-6UA34-5AB2	61.000	3WT8164-6UA34-5AB2	79.000
ETU37WT, horizontal main circuit connection (breaking capacity S)							
I	400	66	50	3WT8041-6UA34-5AB2	58.000	3WT8045-6UA34-5AB2	76.000
I	630	66	50	3WT8061-6UA34-5AB2	58.000	3WT8065-6UA34-5AB2	76.000
I	800	66	50	3WT8081-6UA34-5AB2	58.000	3WT8085-6UA34-5AB2	76.000
I	1000	66	50	3WT8101-6UA34-5AB2	58.000	3WT8105-6UA34-5AB2	76.000
I	1250	66	50	3WT8121-6UA34-5AB2	58.000	3WT8125-6UA34-5AB2	76.000
I	1600	66	50	3WT8161-6UA34-5AB2	61.000	3WT8165-6UA34-5AB2	79.000
II	630	66	66	3WT8062-6UA34-5AB2	94.000	3WT8066-6UA34-5AB2	118.000
II	800	66	66	3WT8082-6UA34-5AB2	94.000	3WT8086-6UA34-5AB2	118.000
II	1000	66	66	3WT8102-6UA34-5AB2	94.000	3WT8106-6UA34-5AB2	118.000
II	1250	66	66	3WT8122-6UA34-5AB2	94.000	3WT8126-6UA34-5AB2	118.000
II	1600	66	66	3WT8162-6UA34-5AB2	94.000	3WT8166-6UA34-5AB2	118.000
II	2000	66	66	3WT8202-6UA34-5AB2	94.000	3WT8206-6UA34-5AB2	118.000
II	2500	66	66	3WT8252-6UA34-5AB2	94.000	3WT8256-6UA34-5AB2	118.000
II	3200	66	66	3WT8322-6UA34-5AB2	100.000	3WT8326-6UA34-5AB2	124.000
ETU37WT, vertical main circuit connection (breaking capacity S)							
II	4000	66	66	3WT8402-6UA35-5AB2	100.000	3WT8406-6UA35-5AB2	141.000

Electronic trip unit (ETU)

ETU35WT: protection functions LSI with LCD display
 ETU37WT: protection functions LSING²⁾ with LCD display

Accessories included

Motor operated mechanism,
 with mechanical and electrical closing,
 motor and closing solenoid 220-240 V AC 50/60 Hz,
 220-250 V DC,

Shunt release "F" 220-240 V AC 50/60 Hz,
 220-250 V DC

with door sealing frame IP41, sealing cap over OFF button,
 and shutter
 without 2nd auxiliary release,
 with auxiliary switch 2 NO + 2 NC,
 with shutter

1) $I_{cw}/500\text{ V}$ 0.5 s for breaking capacity N.

2) Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/33.

3WT Air Circuit Breakers up to 4000 A (AC)

3- and 4-pole, fixed-mounted version inclusive standard accessories

Selection and ordering data

Size	Rated current I_n	Short-circuit breaking capacity $I_{cu}/500\text{ V}$	Short-time withstand current, $I_{cw}/500\text{ V}$ 1 s ¹⁾	3-pole		4-pole	
				Article No.	Weight approx.	Article No.	Weight approx.
	A	kA	kA		kg		kg
ETU35WT, horizontal main circuit connection (breaking capacity N)							
I	400	55	50	3WT8040-5UA30-0AA2	34.000	3WT8044-5UA30-0AA2	47.000
I	630	55	50	3WT8060-5UA30-0AA2	34.000	3WT8064-5UA30-0AA2	47.000
I	800	55	50	3WT8080-5UA30-0AA2	34.000	3WT8084-5UA30-0AA2	47.000
I	1000	55	50	3WT8100-5UA30-0AA2	34.000	3WT8104-5UA30-0AA2	47.000
I	1250	55	50	3WT8120-5UA30-0AA2	34.000	3WT8124-5UA30-0AA2	47.000
I	1600	55	50	3WT8160-5UA30-0AA2	36.000	3WT8164-5UA30-0AA2	49.000
ETU35WT, horizontal main circuit connection (breaking capacity S)							
I	400	66	50	3WT8041-5UA30-0AA2	34.000	3WT8045-5UA30-0AA2	47.000
I	630	66	50	3WT8061-5UA30-0AA2	34.000	3WT8065-5UA30-0AA2	47.000
I	800	66	50	3WT8081-5UA30-0AA2	34.000	3WT8085-5UA30-0AA2	47.000
I	1000	66	50	3WT8101-5UA30-0AA2	34.000	3WT8105-5UA30-0AA2	47.000
I	1250	66	50	3WT8121-5UA30-0AA2	34.000	3WT8125-5UA30-0AA2	47.000
I	1600	66	50	3WT8161-5UA30-0AA2	36.000	3WT8165-5UA30-0AA2	49.000
II	630	66	66	3WT8062-5UA30-0AA2	57.000	3WT8066-5UA30-0AA2	70.000
II	800	66	66	3WT8082-5UA30-0AA2	57.000	3WT8086-5UA30-0AA2	70.000
II	1000	66	66	3WT8102-5UA30-0AA2	57.000	3WT8106-5UA30-0AA2	70.000
II	1250	66	66	3WT8122-5UA30-0AA2	57.000	3WT8126-5UA30-0AA2	70.000
II	1600	66	66	3WT8162-5UA30-0AA2	57.000	3WT8166-5UA30-0AA2	70.000
II	2000	66	66	3WT8202-5UA30-0AA2	57.000	3WT8206-5UA30-0AA2	70.000
II	2500	66	66	3WT8252-5UA30-0AA2	57.000	3WT8256-5UA30-0AA2	70.000
II	3200	66	66	3WT8322-5UA30-0AA2	61.000	3WT8326-5UA30-0AA2	74.000
ETU35WT, vertical main circuit connection (breaking capacity S)							
II	4000 ³⁾	66	66	3WT8402-5UA31-0AA2	92.000	3WT8406-5UA31-0AA2	106.000
ETU37WT, horizontal main circuit connection (breaking capacity N)							
I	400	55	50	3WT8040-6UA30-0AA2	34.000	3WT8044-6UA30-0AA2	47.000
I	630	55	50	3WT8060-6UA30-0AA2	34.000	3WT8064-6UA30-0AA2	47.000
I	800	55	50	3WT8080-6UA30-0AA2	34.000	3WT8084-6UA30-0AA2	47.000
I	1000	55	50	3WT8100-6UA30-0AA2	34.000	3WT8104-6UA30-0AA2	47.000
I	1250	55	50	3WT8120-6UA30-0AA2	34.000	3WT8124-6UA30-0AA2	47.000
I	1600	55	50	3WT8160-6UA30-0AA2	36.000	3WT8164-6UA30-0AA2	49.000
ETU37WT, horizontal main circuit connection (breaking capacity S)							
I	400	66	50	3WT8041-6UA30-0AA2	34.000	3WT8045-6UA30-0AA2	47.000
I	630	66	50	3WT8061-6UA30-0AA2	34.000	3WT8065-6UA30-0AA2	47.000
I	800	66	50	3WT8081-6UA30-0AA2	34.000	3WT8085-6UA30-0AA2	47.000
I	1000	66	50	3WT8101-6UA30-0AA2	34.000	3WT8105-6UA30-0AA2	47.000
I	1250	66	50	3WT8121-6UA30-0AA2	34.000	3WT8125-6UA30-0AA2	47.000
I	1600	66	50	3WT8161-6UA30-0AA2	36.000	3WT8165-6UA30-0AA2	49.000
II	630	66	66	3WT8062-6UA30-0AA2	57.000	3WT8066-6UA30-0AA2	70.000
II	800	66	66	3WT8082-6UA30-0AA2	57.000	3WT8086-6UA30-0AA2	70.000
II	1000	66	66	3WT8102-6UA30-0AA2	57.000	3WT8106-6UA30-0AA2	70.000
II	1250	66	66	3WT8122-6UA30-0AA2	57.000	3WT8126-6UA30-0AA2	70.000
II	1600	66	66	3WT8162-6UA30-0AA2	57.000	3WT8166-6UA30-0AA2	70.000
II	2000	66	66	3WT8202-6UA30-0AA2	57.000	3WT8206-6UA30-0AA2	70.000
II	2500	66	66	3WT8252-6UA30-0AA2	57.000	3WT8256-6UA30-0AA2	70.000
II	3200	66	66	3WT8322-6UA30-0AA2	61.000	3WT8326-6UA30-0AA2	74.000
ETU37WT, vertical main circuit connection (breaking capacity S)							
II	4000 ³⁾	66	66	3WT8402-6UA31-0AA2	92.000	3WT8406-6UA31-0AA2	106.000

Electronic trip unit (ETU)

ETU35WT: protection functions LSI with LCD display
 ETU37WT: protection functions LSING²⁾ with LCD display

Accessories included

Motor operated mechanism,
 with mechanical and electrical closing,
 motor and closing solenoid 220-240 V AC 50/60 Hz,
 220-250 V DC,
 Shunt release *F 220-240 V AC 50/60 Hz,
 220-250 V DC

with door sealing frame IP41,
 without 2nd auxiliary release,
 with auxiliary switch 2 NO + 2 NC

¹⁾ $I_{cw}/500\text{ V}$ 0.5 s for breaking capacity N.

²⁾ Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/33.

³⁾ New design 2020 corresponds to the 4000 A drawout circuit breaker.

3WT Air Circuit Breakers up to 4000 A (AC)

3- and 4-pole, withdrawable version

Selection and ordering data

Size	Rated current I_n	Short-circuit breaking capacity $I_{cu}/500\text{ V}$	Short-time withstand current, $I_{cw}/500\text{ V}$ (1 s ¹⁾)	3-pole		Weight approx. kg	4-pole		Weight approx. kg
				Article No.	Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.		Article No.	Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.	
A	kA	kA	kA						
Horizontal main circuit connection (breaking capacity N)									
I	400	55	50	3WT8040-□□□□4-□□□□		58.000	3WT8044-□□□□4-□□□□		76.000
I	630	55	50	3WT8060-□□□□4-□□□□		58.000	3WT8064-□□□□4-□□□□		76.000
I	800	55	50	3WT8080-□□□□4-□□□□		58.000	3WT8084-□□□□4-□□□□		76.000
I	1000	55	50	3WT8100-□□□□4-□□□□		58.000	3WT8104-□□□□4-□□□□		76.000
I	1250	55	50	3WT8120-□□□□4-□□□□		58.000	3WT8124-□□□□4-□□□□		76.000
I	1600	55	50	3WT8160-□□□□4-□□□□		58.000	3WT8164-□□□□4-□□□□		76.000
Horizontal main circuit connection (breaking capacity S)									
I	400	66	50	3WT8041-□□□□4-□□□□		58.000	3WT8045-□□□□4-□□□□		76.000
I	630	66	50	3WT8061-□□□□4-□□□□		58.000	3WT8065-□□□□4-□□□□		76.000
I	800	66	50	3WT8081-□□□□4-□□□□		58.000	3WT8085-□□□□4-□□□□		76.000
I	1000	66	50	3WT8101-□□□□4-□□□□		58.000	3WT8105-□□□□4-□□□□		76.000
I	1250	66	50	3WT8121-□□□□4-□□□□		58.000	3WT8125-□□□□4-□□□□		76.000
I	1600	66	50	3WT8161-□□□□4-□□□□		61.000	3WT8165-□□□□4-□□□□		79.000
II	630	66	66	3WT8062-□□□□4-□□□□		94.000	3WT8066-□□□□4-□□□□		118.000
II	800	66	66	3WT8082-□□□□4-□□□□		94.000	3WT8086-□□□□4-□□□□		118.000
II	1000	66	66	3WT8102-□□□□4-□□□□		94.000	3WT8106-□□□□4-□□□□		118.000
II	1250	66	66	3WT8122-□□□□4-□□□□		94.000	3WT8126-□□□□4-□□□□		118.000
II	1600	66	66	3WT8162-□□□□4-□□□□		94.000	3WT8166-□□□□4-□□□□		118.000
II	2000	66	66	3WT8202-□□□□4-□□□□		94.000	3WT8206-□□□□4-□□□□		118.000
II	2500	66	66	3WT8252-□□□□4-□□□□		94.000	3WT8256-□□□□4-□□□□		118.000
II	3200	66	66	3WT8322-□□□□4-□□□□		100.000	3WT8326-□□□□4-□□□□		124.000
Horizontal main circuit connection at top, vertical connection at bottom (breaking capacity N)⁵⁾									
I	400	55	50	3WT8040-□□□□8-□□□□		58.000	3WT8044-□□□□8-□□□□		76.000
I	630	55	50	3WT8060-□□□□8-□□□□		58.000	3WT8064-□□□□8-□□□□		76.000
I	800	55	50	3WT8080-□□□□8-□□□□		58.000	3WT8084-□□□□8-□□□□		76.000
I	1000	55	50	3WT8100-□□□□8-□□□□		58.000	3WT8104-□□□□8-□□□□		76.000
I	1250	55	50	3WT8120-□□□□8-□□□□		58.000	3WT8124-□□□□8-□□□□		76.000
I	1600	55	50	3WT8160-□□□□8-□□□□		58.000	3WT8164-□□□□8-□□□□		76.000

Electronic trip unit (ETU; 8th position of Article No.)

ETU35WT: LSI with LCD display
 ETU37WT: LSING²⁾ with LCD display
 ETU45WT: LSIN²⁾⁶⁾ with LCD display and additional features
 ETU47WT: LSING²⁾⁶⁾ with LCD display and additional features

Operating mechanism, auxiliary release, auxiliary switch (9th to 11th position of Article No., further options see page 2/25)

Manual operating mechanism, with mechanical closing, without 1st and 2nd auxiliary releases, with auxiliary switch 2 NO + 2 NC

Accessories (13th to 16th position of Article No., further options see pages 2/26 to 2/32)

with door sealing frame IP41,
 with door sealing frame IP41, sealing cap over OFF button, and shutter size I, up to 1600 A size II, 630 ... 4000 A
 with door sealing frame IP41, safety lock device CES instead of OFF button³⁾ (key removable in OFF position); and shutter size I, up to 1600 A size II, 630 ... 4000 A

Article No. supplements	Additional price	Article No. supplements	Additional price
5	X	5	X
6	X	6	X
7	X	7	X
8	X	8	X
AA0	without	AA0	without
5AA2	without	5AA2	without
4) 5AB2	X	4) 5AB2	X
	X		X
4) 5AF2	X	4) 5AF2	X
	X		X

1) $I_{cw}/500\text{ V}$ 0.5 s for breaking capacity N.
 2) Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/33.
 3) This disables mechanical or electrical ON commands.
 4) Not available for circuit breakers without guide frame, see also page 2/26.
 5) Can be converted to vertical at top and horizontal main connection at bottom.
 6) ETU Release 2 prepared for communication and metering.

X = additional price

3WT Air Circuit Breakers up to 4000 A (AC)

3- and 4-pole, withdrawable version

Size	Rated current I_n	Short-circuit breaking capacity $I_{cu}/500\text{ V}$	Short-time withstand current, $I_{cw}/500\text{ V}$ 1 s ¹⁾	3-pole		4-pole	
				Article No.	Weight approx.	Article No.	Weight approx.
A	kA	kA	Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32 .	kg	Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32 .	kg	

Horizontal main circuit connection at top, vertical connection at bottom^{b)} (breaking capacity S)

I	400	66	50	3WT8041-□□□□8-□□□□	58.000	3WT8045-□□□□8-□□□□	76.000
I	630	66	50	3WT8061-□□□□8-□□□□	58.000	3WT8065-□□□□8-□□□□	76.000
I	800	66	50	3WT8081-□□□□8-□□□□	58.000	3WT8085-□□□□8-□□□□	76.000
I	1000	66	50	3WT8101-□□□□8-□□□□	58.000	3WT8105-□□□□8-□□□□	76.000
I	1250	66	50	3WT8121-□□□□8-□□□□	58.000	3WT8125-□□□□8-□□□□	76.000
I	1600	66	50	3WT8161-□□□□8-□□□□	61.000	3WT8165-□□□□8-□□□□	79.000
II	630	66	66	3WT8062-□□□□8-□□□□	94.000	3WT8066-□□□□8-□□□□	118.000
II	800	66	66	3WT8082-□□□□8-□□□□	94.000	3WT8086-□□□□8-□□□□	118.000
II	1000	66	66	3WT8102-□□□□8-□□□□	94.000	3WT8106-□□□□8-□□□□	118.000
II	1250	66	66	3WT8122-□□□□8-□□□□	94.000	3WT8126-□□□□8-□□□□	118.000
II	1600	66	66	3WT8162-□□□□8-□□□□	94.000	3WT8166-□□□□8-□□□□	118.000
II	2000	66	66	3WT8202-□□□□8-□□□□	94.000	3WT8206-□□□□8-□□□□	118.000
II	2500	66	66	3WT8252-□□□□8-□□□□	94.000	3WT8256-□□□□8-□□□□	118.000
II	3200	66	66	3WT8322-□□□□8-□□□□	100.000	3WT8326-□□□□8-□□□□	124.000

Vertical main circuit connection, top and bottom (breaking capacity N)

I	400	55	50	3WT8040-□□□□6-□□□□	58.000	3WT8044-□□□□6-□□□□	76.000
I	630	55	50	3WT8060-□□□□6-□□□□	58.000	3WT8064-□□□□6-□□□□	76.000
I	800	55	50	3WT8080-□□□□6-□□□□	58.000	3WT8084-□□□□6-□□□□	76.000
I	1000	55	50	3WT8100-□□□□6-□□□□	58.000	3WT8104-□□□□6-□□□□	76.000
I	1250	55	50	3WT8120-□□□□6-□□□□	58.000	3WT8124-□□□□6-□□□□	76.000
I	1600	55	50	3WT8160-□□□□6-□□□□	58.000	3WT8164-□□□□6-□□□□	76.000

Vertical main circuit connection, top and bottom (breaking capacity S)

I	400	66	50	3WT8041-□□□□6-□□□□	58.000	3WT8045-□□□□6-□□□□	76.000
I	630	66	50	3WT8061-□□□□6-□□□□	58.000	3WT8065-□□□□6-□□□□	76.000
I	800	66	50	3WT8081-□□□□6-□□□□	58.000	3WT8085-□□□□6-□□□□	76.000
I	1000	66	50	3WT8101-□□□□6-□□□□	58.000	3WT8105-□□□□6-□□□□	76.000
I	1250	66	50	3WT8121-□□□□6-□□□□	58.000	3WT8125-□□□□6-□□□□	76.000
I	1600	66	50	3WT8161-□□□□6-□□□□	61.000	3WT8165-□□□□6-□□□□	79.000
II	630	66	66	3WT8062-□□□□6-□□□□	94.000	3WT8066-□□□□6-□□□□	118.000
II	800	66	66	3WT8082-□□□□6-□□□□	94.000	3WT8086-□□□□6-□□□□	118.000
II	1000	66	66	3WT8102-□□□□6-□□□□	94.000	3WT8106-□□□□6-□□□□	118.000
II	1250	66	66	3WT8122-□□□□6-□□□□	94.000	3WT8126-□□□□6-□□□□	118.000
II	1600	66	66	3WT8162-□□□□6-□□□□	94.000	3WT8166-□□□□6-□□□□	118.000
II	2000	66	66	3WT8202-□□□□6-□□□□	94.000	3WT8206-□□□□6-□□□□	118.000
II	2500	66	66	3WT8252-□□□□6-□□□□	94.000	3WT8256-□□□□6-□□□□	118.000
II	3200	66	66	3WT8322-□□□□6-□□□□	100.000	3WT8326-□□□□6-□□□□	124.000
II	4000	66	66	3WT8402-□□□□5-□□□□	118.000	3WT8406-□□□□5-□□□□	141.000

Electronic trip unit (ETU; 8th position of Article No.)

ETU35WT: LSI with LCD display
 ETU37WT: LSING²⁾ with LCD display
 ETU45WT: LSIN²⁾⁶⁾ with LCD display and additional features
 ETU47WT: LSING²⁾⁶⁾ with LCD display and additional features

Operating mechanism, auxiliary release, auxiliary switch (9th to 11th position of Article No., further options see page 2/25)

Manual operating mechanism, with mechanical closing, without 1st and 2nd auxiliary releases, with auxiliary switch 2 NO + 2 NC

Accessories (13th to 16th position of Article No., further options see pages 2/26 to 2/32)

with door sealing frame IP41,

with door sealing frame IP41, sealing cap over OFF button and shutter
 size I, up to 1600 A
 size II, 630 ... 4000 A

with door sealing frame IP41, safety lock device CES instead of OFF button³⁾ (key removable in OFF position); and shutter
 size I, up to 1600 A
 size II, 630 ... 4000 A

Article No. supplements

- 5
- 6
- 7
- 8

AA0

Additional price

- X
- X
- X
- X

Article No. supplements

- 5
- 6
- 7
- 8

AA0

Additional price

- X
- X
- X
- X

without

without

without

without

- X
- X

- X
- X

- X
- X

- X
- X

1) $I_{cw}/500\text{ V}$ 0.5 s for breaking capacity N.

2) Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/33.

3) This disables mechanical or electrical ON commands.

4) Not available for circuit breakers without guide frame, see also page 2/26.

5) Can be converted to vertical at top and horizontal main connection at bottom.

6) ETU Release 2 prepared for communication and metering.

X = additional price

3WT Air Circuit Breakers up to 4000 A (AC)

3- and 4-pole, withdrawable version

Size	Rated current I_n	Short-circuit breaking capacity $I_{cu}/500\text{ V}$	Short-time withstand current, $I_{cw}/500\text{ V}$ 1 s ¹⁾	3-pole		4-pole	
				Article No.	Weight approx.	Article No.	Weight approx.
	A	kA	kA	Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.	kg	Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.	kg
Without guide frame (breaking capacity N, guide frame see page 2/33)							
I	400	55	50	3WT8040-□□□□3-□□□□	36.000	3WT8044-□□□□3-□□□□	49.000
I	630	55	50	3WT8060-□□□□3-□□□□	36.000	3WT8064-□□□□3-□□□□	49.000
I	800	55	50	3WT8080-□□□□3-□□□□	36.000	3WT8084-□□□□3-□□□□	49.000
I	1000	55	50	3WT8100-□□□□3-□□□□	36.000	3WT8104-□□□□3-□□□□	49.000
I	1250	55	50	3WT8120-□□□□3-□□□□	36.000	3WT8124-□□□□3-□□□□	49.000
I	1600	55	50	3WT8160-□□□□3-□□□□	58.000	3WT8164-□□□□3-□□□□	76.000
Without guide frame (breaking capacity S, guide frame see page 2/33)							
I	400	66	50	3WT8041-□□□□3-□□□□	36.000	3WT8045-□□□□3-□□□□	49.000
I	630	66	50	3WT8061-□□□□3-□□□□	36.000	3WT8065-□□□□3-□□□□	49.000
I	800	66	50	3WT8081-□□□□3-□□□□	36.000	3WT8085-□□□□3-□□□□	49.000
I	1000	66	50	3WT8101-□□□□3-□□□□	36.000	3WT8105-□□□□3-□□□□	49.000
I	1250	66	50	3WT8121-□□□□3-□□□□	36.000	3WT8125-□□□□3-□□□□	49.000
I	1600	66	50	3WT8161-□□□□3-□□□□	38.000	3WT8165-□□□□3-□□□□	51.000
II	630	66	66	3WT8062-□□□□3-□□□□	94.000	3WT8066-□□□□3-□□□□	118.000
II	800	66	66	3WT8082-□□□□3-□□□□	94.000	3WT8086-□□□□3-□□□□	118.000
II	1000	66	66	3WT8102-□□□□3-□□□□	94.000	3WT8106-□□□□3-□□□□	118.000
II	1250	66	66	3WT8122-□□□□3-□□□□	94.000	3WT8126-□□□□3-□□□□	118.000
II	1600	66	66	3WT8162-□□□□3-□□□□	94.000	3WT8166-□□□□3-□□□□	118.000
II	2000	66	66	3WT8202-□□□□3-□□□□	59.000	3WT8206-□□□□3-□□□□	72.000
II	2500	66	66	3WT8252-□□□□3-□□□□	59.000	3WT8256-□□□□3-□□□□	72.000
II	3200	66	66	3WT8322-□□□□3-□□□□	63.000	3WT8326-□□□□3-□□□□	76.000

Electronic trip unit (ETU; 8th position of Article No.)

ETU35WT: LSI with LCD display
 ETU37WT: LSING²⁾ with LCD display
 ETU45WT: LSIN²⁾⁴⁾ with LCD display and additional features
 ETU47WT: LSING²⁾⁴⁾ with LCD display and additional features

Operating mechanism, auxiliary release, auxiliary switch (9th to 11th position of Article No., further options see page 2/25)

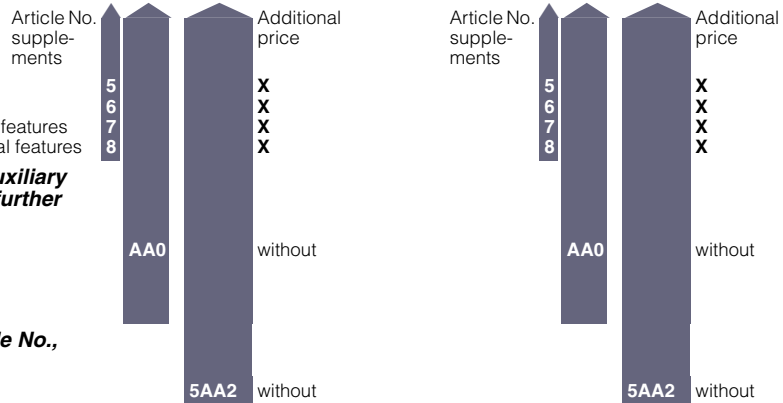
Manual operating mechanism, with mechanical closing, without 1st and 2nd auxiliary releases, with auxiliary switch 2 NO + 2 NC

Accessories (13th to 16th position of Article No., further options see pages 2/26 to 2/32)

with door sealing frame IP41,

- 1) $I_{cw}/500\text{ V}$ 0.5 s for breaking capacity N.
- 2) Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/33.
- 3) This disables mechanical or electrical ON commands.
- 4) ETU Release 2 prepared for communication and metering.

X = additional price



3WT Air Circuit Breakers up to 4000 A (AC)

3- and 4-pole, fixed-mounted version

Selection and ordering data

Size	Rated current I_n	Short-circuit breaking capacity $I_{cu}/500\text{ V}$	Short-time withstand current, $I_{cw}/500\text{ V}$ 1 s ¹⁾	3-pole	Weight approx.	4-pole	Weight approx.
A	kA	kA	kA	Article No. Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.	kg	Article No. Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.	kg

Horizontal main circuit connection (breaking capacity N)

I 400	55	50	3WT8040 -□□□□□□□□□□	34.000	3WT8044 -□□□□□□□□□□	47.000
I 630	55	50	3WT8060 -□□□□□□□□□□	34.000	3WT8064 -□□□□□□□□□□	47.000
I 800	55	50	3WT8080 -□□□□□□□□□□	34.000	3WT8084 -□□□□□□□□□□	47.000
I 1000	55	50	3WT8100 -□□□□□□□□□□	34.000	3WT8104 -□□□□□□□□□□	47.000
I 1250	55	50	3WT8120 -□□□□□□□□□□	34.000	3WT8124 -□□□□□□□□□□	47.000
I 1600	55	50	3WT8160 -□□□□□□□□□□	34.000	3WT8164 -□□□□□□□□□□	47.000

Horizontal main circuit connection (breaking capacity S)

I 400	66	50	3WT8041 -□□□□□□□□□□	34.000	3WT8045 -□□□□□□□□□□	47.000
I 630	66	50	3WT8061 -□□□□□□□□□□	34.000	3WT8065 -□□□□□□□□□□	47.000
I 800	66	50	3WT8081 -□□□□□□□□□□	34.000	3WT8085 -□□□□□□□□□□	47.000
I 1000	66	50	3WT8101 -□□□□□□□□□□	34.000	3WT8105 -□□□□□□□□□□	47.000
I 1250	66	50	3WT8121 -□□□□□□□□□□	34.000	3WT8125 -□□□□□□□□□□	47.000
I 1600	66	50	3WT8161 -□□□□□□□□□□	36.000	3WT8165 -□□□□□□□□□□	49.000
II 630	66	66	3WT8062 -□□□□□□□□□□	57.000	3WT8066 -□□□□□□□□□□	70.000
II 800	66	66	3WT8082 -□□□□□□□□□□	57.000	3WT8086 -□□□□□□□□□□	70.000
II 1000	66	66	3WT8102 -□□□□□□□□□□	57.000	3WT8106 -□□□□□□□□□□	70.000
II 1250	66	66	3WT8122 -□□□□□□□□□□	57.000	3WT8126 -□□□□□□□□□□	70.000
II 1600	66	66	3WT8162 -□□□□□□□□□□	57.000	3WT8166 -□□□□□□□□□□	70.000
II 2000	66	66	3WT8202 -□□□□□□□□□□	57.000	3WT8206 -□□□□□□□□□□	70.000
II 2500	66	66	3WT8252 -□□□□□□□□□□	57.000	3WT8256 -□□□□□□□□□□	70.000
II 3200	66	66	3WT8322 -□□□□□□□□□□	61.000	3WT8326 -□□□□□□□□□□	74.000

Vertical main circuit connection (breaking capacity S)

II 4000 ⁵⁾	66	66	3WT8402 -□□□□□□□□□□	92.000	3WT8406 -□□□□□□□□□□	106.000
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Electronic trip unit (ETU; 8th position of Article No.)

ETU35WT: LSI with LCD display
 ETU37WT: LSING²⁾ with LCD display
 ETU45WT: LSIN²⁾⁴⁾ with LCD display and additional features
 ETU47WT: LSING²⁾⁴⁾ with LCD display and additional features

Operating mechanism, auxiliary release, auxiliary switch (9th to 11th position of Article No., further options see page 2/25)

Manual operating mechanism, with mechanical closing, without 1st and 2nd auxiliary releases, with auxiliary switch 2 NO + 2 NC

Motor operated mechanism, with mechanical and electrical closing, motor and closing solenoid 220-240 V AC 50/60 Hz, 220-250 V DC,

Shunt release "F" 220-240 V AC 50/60 Hz, 220-250 V DC

without 2nd auxiliary release, with auxiliary switch 2 NO + 2 NC

Motor operated mechanism, with mechanical and electrical closing, motor and closing solenoid 220-240 V AC 50/60 Hz, 220-250 V DC,

Undervoltage release "r", "F3" 220-240 V AC 50/60 Hz, 220-250 V DC

Shunt release "F" 220-240 V AC 50/60 Hz, 220-250 V DC

with auxiliary switch 2 NO + 2 NC

Accessories (13th to 16th position of Article No., further options see pages 2/26 to 2/32)

with door sealing frame IP41

with door sealing frame IP41, safety lock device CES instead of OFF button³⁾ (key removable in OFF position)

with door sealing frame IP41, sealing cap over OFF button and mutual mechanical interlock for 3WT circuit breaker

Article No. supplements

5
6
7
8

AA0
UA3
UN3

Additional price
X
X
X
X

without

X

X

without

X

X

Article No. supplements

5
6
7
8

AA0
UA3
UN3

Additional price
X
X
X
X

without

X

X

without

X

X

¹⁾ $I_{cw}/500\text{ V}$ 0.5 s for breaking capacity N.

²⁾ Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/33.

³⁾ This disables mechanical or electrical ON commands.

⁴⁾ ETU Release 2 prepared for communication and metering.

⁵⁾ New design 2020 corresponds to the 4000 A drawout circuit breaker.

X = additional price

3WT Air Circuit Breakers up to 4000 A (AC)

Non-automatic air circuit breakers, 3- and 4-pole, withdrawable version

Selection and ordering data

Size	Rated current I_n	Short-circuit breaking capacity $I_{cc}/500\text{ V}$	3-pole		4-pole	
			Article No. Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.	Weight approx. kg	Article No. Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.	Weight approx. kg
A		kA				
Withdrawable version, horizontal main circuit connection (breaking capacity S)						
I	800	55	3WT8080-4□□□4-□□□□	58.000	3WT8084-4□□□4-□□□□	76.000
I	1250	55	3WT8120-4□□□4-□□□□	58.000	3WT8124-4□□□4-□□□□	76.000
I	1600	66	3WT8161-4□□□4-□□□□	61.000	3WT8165-4□□□4-□□□□	79.000
II	2000	66	3WT8202-4□□□4-□□□□	94.000	3WT8206-4□□□4-□□□□	118.000
II	2500	66	3WT8252-4□□□4-□□□□	94.000	3WT8256-4□□□4-□□□□	118.000
II	3200	66	3WT8322-4□□□4-□□□□	100.000	3WT8326-4□□□4-□□□□	124.000
Withdrawable version, horizontal main circuit connection at top, vertical connection at bottom¹⁾ (breaking capacity S)						
I	800	55	3WT8080-4□□□8-□□□□	58.000	3WT8084-4□□□8-□□□□	76.000
I	1250	55	3WT8120-4□□□8-□□□□	58.000	3WT8124-4□□□8-□□□□	76.000
I	1600	66	3WT8161-4□□□8-□□□□	61.000	3WT8165-4□□□8-□□□□	79.000
II	2000	66	3WT8202-4□□□8-□□□□	94.000	3WT8206-4□□□8-□□□□	118.000
II	2500	66	3WT8252-4□□□8-□□□□	94.000	3WT8256-4□□□8-□□□□	118.000
II	3200	66	3WT8322-4□□□8-□□□□	100.000	3WT8326-4□□□8-□□□□	124.000
Withdrawable version, vertical connection at top and bottom (breaking capacity S)						
I	800	55	3WT8080-4□□□6-□□□□	58.000	3WT8084-4□□□6-□□□□	76.000
I	1250	55	3WT8120-4□□□6-□□□□	58.000	3WT8124-4□□□6-□□□□	76.000
I	1600	66	3WT8161-4□□□6-□□□□	61.000	3WT8165-4□□□6-□□□□	79.000
II	2000	66	3WT8202-4□□□6-□□□□	94.000	3WT8206-4□□□6-□□□□	118.000
II	2500	66	3WT8252-4□□□6-□□□□	94.000	3WT8256-4□□□6-□□□□	118.000
II	3200	66	3WT8322-4□□□6-□□□□	100.000	3WT8326-4□□□6-□□□□	124.000
II	4000	66	3WT8402-4□□□5-□□□□	100.000	3WT8406-4□□□5-□□□□	141.000
Withdrawable version without guide frame (breaking capacity S, guide frame see page 2/33)						
I	800	55	3WT8080-4□□□3-□□□□	36.000	3WT8084-4□□□3-□□□□	49.000
I	1250	55	3WT8120-4□□□3-□□□□	36.000	3WT8124-4□□□3-□□□□	49.000
I	1600	66	3WT8161-4□□□3-□□□□	38.000	3WT8165-4□□□3-□□□□	51.000
II	2000	66	3WT8202-4□□□3-□□□□	59.000	3WT8206-4□□□3-□□□□	72.000
II	2500	66	3WT8252-4□□□3-□□□□	59.000	3WT8256-4□□□3-□□□□	72.000
II	3200	66	3WT8322-4□□□3-□□□□	63.000	3WT8326-4□□□3-□□□□	76.000
Operating mechanism, auxiliary release, auxiliary switch			Article No. supplements	Additional price	Article No. supplements	Additional price
(9th to 11th position of Article No., further options see page 2/25)						
Manual operating mechanism, with mechanical closing, without 1st and 2nd auxiliary releases, with auxiliary switch 2 NO + 2 NC			AA0	without	AA0	without
Motor operated mechanism, with mechanical and electrical closing, motor and closing solenoid 220-240 V AC 50/60 Hz, 220-250 V DC, 220-240 V AC 50/60 Hz, 220-250 V DC			UA3	X	UA3	X
Shunt release "F" without 2nd auxiliary release, with auxiliary switch 2 NO + 2 NC						
Withdrawable version Accessories (13th to 16th position of Article No., further options see pages 2/26 to 2/32)						
with door sealing frame IP41			5AA2	without	5AA2	without
with door sealing frame IP41, sealing cap over OFF button, and shutter size I, up to 1600 A			5AB2	X	5AB2	X
size II, 630 ... 4000 A				X		X

"Options" and "Accessories" see "Options" and "Accessories" for "Air Circuit Breakers", pages 2/25 to 2/38.

¹⁾ Can be converted to vertical at top and horizontal main connection at bottom.

X = additional price

3WT Air Circuit Breakers up to 4000 A (AC)

Non-automatic air circuit breakers, 3- and 4-pole, fixed-mounted version

Selection and ordering data

Size	Rated current I_n	Short-circuit breaking capacity $I_{cc} / 500 V$	3-pole		Weight approx. kg	4-pole		Weight approx. kg
			Article No. Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.			Article No. Article No. supplement (8th to 11th and 13th to 16th position of Article No.) must be added. For quick selection see below. Further options see pages 2/25 to 2/32.		
A		kA						

2

Fixed-mounted version, horizontal main circuit connection (breaking capacity S)

I	800	55	3WT8080-4 □□□□-□□□□	34.000	3WT8084-4 □□□□-□□□□	47.000
I	1250	55	3WT8120-4 □□□□-□□□□	34.000	3WT8124-4 □□□□-□□□□	47.000
I	1600	66	3WT8161-4 □□□□-□□□□	36.000	3WT8165-4 □□□□-□□□□	49.000
II	2000	66	3WT8202-4 □□□□-□□□□	57.000	3WT8206-4 □□□□-□□□□	70.000
II	2500	66	3WT8252-4 □□□□-□□□□	57.000	3WT8256-4 □□□□-□□□□	70.000
II	3200	66	3WT8322-4 □□□□-□□□□	61.000	3WT8326-4 □□□□-□□□□	74.000

Fixed-mounted version, vertical main circuit connection (breaking capacity S)

II	4000 ¹⁾	66	3WT8402-4 □□□□1-□□□□	92.000	3WT8406-4 □□□□1-□□□□	106.000
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Operating mechanism, auxiliary release, auxiliary switch (9th to 11th position of Article No., further options see page 2/25)

Manual operating mechanism, with mechanical closing, without 1st and 2nd auxiliary releases, with auxiliary switch 2 NO + 2 NC

Motor operated mechanism, with mechanical and electrical closing, motor and closing solenoid 220-240 V AC 50/60 Hz, 220-250 V DC, Shunt release "F" 220-240 V AC 50/60 Hz, 220-250 V DC

without 2nd auxiliary release, with auxiliary switch 2 NO + 2 NC

Article No. supplements	Additional price
AA0	without
UA3	X
0AA2	without
5AA2	without
5AB2	X
	X

Article No. supplements	Additional price
AA0	without
UA3	X
0AA2	without
5AA2	without
5AB2	X
	X

Fixed-mounted version Accessories (13th to 16th position of Article No., further options see pages 2/26 to 2/32)

with door sealing frame IP41

Withdrawable version Accessories (13th to 16th position of Article No., further options see pages 2/26 to 2/32)

with door sealing frame IP41

with door sealing frame IP41, sealing cap over OFF button, and shutter size I, up to 1600 A size II, 630 ... 4000A

"Options" and "Accessories" see pages 2/25 to 2/38.

¹⁾ New design 2020 corresponds to the 4000 A drawout circuit breaker.
X = additional price




Selection and ordering data

Design	Article No. supplement	Additional price		
	9th to 11th position of Article No. of circuit breaker (see pages 2/19 to 2/24) must be added as listed below 3WT8 . . . - . □ □ □ □ . -			
Operating mechanism				
Manual operating mechanism, with mechanical closing	A B E F	without		
Manual operating mechanism, with mechanical and electrical closing				
Closing solenoid				
AC 50/60 Hz V		DC V		
--		24	X	
110 ... 127		110 ... 125	X	
220 ... 240		220 ... 250	X	
Manual/motorized operating mechanism, with mechanical and electrical closing				
Motor		Closing solenoid		
AC 50/60 Hz V		DC V	AC 50/60 Hz V	DC V
--	24	24	24	X
110 ... 127	110 ... 125	110 ... 127	110 ... 125	X
220 ... 240	220 ... 250	220 ... 240	220 ... 250	X
110 ... 127	110 ... 125	--	24	X
220 ... 240	220 ... 250	--	24	X
220 ... 240	220 ... 250	110 ... 127	110 ... 125	X
1st auxiliary release				
Without 1st auxiliary release	A B F G H M N P U V W	without		
Shunt release "f" F1				
AC 50/60 Hz V		DC V		
--		24	X	
110 ... 127		110 ... 125	X	
220 ... 240		220 ... 250	X	
Undervoltage release "r" F3				
AC 50/60 Hz V		DC V		
--		24	X	
110 ... 127		110 ... 125	X	
220 ... 240	220 ... 250	X		
380 ... 415	--	X		
Undervoltage release "rc" F8, can be delayed between 0.2 and 3.2 s				
AC 50/60 Hz V	DC V			
110 ... 127	110 ... 125	X		
220 ... 240	220 ... 250	X		
380 ... 415	--	X		
2nd auxiliary release and auxiliary switch				
Without 2nd auxiliary release	with 1st auxiliary contact block (standard)	0	without	
	2 NO + 2 NC			
Shunt release "f" F2	with 1st auxiliary contact block (standard)	1	X	
AC 50/60 Hz V	DC V	2	X	
--	24	3	X	
110 ... 127	110 ... 125	4	X	
220 ... 240	220 ... 250			
Without 2nd auxiliary release				
	with 1st and 2nd auxiliary contact block	5	X	
	2 NO + 2 NC + 2 CO	6	X	
Shunt release "f" F2	with 1st and 2nd auxiliary contact block	7	X	
AC 50/60 Hz V	DC V			
--	24			
110 ... 127	110 ... 125			
220 ... 240	220 ... 250			

X = additional price




3WT Air Circuit Breakers up to 4000 A (AC)

Options

Design	Article No. supplement 13th to 16th position of Article No. of circuit breaker (see pages 2/19 to 2/22) must be added as listed below	3WT8 . . . - - □ □ □ □				Additional price		
		3-pole				3-pole	4-pole	
For withdrawable circuit breakers without guide frame								
	With door sealing frame IP41	5	A	A	2		without	without
	With door sealing frame IP41 and locking device With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position)	5	A	E	2		X	X
For withdrawable circuit breakers with guide frame								
	With door sealing frame IP41	5	A	A	2		without	without
	With door sealing frame IP41, sealing cap over OFF button, and shutter Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	B	2		X	X
	With door sealing frame IP41, sealing cap over OFF button, and mutual mechanical interlock for 3WT circuit breaker Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	5	A	C	2		X	X
	With door sealing frame IP41, sealing cap over OFF button, mutual mechanical interlock for 3WT circuit breaker and shutter Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34. With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	D	2		X	X
	With door sealing frame IP41 and locking device With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position)	5	A	E	2		X	X
	With door sealing frame IP41, locking device, and shutter With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position) With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	F	2		X	X
	With door sealing frame IP41 locking device, blocking device and mutual mechanical interlock for 3WT circuit breaker With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position) Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	5	A	G	2		X	X
	With door sealing frame IP41 locking device, blocking device, mutual mechanical interlock for 3WT circuit breaker and shutter With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position) Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34. With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	H	2		X	X

¹⁾ This disables mechanical or electrical ON commands.

X = additional price




Design	Article No. supplement 13th to 16th position of Article No. of circuit breaker (see pages 2/19 to 2/24) must be added as listed below	3WT8 . . . - - □ □ □ □				Additional price	
		3-pole				4-pole	
For withdrawable circuit breakers with guide frame							
	With door sealing frame IP41 locking device and sealing cap over OFF button Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2)	5	A	J	2		
	Sealing cap to prevent unauthorized opening, cannot be combined with safety lock					X	X
	With door sealing frame IP41 locking device, sealing cap over OFF button, and shutter Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	K	2		
	With door sealing frame IP41 locking device, blocking device, sealing cap over OFF button and mutual mechanical interlock for 3WT circuit breaker Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	5	A	L	2		
	With door sealing frame IP41 locking device, blocking device, sealing cap over OFF button, mutual mechanical interlock for 3WT circuit breaker and shutter Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34. With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	M	2		
	With door sealing frame IP41, sealing cap over OFF button, 5-digit operating cycles counter and shutter Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	P	2		
	With door sealing frame IP41 blocking device, sealing cap over OFF button, 5-digit operating cycles counter and mutual mechanical interlock for 3WT circuit breaker Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	5	A	Q	2		

¹⁾ Locks are available at the manufacturer of the locks or 3WT lock, interlock system 2 identical keys for 3 circuit breakers.

X = additional price

3WT Air Circuit Breakers up to 4000 A (AC)

Options




Design	Article No. supplement	Additional price					
	13th to 16th position of Article No. of circuit breaker (see pages 2/19 to 2/24) must be added as listed below	3-pole	4-pole				
	3WT8...-.....-□□□□						
For withdrawable circuit breakers with guide frame							
  	With door sealing frame IP41 locking device, sealing cap over OFF button, 5-digit operating cycles counter and mutual mechanical interlock for 3WT circuit breaker, and shutter Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34. With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	R	2		
	With door sealing frame IP41 locking device, sealing cap over OFF button and 5-digit operating cycles counter Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock	5	A	S	2	X	X
	With door sealing frame IP41 locking device, sealing cap over OFF button, 5-digit operating cycles counter and shutter Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	T	2	X	X
	With door sealing frame IP41 locking device, blocking device, sealing cap over OFF button, 5-digit operating cycles counter and mutual mechanical interlock for 3WT circuit breaker Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	5	A	U	2	X	X
	With door sealing frame IP41 locking device, blocking device, sealing cap over OFF button, 5-digit operating cycles counter mutual mechanical interlock for 3WT circuit breaker and shutter Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Blocking device to prevent opening of the cabinet door when the circuit breaker is in connected position Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34. With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5	A	V	2	X	X

¹⁾ Locks are available at the manufacturer of the locks or 3WT lock, interlock system 2 identical keys for 3 circuit breakers.

X = additional price

3WT Air Circuit Breakers up to 4000 A (AC)

Options




Design	Article No. supplement 13th to 16th position of Article No. of circuit breaker (see pages 2/19 to 2/24) must be added as listed below	Additional price	
		3-pole	4-pole
3WT8 ... - ... - □ □ □ □			
For withdrawable circuit breakers with guide frame			
	With door interlock	5 A W 2	X X
	With door interlock and shutter With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5 A X 2	X X X X
	With door interlock, locking device, sealing cap over OFF button, position indicator switch and shutter Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5 A Y 2	X X X X
	With door interlock, sealing cap over OFF button, position indicator switch, 5-digit operating cycles counter and shutter Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5 B A 2	X X X X
	With door interlock, locking device, sealing cap over OFF button, position indicator switch, 5-digit operating cycles counter and shutter Locking device: mounting set for CASTELL lock ¹⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5 B B 2	X X X X
	With door interlock, sealing cap over OFF button, position indicator switch and shutter Sealing cap to prevent unauthorized opening, cannot be combined with safety lock With shutter Size I, up to 1600 A Size II, 630 ... 4000 A	5 B C 2	X X X X

¹⁾ Locks are available at the manufacturer of the locks or 3WT lock, interlock system 2 identical keys for 3 circuit breakers.

X = additional price




3WT Air Circuit Breakers up to 4000 A (AC)

Options

Design	Article No. supplement 13th to 16th position of Article No. of circuit breaker (see pages 2/19 to 2/24) must be added as listed below	Additional price	
		3-pole	4-pole
3WT8 . . . - - □ □ □ □			
For fixed-mounted circuit breakers			
	With door sealing frame IP41	0 A A 2	without without
	With door sealing frame IP41 and locking device With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position)	0 A B 2	X X
	With door sealing frame IP41, sealing cap over OFF button and mutual mechanical interlock for 3WT circuit breaker, sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	0 A C 2	X X
	With door sealing frame IP41, locking device, and mutual mechanical interlock for 3WT circuit breaker With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position) Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	0 A D 2	X X
	With door sealing frame IP41, sealing cap over OFF button, blocking device, and mutual mechanical interlock for 3WT circuit breaker Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Blocking device to prevent opening of the cabinet door with the circuit breaker closed Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	0 A E 2	X X
	With door sealing frame IP41, locking device, blocking device, and mutual mechanical interlock for 3WT circuit breaker With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position) Blocking device to prevent opening of the cabinet door with the circuit breaker closed Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	0 A F 2	X X
	With door sealing frame IP41, locking device, and sealing cap over OFF button Locking device: mounting set for CASTELL lock ²⁾ ; Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock	0 A G 2	X X
	With door sealing frame IP41, 5-digit operating cycles counter, locking device, sealing cap over OFF button, blocking device, and mutual mechanical interlock for 3WT circuit breaker Locking device: mounting set for CASTELL lock ²⁾ ; Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Blocking device to prevent opening of the cabinet door with the circuit breaker closed Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	0 A H 2	X X
	With door sealing frame IP41, 5-digit operating cycles counter, sealing cap over OFF button, and mutual mechanical interlock for 3WT circuit breaker Sealing cap to prevent unauthorized opening, cannot be combined with safety lock Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	0 A J 2	X X

X = additional price

¹⁾ This disables mechanical or electrical ON commands.²⁾ Locks are available at the manufacturer of the locks or 3WT lock, interlock system 2 identical keys for 3 circuit breakers.

Design	Article No. supplement 13th to 16th position of Article No. of circuit breaker (see pages 2/19 to 2/24) must be added as listed below	Additional price					
		3-pole	4-pole				
3WT8 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>							
For fixed-mounted circuit breakers							
	With door sealing frame IP41, 5-digit operating cycles counter, sealing cap over OFF button, blocking device, and mutual mechanical interlock for 3WT circuit breaker Sealing cap to prevent unauthorized opening, cannot be combined with safety lock	0	A	K	2		
	Blocking device to prevent opening of the cabinet door with the circuit breaker closed						
	Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.					X	X
	With door sealing frame IP41, 5-digit operating cycles counter, locking device, and sealing cap over OFF button Locking device: mounting set for CASTELL lock ²⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Sealing cap to prevent unauthorized opening, cannot be combined with safety lock	0	A	L	2		
	Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.					X	X
	With door sealing frame IP41, 5-digit operating cycles counter, locking device, sealing cap over OFF button, blocking device, and mutual mechanical interlock for 3WT circuit breaker With safety lock device CES instead of OFF button ¹⁾ (key removable in OFF position) Locking device: mounting set for CASTELL lock ²⁾ , Interlock to be obtained from the manufacturer of the locks CASTELL lock (FS 2) Blocking device to prevent opening of the cabinet door with the circuit breaker closed Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.	0	A	M	2		
	Interlock module with a Bowden wire (2 m); when interlocking three circuit breakers an additional Bowden wire is required, see page 2/34.					X	X
	With 5-digit operating cycles counter	0	A	N	2	X	X
	With door interlock	0	A	P	2	X	X

¹⁾ This disables mechanical or electrical ON commands.

X = additional price

²⁾ Locks are available at the manufacturer of the locks or 3WT lock, interlock system 2 identical keys for 3 circuit breakers.

3WT Air Circuit Breakers up to 4000 A (AC)

Options

Add "-Z" to complete Article No. and indicate the appropriate order code(s).			3WT.....-.....-Z
			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> +...+...
Rated operating voltage U_e¹⁾			
Conditions	Size	Rated current I_n	
Rated operating voltage U_e 690 V AC with I_{CS} , I_{CU} , I_{CW} = 50 kA, only for S class	I and II	Up to 3200 A	A 0 4
Rated operating voltage U_e 690 V AC with I_{CS} , I_{CU} , I_{CW} = 66 kA, only for S class	II	Up to 4000 A	A 0 8
Conditions	Size	Rated current I_n	
Rated operating voltage U_e 440 V AC with I_{CS} , I_{CU} , I_{CW} = 66 kA, only for S class	I	Up to 1600 A	A 1 2
Rated operating voltage U_e 440 V AC with I_{CS} , I_{CU} , I_{CW} = 85 kA, only for S class	II	Up to 4000 A	A 1 2
Auxiliary contact block²⁾			
Conditions	Size	Rated current I_n	
1 st and 2 nd auxiliary contact block with 4 NO + 4 NC	I and II	Up to 4000 A	A 0 1
1 st and 2 nd auxiliary contact block with 5 NO + 3 NC	I and II	Up to 4000 A	A 1 1
1 st and 2 nd auxiliary contact block with 6 NO + 2 NC	I and II	Up to 4000 A	A 2 1
Phase barrier			
Conditions	Size	Rated current I_n	
3- or 4-pole	I and II	Up to 4000 A	A 3 0
Automatic mechanical resetting device			
Conditions	Size	Rated current I_n	
Automatic mechanical resetting device after overcurrent tripping	I and II	Up to 4000 A	K 0 1
Arc chute cover			
Conditions	Size	Rated current I_n	
For guide frames of withdrawable breaker	I and II	Up to 4000 A	R 1 0
Communication			
Conditions	Size	ETU	
COM16WT – Modbus RTU, incl. BSSWT	I and II	ETU45/47WT	F 1 2
Meterings			
Conditions	Size	ETU	
Metering with internal voltage tap on the lower main contacts	I and II	ETU45/47WT	F 0 5

¹⁾ Standard rated operating voltage U_e is 500 V AC.

²⁾ Only possible together with the 1st auxiliary contact block. 11th digit of the article number needs 0 - 3.

Selection and ordering data

Size	Rated current I_n	3-pole			4-pole		
		Article No.	Price	Weight approx. kg	Article No.	Price	Weight approx. kg
Guide frame for withdrawable version, horizontal main circuit connection, 2 auxiliary supply connectors							
I	400 ... 1250 N, S class.; 1600 N class	3WT9883-2AC10		22.000	3WT9883-2AC30		27.000
I	1600 S class	3WT9883-4AC10		23.000	3WT9883-4AC30		28.000
II	630 ... 2500	3WT9883-6AC10		37.000	3WT9883-6AC30		48.000
II	3200	3WT9883-7AC10		37.000	3WT9883-7AC30		48.000
Guide frame for withdrawable version, horizontal main circuit connection at top, vertical connection at bottom, 2 auxiliary supply connectors							
I	400 ... 1250 N, S class.; 1600 N class	3WT9883-2BC10		22.000	3WT9883-2BC30		27.000
I	1600 S class	3WT9883-4BC10		23.000	3WT9883-4BC30		28.000
II	630 ... 2500	3WT9883-6BC10		37.000	3WT9883-6BC30		48.000
II	3200	3WT9883-7BC10		37.000	3WT9883-7BC30		48.000
Guide frame for withdrawable version, vertical main circuit connection at top and bottom, 2 auxiliary supply connectors							
I	400 ... 1250 N, S class.; 1600 N class	3WT9883-2BC20		22.000	3WT9883-2BC40		27.000
I	1600 S class	3WT9883-4BC20		23.000	3WT9883-4BC40		28.000
II	630 ... 2500	3WT9883-6BC20		37.000	3WT9883-6BC40		48.000
II	3200	3WT9883-7BC20		37.000	3WT9883-7BC40		48.000
II	4000	3WT9883-8BC30		37.000	3WT9883-8BC50		48.000
For 690 V / 66 kA (Z-option A08)							
Guide frame for withdrawable version, horizontal main circuit connection, 2 auxiliary supply connectors							
II	3200	3WT9883-7AC20		37.000	3WT9883-7AC40		48.000
Guide frame for withdrawable version, vertical main circuit connection at top and bottom, 2 auxiliary supply connectors							
II	3200	3WT9883-7CC20		37.000	3WT9883-7CC40		48.000
II	4000	3WT9883-8BC60		37.000	3WT9883-8BC70		48.000

For fixed-mounted and withdrawable circuit breakers

Current transformers for neutral conductor overload protection and ground-fault protection

Only one of the two measuring methods is permissible in conjunction with the electronic trip unit. The overload protection for the neutral conductor takes effect when the current transformer is fitted in the neutral conductor. The ground-fault current is calculated by means of summation current formation of the phases and the neutral conductor.

Type of detection (see page 2/7) Designation	Frame size of the circuit breaker	Required order quantity per circuit breaker	For 1 set or 1 unit Article No.	Price	Weight approx. kg
Vectorial summation with current transformer in the neutral conductor					
Current transformers for 3-pole circuit breakers, external neutral conductor with copper busbars	I	1 unit	3WL9111-0AA31-0AA0		1.600
	II	1 unit	3WL9111-0AA32-0AA0		4.260
Current transformers for 3-pole circuit breakers, external neutral conductor without copper busbars	I	1 unit	3WL9111-0AA21-0AA0		0.321
	II	1 unit	3WL9111-0AA22-0AA0		0.490
Designation	Rated control supply voltage/ rated operational voltage	Order quantity	For 1 set or 1 unit		
	AC 50/60 Hz				

Commissioning and service tools

Manual function tester for electronic trip unit for versions ETU35WT ... ETU47WT	110 ... 127/220 ... 240 V	1 unit	3WL9111-0AT32-0AA0		1.810
TD400 commissioning and service tool for ETU45WT and ETU47WT Energy supply via batteries or the USB-C interface USB-C interface for connecting a PC with powerconfig Bluetooth interface for connection to a PC, smartphone or tablet ETU parameterization Including adapter and connecting cable to 3VA2 molded case circuit breaker and IEC 3WT (ETU release 2) Including case			3VW9011-0AT40		
For fixed-mounted circuit breakers					
Door sealing frame IP41		1 unit	3WT9886-0JA00		1.000
Protective covers, IP55 Cannot be used in conjunction with door sealing frames, cover removable and can be opened on both sides		1 unit	3WL9111-0AP02-0AA0		2.400

3WT Air Circuit Breakers up to 4000 A (AC)

Accessories/spare parts

When retrofitting, the circuit breaker Article No. must be added to the name plate on the operator panel and to the side wall of the circuit breaker in accordance with the installation instructions.

Designation	Required order quantity per circuit breaker	For 1 set or 1 unit Article No.	Price	Weight approx. kg			
For fixed-mounted and withdrawable circuit breakers							
5-digit operating cycles counter	1 unit	3WT9864-0CA00		0.500			
Auxiliary release	Rated control supply voltage						
	AC 50/60 Hz V	DC V					
Shunt release "f" for 1st and 2nd auxiliary release (F1 and F2) and closing solenoid (Y1)	--	24	1 unit	3WT9851-1JB00	0.800		
	110 ... 127	110 ... 125	1 unit	3WT9851-1JH00	0.800		
	220 ... 240	220 ... 250	1 unit	3WT9851-1JK00	0.800		
Undervoltage release "r" (F3) instantaneous 0 ms, short-delay 200 ms	--	24	1 unit	3WT9853-1JB00	0.800		
	110 ... 127	110 ... 125	1 unit	3WT9853-1JH00	0.800		
	220 ... 240	220 ... 250	1 unit	3WT9853-1JK00	0.800		
	380 ... 415	--	1 unit	3WT9853-1JM00	0.800		
Undervoltage release "rc" (F8) can be delayed 0.2 ... 3.2 s	110 ... 127	110 ... 125	1 unit	3WT9854-1JH00	0.850		
	220 ... 240	220 ... 250	1 unit	3WT9854-1JK00	0.850		
	380 ... 415	--	1 unit	3WT9854-1JM00	0.850		
Undervoltage release "rc" (F8) can be delayed 0.2 ... 3.2 s for ETU45/47WT release 2	110 ... 127	110 ... 125	1 unit	3WT9855-1JH00	0.843		
	220 ... 240	220 ... 250	1 unit	3WT9855-1JK00	0.825		
	380 ... 415	--	1 unit	3WT9855-1JM00	0.772		
Auxiliary switches	2nd auxiliary contact block in addition to the 1st auxiliary contact block						
2 CO		1 unit	3WT9816-1CE00	0.070			
2 CO for ETU45/47WT release 2		1 unit	3WT9888-1CH00	0.068			
2 NC and 2 NO		1 unit	3WT9816-1CD00	0.180			
3 NO and 1 NC		1 unit	3WT9816-1CF00	0.170			
4 NO		1 unit	3WT9816-1CG00	0.170			
Motorized operating mechanism and electrical closing (possible if 9th position of Article No. for circuit breaker is "A")	Consisting of motor and closing solenoid (Y1) Rated control supply voltage						
	Motor		Closing solenoid				
	AC 50/60 Hz V	DC V	AC 50/60 Hz V	DC V			
	110 ... 127	110 ... 125	110 ... 127	110 ... 125	1 unit	3WT9831-1JH00	2.400
	220 ... 240	220 ... 250	220 ... 240	220 ... 250	1 unit	3WT9831-1JK00	2.400
Motorized operating mechanism	Consisting of motor and wiring Rated control supply voltage of motor						
	AC 50/60 Hz V	DC V					
	--	24	1 unit	3WT9832-1JB00	1.600		
	110 ... 127	110 ... 125	1 unit	3WT9832-1JH00	1.600		
	220 ... 240	220 ... 250	1 unit	3WT9832-1JK00	1.686		
Mutual mechanical interlock for 3WT circuit breaker	An interlock module with a Bowden wire (2 m) for one fixed-mounted circuit breaker		1 unit	3WT9866-3JA00	3.000		
	for one withdrawable circuit breaker		1 unit	3WT9866-4JA00	1.000		
	Interlocking of three circuit breakers additional Bowden wire required for each circuit breaker						
	Bowden wire (2 m)		1 unit	3WT9866-8JA00	0.200		
	Bowden wire (3 m)		1 unit	3WT9866-8JA01	0.500		
	Bowden wire (4.5 m)		1 unit	3WT9866-8JA02	2.500		
Interlocking systems	<ul style="list-style-type: none"> • 3WT locks • 2 of the same keys for 3 circuit breakers • Locking device in OFF position • Lock in the operator panel • A maximum of 2 circuit breakers can be switched on • Preparation for CASTELL lock is necessary⁴⁾ 		1 unit	3WT9863-7JE00	0.360		
Locking device consisting of safety locks or padlocks to prevent unauthorized closing of the circuit breaker	Safety lock (3SB1) instead of the OFF button		Made by CES Normal lock no. SSG 10	1 unit	3WT9863-1JA00	0.120	
	Mounting set ¹⁾ for 3WT lock ³⁾ , CASTELL or FORTRESS lock ²⁾			1 unit	3WT9863-6JE00	0.100	
	Interlock to be obtained from the lock manufacturer CASTELL lock (FS 2) or FORTRESS lock (H31LH/65°/standard)						



¹⁾ The 3WT9863-6JE locking system meets the isolation conditions to IEC 60947-1 and IEC 60947-1/A1.

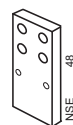
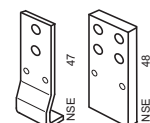
²⁾ Locks are available at the manufacturer of the locks.

³⁾ Interlock system 2 identical keys for 3 circuit breakers 3WT9863-7JE00.

⁴⁾ Directly in the circuit breaker order or as an accessory 3WT9863-6JE00.

When retrofitting, the circuit breaker Article No. must be added to the name plate on the operator panel and to the side wall of the circuit breaker in accordance with the installation instructions.

Designation/ for circuit breaker Type	Rated current I_n	Size	Number of poles	Required order quan- tity per cir- cuit breaker	For 1 set or 1 unit Article No.	Price	Weight approx. kg
For fixed-mounted and withdrawable circuit breakers							
Crank handle							
For withdrawable circuit breaker				1 unit	3WT9884-0JA10		0.500
Electronic trip unit							
ETU35WT, LSI with display				1 unit	3WT9841-4AA00		1.200
ETU37WT, LSING with display				1 unit	3WT9841-5AB00		1.000
ETU45WT, LSIN with display				1 unit	3WT9841-6AC00		1.200
ETU47WT, LSING with display				1 unit	3WT9841-7AD00		1.200
ETU45WT, LSIN with display, release 2 with communication capability				1 unit	3WT9841-6AC02		0.316
ETU47WT, LSING with display, release 2 with communication capability				1 unit	3WT9841-7AD02		0.314
ETU45WT, LSIN with display, release 2 with communication capability and metering				1 unit	3WT9841-6AC22		0.403
ETU47WT, LSING with display, release 2 with communication capability and metering				1 unit	3WT9841-7AD22		0.404
Phase barrier							
For fixed-mounted circuit breaker		I	3-pole	1 unit	3WT9831-0AA00		0.950
			4-pole	1 unit	3WT9831-0AC00		1.130
		II	3-pole	1 unit	3WT9831-0AE00		0.900
			4-pole	1 unit	3WT9831-0AG00		1.050
For withdrawable circuit breaker		I	3-pole	1 unit	3WT9831-0AB00		1.250
			4-pole	1 unit	3WT9831-0AD00		1.500
		II	3-pole	1 unit	3WT9831-0AF00		1.050
			4-pole	1 unit	3WT9831-0AJ00		1.280
Communication and meterings							
Breaker status sensor (BSSWT) , for ETU45/47WT release 2				1 unit	3WT9844-0AT00		0.053
Communication module COM16WT MODBUS RTU, for ETU45/47WT release 2				1 unit	3WT9844-1AT00		0.146
Internal voltage converter, for ETU45/47WT release 2				1 unit	3WT9844-4AT00		0.061
Metering module, for ETU45/47WT release 2				1 unit	3WT9844-5AT00		0.095
Mounting adapter for COM16WT fix-mounted				1 unit	3WT9844-2AT00		0.202
Mounting adapter for COM16WT draw-out				1 unit	3WT9844-3AT00		0.196
For fixed-mounted circuit breakers							
Connecting bars for vertical connection ⁴⁾	up to 1250 A up to 1250 A N, I S class; 1600 A, N class		3- and 4-pole	1 unit ³⁾	3WT9821-7AC00		2.000
	1600 A, S class	I	3- and 4-pole	1 unit ³⁾	3WT9821-7BC00		4.100
	630 A up to 2500 A	II	3-pole	1 set ¹⁾	3WT9821-7DA00		5.500
			4-pole	1 set ²⁾	3WT9821-7DB00		7.400
	3200 A	II	3-pole	1 set ¹⁾	3WT9821-7FA00		4.800
4-pole			1 set ²⁾	3WT9821-7FB00		6.500	
Connecting bars for front-accessible con- nection Vertical double-hole bar (holes to DIN 43673)	up to 1250 A up to 1250 A N, I S class; 1600 A, N class		3- and 4-pole	1 unit ³⁾	3WT9821-1AA01		0.980
	1600 A S class	I	3- and 4-pole	1 unit ³⁾	3WT9821-1BA01		2.060
	630 A up to 2500 A	II	3- and 4-pole	1 unit ³⁾	3WT9821-1DA01		2.530
			3- and 4-pole	1 unit ³⁾	3WT9821-1FA01		2.500
3200 A	II	3- and 4-pole	1 unit ³⁾	3WT9821-1AA01		0.980	
Auxiliary supply connectors				1 unit	3WT9111-0AB10		0.080
Blocking device	to prevent opening of the cabinet door with the fixed-mounted circuit breaker closed			1 unit	3WT9867-2JA00		0.700
Conversion set from fixed-mounted to withdrawable version = single operating mechanism	up to 1600 A	I	3-pole	1 unit	3WT9888-0GA00		3.500
			4-pole	1 unit	3WT9888-0HA00		3.500
	up to 3200 A	II	3-pole	1 unit	3WT9888-0KA00		5.000
			4-pole	1 unit	3WT9888-0LA00		4.200
For guide frames							
Connecting bar for addi- tional terminal accessi- ble from the front Vertical double-hole bar (holes to DIN 43673)	up to 1250 A up to 1250 A N, I S class; 1600 A N class		3- and 4-pole	1 unit ³⁾	3WT9823-1AA01		1.300
	1600 A S class	I	3- and 4-pole	1 unit ³⁾	3WT9823-1BA01		1.800
	630 A up to 2500 A	II	3- and 4-pole	1 unit ³⁾	3WT9823-1DA01		2.530
			3- and 4-pole	1 unit ³⁾	3WT9823-1EA01		2.000
3200 A	II	3- and 4-pole	1 unit ³⁾	3WT9823-1AA01		1.300	



1) 1 set = 3 units.

2) 1 set = 4 units.

3) Please order the number of connecting bars as required for the application.

4) Vertical connection 4000 A are only available in combination with a circuit breaker

3WT Air Circuit Breakers up to 4000 A (AC)

Accessories/spare parts

When retrofitting, the circuit breaker Article No. must be added to the name plate on the operator panel and to the side wall of the circuit breaker in accordance with the installation instructions.

Designation/ for circuit breaker Type	Rated current I_n	Size	Numbers of poles	Required order quantity per circuit breaker	For 1 set or 1 unit Article No.	Price	Weight approx. kg
For guide frames							
Connecting bar for rear vertical connection⁴⁾	up to 1250 A N, S class; 1600 A N class	I	3- and 4-pole	1 unit ³⁾	3WT9823-3AA00		1.500
	1600 A S class	I	3- and 4-pole	1 unit ³⁾	3WT9823-3BA00		1.500
	630 A up to 2500 A	II	3-pole	1 set ¹⁾	3WT9823-4AB00		2.600
			4-pole	1 set ²⁾	3WT9823-4AC00		3.500
3200 A	II	3-pole	1 set ¹⁾	3WT9823-4BB00		5.400	
			4-pole	1 set ²⁾	3WT9823-4BC00		7.100
Position indicator switch (actuated by with- drawable circuit breaker)	Connected position	Test position	Discon- nected position	Precondition	3WT9884-1JC10		0.280
	3 NO + 3 NC	2 NO + 2 NC	1 NO + 1 NC	possible if no pos. switch mounted yet			
Automatic mechanical resetting device after overcurrent tripping				1 unit	3WT9866-2JA00		0.050
Shutters Protection against touch- ing the main contacts	1600 A	I	3-pole	1 unit	3WT9884-3CA00		0.500
	630 A ... 4000A	II		1 unit	3WT9884-3DA00		0.630
	1600 A	I	4-pole	1 unit	3WT9884-3CB00		0.500
	630 A ... 4000A	II		1 unit	3WT9884-3DB00		0.500
Auxiliary supply con- nectors	up to 4000 A	I, II	3- and 4-pole	1 unit	3WT9111-1AB14		0.160
For guide frames – for spare parts and ret- rofitting							
Arc chute cover		I	3-pole	1 unit	3WT9811-0GA00		3.820
			4-pole	1 unit	3WT9811-0HA00		4.950
		II	3-pole	1 unit	3WT9811-0JA00		4.900
			4-pole	1 unit	3WT9811-0KA00		5.600
	3200 A / 4000 A, 690 V / 66 kA with Z=A08	II	3-pole	1 unit	3WT9811-0JA10		3.200
			4-pole	1 unit	3WT9811-0KA10		3.900
Additional front panel cover	4000 A / 690 V / 66 kA draw-out breaker with Z=A08				3WT9886-0JB00		0.050
For withdrawable circuit breakers							
Blocking device to prevent opening of the cabinet door, when circuit breaker is in con- nected position	up to 4000 A	I, II	3- and 4-pole	1 unit	3WT9867-1JC00		0.100

1) 1 set = 3 units.

2) 1 set = 4 units.

3) Please order the number of connecting bars as required for the application.

4) Vertical connection 4000 A are only available in combination with a circuit breaker

3WT Air Circuit Breakers up to 4000 A (AC)

Accessories/spare parts

When retrofitting, the circuit breaker Article No. must be added to the name plate on the operator panel and to the side wall of the circuit breaker in accordance with the installation instructions.

Designation/ for circuit breaker Type	Rated current I_n	Size	Numbers of poles	Required order quantity per circuit breaker	For 1 set or 1 unit	
					Article No.	Price
For fixed-mounted and withdrawable circuit breakers						
Main contact	up to 1250 A, N class, breaking capacity N	I	3-pole	1 unit	3WT9821-0AA00	2.000
			4-pole	1 unit	3WT9821-0AA00	2.000
	up to 1250 A, S class; 1600 A, N class $I_{cw} = 50$ kA	I	3-pole	1 unit	3WT9821-0AA10	2.500
			4-pole	1 unit	3WT9821-0AA10	2.500
	up to 1600 A, S class	I	3-pole	1 unit	3WT9821-0BA00	3.000
			4-pole	1 unit	3WT9821-0BA00	3.000
	up to 2500 A	II	3-pole	1 unit	3WT9821-0DA00	5.300
			4-pole	1 unit	3WT9821-0DA00	5.300
for fixed-mounted circuit breakers only	up to 4000 A	II	3-pole	1 unit	3WT9821-0FA00	7.300
			4-pole	1 unit	3WT9821-0FA00	7.300
for withdrawable circuit breakers and for fixed-mounted circuit breakers	up to 3200 A	II	3-pole	1 unit	3WT9821-0FA00	7.300
			4-pole	1 unit	3WT9821-0FA00	7.300
fixed-mounted breaker draw-out breaker	3200 A / 4000 A, 690 V / 66 kA	II	3- and 4-pole	1 unit	3WT9821-0HA00	6.450
				1 unit	3WT9821-0HA10	6.750
Arc chute	up to 1600 A	I	3-pole	1 unit	3WT9811-0CA00	1.800
			4-pole	1 unit	3WT9811-0CA00	1.800
	630 A ... 4000 A	II	3-pole	1 unit	3WT9811-0FA00	2.500
			4-pole	1 unit	3WT9811-0FA00	2.500
Arc chute higher	3200 A / 4000 A, 690 V / 66 kA with Z=A08	II	3- and 4-pole	1 unit	3WT9811-0FA10	3.600
Installation manual for 3WT8¹⁾						
Chinese language					3ZX1812-0WT81-0AN0	1.000
English language					3ZX1812-0WT82-0AN0	1.000

¹⁾ More languages are available as PDF online.

3WT Air Circuit Breakers up to 4000 A (AC)

Project planning aids

Characteristic curves²⁾

Every electronic trip unit type and every setting has its own characteristic. Only a selection is shown in the following. The characteristic curves each show the largest and smallest setting range of 3WT8 circuit breakers with 1000 A rated current at 500 V rated voltage with various trip units.

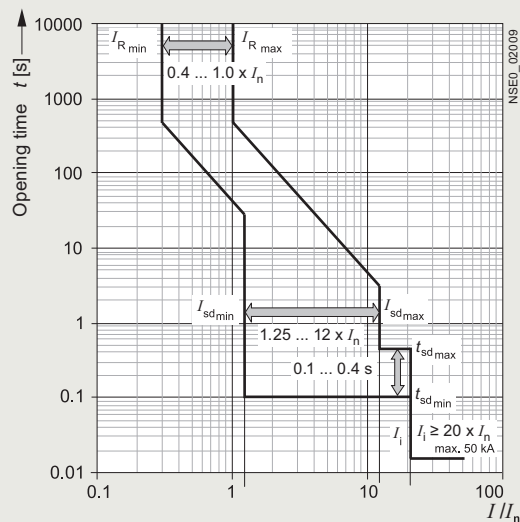
In order to obtain a complete tripping characteristic, the relevant parts of the characteristic have to be combined.

The characteristic curves show the behavior of the electronic trip unit when it is activated by a current that is already flowing before the tripping operation. If the overcurrent tripping occurs im-

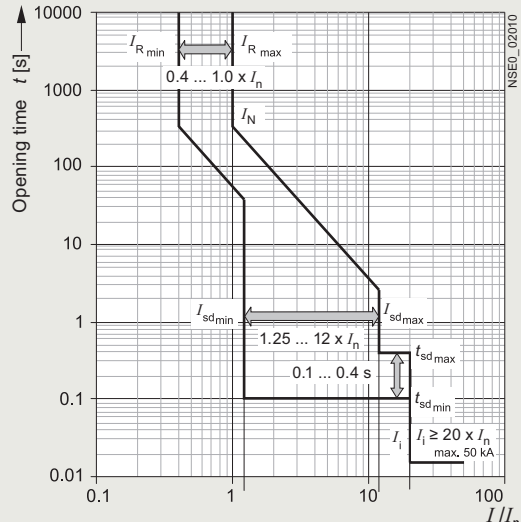
mediately after switch on and the electronic trip unit is therefore not yet enabled, the opening time is extended, depending on the level of the overcurrent by up to 15 ms. In order to determine the break-times of the circuit breakers, approximately 15 ms must be added to the opening times shown for the arcing time.

Refer to the following legend for tolerances.

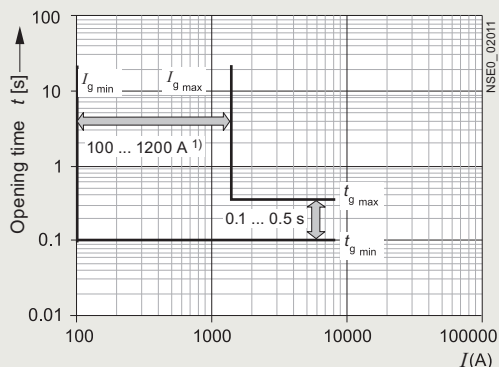
The characteristic curves shown apply to ambient temperatures at the circuit breaker between -5 and +55 °C. The trip unit can be operated at ambient temperatures of -20 to +70 °C. An extended tolerance band can apply at these temperatures.



3WT8 circuit breaker with ETU35WT electronic trip unit, LSI characteristic curve



3WT8 circuit breaker with ETU37WT electronic trip unit, LSIN characteristic curve



3WT8 circuit breaker with ETU37WT electronic trip unit, G characteristic curve³⁾

Tolerances for the set currents

L: Tripping operations between 1.05 and 1.2 x I_R

S: -0 %, +20 %

I: -0 %, +20 %

G: -0 %, +20 %

Tolerances for the tripping times

L: -20 %, +0 % for I^2t characteristic curve

S: -0 %, +60 ms or -0 %, 10 % for characteristic curve with fixed delay time

I: <50 ms

G: -0 %, +60 ms or -0 %, 10 % for characteristic curve with fixed delay time

¹⁾ Sizes I and II: 100 ... 1200 A.

²⁾ With single-pole loading in the lowest rated current range, the response times of the short-circuit release can be extended by approx. 10 % and the tripping times by approx. 15 % compared to the characteristic curve.

³⁾ As a result of the activation level of 150 A (frame size I) and 200 A (frame size II) in case of a single-pole loading the minimum pick-up value of ground fault will be $I_g = 300$ A.

Every electronic trip unit type and every setting has its own characteristic. Only a selection is shown in the following. The characteristic curves each show the largest and smallest setting range of 3WT8 circuit breakers with 1000 A rated current at 500 V rated voltage with various trip units.

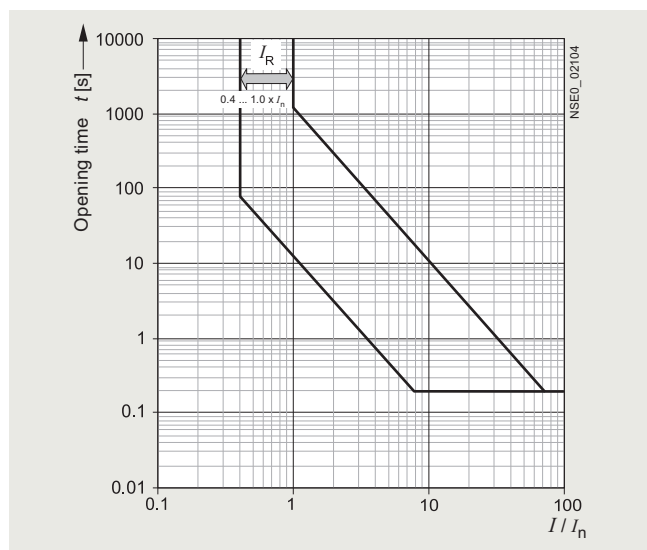
In order to obtain a complete tripping characteristic, the relevant parts of the characteristic have to be combined.

The characteristic curves show the behavior of the electronic trip unit when it is activated by a current that is already flowing before the tripping operation. If the overcurrent tripping occurs im-

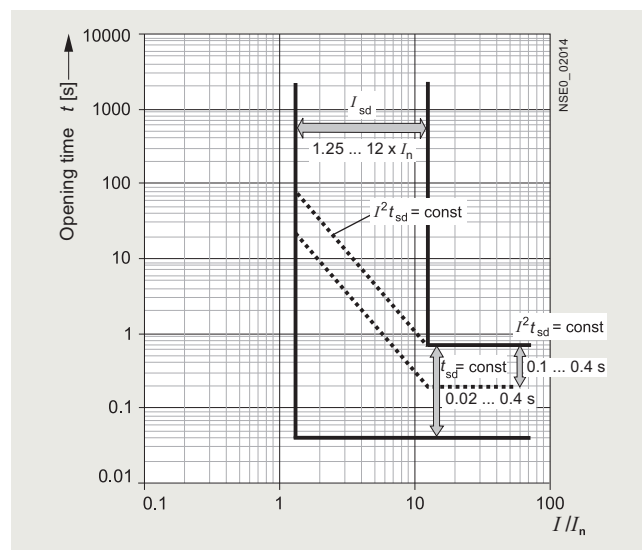
mediately after switch on and the electronic trip unit is therefore not yet enabled, the opening time is extended, depending on the level of the overcurrent by up to 15 ms. In order to determine the break-times of the circuit breakers, approximately 15 ms must be added to the opening times shown for the arcing time.

Refer to the following legend for tolerances.

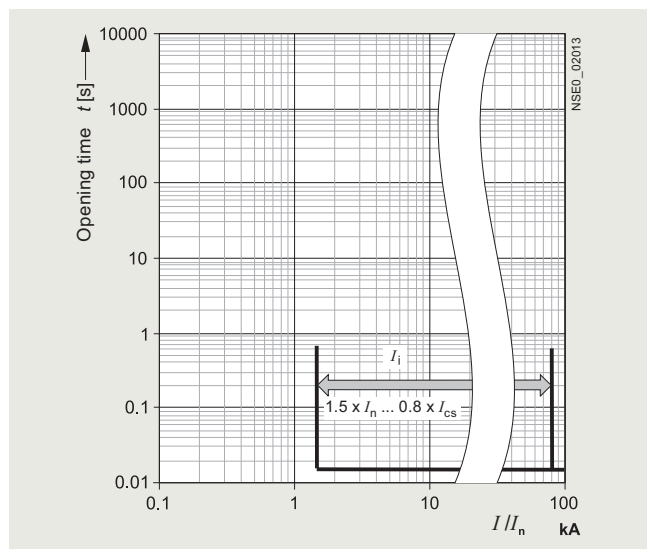
The characteristic curves shown apply to ambient temperatures at the circuit breaker between -5 and +55 °C. The trip unit can be operated at ambient temperatures of -20 to +70 °C. An extended tolerance band can apply at these temperatures.



3WT8 circuit breaker with ETU45WT and ETU47WT electronic trip unit, L characteristic curve



3WT8 circuit breaker with ETU45WT and ETU47WT electronic trip unit, S characteristic curve



3WT8 circuit breaker with ETU45WT and ETU47WT electronic trip unit, I characteristic curve

Tolerances for the set currents

L: Tripping operations between 1.05 and 1.2 x I_R

S: -0 %, +20 %

I: -0 %, +20 %

G: -0 %, +20 %

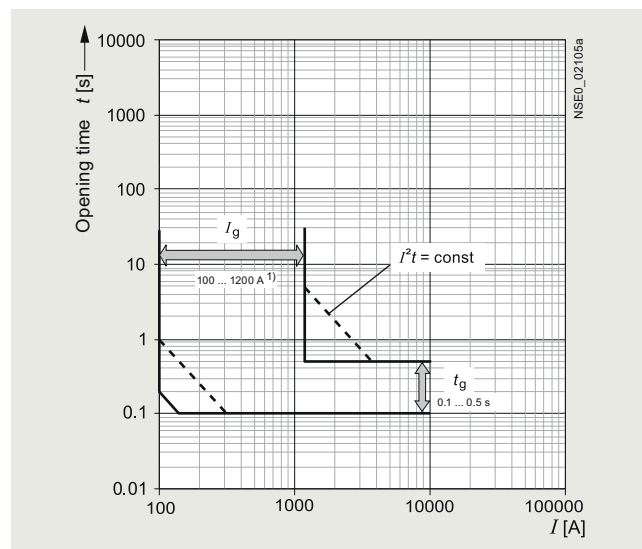
Tolerances for the tripping times

L: -20 %, +0 % for $I^2 t$ characteristic curve

S: -0 %, +60 ms or -0 %, 10 % for characteristic curve with fixed delay time

I: <50 ms

G: -0 %, +60 ms or -0 %, 10 % for characteristic curve with fixed delay time



3WT8 circuit breaker with ETU47WT electronic trip unit, G characteristic curve²⁾

¹⁾ Sizes I and II: 100 ... 1200 A.

²⁾ As a result of the activation level of 150 A (frame size I) and 200 A (frame size II) in case of a single-pole loading the minimum pick-up value of ground fault will be $I_g = 300$ A.

3WT Air Circuit Breakers up to 4000 A (AC)

Project planning aids

Further information

For dimensional drawings and planning guides with further descriptions relating to design, operating principle, installation and retrofitting see manual "3WT Air Circuit Breakers" at www.siemens.com/lowvoltage/manuals

Appendix



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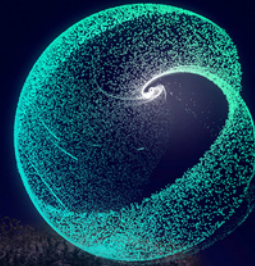
Appendix

SITRAIN – Digital Industry Academy

Introduction

SITRAIN – DIGITAL INDUSTRY ACADEMY

The Future of Learning starts **now**



3

The Future of Learning starts now

Globalization, digitalization, new work, Internet of Things, new business models – our way of working, living and learning is changing rapidly. With SITRAIN, the future of learning begins today: SITRAIN stands for a modern learning culture that focuses on the needs of learners and the demands of innovative companies.

With SITRAIN – Digital Industry Academy, the future of learning is yours.

Face-to-face training or digital training, location-independent, 24/7, on-demand or learning at fixed dates and course times? With a personal learning consultant, in a team, or on your own responsibility? Everything is possible. SITRAIN offers a wide range of different learning options with the "Learning Journey", "Learning Membership" and "Learning Event".

The three learning formats of SITRAIN – Digital Industry Academy



Learning Journey

The combination for sustainable learning success

- The optimal mix of self-study units and guided live modules
- Includes a Learning Membership to work through the self-study modules and access on-demand content
- The SITRAIN learning consultant is available for questions and one-on-one consultations
- Ideal integration into the daily work routine and adaptation to one's own learning pace.



Learning Membership

Securing knowledge through continuous learning on your own responsibility

- With access to the comprehensive and constantly growing range of self-study units on SITRAIN access, the digital learning platform
- Search and find specific learning content or simply have a look around – anytime and anywhere
- A modern learning culture through continuous learning on your own responsibility and transparency about your learning success in the team or company.



Learning Event

Acquire theoretical and practical knowledge in a compact and guided format

- You achieve a defined learning goal in the shortest possible time
- The learning consultant guides you through the practical exercises and is also exclusively available to you during the theoretical sessions for the entire duration
- Focused learning, outside of the daily work routine, in a protected learning environment – virtually, in the training center, or at your company.

Introduction

Expand your knowledge, apply what you have learned, develop future skills

The SITRAIN Digital Industry Academy combines didactically effective methods and modular options.



Effective



Flexible



Relevant



Continuous

The four building blocks of SITRAIN – Digital Industry Academy

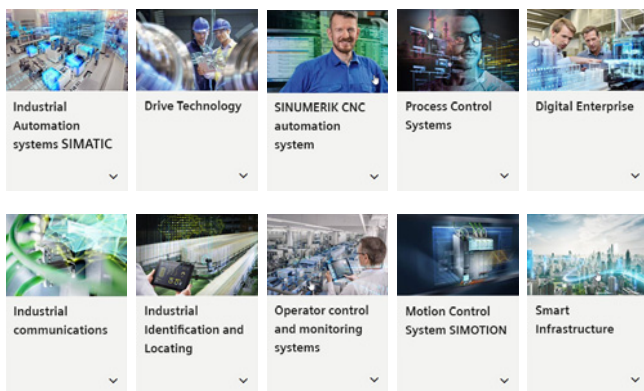
Different methods for maximum learning success:

- Live
- On your own responsibility
- On demand
- Individual

Learn the way you want to learn. For learning success that takes you further.

Education and training directly from the manufacturer

For individual knowledge building, the following topics concerning the industrial product and solution portfolio of Siemens are available. Experience the new learning culture with SITRAIN.



Training cases catalog

<https://www.siemens.com/sitrain-catalog-training-cases>



Find
your local
offer here



SITRAIN – Digital Industry Academy worldwide

You will find the regional knowledge offer in the country selection. One click will take you to the corresponding website.

SITRAIN – Digital Industry Academy

www.siemens.com/sitrain

- SITRAIN Learning Journey:
www.siemens.com/sitrain-learning-journey
- SITRAIN Learning Membership:
www.siemens.com/sitrain-learning-membership
- SITRAIN Learning Event:
www.siemens.com/sitrain-learning-event

Appendix

Glossary

Rated operating voltage, (U_e)

EN 60947-1; 4.3.1.1

Voltage fixed by the manufacturer. Several pertinent tests relate to its determination, as may also the utilization category. Along with the rated (operating) current, it determines the device's utilization. The highest value of rated operating voltage may in no case be greater than the value of the rate insulation voltage U_i .

Rated insulation voltage, (U_i)

EN 60947-1; 4.3.1.2

Voltage measure to which are related tests of dielectric strength and creepage distance.

Rated current, (I_n)

EN 60947-2; 4.3.2.3

Current value of particular circuit breaker that can be handled uninterruptedly. The highest current valued tripping the circuit breaker in conformity with a specifically stated tripping characteristic.

Reduced rated current, (I_r)

Specifically established, reduced value of I_n current for a regulated time-dependent (thermal) release and that the circuit breaker can handle continuously. Maximum setting is at value equal to I_n . Changing I_r shifts the release's tripping characteristic along the current axis. ($I_r = k \times I_n$ holds where $k \leq 1$)

Tripping time at a given I_r multiple, (t_r)

Time after which circuit breaker will trip, if a current flows through it that is equal to the given multiple of I_r . Changing t_r shifts the tripping characteristic along the time axis.

Actuating current of (selective) release's time-independent delay, (I_{ds})

Minimum current value causing the release's time-independent delay to actuate.

Delay of time-independent delayed release, (t_d)

If a current flows through the circuit breaker equal to at least I_{sd} but not reaching I_{rm} the circuit breaker will trip with time delay t_d . Total shut-off time is influenced by the tripping of the circuit breaker itself and is about 10 ÷ 20 ms longer.

Actuating current of time-independent instantaneous, (I_{rm})

Minimum current value causing the time-independent instantaneous release to actuate.

Rated operating current, (I_e)

EN 60947-1; 4.3.2.3

Rated operating current of device (switch-disconnector) is fixed by the manufacturer with consideration for the rated operating voltage, rated frequency, rated operation, utilization category and type of protective cover, if that comes into consideration.

Rated normal current, (I_u)

EN 60947-1; 4.3.2.4

Current value set by the manufacturer and which the device can handle in continuous operation, i.e. during a period longer than 8 hours (weeks, months, or longer).

Rated ultimate short-circuit breaking capacity, (I_{cu})

EN 60947-2; 2.15.1; 4.3.5.2.1

Ultimate short-circuit breaking capacity value expressed as the rms value of the alternating component of the assumed short-circuit current that the circuit breaker must be able to manage in the mode: 1x switching off of the short circuit and a following 1x make-break sequence. After testing, the circuit breaker need not be able to conduct the rated current uninterruptedly. I_{cu} is set for the rated operating voltage at the rated frequency and at the established power factor for alternating current or at the time constant for direct current. Must fulfil the condition: $I_{cu} \geq I_k$ "

Rated short-circuit service breaking capacity, (I_{cs})

EN 60947-2; 2.15.2; 4.3.5.2.2

Value of the operating short-circuit breaking capacity expressed as the rms value of the alternating component of the assumed short-circuit current that the circuit breaker must be able to manage in the mode: 1x switching off of the short circuit and a following 2x make-break sequence. May also be expressed as a percentage of I_{cu} . After testing, the circuit breaker must be able uninterruptedly to conduct the rated current and to switch off the overcurrent. Temperature increase of the main terminals may be greater. I_{cs} is set for the rated operating voltage at the rated frequency and at the established power factor for alternating current or at the time constant for direct current. Permitted: $I_{cs} \geq I_k$ "

Rated short-time withstand current, (I_{cw})

EN 60947-1; 4.3.6.1
EN 60947-2; 4.3.5.4
EN 60947-3; 4.3.6.1

Value of short-time withstand current specified by the manufacturer that the device is able to handle without damage during a designated time period (short-time delay). In case of alternating current, it is the rms value of the alternating component of the assumed short-circuit current I_p .

Overview

Trademarks

All product designations may be registered trademarks or product names of Siemens 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

Appendix

Logistics

Overview

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.

Our delivery processes are designed such that, as a rule, a confirmed deadline is not generally exceeded. In fact, wherever possible, we aim to deliver up to three working days ahead of schedule to optimize the overall delivery situation (e.g. in anticipation of holidays and peak order periods).

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

To achieve this, we supply the preferred types marked with ► ex warehouse.

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 you receive our products in a perfect state.

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 packaging 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 order costs
- Cost savings through uniform-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 area
- 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 economical packing 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 mark and product description information in English and German.

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

The device Article No. of most devices can also be acquired through the EAN barcode to simplify ordering and storage logistics.

The related master data are available from your local Siemens representative.

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

The screenshot shows the Siemens website interface. At the top, there are navigation links for 'Products & Services', 'Market-specific Solutions', and 'Company'. A search bar is visible. The main heading is 'Low-voltage power distribution and electrical installation technology'. Below this, there is a sub-heading 'Innovative solutions for industrial controls and power distribution' and a paragraph of text. A large image shows a person in a factory setting. Below the image, there is a 'Products' section with four categories: 'Low-voltage systems', 'Low-voltage components', 'Industrial Controls', and 'Software'.

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

Industry Mall

The screenshot shows the Siemens Industry Mall website interface. At the top, there is a navigation bar with 'Home', 'Language', 'Contact', and 'Help'. The main heading is 'Industry Mall' and a sub-heading is 'Product catalogue and online ordering system for the Industry Automation and Drive Technology'. Below this, there is a 'Product Catalogue' section with a list of categories: 'Drive technology', 'Automation technology', 'Energy', 'Building Technologies', 'Low-voltage controls and distribution', 'Safety Systems - Safety Integrated', 'Market-specific solutions', 'Industry Services', and 'Software'. There is also a 'Country overview' section with a list of countries and their flags: Argentina, Australia, Austria, Belgium, Bulgaria, Canada, Chile, China, Colombia, Croatia, Czech Republic, Denmark, Ecuador, Estonia, Mexico, Netherlands, New Zealand, Norway, Oman, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russia, Singapore, and Slovakia.

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

Appendix

Further documentation

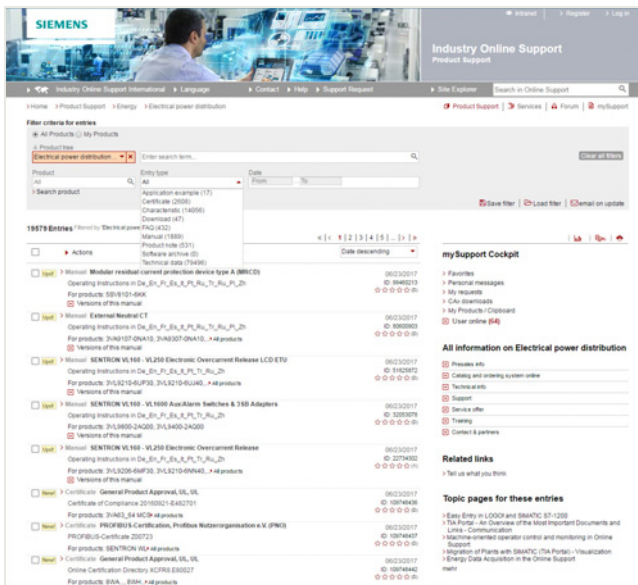
Industry Online Support



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

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).

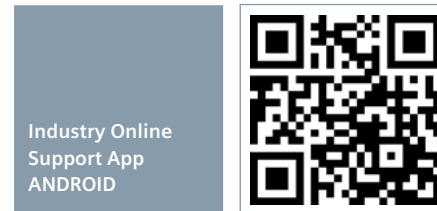
You can find information on the Industry Online Support App on the Internet at

www.siemens.com/support-app

Apple iOS:



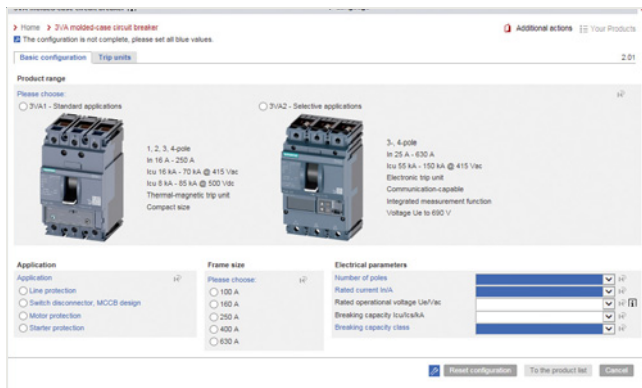
Android:



Appendix

Further documentation

Product configurator

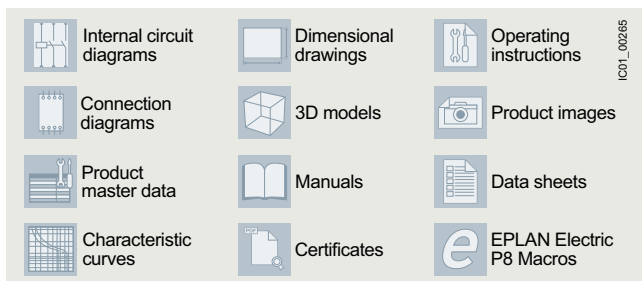


Finding the right product faster

- 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. 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

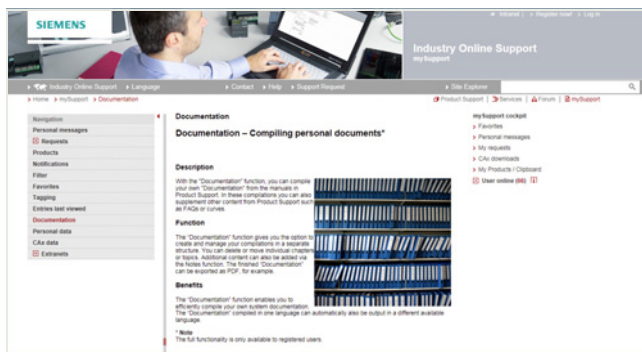
Time savings of up to 80% with universal product data for your CAE and CAD systems

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

Overview

Certificates

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

www.siemens.com/lowvoltage/certificates

The screenshot shows the Siemens Industry Online Support interface. The top navigation bar includes 'Intranet', 'Register', and 'Log in'. The main header is 'Industry Online Support Product Support'. Below this, there are navigation links for 'Industry Online Support International', 'Language', 'Contact', 'Help', 'Support Request', 'Site Explorer', and a search bar. The breadcrumb trail is 'Home > Product Support > Energy > Electrical Distribution'. The main content area is titled 'Filter criteria for entries' and includes options for 'All Products' and 'My Products'. The 'Product tree' is set to 'Electrical Distribution (3964)'. The 'Entry type' is 'Certificate (3964)'. The 'Date' field is empty. The 'Certificate type' is 'All', 'Approval office' is 'All', and 'Country' is 'All'. There are buttons for 'Save filter', 'Load filter', and 'email on update'. Below the filter criteria, there is a table of 3964 entries. The table has columns for 'Actions', 'Certificate description', 'Date', and 'ID'. The first few entries are:

Actions	Certificate description	Date	ID
<input type="checkbox"/> New!	Certificate UBC, CBC, IBC Certificate of Seismic Compliance 137-1000, 137-1001, 137-1002 For products: SIVACON SICUBE 8MF1 ▶ All products	06/03/2016	ID: 109738005 ☆☆☆☆☆ (0)
<input type="checkbox"/> New!	Certificate IEC 60980, IEC 60068-2-57 Certificate of Seismic Compliance 137-1000, 137-1001, 137-1002 For products: SIVACON SICUBE 8MF1 ▶ All products	06/03/2016	ID: 109738004 ☆☆☆☆☆ (0)
<input type="checkbox"/> New!	Certificate General Product Approval, TSE, TSE TSE-Certificate 000082-TSE-02/01 For products: 5SL3..., 5SL6..., 5SL3...-YA, 5SL6...-YA ▶ All products	06/03/2016	ID: 109738035 ☆☆☆☆☆ (0)
<input type="checkbox"/> New!	Certificate General Product Approval, TSE, TSE TSE Certificate 104688-TSE-01/01 For products: 5SL3..., 5SL6..., 5SL3...-YA, 5SL6...-YA ▶ All products	06/03/2016	ID: 109738036 ☆☆☆☆☆ (0)
<input type="checkbox"/>	Certificate Declaration of Conformity, EC/EU-Declaration of Conformity, Manufacturer EU Declaration of Conformity: 16047314.v01	06/02/2016	ID: 109738003

On the right side of the page, there is a 'mySupport Cockpit' section with links for 'Favorites', 'Personal messages', 'My requests', 'CAx downloads', 'My Products / Clipboard', and 'User online (78)'. Below this is an 'All information on Electrical Distribution' section with links for 'Presales info', 'Catalog and ordering system online', 'Technical info', 'Support', and 'Service offer'.

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

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

The screenshot shows the Siemens Industry Online Support interface with the 'Certificates' filter criteria. The 'Product tree' is set to 'Electrical Distribution (323)'. The 'Entry type' is 'Certificate (323)'. The 'Date' field is empty. The 'Certificate type' is 'All', 'Approval office' is 'VDE (323)', and 'Country' is 'All'. There are buttons for 'Save filter', 'Load filter', and 'email on update'. Below the filter criteria, there is a table of 323 entries. The table has columns for 'Actions', 'Certificate description', 'Date', and 'ID'. The first few entries are:

Actions	Certificate description	Date	ID
<input type="checkbox"/> New!	Certificate General Product Approval, VDE, VDE VDE Marks Approval 40038896 For products: 5TL1 ▶ All products		
<input type="checkbox"/> New!	Certificate General Product Approval, VDE, VDE VDE Marks Approval 40029763 For products: 5SH112 ▶ All products		
<input type="checkbox"/> New!	Certificate General Product Approval, VDE, VDE VDE Marks Approval 40029762 For products: 5SH113 ▶ All products		
<input type="checkbox"/> New!	Certificate General Product Approval, VDE, VDE VDE Marks Approval 40029716 For products: 5SH1231 ▶ All products		
<input type="checkbox"/> New!	Certificate General Product Approval, VDE, VDE VDE Marks Approval 40029715 For products: 5SH1221 ▶ All products		

On the right side of the page, there is a 'mySupport Cockpit' section with links for 'Favorites', 'Personal messages', 'My requests', 'CAx downloads', 'My Products / Clipboard', and 'User online (78)'. Below this is an 'All information on Electrical Distribution' section with links for 'Presales info', 'Catalog and ordering system online', 'Technical info', 'Support', and 'Service offer'.

Appendix

Standards and approvals

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.

The Chinese certification system has changed.

As of November 1, 2020, the self-declaration by Siemens (Self-Declaration of Compliance (SDOC)) forms the basis of CCC and the import to China. The CCC scope, product labeling, certification procedures, implementation rules in manufacturing and regulations regarding the import to China have remained unchanged. All CCC certificates issued by CQC have been transferred to SDOCs and all CCC certificates issued by CQC are invalid as of November 1, 2020.

UKCA: As of January 1, 2023, all devices to be marketed in Great Britain require a manufacturer's declaration (UK Declaration of Conformity) and must be supplied with a UKCA mark. The declaration is based on UK regulations and the underlying British standards (BS). Alternatively, EN standards can also be applied. Otherwise, the same requirements apply as for the EU Declaration of Conformity.

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

www.siemens.com/lowvoltage/contact

Overview

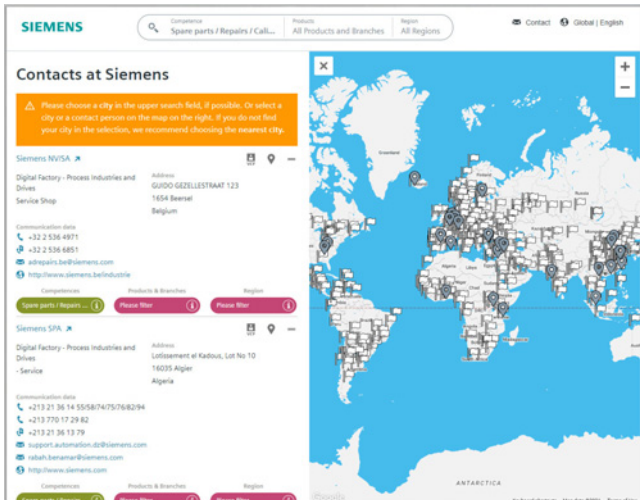
The quality management system of our "Electrical Products" Business Unit in the "Smart Infrastructure" Division complies with the international standard EN ISO 9001.

The products and systems listed in this catalog are developed, manufactured and sold under application of a certified quality management system according to ISO 9001.

Appendix

Partners at Siemens

Overview



At your service locally, around the globe for consulting, sales, training, service, support, spare parts on the entire portfolio of Siemens.

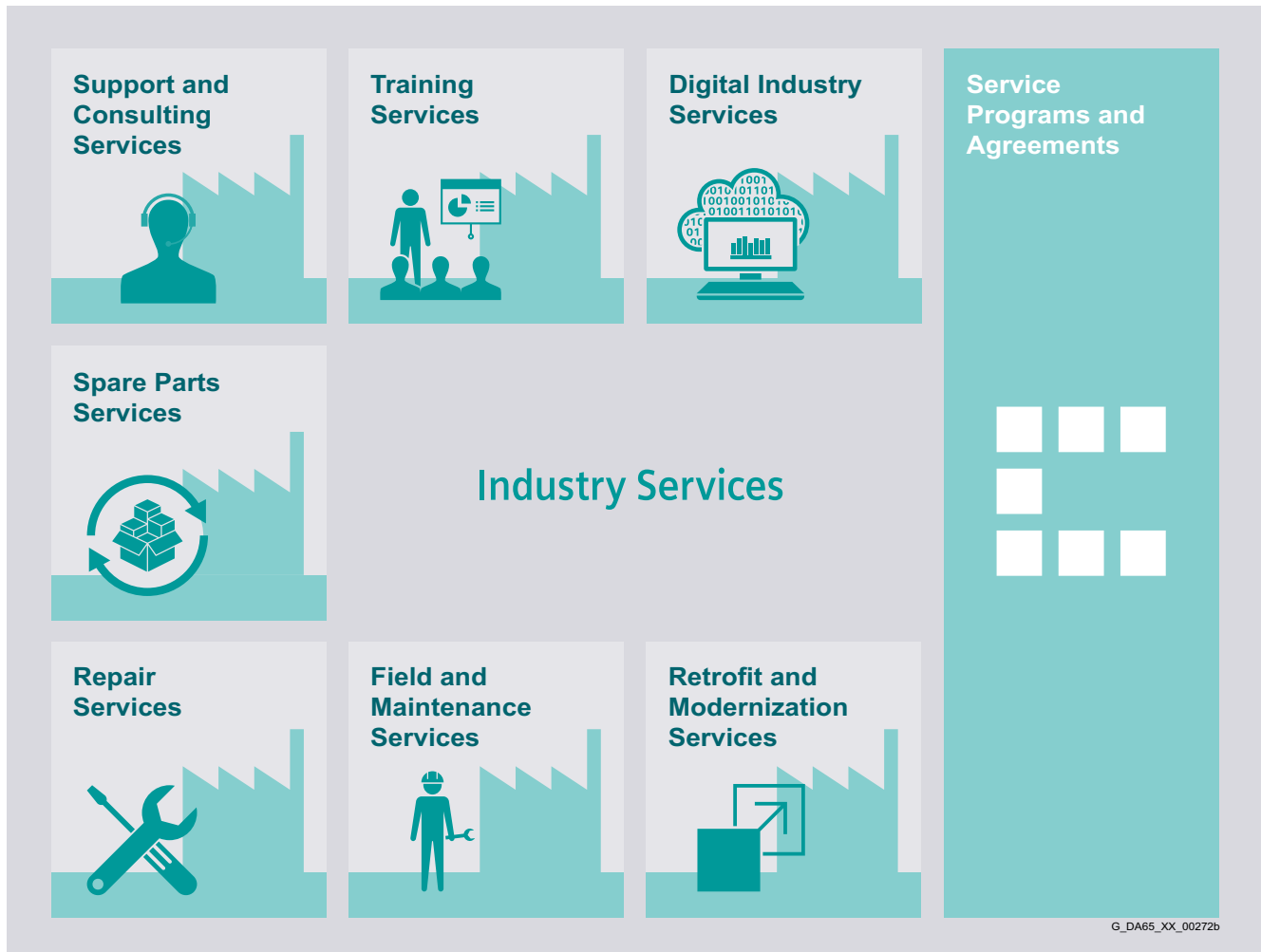
Your partner can be found in our Personal Contacts Database at: www.siemens.com/automation-contact

You start by selecting

- the required competence,
- products and branches,
- a country and a city

or by a

- location search or free text search.

Overview


3

Keep your business running and shaping your digital future – with Industry Services

Optimizing the productivity of your equipment and operations can be a challenge, especially with constantly changing market conditions. Working with our service experts makes it easier. We understand your industry's unique processes and provide the services needed so that you can better achieve your business goals.

You can count on us to maximize your uptime and minimize your downtime, increasing your operations' productivity and reliability. When your operations have to be changed quickly to meet a new demand or business opportunity, our services give you the flexibility to adapt. Of course, we take care that your production is protected against cyber threats. We assist in keeping your operations as energy and resource efficient as possible and reducing your total cost of ownership. As a trendsetter, we ensure that you can capitalize on the opportunities of digitalization and by applying data analytics to enhance decision making: You can be sure that your plant reaches its full potential and retains this over the longer lifespan.

You can rely on our highly dedicated team of engineers, technicians and specialists to deliver the services you need – safely, professionally and in compliance with all regulations. We are there for you, where you need us, when you need us.

www.siemens.com/industrieservices

Appendix

Industry Services

Industry Services – Portfolio

Overview (continued)

Digital Industry Services



Digital Industry Services make your industrial processes transparent to gain improvements in productivity, asset availability, and energy efficiency.

Production data is generated, filtered and translated with intelligent analytics to enhance decision-making.

This is done whilst taking data security into consideration and with continuous protection against cyber-attack threats.

www.siemens.com/global/en/products/services/industry/digital-industry-services.html

Support and Consulting Services



Industry Online Support site for comprehensive information, application examples, FAQs and support requests.

Technical and Engineering Support for advice and answers for all inquiries about functionality, handling, and fault clearance. The Service Card as prepaid support for value added services such as Priority Call Back or Extended Support offers the clear advantage of quick and easy purchasing.

Information & Consulting Services, e.g. SIMATIC System Audit; clarity about the state and service capability of your automation system or Lifecycle Information Services; transparency on the lifecycle of the products in your plants.

<https://support.industry.siemens.com/cs/ww/en/sc/2235>

Training Services



From the basics and advanced to specialist skills, SITRAIN courses provide expertise right from the manufacturer – and encompass the entire spectrum of Siemens products and systems for the industry.

Worldwide, SITRAIN courses are available wherever you need a training course in more than 170 locations in over 60 countries.

<https://support.industry.siemens.com/cs/ww/en/sc/2226>

Spare Parts Services



Spare Parts Services are available worldwide for smooth and fast supply of spare parts – and thus optimal plant availability. Genuine spare parts are available for up to ten years. Logistic experts take care of procurement, transport, custom clearance, storage and order management. Reliable logistics processes ensure that components reach their destination as needed.

Since not all spare parts can be kept in stock at all times, Siemens offers a preventive measure for spare parts provisioning on the customer's premises with optimized **Spare Parts Packages** for individual products, custom-assembled drive components and entire integrated drive trains – including risk consulting.

Asset Optimization Services help you design a strategy for parts supply where your investment and carrying costs are reduced and the risk of obsolescence is avoided.

<https://support.industry.siemens.com/cs/ww/en/sc/2110>

Overview (continued)

Repair Services


Repair Services are offered on-site and in regional repair centers for fast restoration of faulty devices' functionality.

Also available are extended repair services, which include additional diagnostic and repair measures, as well as emergency services.

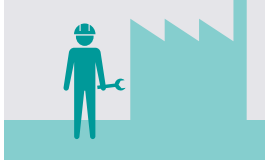
<https://support.industry.siemens.com/cs/ww/en/sc/2154>

Retrofit and Modernization Services


Provide a cost-effective solution for the expansion of entire plants, optimization of systems or upgrading existing products to the latest technology and software, e.g. migration services for automation systems.

Service experts support projects from planning through commissioning and, if desired over the entire extended lifespan, e.g. Retrofit for Integrated Drive Systems for an extended lifetime of your machines and plants.

<https://support.industry.siemens.com/cs/ww/en/sc/2286>

Field and Maintenance Services


Siemens specialists are available globally to provide expert field and maintenance services, including commissioning, functional testing, preventive maintenance and fault clearance.

All services can be included in customized service agreements with defined reaction times or fixed maintenance intervals.

<https://support.industry.siemens.com/cs/ww/en/sc/2265>

Service Programs and Agreements


A technical Service Program or Agreement enables you to easily bundle a wide range of services into a single annual or multi-year agreement.

You pick the services you need to match your unique requirements or fill gaps in your organization's maintenance capabilities.

Programs and agreements can be customized as KPI-based and/or performance-based contracts.

<https://support.industry.siemens.com/cs/ww/en/sc/2275>

Appendix

Industry Services

Online Support

Overview

Online Support – fast, intuitive, whenever you want, wherever you need



Web
www.siemens.com/online-support

App





Scan the QR code for information on our Online Support app.



- 
FAQ / Application examples
 Information about industrial products, programming and configuration as well as application examples
- 
Technical information
 Videos, documentation, manuals, updates, product notes, compatibility tool, certificates, planning data such as dimensional drawings, product data, 3D models
- 
Forum
 Exchange information and experience with other users and experts

Online Support for Siemens Industry Products

Siemens Industry and Online Support with some 1.7 million visitors per month is one of the most popular web services provided by Siemens. It is the central access point for comprehensive technical know-how about products, systems and services for automation and drives applications as well as for process industries.

In connection with the challenges and opportunities related to digitalization you can look forward to continued support with innovative offerings.

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

Product and system engineering

SIMARIS software tools Support in planning and configuring the electrical power distribution:
www.siemens.com/simaris

SIMARIS 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/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/sitrain-lowvoltage

Product hotline

Technical Support Support in all technical queries about our products:
www.siemens.com/support-request

Partners at Siemens

Local contacts Your local contact can be found in our personal contacts database:
www.siemens.com/lowvoltage/contact

Appendix

Software licenses

Overview

Software types

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

- Engineering software
- Runtime software

Engineering software

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

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

Runtime software

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

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

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

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

License types

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

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

Floating license

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

A license is required for each concurrent user.

Single license

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

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

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

Rental license

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

One license is required for each installation of the software.

Rental floating license

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

Trial license

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

Demo license

The demo license support the "sporadic use" of engineering software in a non-productive context, for example, use for testing and evaluation purposes. It can be transferred to another license. After the installation of the license key, the software can be operated for a specific period of time, whereby usage can be interrupted as often as required.

One license is required per installation of the software.

Demo floating license

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

Certificate of License (CoL)

The CoL is the licensee's proof that the use of the software has been licensed by Siemens. A CoL is required for every type of use and must be kept in a safe place.

Downgrading

The licensee is permitted to use the software or an earlier version/release of the software, provided that the licensee owns such a version/release and its use is technically feasible.

Delivery versions

Software is constantly being updated.

The following delivery versions

- PowerPack
- Upgrade

can be used to access updates.

Existing bug fixes are supplied with the ServicePack version.

PowerPack

PowerPacks can be used to upgrade to more powerful software. The licensee receives a new license agreement and CoL (Certificate of License) with the PowerPack. This CoL, together with the CoL for the original product, proves that the new software is licensed.

A separate PowerPack must be purchased for each original license of the software to be replaced.

Upgrade

An upgrade permits the use of a new version of the software on the condition that a license for a previous version of the product is already held.

The licensee receives a new license agreement and CoL with the upgrade. This CoL, together with the CoL for the previous product, proves that the new version is licensed.

A separate upgrade must be purchased for each original license of the software to be upgraded.

Overview**ServicePack**

ServicePacks are used to debug existing products. ServicePacks may be duplicated for use as prescribed according to the number of existing original licenses.

License key

Siemens Industry Automation & Drive Technologies supplies software products with and without license keys.

The license key serves as an electronic license stamp and is also the "switch" for activating the software (floating license, rental license, etc.).

The complete installation of software products requiring license keys includes the program to be licensed (the software) and the license key (which represents the license).

Software Update Service (SUS)

As part of the SUS contract, all software updates for the respective product are made available to you free of charge for a period of one year from the invoice date. The contract will automatically be extended for one year if it is not canceled three months before it expires.

The possession of the current version of the respective software is a basic condition for entering into an SUS contract.

You can download explanations concerning license conditions from https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

Appendix

Conditions of sale and delivery

1. General Provisions

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

1.1 For customers with a seat or registered office in European Union

For customers with a seat or registered office in European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for stand-alone software products and software products forming a part of a product or project, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany"¹⁾ and/or
- for consulting services the "Allgemeine Geschäftsbedingungen für Beratungsleistungen der Division DF – Deutschland" (available only in German) and/or
- for other services, the „Supplementary Terms and Conditions for Services ("BL")"¹⁾ and/or
- for other supplies the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"¹⁾.

In case such supplies should contain Open Source Software, the conditions of which shall prevail over the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry"¹⁾, a notice will be contained in the scope of delivery in which the applicable conditions for Open Source Software are specified. This shall apply mutatis mutandis for notices referring to other third party software components.

1.2 For customers with a seat or registered office outside European Union

For customers with a seat or registered office outside European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for consulting services the "Standard Terms and Conditions for Consulting Services of the Division DF for Customers with a Seat or Registered Office Outside of Germany"¹⁾ and/or
- for other services the "International Terms & Conditions for Services"¹⁾ supplemented by "Software Licensing Conditions"¹⁾ and/or
- for other supplies of hard- and software the "International Terms & Conditions for Products"¹⁾ supplemented by "Software Licensing Conditions"¹⁾

1.3 For customers with master or framework agreement

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

2. Prices

The prices are in € (Euro) ex point of delivery, exclusive of packaging.

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

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

To compensate for variations in the price of raw materials (e.g. silver, copper, aluminum, lead, gold, dysprosium and neodym), surcharges are calculated on a daily basis using the so-called metal factor for products containing these raw materials.

A surcharge for the respective raw material is calculated as a supplement to the price of a product if the basic official price of the raw material in question is exceeded.

The metal factor of a product indicates the basic official price (for those raw materials concerned) as of which the surcharges on the price of the product are applied, and with what method of calculation.

An exact explanation of the metal factor can be downloaded at: https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

To calculate the surcharge (except in the cases of dysprosium and neodym), the official price from the day prior to that on which the order was received or the release order was effected is used.

To calculate the surcharge applicable to dysprosium and neodym ("rare earths"), the corresponding three-month basic average price in the quarter prior to that in which the order was received or the release order was effected is used with a one-month buffer (details on the calculation can be found in the explanation of the metal factor).

3. Additional Terms and Conditions

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

Illustrations are not binding.

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

¹⁾ The text of the Terms and Conditions of Siemens AG can be downloaded at https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

4. Export Regulations

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

Export may be subject to license. We shall indicate in the delivery details whether licenses are required under German, European and US export lists.

Our products are controlled by the U.S. Government (when labeled with "ECCN" unequal "N") and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations. Products labeled with "AL" unequal "N" are subject to European / national export authorization.

The export indications can be viewed in advance in the description of the respective goods on the Industry Mall, our online catalog system. Only the export labels "AL" and "ECCN" indicated on order confirmations, delivery notes and invoices are authoritative.

Products without label, with label "AL:N" / "ECCN:N", or label "AL:9X9999" / "ECCN: 9X9999" may require authorization from responsible authorities depending on the final end-use, or the destination.

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. In any event of such transfer of goods, works and services you shall comply with the (re-) export control regulations of the Federal Republic of Germany, of the European Union and of the United States of America.

Prior to any transfer of goods, works and services provided by us to a third party you shall in particular check and guarantee by appropriate measures that

- there will be no infringement of an embargo imposed by the European Union, by the United States of America and/ or by the United Nations by such transfer, by brokering of contracts concerning those goods, works and services or by provision of other economic resources in connection with those goods, works and services, also considering the limitations of domestic business and prohibitions of by-passing those embargoes;
- such goods, works and services are not intended for use in connection with armaments, nuclear technology or weapons, if and to the extent such use is subject to prohibition or authorization, unless required authorization is provided;
- the regulations of all applicable Sanctioned Party Lists of the European Union and the United States of America concerning the trading with entities, persons and organizations listed therein are considered.

If required to enable authorities or us to conduct export control checks, you, upon request by us, shall promptly provide us with all information pertaining to the particular end customer, the particular destination and the particular intended use of goods, works and services provided by us, as well as any export control restrictions existing.

You acknowledge that under the EU embargo regulations against Iran, Syria and Russia respectively the sale of certain listed goods and related services is subject to authorization by the competent export control authorities of the European Union. If (i) the goods or services ordered by you are destined for Iran, Syria or Russia, and (ii) the contract for our supplies and/or services is subject to prior authorization of the competent export control authorities of the European Union, the contract between you and us shall come into force in this respect only upon granting of such authorization.

The products listed in this catalog may be subject to European/German and/or US export regulations. Any export requiring approval is therefore subject to authorization by the relevant authorities.

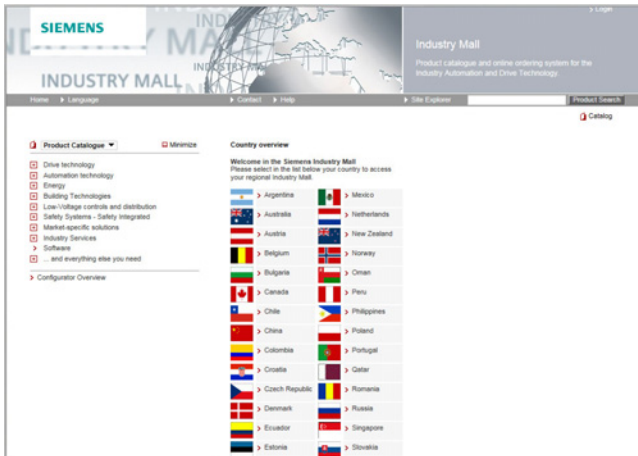
Errors excepted and subject to change without prior notice.

Appendix

Notes

Selection and ordering at Siemens Industry Mall, downloading and ordering catalogs

Easy product selection and ordering: Industry Mall



Industry Mall

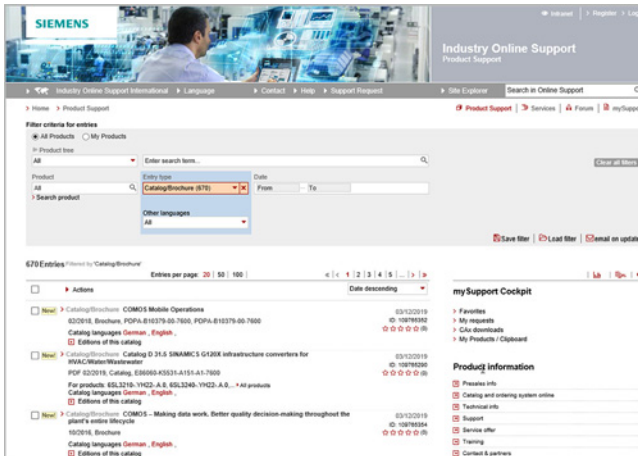
The Industry Mall is a Siemens AG Internet ordering platform. It provides you with online access to a comprehensive product spectrum that is presented in an informative, well-organized way.

Powerful search functions help you select the required products, while configurators enable you to configure complex product and system components quickly and easily. CAx data are also available for you to use.

Data transfer allows the entire procedure, from selection through ordering to tracking and tracing, to be carried out online. Availability checks, individual customer discounting, and quotation preparation are also possible.

www.siemens.com/industrymall

Downloading catalogs



Siemens Industry Online Support

You can download catalogs and brochures in PDF format from Siemens Industry Online Support without having to register.

The filter box makes it possible to perform targeted searches.

www.siemens.com/industry-catalogs

Ordering printed catalogs



Please contact your local Siemens branch if you are interested in ordering printed catalogs.

Addresses can be found at www.siemens.com/automation-contact

Get more information

www.siemens.com/lowvoltage

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Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit <https://www.siemens.com/industrialsecurity>.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under <https://www.siemens.com/cert>.

Subject to changes and errors. The information given in this document only contains general descriptions and/or performance features which may not always specifically reflect those described, or which may undergo modification in the course of further development of the products. The requested performance features are binding only when they are expressly agreed upon in the concluded contract.

All product designations may be trademarks or other rights of Siemens AG, its affiliated companies or other companies whose use by third parties for their own purposes could violate the rights of the respective owner.