
circuit-breakers

Circuit-Breakers from
10 A to 3200 A


SIEMENS

## Related catalogs

## Low-voltage Switchgear and <br> Controlgear SIRIUS $\cdot$ SENTRON $\cdot$ SIVACON

Order-No.:
Catalog 7600

LV 1
LV 1 T
Technical Information
E86060-T1002-A101-A5-
7600
Available March 2006

| Industrial Communication | IK PI |
| :--- | :--- |
| Industrial Communication |  |
| for Automation and Drives |  |
| Order-No.: |  |
| E86060-K6710-A101-B5- |  |
| 7600 |  |
|  |  |
| SIDAC |  |
| Reactors and Filters |  |
| Order No.: |  |
| E86060-K2803-A101-A3- |  |
| 7600 |  |
|  |  |
| SIVACON 8PS |  |
| Busbar Trunking Systems | LV 70 |
| CD, BD01, BD2 up to 1250 A |  |
| Order No.: |  |
| E86060-K1870-A101-A1- |  |
| 7600 |  |
| Automation \& Drives | CA 01 |
| The Offline Mall for A\&D |  |
| Order No.: |  |
| E86060-D4001-A110-C3- |  |
| 7600 |  |

## A\&D Mall

Internet:
http://www.siemens.com/ automation/mall


All products from Automation and Drives, including the products from the catalogues listed above.
Systems • Controlgear: Contactors and and contactor assemblies, solid-state switching devices • Protection Devices ${ }^{\bullet}$ Load feeders, motor and soft starters ${ }^{\circ}$ Monitoring and control devices ${ }^{-}$Detecting devices ${ }^{\circ}$ Commanding and signaling devices • Planning and configuration with SIRIUS • Transformers • Power supplies• ALPHA FIX terminal blocks • SIVACON Switchgear, distribution systems and cabinets ${ }^{\circ}$ SENTRON Switching and protection devices for power distribution: Air circuit-breakers, molded-case circuit-breakers, switch disconnectors • Planning, design and management with SIMARIS • BETA installation equipment

Industrial Ethernet to IEEE 802.3 • PROFINET• Industrial Mobile Communication - PROFIBUS to IEC 61158/EN 50170 • SIMATIC ET 200 distributed I/O• AS-Interface • Remote operation with SINAUT ST7 $\cdot$ Routers • ECOFAST system

Commutating reactors for converters • Mains reactors for frequency converters • Iron-core output reactors ${ }^{\circ}$ Ferrite output reactors • Iron-core smoothing reactor ${ }^{\circ}$ Smoothing air-core reactors • Filter reactors • Applica-tion-specific reactors • Radio interference suppression filters • dv/dt filters • Sinewave filters

Busbar Trunking Units, Overview ${ }^{\circ}$
System CD (25 A - 40 A) • System BD01 (40 A - 160 A) • System BD2 (160 A - 1250 A)

All products from Automation and Drives, including the products from the catalogues listed above.

## Registered trademarks

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.
Further information about low-voltage controlgear is available on the Internet at:
http://www.siemens.com/lowvoltage

## Technical Assistance

Tel.: +49 (9 11) 895-5900
Fax.: +49 (9 11) 895-5907

Email: technical-assistance@siemens.com

Circuit-Breakers from
10 A to 3200 A
Catalog LV $35 \cdot 2006$

Please contact your local Siemens office
© Siemens AG 2005

3WT
Air Circuit-Breakers
up to 3200 A (AC)

## 3VT

Molded-Case
Circuit-Breakers
up to 630 A

Appendix

## Introduction



1/2 Welcome to Automation and Drives
1/4 Totally Integrated Automation Innovations for more productivity

1/6 Totally Integrated Power Energy distribution and management from one source

1/8 Low-voltage, controls
and distribution
Basis for advanced solutions
1/10 $\quad$ 3VT and 3WT circuit-breakers
The economic solution

## Welcome to Automation and Drives



We would like to welcome you to Automation and Drives and our comprehensive range of products, systems, solutions and services for production and process automation and building technology worldwide.

With Totally Integrated Automation and Totally Integrated Power, we deliver solution platforms based on standards that offer you a considerable savings potential.

Discover the world of our technology now. If you need more detailed information, please contact one of your regional Siemens partners. They will be glad to assist you.


## Totally Integrated Automation innovations for more productivity

With the launch of Totally Integrated Automation, we were the first ones on the market to consistently implement the trend from equipment to an integrated automation solution, and have continuously improved the system ever since. Whether your industry is process- and production-oriented or a hybrid, Totally Integrated Automation is a unique "common solution" platform that covers all the sectors.
Totally Integrated Automation is an integrated platform for the entire production line - from receiving to technical processing

and production areas to shipping. Thanks to the system-oriented engineering environment, integrated, open communications as well as intelligent diagnostics options, your plant now benefits in every phase of the life cycle. In fact, to this day we are the only company worldwide that can offer a control system based on an integrated platform for both the production and process industry.


## Totally Integrated Power energy distribution and management from one source

Totally Integrated Power™ by Siemens offers integrated solutions for energy distribution in functional and industrial buildings covering everything from medium-high voltage to power outlets.

Totally Integrated Power ${ }^{\text {TM }}$ is based on integration in planning and configuration as well as coordinated products and systems. In addition, it features communications and software modules for connecting power distribution systems to industrial automation and building automation, thereby offering a substantial savings potential.


Products and systems


Planning and configuration


| Maintenance | Message/ error | Selective protection |
| :---: | :---: | :---: |
|  | management |  |
|  | $=\frac{5}{4}$ | $4$ |



## Low-voltage switchgear and control gear. The basis for progressive solutions.

The requirements in the field of low-voltage switchgear and control gear are high: Cost-effective solutions are required that can be easily integrated into switchgear cabinets, distribution boards or distributed systems and that can communicate with each other perfectly.

Siemens has the answer to this, with SIRIUS industrial switchgear and low-voltage power distribution with SIVACON, SENTRON and SIMARIS.

## SIRIUS industrial switchgear

In the SIRIUS product family, you will find everything that you require for switching, protecting and starting loads. Products for monitoring, controlling, sensing, signalling and power supply round off the spectrum of industrial switchgear. Totally Integrated Automation, Safety Integrated and ECOFAST additionally permit our product portfolio to be combined to form optimized systems. All in all, at Siemens you will find innovative switchgear and control gear with modern features such as integrated communication and safety technology that work to your advantage: The basis for groundbreaking integrated solutions.



## Low-voltage power distribution with SIVACON, SENTRON and SIMARIS

Non-residental buildings and industrial plants have one thing in common: without electricity, everything comes to a halt. The availability, safety and cost effectiveness of the power distribution system is of utmost importance - from the medium voltage supply point through to the socket outlet. And only integrated solutions can ensure maximum efficiency for planning, configuration and operation.

The concept is called Totally Integrated Power from Siemens. Total integration in planning and configuration creates synergies and saves costs. Perfectly interacting products and systems provide efficient engineering and reliable operation. In the field of low-voltage power distribution, the following product families are available:

SIVACON: From the flexible busbar trunking system through to the safe power distribution boards and motor control centers.

SENTRON: From the well-proven switch-disconnector through to intelligent circuit-breakers.

SIMARIS: The software family for planning, parameterizing and managing power distribution.

## 3VT and 3WT circuit-breakers. The economic solution.



Today the economic success of industrial and infrastructure projects depends more than ever on the power supply. This is a key aspect to the availability, performance and productivity of all processes and systems, and it also boosts the system's overall economic efficiency. That's why choosing the right circuit-breakers is so crucial to keeping expenses down while, at the same time, optimizing performance


With the new standard line of 3VT and 3WT circuitbreakers, Siemens offers an economic solution for the entire power range from 10 A to $3,200 \mathrm{~A}$, providing a smart way to protect plants, capacitors, transformers and generators.

Applicable in the infrastructure market as well as in the area of industrial switchgear technology, the 3VT and 3WT circuit-breakers can be used as incoming and outgoing circuit-breakers to distribute energy in lowvoltage switchgear.

The 3VT and 3WT circuit-breakers are available in several designs for system and motor protection. Thereby, each circuit-breaker is characterized by its modular design, user-friendliness as well as its high degree of safety and reliability.

## Good reasons to choose

## 3VT and 3WT circuit-breakers:

## Flexibility

- All components can be combined in a modular way
- Available in 3- or 4-pole version, fixed-mounted, plug-in or withdrawable design


## Ease of use

- User-friendliness in planning, configuration, installation and operation
- Only a few components cover the entire spectrum from 10 A to $3,200 \mathrm{~A}$


## Safety and reliability

- Conforms to international standards and approvals
- Compatibility and safe interaction between products and systems


## 3VT and 3WT circuit-breakers:

The right choice for optimizing your budget


## 3WT air circuit-breakers


(1) 3WT air circuit-breaker
(2) Shutter
(3) Closing solenoid, auxiliary release
(4) Auxiliary conductor plug-in system
(5) Auxiliary switch block
(6) Door sealing frame
(3) EMERGENCY-STOP pushbutton, key operated
(8) Motorized operating mechanism
(9) Operating cycles counter
(1) Electronic trip unit (ETU)
(1) Guide frame
(1) Main connection front, horizontal, vertical

3VT molded-case circuit breakers

(1) 3VT molded-case circuit-breaker (2) Thermal-magnetic overcurrent trip unit

3 Electronic overcurrent trip unit
4 Undervoltage release
5 Shunt release
(6) Auxiliary / Alarm switches
(1) Motorized operating mechanism
(8) Rotary handle operating mechanism

- Front-operated rotary operating mechanism
(1) Plug-in base
(1) Withdrawable version
(1) Phase barriers

B Terminal covers
(4) Extended front busbar connecting bars

## 3WT <br> Air Circuit-Breakers up to 3200 A (AC)



|  |  |
| :--- | :--- |
|  |  |
| $2 / 2$ | General data |
| $2 / 16$ | 3- and 4-pole, withdrawable design <br> with guide frame |
| $2 / 17$ | 3- and 4-pole, fixed-mounted design |
| $2 / 18$ | 3- and 4-pole, withdrawable design |
| $2 / 19$ | 3- and 4-pole, fixed-mounted design |
| $2 / 20$ | Non-automatic air circuit-breakers, <br> 3- and 4-pole, fixed-mounted and <br> withdrawable design |
| $2 / 21$ | Options |
| $2 / 27$ | Accessories/spare parts |
| $2 / 30$ | Project planning aids |

## 3WT Air Circuit-Breakers up to 3200 A (AC)

## General data

Overview


6 ON button, mechanical
Withdrawable circuit-breaker
2 Indication and reset button after tripping for

- tripped signaling switch and
- mechanical closing lockout

3 Spring charge indicator
4 Contact position indicator
5 Ready-to-close indicator

Left: 3WT circuit-breaker, withdrawable version, size I, 3-pole
Right: 3WT circuit-breaker, fixed-mounted version, size I, 3-pole


Motorized operating mechanism


11 Auxiliary circuit plug-in system 12 Crank hole 13 Hand lever


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
- Incoming 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 closing lockout


## 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

## Specifications

IEC 60947-2, VDE 0660 Part 101, GB 14048.2, CCC Approval, climate-proof to IEC 60068-2-30,
Approval according to maritime classification
on request.

## Operating conditions

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

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: 50/65 kA
Rated current: 630 to 3200 A
Rated operating voltage: AC 440 V
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 for overload protection and short-circuit protection, short-circuit releases also delayed for time-based discrimination, with 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 IP40
- Tripped signaling switch (1 NO)
- Ready-to-close indicator with signaling switch
- Spring charge indicator
- Auxiliary switches (2 NO + 2 NC)
- Rear horizontal main circuit connections for fixed mounted and withdrawable versions
- For 4-pole circuit-breakers, the fourth pole $(\mathrm{N})$ is installed on the left and is 100 \% loadable
- Indication and reset button after tripping for
- tripped signaling switch and
- mechanical closing lockout
- User manual in Chinese/English

Additional features of the withdrawable design:

- Main contacts:

Laminated receptacles in the guide frame, penetration blades on the withdrawable circuit-breaker

- Position indicator in the control panel of the withdrawable cir-cuit-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


## General data

## 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.


## Electronic trip units (see illustration "Electronic trip unit")

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

When the circuit-breakers are used in IT networks that are not grounded with converters connected in parallel to a common DC link rail, suitable filter measures must be taken. Please address any questions to your regional Siemens contact. For more information on electronic trip units see "Electronic trip units" and "Functions", "Electronic trip units - General description".

## EMERGENCY-STOP facility

The 3WT circuit-breakers can be used as an EMERGENCYSTOP facility to DIN VDE 0113 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 as well as by means of an indicator switch (S7).

- Contact position-independent auxiliary switches The circuit-breakers are supplied with 2 NO and 2 NC contacts or with 2 NO and 2 NC and 2 CO contacts according to order.
- "Tripped" signaling switch and mechanical closing lockout As standard, the circuit-breaker is equipped with an S11 signaling switch and a mechanical closing 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. If the circuit-breaker has to be ready to close immediately after tripping, an automatic mechanical reset mechanism is available, but this does not reset the electrical signal from the "tripped" switch S11. The "tripped" signal then has to be reset by operating the Reset button.


## 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 440 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.

- 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 circuitbreaker, 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 circuitbreaker.

- Auxiliary supply connections

The auxiliary supply connections make contact automatically when the circuit-breaker slides into the guide frame (test position, connected position).

- Switch 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 "isolation 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.


## 3WT Air Circuit-Breakers up to 3200 A (AC)

## Guide frames

Closing of the crank hole is only possible in the circuit-breaker positions (connected, test or disconnected position). The circuitbreaker 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.



Fixed-mounted circuit-breakers
Main circuit
connection rear,
horizontal
(standard)


Withdrawable circuit-breakers
Rear,
horizontal
connections with
guide rails
(standard)

Main circuit connections


Guide frame


Locking device to prevent insertion of the withdrawable circuit-breaker

## General data

## Electronic trip units



Electronic trip unit version ETU2WT "LSI"


Electronic trip unit version ETU8WT "LSING"


Electronic trip unit version ETU5WT "LSIN" with LCD display

## Function

## Electronic trip units - General description

The new generation of solid-state microprocessor-based electronic trip units

Overload protection ("L")
Inverse-time delayed overload release for overload protection of load feeders and cables.


Selective short-circuit delayed short-circuit protection ("S")


Instantaneous short-circuit protection ("I")


Ground-fault protection ("G")
For sensing of fault currents that flow to ground and that can cause fire in the plant.



Electronic trip units - versions ETU2WT, ETU8WT, ETU5WT

In all electronic trip units, the following functions are included as standard:

- 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 the "heartbeat" of a green flashing LED.
When the operating current exceeds the response threshold of the overload protection, this is indicated by rapid flashing.

- Cause of tripping

The cause of tripping can be queried locally and displayed (by pressing the "Query" button).

- Alarm

A microprocessor fault is signaled by a warning indicator (also optionally via an optocoupler as well).

- Overtemperature

If the temperature in the electronic trip unit exceeds $85^{\circ} \mathrm{C}$, it will be indicated by an LED.

## 3WT Air Circuit-Breakers up to 3200 A (AC)

## General data

Comprehensive additional functions - in accordance with the design of the electronic trip unit, e.g.:


- Short time-delayed short-circuit release with $I^{2}$ t-dependent delay for improved discrimination to the downstream fuses
- LCD operating current 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 circuitbreakers 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 methods
- Vectorial summation formation with current transformer in neutral conductor
The neutral conductor current is measured directly and is evaluated for neutral conductor overload protection. 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.


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

| Electronic trip unit version | Current transformer T5 must be con- <br> nected to auxiliary current connec- <br> tion |
| :--- | :--- |
| - ETU5WT, ETU8WT | 400.13 |
| 400.14 |  |

For 4-pole circuit-breakers, the fourth current transformer for the N -conductor is installed internally.

- Direct acquisition of the ground-fault current by means of a current transformer in the grounded neutral point of the transformer. The current transformer is installed directly into the grounded neutral point of the transformer.


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

| Electronic trip unit version | Current transformer T6 must be con- <br> nected to auxiliary current connec- <br> tion |
| :--- | :--- |
| - ETU8WT | 400.13 |
|  | 400.14 |



Four-pole circuit-breakers, current transformers in the grounded neutral point of the transformer (connection as for three-pole circuit-breakers)

## Hand-held device

- Description

The hand-held device is connected to the electronic trip unit by means of a connecting lead and a snap-on power supply adapter. A DC 24 V power supply can be connected to the adapter to activate the trip unit. This hand-held device can also be used for the communication-capable motor protection and control device 3UF5 (SIMOCODE-DP) for configuration and operation.

- Functions

Connecting and setting operating values for the additional functions of the electronic trip unit version ETU5WT.
The settings read out from the trip unit can be temporarily stored in the hand-held device and written to a different electronic trip unit.


Hand-held device

## Opening, closing and locking devices

- ON and OFF buttons
- Mechanical ON button

In the standard version, the mechanical ON 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.

- Mechanical OFF button

In the standard version, the mechanical OFF button is a pushbutton.

## General data

- Locking device against moving the withdrawable circuitbreaker
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 release

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 release
The shunt release "f" has been designed for permanent excitation. This means that it is also possible to block the circuitbreaker against being jogged into closing.
An energy storage device for shunt releases allows the circuitbreaker to be opened even if the control voltage is no longer available.
The undervoltage release " r " is available without delay as standard (jumper-selectable to 100 ms by customer). In addition, the undervoltage release "rc" with a delay in the range from 0.2 to 3.2 s is available.


Undervoltage release "rc" with delay for mounting in 3WT circuit-breaker

## 3WT Air Circuit-Breakers up to 3200 A (AC)

General data
Functional overview of the electronic trip unit system
Function


1) With 3-pole circuit-breakers a current transformer is required in addition if there is asymmetrical loading of the phases. In the case of 4-pole circuit-breakers a current transformer in the neutral conductor is fitted internally in the circuit-breaker. For current transformers to be ordered separately see page 2/27.

## 3WT Air Circuit-Breakers up to 3200 A (AC)

General data

| Electronic trip unit <br> version <br> ( 8th position of Order No.) | ETURWT |  |
| :--- | :--- | :--- |

## General data

## 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 cable. The Bowden cables are supplied in standard lengths of 2 m . Interlock signals are looped through via the Bowden cables. Interlocking is only effective in the connected position in the case of withdrawable circuit-breakers.
The mechanical lifetime of the Bowden cables is 8000 operating cycles.
The interlocking module is mounted on the right-hand side of the fixed-mounted circuit-breaker (see illustration) or the guide frame.


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


Interlocking module with Bowden wire

|  | Version | Switch status | Description |
| :--- | :--- | :--- | :--- | :--- | :--- |

Technical specifications

5) Per contact set. Disconnect. of the rated current $I_{\mathrm{n}}$ and power factor $=0.8$
2) The temperatures apply to the air surrounding the upper third of the circuitbreaker.
3) These values apply in the case of sinusoidal current $(50 / 60 \mathrm{~Hz})$. The heating/losses increase in the event of harmonics and higher frequencies.
4) Maintenance: replacement of the contact set.

## 3WT Air Circuit-Breakers up to 3200 A (AC)

## General data

## Operating mechanisms

| Manual operating mechanism with mechanical closing | N | 210 |
| :--- | :--- | :--- | :--- |
| Closing | Max. force required to operate the hand lever | 5 |
| Charging stored-  <br> energy feature Required number of strokes on the hand lever |  |  |

## Manual operating mechanism with mechanical and electrical closing

Charging stored-
energy feature
Closing
solenoid (Y1)
Operating range
Extended operating range for battery operation ${ }^{1}$ )
Power input
Minimum command duration at $U_{S}$ for the activation
solenoid
Total closing time at $U_{S}$ after start of
closing command for the activation solenoid,
suitable for synchronizing tasks
Short-circuit protection
Smallest permissible DIAZED fuse (operational class
gL)/miniature circuit-breaker with C-characteristic

|  | see "Manual operating mechanism with mechanica closing" |
| :---: | :---: |
|  | $0.7 \ldots 1.1 \times U_{S}$ |
| $\begin{aligned} & \text { for DC } 24 \mathrm{~V} \text {, DC } 110 \mathrm{~V} \text {, } \\ & \text { DC } 220 \mathrm{~V} \end{aligned}$ | $0.7 \ldots 1.26 \times U_{S}$ |
| AC/DC VA/W | 15 |
| ms | 60 |
| ms | 80 |
|  | $1 \mathrm{~A} \mathrm{TDz} \mathrm{(time-lag)/1} \mathrm{~A}$ |

Manual/motor operating mechanism with mechanical and electrical closing

| Manual operating mechanism |  |  | see "Manual operating mechanism with mechanical closing" |
| :---: | :---: | :---: | :---: |
| Motor | Operating range |  | $0.7 \ldots 1.1 \times U_{S}$ |
|  | Extended operating range for battery operation ${ }^{1}$ ) | $\begin{aligned} & \text { for DC } 24 \text { V, DC } 110 \text { V, } \\ & \text { DC } 220 \text { V } \end{aligned}$ | $0.7 \ldots 1.26 \times U_{s}$ |
| Closing solenoid | Power input to motor | AC/DC VA/W | 40 |
|  | Time required to charge the stored-energy mechanism $1 \times U_{\text {S }}$ |  | 20 |
|  |  |  | see "Manual operating mechanism with mechanical and electrical closing" |
|  | Short-circuit protection |  |  |
|  | Motor and activation solenoid for the same rated control supply voltages: |  |  |
| For motor and closing solenoid | Smallest permissible DIAZED fuse (operational class $\mathrm{gL}) /$ miniature circuit-breaker with C-characteristic | at $U_{\text {S }}=24 \mathrm{~V}$ | $2 \mathrm{~A} \mathrm{TDz} \mathrm{(time-lag)/2} \mathrm{~A}$ |
|  |  | at $U_{S}=110-127 \mathrm{~V}$ | 1 A TDz (time-lag)/1 A |
|  |  | at $U_{S}=220-250 \mathrm{~V}$ | 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 |  | $0.7 \ldots 1.1 \times U_{\text {s }}$ |
|  | For continuous command (100 \% duty ratio), locks out on momentary-contact commands |  |  |
|  | Extended operating range for battery operation ${ }^{1}$ ) | $\begin{aligned} & \text { for DC } 24 \mathrm{~V}, \mathrm{DC} 110 \mathrm{~V} \text {, } \\ & \text { DC } 220 \mathrm{~V} \end{aligned}$ | $0.7 \ldots 1.26 \times U_{s}$ |
|  | Rated control supply voltage $U_{\text {s }}$ | $\begin{array}{ll} \text { AC 50/60 Hz } & \text { V } \\ \text { DC } & \text { V } \end{array}$ | $\begin{aligned} & 110-127,220-240 \\ & 24,110-125,220-250 \end{aligned}$ |
|  | Power input | AC/DC VA/W | 15 |
|  | Minimum command duration at $U_{\mathrm{s}}$ | ms | 60 |
|  | Opening time of circuit-breaker at $U_{\mathrm{s}}=100 \%$ | AC/DC ms | $\leq 80$ |

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 3200 A (AC)

General data

Auxiliary releases


## Contact position-driven auxiliary switches (S1, S2, S3, S4)

| Rated insulation voltage $U_{i}$ AC/DC V <br> Rated operating voltage $U_{e}$  |  |  |  | 400 V |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 400 V |  |  |  |
| Switching capacity AC, $50 / 60 \mathrm{~Hz}$ |  | Rated operating voltage $U_{e}$ | $\checkmark$ | up to 24 | 110 | 220/230 | $\begin{gathered} 380 / 400 \\ 10 \\ 4 \end{gathered}$ |
|  |  | Rated operating current $I_{\mathrm{e}} / \mathrm{AC}-12$ | A | 10 | 10 | 10 |  |
|  |  | Rated operating current $I_{\mathrm{e}} / \mathrm{AC}-15$ | A | 6 | 6 | 6 |  |
| DC |  | Rated operating voltage $U_{e}$ | V | 24 | 110 | 220 |  |
|  |  | Rated operating current $I_{\mathrm{e}} / \mathrm{DC}-12$ | A | 10 | 3.5 | 1 |  |
|  |  | Rated operating current $I_{\mathrm{e}} / \mathrm{DC}-13$ | A | 10 | 1.2 | 0.4 |  |
| Short-circuit protection ${ }^{2}$ ) |  | Largest permissible DIAZED fuse (operational class gL/gG) <br> Largest permissible miniature circuit-breaker with C-characteristic |  | $\begin{aligned} & 10 \mathrm{~A} \mathrm{TDz}, 16 \mathrm{~A} \mathrm{Dz} \\ & 10 \mathrm{~A} \end{aligned}$ |  |  |  |
|  |  |  |  |  |  |  |

Ready-to-close signaling switch (S7) and "tripped" signaling switch (S11), to DIN VDE 0630


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 $I_{\mathrm{k}} \leq 1 \mathrm{kA}$ in accordance with DIN VDE 0660 Part 200.

## 3- and 4-pole, <br> withdrawable design with guide frame

Selection and ordering data - quick selection

| Size | Rated current $I_{n}$ | Short-circuit breaking capacity $I_{\text {cu }} / 440 \mathrm{~V}$ | Short-time withstand current,$\begin{aligned} & I_{\mathrm{CW}} / 440 \mathrm{~V} \\ & 1 \mathrm{~s} \end{aligned}$ | 3-pole |  | 4-pole |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Order No. | Basic price | Weight approx. | Order No. | Basic price | Weight approx. |
|  | A | kA | kA |  |  | kg |  |  | kg |

ETU2WT, horizontal main circuit-connection (ecoline)

| \| | 630 | 50 | 35 | 3W |
| :---: | ---: | ---: | ---: | ---: |
| \| | 800 | 50 | 35 | 3W |
| \| | 1000 | 50 | 35 | 3W |
| I | 1250 | 50 | 35 | 3W |


| I | 630 | 50 | 50 | 3WT80 61-1UG04-5AB2 | 58.000 | 3WT80 65-1UG04-5AB2 | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 50 | 3WT80 81-1UG04-5AB2 | 58.000 | 3WT80 85-1UG04-5AB2 | 76.000 |
| I | 1000 | 50 | 50 | 3WT81 01-1UG04-5AB2 | 58.000 | 3WT81 05-1UG04-5AB2 | 76.000 |
| I | 1250 | 50 | 50 | 3WT81 21-1UG04-5AB2 | 58.000 | 3WT81 25-1UG04-5AB2 | 76.000 |
| I | 1600 | 50 | 50 | 3WT81 61-1UG04-5AB2 | 61.000 | 3WT81 65-1UG04-5AB2 | 79.000 |
| 11 | 2000 | 65 | 60 | 3WT82 02-1UG04-5AB2 | 94.000 | 3WT82 06-1UG04-5AB2 | 118.000 |
| II | 2500 | 65 | 60 | 3WT82 52-1UG04-5AB2 | 94.000 | 3WT82 56-1UG04-5AB2 | 118.000 |
| 11 | 3200 | 65 | 60 | 3WT83 22-1UG04-5AB2 | 100.000 | 3WT83 26-1UG04-5AB2 | 124.000 |

ETU8WT, horizontal main circuit connection (ecoline)

| I | 630 | 50 | 35 | 3WT80 60-2UG04-5AB2 | 58.000 | 3WT80 64-2UG04-5AB2 | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 35 | 3WT80 80-2UG04-5AB2 | 58.000 | 3WT80 84-2UG04-5AB2 | 76.000 |
| I | 1000 | 50 | 35 | 3WT81 00-2UG04-5AB2 | 58.000 | 3WT81 04-2UG04-5AB2 | 76.000 |
| । | 1250 | 50 | 35 | 3WT81 20-2UG04-5AB2 | 58.000 | 3WT81 24-2UG04-5AB2 | 76.000 |

ETU8WT, horizontal main circuit connection

| \| | 630 | 50 | 50 | 3WT80 61-2UG04-5AB2 | 58.000 | 3WT80 65-2UG04-5AB2 | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 50 | 3WT80 81-2UG04-5AB2 | 58.000 | 3WT80 85-2UG04-5AB2 | 76.000 |
| I | 1000 | 50 | 50 | 3WT81 01-2UG04-5AB2 | 58.000 | 3WT81 05-2UG04-5AB2 | 76.000 |
| I | 1250 | 50 | 50 | 3WT81 21-2UG04-5AB2 | 58.000 | 3WT81 25-2UG04-5AB2 | 76.000 |
| I | 1600 | 50 | 50 | 3WT81 61-2UG04-5AB2 | 61.000 | 3WT81 65-2UG04-5AB2 | 79.000 |
| 11 | 2000 | 65 | 60 | 3WT82 02-2UG04-5AB2 | 94.000 | 3WT82 06-2UG04-5AB2 | 118.000 |
| 11 | 2500 | 65 | 60 | 3WT82 52-2UG04-5AB2 | 94.000 | 3WT82 56-2UG04-5AB2 | 118.000 |
| 11 | 3200 | 65 | 60 | 3WT83 22-2UG04-5AB2 | 100.000 | 3WT83 26-2UG04-5AB2 | 124.000 |

ETU5WT, horizontal main circuit-connection (ecoline)

|  |  |  |  |  |  |  |
| ---: | ---: | :--- | :--- | :--- | :--- | :--- |
| $\mid$ | 630 | 50 | 300 | 50 | 35 | 3WT80 60-3UG04-5AB2 |

ETU5WT, horizontal main circuit-connection

| I | 630 | 50 | 50 | 3WT80 61-3UG04-5AB2 | 58.000 | 3WT80 65-3UG04-5AB2 | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 50 | 3WT80 81-3UG04-5AB2 | 58.000 | 3WT80 85-3UG04-5AB2 | 76.000 |
| I | 1000 | 50 | 50 | 3WT81 01-3UG04-5AB2 | 58.000 | 3WT81 05-3UG04-5AB2 | 76.000 |
| I | 1250 | 50 | 50 | 3WT81 21-3UG04-5AB2 | 58.000 | 3WT81 25-3UG04-5AB2 | 76.000 |
| । | 1600 | 50 | 50 | 3WT81 61-3UG04-5AB2 | 61.000 | 3WT81 65-3UG04-5AB2 | 79.000 |
| 11 | 2000 | 65 | 60 | 3WT82 02-3UG04-5AB2 | 94.000 | 3WT82 06-3UG04-5AB2 | 118.000 |
| 11 | 2500 | 65 | 60 | 3WT82 52-3UG04-5AB2 | 94.000 | 3WT82 56-3UG04-5AB2 | 118.000 |
| 11 | 3200 | 65 | 60 | 3WT83 22-3UG04-5AB2 | 100.000 | 3WT83 26-3UG04-5AB2 | 124.000 |

Electronic trip unit (ETU)
ETU2WT: protection functions LSI
ETU8WT: protection functions LSING ${ }^{1}$ )
ETU5WT: protection functions LSIN ${ }^{1}$ ) with LCD display
Accessories included
Motor operated mechanism,
with mechanical and electrical closing,
motor and closing solenoid $220-240$ V AC $50 / 60 \mathrm{~Hz}$,
220-250 V DC
220-240 V AC $50 / 60 \mathrm{~Hz}$,
220-250 V DC
with door sealing frame IP40,
without 2nd auxiliary release,
with auxiliary switch $2 \mathrm{NO}+2 \mathrm{NC}$,
with shutter

1) Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/27.

Selection and ordering data - quick selection

| Size | Rated current $I_{n}$ | Short-circuit breaking capacity $I_{\text {cu }} / 440 \mathrm{~V}$ | Short-time withstand current,$I_{\mathrm{cW}} / 440 \mathrm{~V}$$1 \mathrm{~s}$ | 3-pole |  |  | 4-pole |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Order No. | Basic price | Weight approx. | Order No. | Basic price | Weight approx. |
|  | A | kA | kA |  |  | kg |  |  | kg |

ETU2WT, horizontal main circuit connection (ecoline)

| $\mid$ | 630 | 50 | 35 | 3WT80 60-1UG00-0AA2 | 34.000 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| $\mid$ | 800 | 50 | 35 | 3WT80 80-1UG00-0AA2 | 34.000 |
| 1 | 1000 | 50 | 35 | 3WT81 00-1UG00-0AA2 | 34.000 |
| $\mid$ | 1250 | 50 | 35 | 3WT81 20-1UG00-0AA2 | 34.000 |


| 3WT80 64-1UG00-0AA2 | 47.000 |
| :--- | :--- |
| 3WT80 84-1UG00-0AA2 | 47.000 |
| 3WT81 04-1UG00-0AA2 | 47.000 |
| 3WT81 24-1UG00-0AA2 | 47.000 |

ETU2WT, horizontal main circuit connection

| I | 630 | 50 | 50 | 3WT80 61-1UG00-0AA2 | 34.000 |
| :--- | ---: | :--- | :--- | :--- | :--- |
| I | 800 | 50 | 50 | 3WT80 81-1UG00-0AA2 | 34.000 |
| I | 1000 | 50 | 50 | 3WT81 01-1UG00-0AA2 | 34.000 |
| I 1250 | 50 | 50 | 3WT81 21-1UG00-0AA2 | 34.000 |  |
| I | 1600 | 50 | 50 | 3WT81 61-1UG00-0AA2 | 36.000 |
| $\\|$ | 2000 | 65 | 60 | 3WT82 02-1UG00-0AA2 | 57.000 |
| II | 2500 | 65 | 60 | 3WT82 52-1UG00-0AA2 | 57.000 |
| II | 3200 | 65 | 60 | 3WT83 22-1UG00-0AA2 | 61.000 |

ETU8WT, horizontal main circuit connection (ecoline)

| I | 630 | 50 | 35 | 3WT80 60-2UG00-0AA2 | 34.000 | 3WT80 64-2UG00-0AA2 | 47.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| , | 800 | 50 | 35 | 3WT80 80-2UG00-0AA2 | 34.000 | 3WT80 84-2UG00-0AA2 | 47.000 |
| I | 1000 | 50 | 35 | 3WT81 00-2UG00-0AA2 | 34.000 | 3WT81 04-2UG00-0AA2 | 47.000 |
| । | 1250 | 50 | 35 | 3WT81 20-2UG00-0AA2 | 34.000 | 3WT81 24-2UG00-0AA2 | 47.000 |

ETU8WT, horizontal main circuit connection

| । | 630 | 50 | 50 | 3WT80 61-2UG00-0AA2 | 34.000 | 3WT80 65-2UG00-0AA2 | 47.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| , | 800 | 50 | 50 | 3WT80 81-2UG00-0AA2 | 34.000 | 3WT80 85-2UG00-0AA2 | 47.000 |
| । | 1000 | 50 | 50 | 3WT81 01-2UG00-0AA2 | 34.000 | 3WT81 05-2UG00-0AA2 | 47.000 |
| I | 1250 | 50 | 50 | 3WT81 21-2UG00-0AA2 | 34.000 | 3WT81 25-2UG00-0AA2 | 47.000 |
| I | 1600 | 50 | 50 | 3WT81 61-2UG00-0AA2 | 36.000 | 3WT81 65-2UG00-0AA2 | 49.000 |
| II | 2000 | 65 | 60 | 3WT82 02-2UG00-0AA2 | 57.000 | 3WT82 06-2UG00-0AA2 | 70.000 |
| 11 | 2500 | 65 | 60 | 3WT82 52-2UG00-0AA2 | 57.000 | 3WT82 56-2UG00-0AA2 | 70.000 |
| 11 | 3200 | 65 | 60 | 3WT83 22-2UG00-0AA2 | 61.000 | 3WT83 26-2UG00-0AA2 | 74.000 |
| ETU5WT, horizontal main circuit connection (ecoline) |  |  |  |  |  |  |  |
| 1 | 630 | 50 | 35 | 3WT80 60-3UG00-0AA2 | 34.000 | 3WT80 64-3UG00-0AA2 | 47.000 |
| I | 800 | 50 | 35 | 3WT80 80-3UG00-0AA2 | 34.000 | 3WT80 84-3UG00-0AA2 | 47.000 |
| I | 1000 | 50 | 35 | 3WT81 00-3UG00-0AA2 | 34.000 | 3WT81 04-3UG00-0AA2 | 47.000 |
| । | 1250 | 50 | 35 | 3WT81 20-3UG00-0AA2 | 34.000 | 3WT81 24-3UG00-0AA2 | 47.000 |
| ETU5WT, horizontal main circuit connection |  |  |  |  |  |  |  |
| । | 630 | 50 | 50 | 3WT80 61-3UG00-0AA2 | 34.000 | 3WT80 65-3UG00-0AA2 | 47.000 |
| I | 800 | 50 | 50 | 3WT80 81-3UG00-0AA2 | 34.000 | 3WT80 85-3UG00-0AA2 | 47.000 |
| I | 1000 | 50 | 50 | 3WT81 01-3UG00-0AA2 | 34.000 | 3WT81 05-3UG00-0AA2 | 47.000 |
| I | 1250 | 50 | 50 | 3WT81 21-3UG00-0AA2 | 34.000 | 3WT81 25-3UG00-0AA2 | 47.000 |
| I | 1600 | 50 | 50 | 3WT81 61-3UG00-0AA2 | 36.000 | 3WT81 65-3UG00-0AA2 | 49.000 |
| 11 | 2000 | 65 | 60 | 3WT82 02-3UG00-0AA2 | 57.000 | 3WT82 06-3UG00-0AA2 | 70.000 |
| 11 | 2500 | 65 | 60 | 3WT82 52-3UG00-0AA2 | 57.000 | 3WT82 56-3UG00-0AA2 | 70.000 |
| 11 | 3200 | 65 | 60 | 3WT83 22-3UG00-0AA2 | 61.000 | 3WT83 26-3UG00-0AA2 | 74.000 |

Electronic trip unit (ETU)
ETU2WT: protection functions LSI
ETU8WT: protection functions LSING ${ }^{1}$ )
ETU5WT: protection functions $\operatorname{LSIN}{ }^{1}$ ) with LCD display
Accessories included
Motor operated mechanism,
with mechanical and electrical closing,
motor and closing solenoid $220-240$ V AC $50 / 60 \mathrm{~Hz}$,
220-250 V DC,
Shunt release "F" $220-240$ V AC' $50 / 60 \mathrm{~Hz}$,
220-250 V DC
with door sealing frame IP40,
without 2nd auxiliary release,
with auxiliary switch $2 \mathrm{NO}+2 \mathrm{NC}$

1) Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/27.
```
3- and 4-pole,
withdrawable design
```

Selection and ordering data

| Size | Rated current $I_{n}$ | Short－circuit breaking capacity$I_{\mathrm{Cu}} / 440 \mathrm{~V}$ | Short－time withstand current，$\begin{aligned} & I_{\mathrm{CW}} / 440 \mathrm{~V} \\ & 1 \mathrm{~S} \end{aligned}$ | 3－pole |  |  | 4－pole |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Order No． | Basic price | Weight | Order No． | Basic price | Weight |
|  |  |  |  | Order No．supplement （8th to 11th and 13th to 16th position of Order No．）must be added． |  | approx． | Order No．supplement （8th to 11th and 13th to 16th position of Order No．）must be added． |  | approx． |
|  |  |  |  | For quick selection see below．Further options see pages 2／21 to 2／26． |  | kg | For quick selection see below．Further options see pages 2／21 to 2／26． |  | kg |

Horizontal main circuit－connection（ecoline）

| I | 630 | 50 | 35 | 3W780 60－ㅁํㅁํ 4－ㅁㅁㅁ | 58.000 | 3WT80 64－ㅁํㅁㅁ 4－ㅁํㅁㅁ | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 35 | 3WT80 80－ㅁㅁㅁㅁ4－ㅁㅁㅁ | 58.000 | 3WT80 84－ㅁㅁㅁㅁ－ㅁㅁㅁ | 76.000 |
| I | 1000 | 50 | 35 | 3WT81 00－ロロロロ4－ㅁ口ロロ | 58.000 | 3WT81 04－ㅁㅁㅁㄴ－ㅁㅁㅁ | 76.000 |
| I | 1250 | 50 | 35 |  | 58.000 | 3WT81 24－ㅁㅁㅁ4－ㅁㅁㅁ | 76.000 |
| Horizontal main circuit－connection |  |  |  |  |  |  |  |
| I | 630 | 50 | 50 | 3WT80 61－ㅁㅁㅁㅁ－ㅁㅁㅁ | 58.000 | 3WT80 65－ㅁㅁㅁㅁㄴ－ㅁํㅁㅁ | 76.000 |
| I | 800 | 50 | 50 | 3WT80 81－ㅁㅁㅁ4－ㅁㅁㅁ | 58.000 | 3WT80 85－ㅁㅁㅁㅁ－ㅁㅁㅁㅁ | 76.000 |
| I | 1000 | 50 | 50 | 3WT81 01－ロロロロ4－ㅁㅁㅁ | 58.000 | 3WT81 05－ㅁㅁㅁㅁ－ㅁㅁㅁ | 76.000 |
| । | 1250 | 50 | 50 | 3WT81 21－ロロロロ4－ㅁㅁㅁ | 58.000 | 3WT81 25－ㅁㅁㅁㅁ－ㅁㅁㅁ | 76.000 |
| । | 1600 | 50 | 50 | 3WT81 61－ロロロロ4－ㅁㅁㅁ | 61.000 | 3WT81 65－ㅁㅁㅁㄴ－ดロロロ | 79.000 |
| 11 | 2000 | 65 | 60 | 3WT82 02－ㅁㅁㅁ4－ㅁㅁㅁ | 94.000 | 3WT82 06－ㅁㅁㅁㄴ－ㅁㅁㅁ | 118.000 |
| II | 2500 | 65 | 60 | 3WT82 52－ㅁㅁㅁㅣ－ㅁㅁㅁ | 94.000 | 3WT82 56－ㅁㅁㅁㅁ－ㅁㅁㅁ | 118.000 |
| 11 | 3200 | 65 | 60 | 3WT83 22－ロロロロ4－ㅁㅁㅁ | 100.000 |  | 124.000 |

Horizontal main circuit－connection at top，vertical connection at bottom（ecoline）

| I | 630 | 50 | 35 | 3WT80 60－ㅁㅁㅁㅁ－ㅁㅁㅁㅁ | 58.000 | 3WT80 64－ㅁㅁㅁㅁ－ㅁㅁㅁ | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 35 | 3WT80 80－ㅁㅁㅁㅁ－ㅁㅁㅁ | 58.000 | 3WT80 84－ㅁㅁㅁㅁ－ㅁㅁㅁ | 76.000 |
| । | 1000 | 50 | 35 | 3WT81 00－ㅁㅁㅁำ－ㅁㅁㅁ | 58.000 | 3WT81 04－ㅁㅁㅁㅏ－ㅁㅁㅁ | 76.000 |
| I | 1250 | 50 | 35 | 3WT81 20－ㅁㅁㅁำ－ㅁㅁㅁ | 58.000 | 3WT81 24－ㅁㅁㅁㅏ－■ด口口 | 76.000 |

Horizontal main circuit－connection at top，vertical connection at bottom

| I | 630 | 50 | 50 | 3WT80 61－ㅁㅁำ－ㅁㅁㅁ | 58.000 | 3WT80 65－ㅁㅁำ－ㅁㅁㅁ | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 50 | 3WT80 81－ㅁㅁㅁำ－ㅁㅁㅁ | 58.000 | 3WT80 85－ㅁㅁㅁㅁ－ㅁㅁㅁ | 76.000 |
| I | 1000 | 50 | 50 | 3WT81 01－ロロロロ8－ㅁㅁㅁ | 58.000 | 3WT81 05－ㅁㅁㅁ－ㅁㅁㅁ | 76.000 |
| I | 1250 | 50 | 50 | 3WT81 21－ㅁㅁㅁ－ㅁㅁㅁ | 58.000 |  | 76.000 |
| I | 1600 | 50 | 50 | 3WT81 61－ロロロロ8－ㅁㅁㅁ | 61.000 | 3WT81 65－ロロロロ8－पロロロ | 79.000 |
| II | 2000 | 65 | 60 | 3WT82 02－ㅁㅁㅁ－ㅁㅁㅁ | 94.000 |  | 118.000 |
| II | 2500 | 65 | 60 | 3WT82 52－ロロロロ8－ㅁㅁㅁ | 94.000 |  | 118.000 |
| II | 3200 | 65 | 60 | 3WT83 22－ロロロロ8－ㅁㅁㅁ | 100.000 |  | 124.000 |

Without guide frame（ecoline；guide frame see page 2／27）

| । | 630 | 50 | 35 | 3WT80 60－ㅁㅁㅁㅣ－ㅁㅁㅁ | 36.000 |  | 49.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I | 800 | 50 | 35 | 3WT80 80－ㅁㅁㅁㅁ－ㅁㅁㅁ | 36.000 | 3WT80 84－ㅁㅁㅁㅁ－ㅁㅁㅁ | 49.000 |
| I | 1000 | 50 | 35 | 3WT81 00－ㅁㅁㅁㅣ－ㅁㅁㅁ | 36.000 | 3WT81 04－ㅁㅁㅁㅣ－ㅁㅁㅁ | 49.000 |
| I | 1250 | 50 | 35 | 3WT81 20－ㅁ口ดロ3－ㅁㅁㅁ | 36.000 | 3WT81 24－ㅁㅁㅁㅣ－■ด口口 | 49.000 |

Without guide frame（guide frame see page $2 / 27$ ）


Selection and ordering data

| Size | Rated current $I_{\mathrm{n}}$ | Short-circuit breaking capacity $I_{\text {cu }} / 440 \mathrm{~V}$ | Short-time withstand current,$\begin{aligned} & I_{\mathrm{CW}} / 440 \mathrm{~V} \\ & 1 \mathrm{~s} \end{aligned}$ | 3-pole |  | 4-pole |  |  | Weight approx. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Order No. | Basic price | Weight approx. | Order No. | Basic price |  |
|  |  |  |  | Order No. supplement (8th to 11th and 13th to 16th position of Order No.) must be added. |  |  | Order No. supplement (8th to 11th and 13th to 16th position of Order No.) must be added. |  |  |
|  |  |  |  | For quick selection see below. Further options see pages 2/21 to 2/26. |  |  | For quick selection see below. Further options see pages $2 / 21$ to $2 / 26$. |  | kg |

Horizontal main circuit connection (ecoline)

| 1 | 630 | 50 | 35 | 3WT80 60-ㅁㅁㅁㅣ-ㅁㅁㅁ | 34.000 | 3WT80 64-ㅁㅁㅁㅣ-पดロロ | 47.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| । | 800 | 50 | 35 | 3WT80 80-ㅁㅁㅁㅁㅇ-ㅁㅁㅁ | 34.000 | 3WT80 84-ㅁㅁㅁㅁ-ㅁㅁㅁㅁ | 47.000 |
| I | 1000 | 50 | 35 |  | 34.000 |  | 47.000 |
| I | 1250 | 50 | 35 | 3WT81 20-ㅁㅁㅁㅣ-ㅁㅁㅁ | 34.000 |  | 47.000 |

Horizontal main circuit connection

with mutual mechanical interlock for circuit-breaker 3WT

1) Current transformer for overload protection in the neutral conductor and for ground-fault protection must be ordered separately, see page 2/27.
2) This disables mechanical or electrical ON commands.

Non－automatic air circuit－breakers，3－and 4－pole，
fixed－mounted and withdrawable design
Selection and ordering data

| Size | Rated current $I_{n}$ | 3－pole |  |  | 4－pole |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Order No． | Basic price | Weight | Order No． | Basic price | Weight |
|  |  | Order No．supplement （8th to 11th and 13th to 16th position of Order No．）must be added． |  | approx． | Order No．supplement （8th to 11th and 13th to 16th position of Order No．）must be added． |  | approx． |
|  |  | For quick selection see below．Further options see pages $2 / 21$ to 2／26． |  | kg | For quick selection see below．Further options see pages $2 / 21$ to $2 / 26$ ． |  | kg |

Withdrawable design，horizontal main circuit－connection

| I | 1250 | 3WT81 20－0ㅁㅁㄴ－ㅁㅁㅁㅁ | 58.000 | 3WT81 24－0ㅁㅁ4－ㅁ口ด | 76.000 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I | 1600 | 3WT81 61－0ㅁㅁㄴ－ㅁㅁㅁ | 61.000 | 3WT81 65－0ㅁㅁ4－ㅁㅁㅁ | 79.000 |
| II | 2500 | 3WT82 52－0ㅁㅁㄴ－ㅁㅁㅁㅁ | 94.000 | 3WT82 56－0ㅁㅁㅁ－ㅁㅁㅁ | 118.000 |
| II | 3200 | 3WT83 22－0ロロロ4－ㅁㅁㅁ | 100.000 | 3WT83 26－0ロロロ4－ロロロロ | 124.000 |

Withdrawable design，horizontal main circuit－connection at top，vertical connection at bottom

＂Options＂and＂Accessories＂see＂Options＂and＂Accessories＂for＂Air－Circuit－Breakers＂，pages 2／21 to 2／30．
1）This disables mechanical or electrical ON commands．
2）Not available for circuit－breakers without guide frame，see also page $2 / 22$ ．

## Options

Selection and ordering data


## 3WT Air Circuit-Breakers up to 3200 A (AC)

## Options

| Design |  | Order No. supplement |  |  |  | Additional price |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 13th to 16th position of Order No. of circuit-breaker (see pages $2 / 18$ to $2 / 20$ ) must be added as listed below |  |  |  |  |  |
|  |  | 3WT8...-.....-■ ■ ■ |  |  |  | 3 -pole | 4-pole |
|  | For withdrawable circuit-breakers without guide frame With door sealing frame IP40 | 5 | A | A | 2 | none | none |
|  | With door sealing frame IP40 and locking device <br> With safety lock device CES instead of OFF button ${ }^{1}$ ) <br> (key removable in OFF position) |  | A | A | 2 |  |  |
|  | For withdrawable circuit-breakers with guide frame With door sealing frame IP40 | 5 | A | A | 2 | none | none |
|  | With door sealing frame IP40, sealing cap over OFF button, and shutter <br> Sealing cap to prevent unauthorized opening, cannot be combined with safety lock | 5 | A | B | 2 |  |  |
|  | With shutter <br> Size I, up to 1600 A <br> Size II, 2000 ... 3200 A |  |  |  |  |  |  |

Size II, 2000 ...3200 A
With door sealing frame IP40,
5 AC 2
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 $2 / 28$.

| With door sealing frame IP40, | 5 A D 2 |
| :--- | :--- |

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 2/28.
With shutter
Size I, up to 1600 A
Size II, 2000 ... 3200 A
With door sealing frame IP40
and locking device
With safety lock device CES instead of OFF button ${ }^{1}$ )
(key removable in OFF position)
With door sealing frame IP40, 5 A F 2

## 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, 2000 ... 3200 A

## With door sealing frame IP40 <br> 5 A G 2

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 2/28.
With door sealing frame IP40
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 2/28.
With shutter
Size I, up to 1600 A
Size II, 2000 ... 3200 A

1) This disables mechanical or electrical $O N$ commands.

## Options




With door sealing frame IP40
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 2/28.

[^0]
## 3WT Air Circuit-Breakers up to 3200 A (AC)

## Options



With door sealing frame IP40 5 A T 2

## 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, 2000 ... 3200 A

## With door sealing frame IP40

## 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 2/28.

## With door sealing frame IP40

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 2/28
With shutter
Size I, up to 1600 A
Size II, 2000 ... 3200 A

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

## Options

| Design |  | Order No. supplement |  |  | Additional price |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 13th to 16th position of Order No. of circuit-breaker (see pages $2 / 18$ to $2 / 20$ ) must be added as listed below |  |  |  |  |
|  |  | 3WT8...-....-■■■■ |  |  |  |  |
|  | For fixed-mounted circuit-breakers With door sealing frame IP40 | 0 | A | A | none | none |
| "ose | With door sealing frame IP40 <br> and locking device <br> With safety lock device CES instead of OFF button ${ }^{1}$ ) <br> (key removable in OFF position) |  | A | B 2 |  |  |
|  | With door sealing frame IP40, sealing cap over OFF button and mutual mechanical interlock for 3WT circuit-breaker, sealing cap to prevent unautorized opening, cannot be combined with safety lock |  | A | C 2 |  |  |
|  | Interlock module with a Bowden wire ( 2 m ); when interlocking three circuit-breakers an additional Bowden wire is required, see page 2/28. |  |  |  |  |  |

With door sealing frame IP40, OAD 2

## 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 2/28.
With door sealing frame IP40, OAE 2
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 2/28

## With door sealing frame IP40,

A F 2
ocking 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 $2 / 28$.

## With door sealing frame IP40 <br> 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
With door sealing frame IP40,
5-digit operating cycles counter,
locking device,
sealing cap over OFF button,

## blocking device,

and mutual mechanical interlock for 3WT circuit-breake
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 2/28
With door sealing frame IP40,
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 $2 / 28$

1) This disables mechanical or electrical ON commands.
2) Locks are available at the manufacturer of the locks.

## 3WT Air Circuit-Breakers up to 3200 A (AC)

## Options



1) This disables mechanical or electrical ON commands.
2) Locks are available at the manufacturer of the locks.

## 3WT Air Circuit-Breakers up to 3200 A (AC)

Accessories/spare parts
Selection and ordering data

| Size | Rated <br> current $I_{\mathrm{n}}$ | 3-pole | Price | Weight <br> approx. | 4-pole |
| :--- | :--- | :--- | :--- | :--- | :--- |

Guide frame for withdrawable design, horizontal main circuit connection, 2 auxiliary supply connectors


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 2/8) Designation | Electronic trip unit version | Primary rated current of the transformer | Required order quantity per circuitbreaker | For 1 set or 1 unit | Price | Weight approx. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A |  | Order No. |  | kg |

Vectorial summation with current transformer in the neutral conductor
Current transformers for 3-pole circuit-breakers ETU8WT,
ETU5WT
Direct detection of ground-fault current by means of a current transformer in the grounded neutral point of the transformer.
Current transformers for 3- and 4-pole circuit-breakers ETU8WT

|  | $\begin{array}{r} 630 \\ 800 \\ 1000 \\ 1250 \\ 1600 \end{array}$ | 1 unit | 3WT98 43-1CD00 <br> 3WT98 43-1CE00 <br> 3WT98 43-1CF00 <br> 3WT98 43-1CG00 <br> 3WT98 43-1CH00 | on req. on req. on req. on req. on req. |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & 2000 \\ & 2500 \\ & 3200 \end{aligned}$ | 1 unit | 3WT98 43-1FJ00 3WT98 43-1FK00 3WT98 43-1FM00 | on req. on req. on req |
| Designation | Rated control supply voltage/ rated operational voltage | Order quantity | For 1 set or 1 unit |  |
|  | AC $50 / 60 \mathrm{~Hz}$ |  |  |  |
| Function tester for electronic trip unit for versions ETU2WT, ETU5WT, ETU8WT | 110-127/220-240 V | 1 unit | 3WT98 47-5JA01 | 1.300 |
| ATSE controller for automatic switchover between two fixed-mounted or withdrawable circuit-breakers |  |  | on request |  |
| Door sealing frame IP40 |  | 1 unit | 3WT98 86-0JA00 | 1.000 |

## 3WT Air Circuit-Breakers up to 3200 A (AC)

## Accessories/spare parts



1) The 3WT98 63-6JE 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.

When retrofitting, the circuit-breaker Order 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 $I_{\mathrm{n}}$ | Size | Number of poles | Required order quantity per circuitbreaker | For 1 set or 1 unit | Price | Weight approx |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

For fixed-mounted and withdrawable circuit-breakers

| Crank handle |  |  |
| :--- | :--- | :--- | :--- |
| For withdrawable | 1 set | 3WT98 84-0JA00 |

Circuit-breaker

| Connecting bars for vertical connection | up to 1250 A |  | 1 | 3-pole and 4-pole | 1 unit $^{3}$ ) | 3WT98 21-7AC00 | 2.000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1600 A |  | 1 | 3 -pole and 4-pole | 1 unit $^{3}$ ) | 3WT98 21-7BC00 | 4.100 |
|  | 2000 A and 2500 A |  | II | $\begin{aligned} & \text { 3-pole } \\ & \text { 4-pole } \end{aligned}$ | $\begin{aligned} & \left.1 \operatorname{set}^{1}\right)^{2} \\ & \left.1 \operatorname{set}^{2}\right) \end{aligned}$ | 3WT98 21-7DA00 <br> 3WT98 21-7DB00 | $\begin{aligned} & 5.500 \\ & 7.400 \end{aligned}$ |
|  | 3200 A |  | II | $\begin{aligned} & \text { 3-pole } \\ & \text { 4-pole } \end{aligned}$ | $\begin{aligned} & \left.1 \operatorname{set}^{1}{ }^{1}\right) \\ & \left.1 \operatorname{set}^{2}\right) \end{aligned}$ | 3WT98 21-7FA00 <br> 3WT98 21-7FB00 | $\begin{aligned} & 4.800 \\ & 6.500 \end{aligned}$ |
| Connecting bars for front-accessible connection Vertical double-hole bar (holes to DIN 43673) | up to 1250 A |  | 1 | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 21-1AA01 | on req. |
|  | 1600 A |  | 1 | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 21-1BA01 | on req. |
|  | 2000 A and 2500 A |  | II | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 21-1DA01 | on req. |
|  | 3200 A |  | 11 | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 21-1FA01 | on req. |
| Auxiliary supply connectors |  |  |  |  | 1 unit | 3WT98 25-1JC00 | 0.080 |
| Blocking device | to prevent opening of the cabinet door with the fixed-mounted circuit-breaker closed |  |  |  | 1 unit | 3WT98 67-2JA00 | 0.700 |
| Conversion set from fixed-mounted to withdrawable variant = single operating mechanism | up to 1600 A up to 1600 A |  | \| | $\begin{aligned} & \text { 3-pole } \\ & \text { 4-pole } \end{aligned}$ | 1 unit 1 unit | 3WT98 88-0GA00 3WT98 88-0HA00 | on req. on req. |
|  | up to 3200 A up to 3200 A |  | $\begin{aligned} & \\| \\ & \text { ॥ } \end{aligned}$ | $\begin{aligned} & \text { 3-pole } \\ & \text { 4-pole } \end{aligned}$ | 1 unit 1 unit | 3WT98 88-0KA00 <br> 3WT98 88-0LA00 | on req. on req. |
| For guide frames |  |  |  |  |  |  |  |
| Connecting bar for additional terminal accessible from the front <br> Vertical double-hole bar (holes to DIN 43673) | up to 1250 A |  | 1 | 3- and 4-pole | 1 unit $^{3}$ ) | 3WT98 23-1AA01 | on req. |
|  | 1600 A |  | 1 | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 23-1BA01 | on req. |
|  | 2000 A and 2500 A |  | 11 | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 23-1DA01 | on req. |
|  | 3200 A |  | II | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 23-1EA01 | on req. |
| Connecting bar for rear vertical connection | up to 1250 A |  | 1 | 3- and 4-pole | 1 unit $^{3}$ ) | 3WT98 23-3AA00 | on req. |
|  | 1600 A |  | 1 | 3 - and 4-pole | 1 unit $^{3}$ ) | 3WT98 23-3BA00 | on req. |
|  | 2000 A and 2500 A |  | II | $\begin{aligned} & \text { 3-pole } \\ & \text { 4-pole } \end{aligned}$ | $\begin{aligned} & \left.1 \operatorname{set}^{1}\right) \\ & \left.1 \operatorname{set}^{2}\right) \end{aligned}$ | 3WT98 23-4AB00 3WT98 23-4AC00 | 2.600 3.500 |
|  | 3200 A |  | II | 3-pole 4-pole | $\begin{aligned} & 1 \text { set }{ }^{1} \text { ) } \\ & \left.1 \text { set }^{2}\right) \end{aligned}$ | 3WT98 23-4BB00 <br> 3WT98 23-4BC00 | $\begin{aligned} & 5.400 \\ & 7.100 \end{aligned}$ |
| Position indicator switch (actuated by withdrawable circuit-breaker) | Connected Test position position |  |  | Precondition |  |  |  |
|  | $\begin{aligned} & 3 \mathrm{NO}+ \\ & 3 \mathrm{NC} \end{aligned}$ | $\begin{aligned} & 2 \mathrm{NO}+ \\ & 2 \mathrm{NC} \end{aligned}$ |  | possible if no pos. switch mounted yet | $\begin{aligned} & 1 \text { set } \\ & =1 \text { unit } \end{aligned}$ | 3WT98 84-1JC10 | on req. |
| Shutters | For 3-pole guide frames |  |  | in contacts for rated current up to size I, 1600 A size II, 2000 A ... 3200 A | 1 unit 1 unit | 3WT98 84-3CA00 3WT98 84-3DA00 | $\begin{aligned} & 0.500 \\ & \text { on req. } \end{aligned}$ |
|  | For 4-pole guide fram |  |  | for rated current up to size I, 1600 A <br> size II, 2000 A ... 3200 A | 1 unit 1 unit | 3WT98 84-3CB00 <br> 3WT98 84-3DB00 | on req. on req. |
| Auxiliary supply connectors | For guide fram | ames - for | are | and retrofitting | 1 unit | 3WT98 27-1JA00 | 0.160 |

For withdrawable circuit-breakers

| Blocking device | to prevent opening of the cabinet door, <br> when circuit-breaker is in connected position | 1 unit | $\mathbf{3 W T 9 8} \mathbf{6 7 - 1 J C 0 0}$ | on req. |
| :--- | :--- | :--- | :--- | :--- |

[^1]
## 3WT Air Circuit-Breakers up to 3200 A (AC)

## Project planning aids

## Characteristic curves

The characteristics 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 immediately 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 approximately 3 to 10 ms . In order to deter-
Tripping characteristics "L" and "S": "S" = definite-time delayed


Tripping characteristics of electronic trip units - version ETU2WT
mine the total break-times of the circuit-breakers, approximately 15 ms must be added to the opening times shown for the arcing time.

Tolerances according to IEC 60947


Tripping characteristics of electronic trip units - version ETU8WT

## Key to illustrations above:

Inverse-time delayed electronic trip unit "L"
$I_{\mathrm{R}} \quad$ Current setting (adjustable)
$I_{\mathrm{N}}$ Current setting ( 50 or $100 \% I_{\mathrm{R}}$ ) for the N conductor
$t_{\mathrm{R}} \quad$ Time-lag class (permanently set to 10 s )

Short-time delayed short-circuit release "S"
$I_{\text {sd }}$ Operating current (adjustable)
$t_{\text {sd }}$ Delay time (adjustable)

## Tripping characteristic "I"



Tripping characteristics of electronic trip units -
versions ETU2WT and ETU8WT
$I_{\mathrm{n}}$ Transformer primary rated current
Instantaneous short-circuit release "I"
$I_{\mathrm{i}} \quad$ Operating current (permanently set)

Tripping characteristic "G": definite-time delayed


Tripping characteristics of electronic trip units version ETU8WT
$I_{\mathrm{n}}$ Transformer primary rated current
Ground-fault release "G"
$I_{\mathrm{g}}$ Operating current (adjustable)
$t_{g}$ Delay time (adjustable)

## Dimensional drawings

3WT circuit-breakers, withdrawable version, 3-pole

## Horizontal connection



a Disconnected position
b Test position
c Connected position
(1) Auxiliary conductor plug-in system
(2) Guide frame
(3) Switchboard door
(4) Slots $(6 \mathrm{~mm}$ deep) for line-side interphase barriers
(5) Holes for attaching the guide frame
(6) Center line of circuit-breaker

## Safety clearances

No additional safety clearance is required to adjacent grounded parts above the circuit-breaker
(on fixed-mounted circuit-breakers identified with 3).
The clearance between the connection point and the support for the busbars must not exceed 250 mm .

| Rated current <br> A | a | b | c | d | e | f |
| :--- | :--- | :--- | :--- | ---: | :--- | :--- |
| 630 up to 1250 | 280 | 320 | 90 | 8 | 60 | 30 |
| 1600 | 280 | 320 | 90 | 15 | 60 | 30 |
| 2000 up to 2500 | 380 | 420 | 120 | 15 | 80 | 40 |
| 3200 | 380 | 420 | 120 | 30 | 100 | 50 |

## Main conductor connection

| Terminal screws with strain washers <br> (inside diameter $=12 \mathrm{~mm}$ to DIN 6769-Fst) | M12 |  |
| :--- | :--- | :--- |
| Recommended tightening torque | Nm | 70 |
| Required strength of screws | 8.8 to DIN 267 |  |

Up to a rated operating voltage of AC 440 V the busbars running vertically (such as in the case of front-accessible connection) do not have to be screened if the busbar system is not arranged above the circuit-breaker. In contrast, live bare conductors and busbars at voltages above AC 440 V that are arranged above the circuitbreaker and when power is supplied from above must be insulated against flashover by interphase barriers or by a busbar cover or by an arc chute cover (use accessory for horizontal or vertical connection only).
Optional electrical equipment directly above (if no arc chute cover is used) or to the side of the circuit-breaker should be protected by a cover. Also after the attachment of additional barriers or covers it must be ensured that the dissipation of heat from the circuit-breaker is not impeded.

## 3WT Air Circuit-Breakers up to 3200 A (AC)

## Project planning aids

3WT circuit-breakers, withdrawable version, 3-pole
Front connection



Double hole, 630 to 1600 A Holes in bars to DIN 43673


Double hole, 2000 to 3200 A Holes in bars to DIN 43673

| Rated current <br> A | a | b | c | d |
| :--- | ---: | ---: | ---: | :--- |
| 630 up to 1250 | 60 | - | 8 | 390 |
| 1600 | 60 | - | 15 | 390 |
| 2000 up to 2500 | 80 | 40 | 20 | 420 |
| 3200 | 100 | 50 | 20 | 420 |

(1) Guide frame
(2) Switchboard door
(3) Slots ( 6 mm deep, 3.5 mm wide) for line-side phase barriers
(4) Center line of circuit-breaker

## For safety clearances see page $\mathbf{2 / 3 1}$.

3WT fixed-mounted circuit-breakers, 3-pole
Horizontal connection


## Front connection

Holes in bars to DIN 43673


| Rated current <br> A | a | b c | d | e | $f$ | $g$ | $h$ | i | k | l |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 630 up to 1250 | 300 | 320 | 90 | 8 | 60 | 30 | - | 8 | 530 | 18 | 40 |
| 1600 | 300 | 320 | 90 | 15 | 60 | 30 | - | 20 | 530 | 18 | 40 |
| 2000 up to 2500 | 400 | 420 | 120 | 15 | 80 | 40 | 40 | 20 | 560 | 22 | 44 |
| 3200 | 400 | 420 | 120 | 30 | 80 | 40 | 40 | 20 | 560 | 22 | 44 |



(1) Clearance for lifting out the arc chute
(2) Space for auxiliary supply connectors
(3) Space above arc chute
(4) Auxiliary supply connectors
(5) Switchboard door
(6) Recessed grip
(7) M8 nut
(8) Slots ( 4 mm deep) for line-side phase barriers
(9) Center line of circuit-breaker

For safety clearances see page $\mathbf{2 / 3 1}$.

## Project planning aids

3WT circuit-breakers, withdrawable version, 4-pole

## Horizontal connection


a Disconnected position
b Test position
c Connected position
(1) Auxiliary conductor plug-in system
(2) Guide frame
(3) Switchboard door
(4) Slots ( 6 mm deep) for line-side phase barriers
(5) Holes for attaching the guide frame
(6) Center line of operator panel

For safety clearances see page $2 / 31$.

| Rated current <br> A | a | b | c | d | e | f | p |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 630 up to 1250 | 370 | 410 | 90 | 8 | 60 | 30 | 140 |
| 1600 | 370 | 410 | 90 | 15 | 60 | 30 | 140 |
| 2000 up to 2500 | 500 | 540 | 120 | 15 | 80 | 40 | 190 |
| 3200 | 500 | 540 | 120 | 30 | 100 | 50 | 190 |

3WT circuit-breakers, withdrawable version, 4-pole
Front connection



Double hole, 630 to 1600 A Holes in bars to DIN 43673


Double hole, 2000 to 3200 A
Holes in bars to DIN 43673

| Rated current <br> A | a | b | c | d | e |
| :--- | ---: | :--- | ---: | :--- | :--- |
| 630 up to 1250 | 60 | - | 8 | 390 | 408 |
| 1600 | 60 | - | 15 | 390 | 408 |
| 2000 up to 2500 | 80 | 40 | 20 | 420 | 445 |
| 3200 | 100 | 50 | 20 | 420 | 445 |

(1) Guide frame
(2) Switchboard door
(3) Slots ( 6 mm deep, 3.5 mm wide)
for line-side phase barriers
(4) Center line of operator panel

For safety clearances see page 2/31.

## Project planning aids

3WT fixed-mounted circuit-breakers, 4-pole
Horizontal connection


(1) Clearance for lifting out the arc chute
(2) Space for auxiliary supply connectors
(3) Space above arc chute
(4) Auxiliary supply connectors
(5) Switchboard door
(6) Recessed grip
(7) Nut M 8
(8) Slots ( 4 mm deep) for line-side phase barriers
(9) Center line of operator panel

For safety clearances see page $\mathbf{2 / 3 1}$.

## Front connection



Double hole
Holes in bars to DIN 43673

| Rated current <br> A | a | b | c | d | e | f | g | h | i | $k$ | l | p |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 630 up to 1250 | 390 | 410 | 90 | 8 | 60 | 30 | - | 8 | 530 | 18 | 40 | 150 |
| 1600 | 390 | 410 | 90 | 15 | 60 | 30 | - | 15 | 530 | 18 | 40 | 150 |
| 2000 up to 2500 | 520 | 540 | 120 | 15 | 80 | 40 | 40 | 20 | 560 | 22 | 44 | 200 |
| 3200 | 520 | 540 | 120 | 30 | 80 | 40 | 40 | 20 | 560 | 22 | 44 | 200 |

3WT circuit-breakers, 3- and 4-pole
Door cut-out for operator panel using the door sealing frame


Door cut-out with edge protector
Cut-out after mounting
the edge protector


Accessories for 3WT circuit-breakers, 3- and 4-pole
Mutual mechanical interlocking (1)/locking device to prevent closing (2),
consisting of lock in the control cabinet door and interlock module with Bowden wire


For withdrawable circuit-breakers


| Clearance for | a | b | c | d | e |
| :--- | :--- | :--- | :--- | ---: | :--- |
| $(1)$ | 90 | 90 | 50 | 65 | 270 |
| $(2)$ | 58 | 215 | 10 | 250 | 115 |

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


| Current transformer | Current <br> trans- <br> former <br> primary <br> rated <br> current <br> $I_{n}$ | Size | A approx. | B | C | D | E | F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3WT98 43-1. . 00 | A |  |  |  |  |  |  |  |
| CD | 630 | 1 | 92 | 60 | 86.5 | 140 | 5... 15 | 107 |
| CE | 800 |  |  |  |  |  |  |  |
| CF | 1000 |  |  |  |  |  |  |  |
| CG | 1250 |  |  |  |  |  |  |  |
| CH | 1600 |  |  |  |  |  |  |  |
| FJ | 2000 | II | 128 | 80 | 99 | 167 | 5... 35 | 136 |
| FK | 2500 |  |  |  |  |  |  |  |
| FM | 3200 |  |  |  |  |  |  |  |

## Schematics

## Example of an overall circuit diagram

Motor/manual operating mechanism, with ready-to-close signaling switch, with electronic trip unit version ETU2WT "LSI", with overvoltage release "r" (F3) or shunt release "f" (F1), with shunt release "f" (F2), with "tripped" signaling switch, with auxiliary switch $2 \mathrm{NO}+2 \mathrm{NC}+2 \mathrm{CO}$, with motor switch


| A1 | Electronic trip unit |
| :--- | :--- |
| S1/S2 | 1st auxiliary switch block |
| S3/S4 | 2nd auxiliary switch block |
| S7 | Ready-to-close |
|  | signaling switch |
| S8 | Storage spring contact |
| S11 | "Tripped" switch |
| F1 | 1st shunt release "f" |
| F2 | 2nd shunt release "f" |
| F3 | Undervoltage release "r" |
| F5 | Trip solenoid |
| M1 | Motor for |
|  | "charging store" |
| P | Storage spring |
| Q01 | Hand-operated lever for |
|  | "charging store" |
| Q1 | Main contacts |
| T1/T2/T3 | Current transformer |
| X100/X200 | Terminals |
| Y1 | Closing solenoid |
| R | Indication and reset button |
|  | for overcurrent tripping |

## Further information

For planning guides with further descriptions relating to design, operating principle, installation and retrofitting see manual
"3WT circuit-breakers for low voltage"
Order No. on request.

## 3VT Molded-Case <br> Circuit-Breakers <br> up to 630 A



|  |  |
| :--- | :--- |
|  |  |
|  |  |
| $3 / 2$ | General data |
| $3 / 14$ | 3-pole |
| $3 / 29$ | 4-pole |
| $3 / 39$ | Options |
| $3 / 40$ | Accessories/spare parts |
| $3 / 42$ | Project planning aids |

## 3VT Molded-Case Circuit-Breakers up to 630 A

General data
Overview

|  |  |  |  |
| :--- | :--- | :--- | :--- |


(1) 3VT Molded-case circuit-breaker
(2) Thermal/magnetic overcurrent trip unit
(3) Electronic overcurrent trip unit
(4) Undervoltage release
(5) Shunt release
(6) Auxiliary/Alarm switches
(7) Motorized operating mechanism
(8) Rotary operating mechanism
(9) Front-operated rotary operating mechanism
(1) Plug-in base
(11) Withdrawable version
(12) Phase barriers
(13) Terminal cover
(44) Extended front busbar connecting bars

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## General data

## Benefits

- The compact design of the 3VT circuit-breakers fulfills in an economic way the high demands of today's electrical distribution systems.
- These circuit-breakers offer a wide range of standard products, space savings and easy operation.
- They are available both in thermal/magnetic (10 A to 630 A) and in electronic versions (160 A to 630 A).


## Application

The different versions of 3VT circuit-breakers are suitable for the following applications:

- Incoming and outgoing circuit-breakers in distribution systems
- Switching and protection devices for motors, transformers and capacitors
- Main control switches and EMERGENCY-STOP switches in conjunction with lockable rotary operating mechanism and terminal covers.

The 3VT circuit-breakers are available in the following versions:

1. For system protection (in 3 and 4 -pole versions)

The overload and short-circuit releases are designed for the protection of cables, leads and non-motor loads.
2. For motor protection (in 3-pole versions)

The overload and short-circuit releases are designed for optimized protection and direct starting of three-phase squirrel-cage motors.

## Standards and specifications

3VT circuit-breakers comply with:
IEC 60947-1
IEC 60947-2
IEC 60947-4.1
IEC 60947-5.1

## Operating conditions

The 3VT circuit-breakers are climate-proof.
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 and damp areas, suitable enclosures must be provided.

## Utilization category

All 3VT circuit-breakers with thermal-magnetic trip unit satisfy utilization category A . The circuit-breakers equipped with an electronic trip unit satisfy the utilization category B.


## Degree of protection

Fixed-mounted circuit-breaker
Fixed-mounted circuit-breaker with screw rear terminals
Plug-in base/withdrawable version -Circuit-breaker

Plug-in base/withdrawable version -
IP20
IP40
IP40
IP20

## Design

- Rated current range from 10 A to 630 A
- No derating or loss of performance up to $40^{\circ} \mathrm{C}$
- Electronic overcurrent trip units from size 250 A (VT250)
- 3 families of internal accessories
- Full range of external accessories

All circuit-breakers are supplied with integrated overcurrent trip units. Auxiliary switches/alarm switches or auxiliary releases are available factory fitted.
The switching capacity is shown on the front of every circuitbreaker.

- Standard switching capacity:
$I_{\mathrm{Cu}}=25$ to 35 kA at AC $50 / 60 \mathrm{~Hz} \mathrm{415/440} \mathrm{~V}$
- High switching capacity:
$I_{\text {Cu }}=50 \mathrm{kA}$ at AC $50 / 60 \mathrm{~Hz} 415 / 440 \mathrm{~V}$
- Very high switching capacity:
$I_{\text {Cu }}=65 \mathrm{kA}$ at AC 50/60 Hz 415/440 V


## 3VT Molded-Case Circuit-Breakers up to 630 A

## Connection

The 3VT circuit-breakers are equipped with incoming and outgoing front-accessible connecting bars which are suitable for fixed and flexible copper bars or cables. These are suitable for connection of standard busbars.
The incoming and outgoing connections for the circuit-breaker can be freely selected and can be used for front or rear connection. The electrical specifications remain the same
Bare conductors at the top connections must be insulated in the arc quenching space that is necessary above the arcing chambers. Phase barriers or terminal covers can be used for this purpose.
For the 3VT circuit-breakers, the connections for the internal accessories (auxiliary releases, auxiliary switches and alarm switches) are supplied with terminal screws.
The auxiliary releases (shunt releases and undervoltage releases), auxiliary switches and alarm switches for all 3VT circuitbreakers can be connected easily and directly.
The motorized operating mechanisms are always equipped with terminals.

## VT63 to VT100 circuit-breakers



## VT100 circuit-breaker

The main components of the VT63 and VT100 circuit-breakers are the three conducting paths with the incoming and outgoing terminals. The fixed and moving contacts are designed in such a way that the contacts are magnetically repelled if there is a short-circuit. In this case and in conjunction with the arcing chambers, a dynamic impedance is created that causes current limiting. This effect brings a reduction in the damaging effects of $I^{2} t$ and $I_{\mathrm{p}}$ energy that arises during short-circuits.
The trip unit is preassembled and equipped with fixed overload releases as well as with fixed short-circuit releases.
To the right and left of the operating mechanism are situated for the auxiliary releases.

## VT160 circuit-breakers



VT160 circuit-breakers

The arrangement of the current path, main contact and switching mechanism as well as internal accessories corresponds to that of the VT63 to VT100 circuit-breakers.
The trip units for the VT160 have the following features:

- The thermal-magnetic overcurrent trip units are available with fixed or adjustable overload releases as well as fixed short-circuit releases.


## VT250 to VT400 circuit-breakers



## VT250 Circuit-breaker

The arrangement of the current path, main contact and switching mechanism as well as internal accessories corresponds to that of the VT63 to VT160 circuit-breakers.
The trip units for the VT250 to VT400 have the following features:

- The thermal-magnetic overcurrent trip units are also available with fixed or adjustable overload releases as well as fixed short-circuit releases.
- Electronic overcurrent trip unit available with adjustable overload and short-circuit releases.


## VT630 circuit-breakers



VT630 circuit-breaker
The arrangement of the current paths and switching mechanism as well as internal accessories corresponds with those of the VT63 to VT400 circuit-breakers.

The VT630 circuit-breakers are available with electronic trip units as well as with thermal-magnetic trip units. The thermal-magnetic is equipped with fixed overload releases as well as with fixed short-circuit releases. The electronic overcurrent trip unit is available with adjustable overload and short-circuit releases.

## General data

## Overcurrent trip unit systems

1. Overcurrent trip unit system of the VT 63 to VT630 circuitbreakers - thermal-magnetic
The overcurrent and short-circuit releases function with bimetallic and magnetic trip units. They are available in fixed set or adjustable versions.
The four-pole circuit-breakers for system protection is equipped with overcurrent trip units for all four poles.
2. Overcurrent trip unit system for VT250 to VT630 circuitbreakers, electronic, ETU
The electronic overcurrent trip unit system consists of:

- Current transformers
- Evaluation electronics with microprocessor
- Tripping solenoid.

An auxiliary power supply is not necessary for the trip unit system.
As is the case for all versions of the 3VT circuit-breakers with electronic trip units, the current transformers are in the same enclosure as the trip units. They send a signal which is proportional to the load current to the electronic overcurrent tripping unit.
All 3VT circuit-breakers with electronic trip units measure the actual r.m.s. current. This type of measurement is the most accurate method. Currents in today's electrical distribution systems with many harmonics are evaluated reliably.
A minimum load current of approx. $20 \%$ of the corresponding rated current $I_{\mathrm{n}}$ of the circuit-breaker is required to activate the microprocessor trip units.
At the output of the electronic overcurrent trip unit module there is a tripping solenoid which trips in the case of overload or shortcircuit.
Abbreviations (functions)
$\left.\begin{array}{lll}\mathrm{L} & =\text { Long Time Delay } & \\ \mathrm{S} & =\text { Overload protection } \\ & =\text { Short Time Delay } & \\ \text { = Short-circuit protection } \\ \text { I } & =\text { Instantaneous } & \\ \text { (short-time delayed) }\end{array}\right\}$

L, S, I, G designations in accordance with IEC 60947

## Internal accessories (auxiliary switches, undervoltage releases, shunt releases)

The 3VT circuit-breakers can be supplied with all the internal accessories (e.g. auxiliary switches, undervoltage releases or shunt releases).

## Fixed-mounted, plug-in or withdrawable version

The 3VT circuit-breakers are available as fixed-mounted circuitbreaker as well as plug-in or withdrawable versions.

## Operating mechanisms

The basic versions of the 3VT circuit-breakers are equipped with a toggle lever as an operating mechanism which is also used as a position indicator. In addition to "ON" and "OFF", "Tripped" is also indicated.
The toggle lever assumes the "tripped" position when the internal tripping mechanism is activated by an overcurrent trip operation, e.g. an overload or short-circuit. The activation of an undervoltage release or shunt release also causes the toggle lever to assume the "tripped" position. The toggle lever must be put into the "OFF/RESET" position before the circuit-breakers can be reclosed. It will then be possible to reset the internal release mechanism and reclose the main contacts on the circuit-breaker.

## Front-operated rotary operating mechanisms

These operating mechanisms have been designed for direct mounting to the circuit-breaker and change the toggle lever movement from a linear to a rotary motion.

## Door-coupling rotary operating mechanisms

Door-coupling rotary operating mechanisms and removable covers are available for circuit-breakers which are installed into control cabinets and distribution boards. These are supplied as complete sets, including an articulated-shaft mechanism.

With regard to the switching status indication and the "RESET" position, the same applies to the rotary operating mechanisms as to the toggle lever. The position of the operator lever (toggle) indicates the status.
All rotary operating mechanisms can be locked in the OFF position with the help of suitable padlocks. This means that all 3VT circuit-breakers which have these operating mechanisms as well as the corresponding terminal covers can be used as main switches.


Front-operated rotary operating mechanism


Door-coupling rotary operating mechanism


Toggle lever operating mechanism positions

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## Motorized operating mechanism

The VT160 to VT630 circuit-breakers can be equipped with motorized operating mechanisms for remote opening and closing during operation.

These devices can be used to block the operating mechanism electrically and mechanically. All remote-controlled mechanisms are equipped with a manual operation option for maintenance purposes.


Motorized operating mechanism

## Auxiliary releases and auxiliary switches

Undervoltage releases


Undervoltage releases
If there is no voltage present, closing of the breaker is not possible. If voltage is not applied to the trip unit, operation of the circuit-breaker will result in no-load switching.

Frequent re-tripping should be avoided because of its adverse effect on the service life of the circuit-breaker.
All undervoltage releases have been designed and tested to fulfill all applicable requirements in accordance with IEC 60947 (release voltage 0.70 to $0.35 U_{e}$, response voltage 0.85 to $1.10 U_{e}$ ).
An attached version is available for the frame sizes VT63, VT100 and VT160.
For the frame sizes VT250, VT400 and VT630 an embedded version is available.
Shunt release


Shunt releases
The shunt release is used for remote tripping of the circuitbreaker.
The coil of the shunt release is designed for short-time operation only. A coil trip is implemented internally.

These devices operate in compliance with IEC 60947 (tripping voltage 0.70 to $\left.1.10 U_{e}\right)$.

| Installation Position of Accessories |  |
| :--- | :--- |
| Left side | Right side |
| - | Alarm switch |
| - | Auxiliary switch |
| - | Auxiliary + Alarm switch |
| - | Two sets of auxiliary switches |
| Shunt trip | - |
| Shunt trip | Alarm switch |
| Shunt trip | Auxiliary switch |
| Shunt trip | Auxiliary + Alarm switch |
| Under voltage release | - |
| Under voltage release | Alarm switch |
| Under voltage release | Auxiliary switch |
| Under voltage release | Auxiliary + Alarm switch |

Possible complements for the insulated accessory subsections in the 3VT circuit-breakers

## 3VT Molded-Case Circuit-Breakers up to 630 A

## General data

Main connections, basic equipment and options


## Main connections

| Type | Fixed-mounted version |  |  | Plug-in version |  | Withdrawable version |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Front terminal | Rear terminals | Extended front terminals | Front terminals | Rear terminals <br> Screw | Front | Rear terminals |  |  |
|  |  | Screw |  |  |  |  | Screw | Horizontal | Vertical |
| VT63 | X | X | X | - | - | - | - | - | - |
| VT100 | X | x | x | - | - | - | - | - | - |
| VT160 | X | X | X | X | X | - | - | - | - |
| VT250 | X | X | X | X | X | - | - | - | - |
| VT400 | X | x | X | X | X | X | X | - | - |
| VT630 | X | X | X | - | - | X | - | X | X |

$x=$ available

- = not available


Front terminals


Extended front terminals


Rear terminals for screw connection


Rear terminals for vertical connection


Rear terminals for horizontal connection

# 3VT Molded-Case Circuit-Breakers up to 630 A 

$\qquad$

## Function

## Current limitation

The 3VT circuit-breakers utilize the design principle of magnetic repulsion of the contacts. The contacts open before the anticipated peak value of the short-circuit current is achieved. The current-limiting effects of the 3VT circuit-breakers provide effective protection for system components against the thermal and dynamic effects of the short-circuit current in the event of an electrical fault.

## Thermal-magnetic overcurrent trip unit



Application: system and motor protection - TM, LI/LIN function
Overload protection (fixed),
short-circuit protection (fixed)

## Application: system and motor protection - TM, LI/LIN function

Overload protection
(adjustable $I_{\mathrm{R}}=0.7$ to $1 \times I_{\mathrm{n}}$ ), short-circuit protection (fixed)

## Electronic overcurrent trip unit



## Application: system and motor protection - ETU, LSI/LSIG ${ }^{1}$ ) function

L - Overload protection (adjustable):
$I_{\mathrm{r}}=0.4-1.0 \times I_{\mathrm{n}}$
S - Short time short-circuit protection (adjustable): $I_{\text {sd }}=1.5 ; 5 ; 8 \times I_{\mathrm{r}}$

## Ground-fault protection

Ground-fault releases " $g$ " sense fault currents that flow to ground and that can cause fire in the plant. Several circuit-breakers connected in series can provide graduated discrimination by means of the adjustable delay time.


I - Short-circuit protection (adjustable): $I_{\mathrm{i}}=2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}}$
G - Ground fault protection (adjustable) ${ }^{1}$ ):
$I_{\mathrm{g}}=0.2 ; 0.4 ; 1.0 \times I_{\mathrm{n}} ;$ OFF
Pre-Alarm: $I_{\mathrm{LC}}=0.7-1.0 \times I_{\mathrm{n}}$


## 3VT Molded-Case Circuit-Breakers up to 630 A

## General data

## Technical specifications



- available
- not available

3VT Molded-Case Circuit-Breakers up to 630 A

General data

|  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| VT160 N | VT160 H | VT250 N | VT250 H | VT400 N | VT400 H | VT630 N | VT630 H | VT630 L |
| 160 |  | 250 |  | 400 |  | 630 |  |  |
| 32, 40, 50, 63, 80, 100, 125, 160 |  | 160, 200, 250 |  | 250, 315, 400 |  | 400, 500, 630 |  |  |
| 690 |  | 690 |  | 690 |  | 690 |  |  |
| 415/440 |  | 415/440 |  | 415/440 |  | 415/440 |  |  |
| 3, 4 |  | 3, 4 |  | 3, 4 |  | 3, 4 |  |  |
| $=I_{\mathrm{n}}$ |  | $=I_{\mathrm{n}}$ |  | $=I_{\mathrm{n}}$ |  | $=I_{\mathrm{n}}$ |  |  |
| 35 | 50 | 35 | 50 | 35 | 50 | 35 | 50 | 65 |
| 26.25 | 37.5 | 35 | 37.5 | 35 | 37.5 | 35 | 37.5 | 48.75 |
| - |  | - |  | 5 |  | 10 |  |  |
| 8 |  | 8 |  | 8 |  | 8 |  |  |
| 5000 |  | 5000 |  | 4000 |  | 2500 |  |  |
| 10000 |  | 10000 |  | 8500 |  | 8500 |  |  |
| ■ |  | ■ |  | ■ |  | $\square$ |  |  |
| $\square$ |  | $\square$ |  | ■ |  | - |  |  |
| A |  | A |  | A/B |  | A/B |  |  |
| AC-15 |  | AC-15 |  | AC-15 |  | AC-15 |  |  |
| $\begin{array}{r} 90 \\ 120 \end{array}$ | $\begin{array}{r} 90 \\ 120 \end{array}$ | $\begin{aligned} & 140 \\ & 184 \end{aligned}$ |  | $\begin{aligned} & 140 \\ & 184 \\ & \hline \end{aligned}$ |  | $\begin{aligned} & 210 \\ & 280 \end{aligned}$ |  |  |
| $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & 120 \\ & 120 \end{aligned}$ | $\begin{aligned} & \left.\hline 170 / 254^{1}\right) \\ & \left.170 / 254^{1}\right) \end{aligned}$ |  | $\begin{aligned} & 254 \\ & 254 \end{aligned}$ |  | $\begin{aligned} & 268 \\ & 268 \end{aligned}$ |  |  |
| $\begin{aligned} & 70 \\ & 70 \end{aligned}$ | $\begin{aligned} & 79 \\ & 79 \end{aligned}$ | $\begin{aligned} & 103.5 \\ & 103.5 \end{aligned}$ |  | $\begin{aligned} & 103.5 \\ & 103.5 \end{aligned}$ |  | $\begin{aligned} & 103.5 \\ & 103.5 \end{aligned}$ |  |  |
| 1.2/1.6 |  | 2.7/3.5 | 4.1/5.5 ${ }^{1}$ ) | 5.1/7.1 |  | 9.6/12.2 |  |  |
| 1.4/1.8 |  | 3.2/4.2 | 4.6/6 ${ }^{1}$ ) | 6.2/8.5 |  | - |  |  |
| - |  | - | - | 6.5/8.7 |  | 12.2/15.3 |  |  |

1) with ETU

## 3VT Molded-Case Circuit-Breakers up to 630 A

## General data

| Type |  |  | VT63 | VT100 | VT160 | VT250 | VT400 | VT630 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Max. rated current $I_{\mathrm{n}}$ |  |  | 63 | 100 | 160 | 250 | 400 | 630 |
| Parameter of thermal overload protection current setting at various ambient temperatures |  |  |  |  |  |  |  |  |
| at $+10^{\circ} \mathrm{C}$ |  | $\times I_{n}$ | 1.19 | 1.20 | 1.15 | 1.14 | 1.13 | 1.12 |
| at $+20^{\circ} \mathrm{C}$ |  | $\times I_{n}$ | 1.13 | 1.14 | 1.10 | 1.10 | 1.11 | 1.10 |
| at $+30^{\circ} \mathrm{C}$ |  | $\times I_{n}$ | 1.06 | 1.08 | 1.05 | 1.05 | 1.04 | 1.03 |
| at $+40^{\circ} \mathrm{C}$ |  | $\times I_{\mathrm{n}}$ | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| at $+50^{\circ} \mathrm{C}$ |  | $\times I_{\mathrm{n}}$ | 0.93 | 0.93 | 0.94 | 0.95 | 0.92 | 0.90 |
| at $+55^{\circ} \mathrm{C}$ |  | $\times I_{\mathrm{n}}$ | 0.90 | 0.89 | 0.91 | 0.91 | 0.88 | 0.85 |
| at $+60^{\circ} \mathrm{C}$ |  | $\times I_{\mathrm{n}}$ | 0.87 | 0.85 | 0.88 | 0.87 | 0.85 | 0.80 |
| Power loss of the circuit-breaker |  |  |  |  |  |  |  |  |
| Three-pole total power loss |  |  |  |  |  |  |  |  |
| Fixed-mounted version <br> thermal-magnetic ov electronic overcurre | thermal-magnetic overcurrent trip unit electronic overcurrent trip unit ETU | W 25 W- | 25 | 25 | 30 | $50$ | $135$ | $\begin{array}{r} 180 \\ 90 \end{array}$ |
| Plug-in version <br> thermal-magnetic ov electronic overcurre | thermal-magnetic overcurrent trip unit electronic overcurrent trip unit ETU | $\begin{aligned} & \text { W } \\ & \text { W } \end{aligned}$ |  | - | $40$ | $\begin{aligned} & 65 \\ & 55 \end{aligned}$ | $\begin{array}{r} 165 \\ 90 \end{array}$ | $\begin{aligned} & 205 \\ & 115 \end{aligned}$ |
| Withdrawable version <br> thermal-magnetic ov electronic overcurre | thermal-magnetic overcurrent trip unit electronic overcurrent trip unit ETU | W |  | - | - | - | $\begin{array}{r} 165 \\ 90 \end{array}$ | $\begin{aligned} & 205 \\ & 115 \end{aligned}$ |
| Shunt release |  |  |  |  |  |  |  |  |
| Range of supply voltage |  |  | 0.7-1.1 $\times U_{S}$ |  |  |  |  |  |
| Power loss at rated control supply voltage $U_{\mathrm{S}}$ | AC 220 V 50 Hz VA |  | 150 |  |  |  |  |  |
|  | AC 380 V 50 Hz VA | VA | 150 |  |  |  |  |  |
|  | DC 110 V | W | 150 |  |  |  |  |  |
|  | DC 220 V | W 150 |  |  |  |  |  |  |
| Undervoltage release |  |  |  |  |  |  |  |  |
| Power loss at rated operating voltage $U_{\mathrm{e}}$ | AC 220 V 50 Hz | VA 10 |  | 10 |  |  |  |  |
|  | AC 380 V 50 Hz | VA | 10 |  |  |  |  |  |
|  | DC 110 V | W 4 | 4 |  |  |  |  |  |
|  | DC 220 V | W | 4 |  |  |  |  |  |
| Operating voltage |  | $0.35-0.7 \times U_{e}$ |  |  |  |  |  |  |
| Release (circuit-breaker is tripped) |  | $0.35 \times U_{\text {e }}$ |  |  |  |  |  |  |
| Pick-up (circuit-breaker can be closed) |  | $0.85-1.1 \times U_{\text {e }}$ |  |  |  |  |  |  |
| Auxiliary contacts |  |  |  |  |  |  |  |  |
| Conventional thermal current $I_{\text {th }}$ |  | A 4 |  |  |  | 6 |  |  |
| Rated insulation voltage $U_{i}$ | AC 50 Hz | $\checkmark$ | 250 |  |  | 380 |  |  |
| Rated current at rated operating voltage $U_{e}$ | AC 220 V 50 Hz | A 3 |  |  |  | 6 |  |  |
|  | AC $380 \vee 50 \mathrm{~Hz}$ | A - |  |  |  | 3.5 |  |  |
|  | DC 110 V | A | - |  |  | - |  |  |
|  | DC 220 V | A 0.14 |  |  |  | 0.2 |  |  |
| Motorized operating mechanism |  |  |  |  |  |  |  |  |
| Range of supply voltage |  |  | 0.85-1.1 $\times U_{S}$ |  |  |  |  |  |
| Power loss at rated control supply voltage $U_{\mathrm{S}}$ : Inrush power consumption/ normal power | AC 220 V 50 Hz | VA | 200/110 |  |  |  |  |  |
|  | AC 380 V 50 Hz | VA | 200/110 |  |  |  |  |  |
|  | DC 110 V | W 200/110 |  |  |  |  |  |  |
|  | DC 220 V | W 200/110 |  |  |  |  |  |  |
| Closing time |  | s 0.5 |  |  |  |  |  |  |
| Opening time |  | s 0.5 |  |  |  |  |  |  |

# 3VT Molded-Case Circuit-Breakers up to 630 A 

General data
Safety distance

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Max. rated current } I_{\mathrm{n}} \\ & \text { A } \end{aligned}$ | A | B | c | D | E to metal body | $\begin{aligned} & \hline \text { F } \\ & \text { to insulator } \end{aligned}$ |
| 63 | 0 | 0 | 20 | 20 | 50 | 25 |
| 100 | 0 | 0 | 20 | 20 | 50 | 25 |
| 160 | 0 | 0 | 20 | 20 | 50 | 30 |
| 250 | 0 | 0 | 25 | 20 | 100 | 40 |
| 400 | 0 | 0 | 25 | 20 | 100 | 40 |
| 630 | 0 | 0 | 25 | 20 | 100 | 40 |

Terminals for cable connection


Cross section of conductors for connecting with main circuit of circuit-breakers and cable size for terminal connection

| Rated <br> current | Cable size <br> Cross-section | Quantity |  |
| :---: | :---: | :--- | :--- |
| Am |  |  |  |

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

## Selection and ordering data

Fixed-mounted circuit-breakers for system and motor protection,
thermal-magnetic overcurrent trip units


# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 3-pole

Fixed-mounted circuit-breakers for system and motor protection, thermal-magnetic overcurrent trip units

| Type | Rated current $I_{\mathrm{n}}$ A | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ A | Setting current of instantaneous short-circuit release "I" $I_{\mathrm{i}}$ <br> A | kA | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | kA | Very high switching capacity L <br> $I_{\text {cu }}$ at AC $415 / 440 \mathrm{~V}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic | kA | Order No. | Basic |  | Order No. | Basic Price |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page 3/39 | Price |  | Order No. supplement required, see page $3 / 39$ |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions with permanently set thermal overload releases, and permanently set short-circuit releases |  |  |  |  |  |  |  |  |  |  |
| VT 160 | 32 | 32 | 500 | 35 | $\begin{aligned} & \text { 3VT82 03-1AA03-..A2 } \\ & \text { 3VT82 04-1AA03-..A2 } \end{aligned}$ |  |  |  | - |  | - |  |
|  | 40 | 40 | 500 |  |  |  |  |  |  |  |  |  |
|  | 50 | 50 | 500 | 35 | 3VT82 05-1AA03-..A2 |  |  |  |  |  |  |  |
|  | 63 | 63 | 630 | 35 | 3VT82 06-1AA03-..A2 |  |  |  |  |  |  |  |
|  | 80 | 80 | 800 |  | 3VT82 08-1AA03-..A2 |  |  |  |  |  |  |  |
|  | 100 | 100 | 1000 |  | 3VT82 10-1AA03-..A2 |  |  |  |  |  |  |  |
|  | $125$ | $125$ | $1250$ | 35 | 3VT82 12-1AA03-...A2 |  |  |  |  |  |  |  |
|  | 160 | 160 | 1600 | 35 | 3VT82 16-1AA03-..A2 |  |  |  |  |  |  |  |
|  |  | Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions with adjustable thermal overload releases, and permanently set short-circuit releases |  |  |  |  |  |  |  |  |  |  |
| VT 160 | 32 | 22.4-32 | 500 |  | - |  | 5050505050505050 | 3VT82 03-2BA03-..A2 <br> 3VT82 04-2BA03-..A2 <br> 3VT82 05-2BA03-..A2 <br> 3VT82 06-2BA03-..A2 <br> 3VT82 08-2BA03-..A2 <br> 3VT82 10-2BA03-..A2 <br> 3VT82 12-2BA03-..A2 <br> 3VT82 16-2BA03-..A2 |  |  | - |  |
|  | 40 | 28-40 | 500 |  |  |  |  |  |  |  |  |  |
|  | 50 | 35-50 | 500 |  |  |  |  |  |  |  |  |  |
|  | 63 | 44.1-63 | 630 |  |  |  |  |  |  |  |  |  |
|  | 80 | 56-80 | 800 |  |  |  |  |  |  |  |  |  |
|  | 100 | 70-100 | 1000 |  |  |  |  |  |  |  |  |  |
|  | $125$ | 87.5-125 | 1250 |  |  |  |  |  |  |  |  |  |
|  | 160 | 112-160 |  |  |  |  |  |  |  |  |  |  |
|  |  | Circuit-breakers for motor protection, thermal-magnetic overcurrent trip unit, LI functions with permanently set thermal overload releases, and permanently set short-circuit releases |  |  |  |  |  |  |  |  |  |  |
| VT 160 |  |  |  |  |  |  |  | - |  |  | - |  |
|  | 63 | $63$ | 756 | 35 | 3VT82 06-1CA03-..A2 |  |  |  |  |  |  |  |
|  | 80 | 80 | 960 |  | 3VT82 08-1CA03-..A2 |  |  |  |  |  |  |  |
|  | 100 | 100 | 1200 |  | 3VT82 10-1CA03-..A2 |  |  |  |  |  |  |  |
|  | 125 | 125 | 1500 |  | 3VT82 12-1CA03-..A2 |  |  |  |  |  |  |  |
|  | 160 | 160 | 1920 | 35 | 3VT82 16-1CA03-..A2 |  |  |  |  |  |  |  |
| I |  | Circuit-breakers for motor protection, thermal-magnetic overcurrent trip unit, LI functions with adjustable thermal overload releases, and permanently set short-circuit releases |  |  |  |  |  |  |  |  |  |  |
| VT 160 | 50 | $35-50$ | 600 |  | - |  | 50 | 3VT82 05-2DA03- |  |  | - |  |
|  | 63 | 44.1-63 | 756 |  |  |  | 50 | 3VT82 06-2DA03- |  |  |  |  |
|  | 80 | 56-80 | 960 |  |  |  | 50 | 3VT82 08-2DA03- |  |  |  |  |
|  | 100 | 70-100 | 1200 |  |  |  | 50 | 3VT82 10-2DA03- |  |  |  |  |
|  | 125 | 87.5-125 | 1500 |  |  |  | 50 | 3VT82 12-2DA03- |  |  |  |  |
|  | 160 | 112-160 | 1920 |  |  |  |  | 3VT82 16-2DA03- |  |  |  |  |

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

Fixed-mounted circuit-breakers for system and motor protection,
thermal-magnetic overcurrent trip units


# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 3-pole

Fixed-mounted circuit-breakers for system and motor protection, thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

Fixed-mounted circuit-breakers for system and motor protection, electronic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\text {R }}$ | Setting current of instantaneous shortcircuit release " 1 " <br> $I_{\mathrm{i}}$ | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{c u}$ at AC 415/440 V |  |  |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page 3/39 | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A | A | A | kA |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSI functions with adjustable thermal overload releases, and adjustable short-circuit releases

| VT 400 | 250 | $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ | 3VT84 25-1EA03-..A2 | 50 | 3VT84 25-2EA03-..A2 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 315 | $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{I}} 35$ 3VT84 31-1EA03-..A2 | 50 3VT84 31-2EA03-..A2 |  |  | 400 - 0.4-1.0 $\times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 40-1EA03-..A2 50 3VT84 40-2EA03- A2



Circuit-breakers for system protection, electronic overcurrent trip unit, LSI functions
with adjustable thermal overload releases, and adjustable short-circuit releases

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 3-pole

Plug-in circuit-breakers with front terminals for system and motor protection,
thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

Plug-in circuit-breakers with front terminals for system and motor protection,
thermal-magnetic overcurrent trip units


# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 3 -pole

Plug-in circuit-breakers with front terminals for system and motor protection,
thermal-magnetic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous shortcircuit release "I" $I_{i}$ | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A | A | A | kA |  |  | kA |  |  | kA |  |  |


ircuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions
with permanently set thermal overload releases, and permanently set short-circuit releases

| VT 400 | 250 | 250 | 2500 | 35 | 3VT84 25-1AA03-..F2 | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 315 | 315 | 3150 | 35 | 3VT84 31-1AA03-..F2 |  |  |
|  | 400 | 400 | 4000 | 35 | 3VT84 40-1AA03-..F2 |  |  |

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions
with adjustable thermal overload releases, and permanently set short-circuit releases


Circuit-breakers for motor protection, thermal-magnetic overcurrent trip unit, LI functions with permanently set thermal overload releases, and permanently set short-circuit releases

| VT 400 | 250 | 250 | 3000 | 35 | 3VT84 25-1CA03-..F2 | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 315 | 315 | 3780 | 35 | 3VT84 31-1CA03-..F2 |  |
|  | 400 | 400 | 4800 | 35 | 3VT84 40-1CA03-..F2 |  |


Circuit-breakers for motor protection, thermal-magnetic overcurrent trip unit, LI functions with adjustable thermal overload releases, and permanently set short-circuit releases

| VT 400 | 250 | 175 | -250 | 3000 |
| :--- | :--- | :--- | :--- | :--- |
|  | 315 | $220.5-315$ | 3780 |  |
|  | 400 | 280 | -400 | 4800 |

[^2]50 3VT84 25-2DA03-..F2
Plug-in circuit-breakers with front terminals for system and motor protection,
electronic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous shortcircuit release "I" $I_{\mathrm{i}}$ | Standard switching capacity N <br> $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A | A | A |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSI functions
with adjustable thermal overload releases, and adjustable short-circuit releases

| $\begin{array}{ll} \text { VT } 250 & 160 \\ & 200 \\ & 250 \\ \hline \end{array}$ | $\begin{aligned} & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \\ & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \\ & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \\ & \hline \end{aligned}$ | 3VT83 16-1EA03-..F2 3VT83 20-1EA03-..F2 3VT83 25-1EA03-..F2 | $\begin{aligned} & 50 \\ & 50 \\ & 50 \end{aligned}$ | 3VT83 16-2EA03-..F2 3VT83 20-2EA03-..F2 3VT83 25-2EA03-..F2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Circuit-breakers for system and with adjustable thermal overload | d motor protection, ele releases, and adjustabl |  | urrent trip unit, LSI fu releases |  |
| $\begin{array}{ll} \text { VT } 400 & 250 \\ 315 \\ & 400 \end{array}$ | $\begin{aligned} & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \\ & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \\ & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \end{aligned}$ | 3VT84 25-1EA03-..F2 3VT84 31-1EA03-..F2 3VT84 40-1EA03-..F2 | 50 50 50 | 3VT84 25-2EA03-..F2 3VT84 31-2EA03-..F2 3VT84 40-2EA03-..F2 | - |

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

Plug-in circuit-breakers with rear terminals for system and motor protection, thermal-magnetic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous short-circuit release "I" $I_{i}$ | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic | kA | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A |  |  | kA |  |  |  |  |  | kA |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions
with permanently set thermal overload releases, and permanently set short-circuit releases

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions

with adjustable thermal overload releases, and permanently set short-circuit releases

| VT 160 | 32 | 32 | 500 | 35 | 3VT82 03-1AA03-..G2 |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  | 40 | 40 | 500 | 35 | 3VT82 04-1AA03-..G2 |
|  | 50 | 50 | 500 | 35 | 3VT82 05-1AA03-..G2 |
|  | 63 | 63 | 630 | 35 | 3VT82 06-1AA03-..G2 |
|  | 80 | 80 | 800 | 35 | 3VT82 08-1AA03-..G2 |
|  | 100 | 100 | 1000 | 35 | 3VT82 10-1AA03-..G2 |
|  | 125 | 125 | 1250 | 35 | 3VT82 12-1AA03-..G2 |

VT 16032

| 32 | $22.4-32$ | 500 |
| ---: | ---: | ---: |
| 40 | $28-40$ | 500 |
| 50 | $35-50$ | 500 |
| 63 | $44.1-63$ | 630 |
| 80 | $56-80$ | 800 |
| 100 | $70-100$ | 1000 |
| 125 | $87.5-125$ | 1250 |
| 160 | $112-160$ | 1600 |

3VT82 03-2BA03-..G2 3VT82 04-2BA03-..G2 3VT82 05-2BA03-..G2 3VT82 06-2BA03-..G2 3VT82 06-2BA03-..G2 3VT82 10-2BA03-..G2 3VT82 12-2BA03-..G2 3VT82 16-2BA03-..G2


Circuit-breakers for motor protection, thermal-magnetic overcurrent trip unit, LI functions
with permanently set thermal overload releases, and permanently set short-circuit releases

| $*$ | VT 160 | 50 | 50 | 600 | 35 |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 3VT82 05-1CA03-..G2 |  |  |  |  |  |
|  | 63 | 63 | 756 | 35 | 3VT82 06-1CA03-..G2 |
|  | 80 | 80 | 960 | 35 | 3VT82 08-1CA03-..G2 |
|  | 100 | 100 | 1200 | 35 | 3VT82 10-1CA03-.G2 |
|  | 125 | 125 | 1500 | 35 | 3VT82 12-1CA03-..G2 |
|  | 160 | 160 | 1920 | 35 | 3VT82 16-1CA03-..G2 |



Circuit-breakers for motor protection, thermal-magnetic overcurrent trip unit, LI functions with adjustable thermal overload releases, and permanently set short-circuit releases

| VT 160 | 50 | 35 | -50 | 600 |
| ---: | ---: | ---: | ---: | ---: |
|  | 63 | $44.1-63$ | 756 |  |
|  | 80 | 56 | -80 | 960 |
|  | 100 | 70 | -100 | 1200 |
|  | 125 | $87.5-125$ | 1500 |  |
|  | 160 | 112 | -160 | 1920 |

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 3 -pole

Plug-in circuit-breakers with rear terminals for system and motor protection,
thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

Plug-in circuit-breakers with rear terminals for system and motor protection, thermal-magnetic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous shortcircuit release "I" $I_{\mathrm{i}}$ |  | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A | A | A | kA |  |  | kA |  |  | A |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions
with permanently set thermal overload releases, and permanently set short-circuit releases


Plug-in circuit-breakers with rear terminals for system and motor protection,
electronic overcurrent trip units

with adjustable thermal overload releases, and adjustable short-circuit releases

| VT 250 160 <br> 200  <br> 250  | $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ $0.4-1.0 \times I_{n} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ | 3VT83 16-1EA03-..G2 3VT83 20-1EA03-..G2 3VT83 25-1EA03-..G2 | 50 50 50 | 3VT83 16-2EA03-..G2 3VT83 20-2EA03-..G2 3VT83 25-2EA03-..G2 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Circuit-breakers for system an with adjustable thermal overload | d motor protection, ele releases, and adjustabl |  | rrent trip unit, LSI fun eleases |  |
| $\begin{array}{ll} \text { VT } 400 & 250 \\ & 315 \\ 400 \end{array}$ | $\begin{aligned} & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \\ & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \\ & 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35 \end{aligned}$ | 3VT84 25-1EA03-..G2 <br> 3VT84 31-1EA03-..G2 <br> 3VT84 40-1EA03-..G2 | 50 50 50 | 3VT84 25-2EA03-..G2 <br> 3VT84 31-2EA03-..G2 <br> 3VT84 40-2EA03-..G2 | - |

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 3-pole

Withdrawable circuit-breakers with front terminals for system and motor protection, thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

Withdrawable circuit-breakers with front terminals for system and motor protection, electronic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous shortcircuit release "I" $I_{i}$ |  | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page 3/39 | Price |
|  | A | A | A | kA |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSI functions with adjustable thermal overload releases, and adjustable short-circuit releases

T $400250 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 25-1EA03-..H2
$315 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 31-1EA03-..H2 $400 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 40-1EA03-..H2

Circuit-breakers for system protection, electronic overcurrent trip unit, LSI functions

with adjustable thermal overload releases, and adjustable short-circuit releases

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 3-pole

## Withdrawable circuit-breakers with rear terminals for system and motor protection,

 thermal-magnetic overcurrent trip units| Type | Rated current $I_{n}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ <br> A | Setting current of instantaneous short-circuit release "I" $I_{i}$ | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic | kA | Order No. | Basic | kA | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page 3/39 | Price |
|  | A |  | A | kA |  |  |  |  |  |  |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions
with permanently set thermal overload releases, and permanently set short-circuit releases,
rear terminals - screw version

| VT 400 | 250 | 250 | 2500 | 35 | 3VT84 25-1AA03-..J2 |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 315 | 315 | 3150 | 35 | 3VT84 31-1AA03-..J2 |

$400400 \quad 4000 \quad 35$ 3VT84 40-1AA03-..J2


Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions
with adjustable thermal overload releases, and permanently set short-circuit releases,
rear terminals - screw version



Circuit-breakers for motor protection, thermal-magnetic overcurrent trip unit, LI functions with adjustable thermal overload releases, and permanently set short-circuit releases, rear terminals - screw version

| $\begin{array}{rr} \text { VT } 400 & 250 \\ & 315 \\ 400 \end{array}$ | $\begin{array}{ll} 175 & -250 \\ 220.5-315 \\ 280 & -400 \end{array}$ | $\begin{aligned} & 3000 \\ & 3780 \\ & 4800 \end{aligned}$ |  | - | $\begin{aligned} & 50 \\ & 50 \\ & 50 \end{aligned}$ | 3VT84 25-2DA03-..J2 3VT84 31-2DA03-..J2 3VT84 40-2DA03-..J2 | - |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions with permanently set thermal overload releases, and permanently set short-circuit releases, rear terminals - horizontal |  |  |  |  |  |  |  |
| $\begin{array}{ll} \text { VT } 630 & 400 \\ & 500 \\ & 630 \end{array}$ | $\begin{aligned} & 400 \\ & 500 \\ & 630 \end{aligned}$ | $\begin{aligned} & 4000 \\ & 5000 \\ & 6300 \end{aligned}$ |  | 3VT85 40-1AA03-..K2 <br> 3VT85 50-1AA03-..K2 <br> 3VT85 63-1AA03-..K2 | 50 50 50 | 3VT85 40-2AA03-..K2 <br> 3VT85 50-2AA03-..K2 <br> 3VT85 63-2AA03-..K2 | $\begin{aligned} & 65 \\ & 65 \\ & 65 \end{aligned}$ | 3VT85 40-3AA03-..K2 <br> 3VT85 50-3AA03-..K2 <br> 3VT85 63-3AA03-..K2 |



VT 630400
Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LI functions with permanently set thermal overload releases, and permanently set short-circuit releases,
rear terminals - vertical

| 400 | 400 | 4000 |
| :--- | :--- | :--- |
| 500 | 500 | 5000 |
| 630 | 630 | 6300 |

3VT85 40-1AA03-..L2
3VT85 50-1AA03-..L2
3VT85 63-1AA03-..L2

3VT85 40-2AA03-..L2
3VT85 50-2AA03-..L2
3VT85 63-2AA03-..L2

3VT85 40-3AA03-..L2
65 3VT85 50-3AA03-..L2
65 3VT85 63-3AA03-..L2

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 3 -pole

Withdrawable circuit-breakers with rear terminals for system and motor protection, electronic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous shortcircuit release "I" $I_{i}$ |  | Standard switching capacity N <br> $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity $L$ <br> $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A | A | A | kA |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSI functions with adjustable thermal overload releases, and adjustable short-circuit releases,
rear terminal - screw version

| VT 630400 | 0.4-1.0 $\times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 40-1EA03-..K2 | 50 3VT85 40-2EA03-..K2 | 65 3VT85 40-3EA03-..K2 |
| :---: | :---: | :---: | :---: |
| 500 | 0.4-1.0 $\times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 50-1EA03-..K2 | 50 3VT85 50-2EA03-..K2 | 65 3VT85 50-3EA03-..K2 |
| 630 | 0.4-1.0 $\times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 63-1EA03-..K2 | 50 3VT85 63-2EA03-..K2 | 65 3VT85 63-3EA03-..K2 |



Circuit-breakers for system protection, electronic overcurrent trip unit, LSI functions
with adjustable thermal overload releases, and adjustable short-circuit releases,
rear terminal - vertical

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 4-pole

Fixed-mounted circuit-breakers for system protection, thermal-magnetic overcurrent trip units

| Type | Rated current $I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ A | Setting current of instantaneous short-circuit release "I" $I_{\mathrm{i}}$ | kA | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page 3/39 | Price |  | Order No. supplement required, see page $3 / 39$ | Price | Order No. supple ment required, see page $3 / 39$ | Price |
|  | A |  |  |  |  |  | kA |  |  |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions with permanently set thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)
VT 63

| 10 | 10 | 500 | 25 | 3VT80 10-1AA04-..A2 |
| :--- | :--- | :--- | :--- | :--- |
| 16 | 16 | 500 | 25 | 3VT80 16-1AA04-..A2 |
| 20 | 20 | 500 | 25 | 3VT80 20-1AA04.-.A2 |
| 25 | 25 | 500 | 25 | 3VT80 25-1AA04..A2 |
| 32 | 32 | 500 | 25 | 3VT80 32-1AA04-..A2 |
| 40 | 40 | 500 | 25 | 3VT80 40-1AA04-..A2 |
| 50 | 50 | 500 | 25 | 3VT80 50-1AA04-..A2 |
| 63 | 63 | 630 | 25 | 3VT80 63-1AA04-..A2 |


| 50 | 3VT80 10-2AA04-..A2 |
| :--- | :--- |
| 50 | 3VT80 162AA04-..A2 |
| 50 | 3VT80 20-2AA04-..A2 |
| 50 | 3VT80 25-2AA04-.A2 |
| 50 | 3VT80 32-2AA04-..A2 |
| 50 | 3VT80 40-2AA04-..A2 |
| 50 | 3VT80 50-2AA04-..A2 |
| 50 | 3VT80 63-2AA04-..A2 |

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions with permanently set thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)

| VT 100 | 32 |
| :---: | :---: |
|  | 40 |
|  | 63 |
|  | 80 |
|  | 100 |
|  |  |
|  |  |
|  |  | 3VT81 03-1AA04-..A2

3VT81 04-1AA04-..A2
3VT81 05-1AA04-.A2
3VT81 06-1AA04-.A2
3VT81 08-1AA04-.A2
3VT81 10-1AA04-..A2

| 50 | 3VT81 03-2AA04-..A2 |
| :--- | :--- |
| 50 | 3VT81 04-2AA04-..A2 |
| 50 | 3VT81 05-2AA04-..A2 |
| 50 | 3VT81 06-2AA04-..A2 |
| 50 | 3VT81 08-2AA04-..A2 |
| 50 | 3VT81 10-2AA04-..A2 |

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions with permanently set thermal overload releases, permanently set short-circuit releases, and with "N" overload and short-circuit releases (100\%)

| VT 160 | 32 | 32 | 500 | 35 | 3VT82 03-1AA04-..A2 |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  | 40 | 40 | 500 | 35 | 3VT82 04-1AA04..A2 |
|  | 50 | 50 | 500 | 35 | 3VT82 05-1AA04-.A2 |
|  | 63 | 63 | 630 | 35 | 3VT82 06-1AA04-..A2 |
|  | 80 | 80 | 800 | 35 | 3VT82 08-1AA04-..A2 |
|  | 100 | 100 | 1000 | 35 | 3VT82 10-1AA04-..A2 |
|  | 125 | 125 | 1250 | 35 | 3VT82 12-1AA04-..A2 |
|  | 160 | 160 | 1600 | 35 | 3VT82 16-1AA04-..A2 |

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
 with adjustable thermal overload releases, permanently set short-circuit releases, and with "N" overload and short-circuit releases (100\%)

| 32 | $22.4-32$ | 500 |
| ---: | ---: | ---: |
| 40 | $28-40$ | 500 |
| 50 | $35-50$ | 500 |
| 63 | $44.1-63$ | 630 |
| 80 | $56-80$ | 800 |
| 100 | 70 | -100 |
| 125 | $87.5-125$ | 1250 |
| 160 | $112-160$ | 1600 |

3VT82 03-2BA04-..A2 3VT82 04-2BA04-..A2 3VT82 05-2BA04-..A2 3VT82 06-2BA04-..A2 3VT82 08-2BA04-..A2 3VT82 10-2BA04-..A2 3VT82 12-2BA04-..A2 3VT82 16-2BA04-..A2

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 4-pole

Fixed-mounted circuit-breakers for system and motor protection, thermal-magnetic overcurrent trip units


Fixed-mounted circuit-breakers for system and motor protection,
electronic overcurrent trip units



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSIG functions
with adjustable thermal overload releases, and adjustable short-circuit releases

| $0.4-1.0 \times I_{\mathrm{n}}$ | $2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 25-1EA04-..A2 | 50 3VT84 25-2EA04-..A2 |
| :--- | :--- | :--- |
| $0.4-1.0 \times I_{\mathrm{n}}$ | $2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 31-1EA04-..A2 | 50 3VT84 31-2EA04-..A2 |
| $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 40-1EA04-..A2 | 50 3VT84 40-2EA04-..A2 |  |

0.4-10 $\times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 40-1EA04- A2 50 3VT84 40-2EA04-.A2

Circuit-breakers for system protection, electronic overcurrent trip unit, LSIG functions
with adjustable thermal overload releases, and adjustable short-circuit releases

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 4 -pole

Plug-in circuit-breakers with front terminals for system protection,
thermal-magnetic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous short-circuit release "I" $I_{i}$ | Standard switching capacity N $I_{\text {cu }}$ at AC $415 / 440 \mathrm{~V}$ |  |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  | Very high switching capacity L $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price | Order No. supplement required, see page $3 / 39$ | Price |
|  | A |  | A | kA | kA |  |  |  |  |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with permanently set thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)

| $*$ | VT 160 | 32 | 32 | 500 | 35 |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  | 3VT82 03-1AA04-..F2 |  |  |  |  |
|  | 40 | 40 | 500 | 35 | 3VT82 04-1AA04-..F2 |
|  | 50 | 50 | 500 | 35 | 3VT82 05-1AA04-.F2 |
|  | 63 | 63 | 630 | 35 | 3VT82 06-1AA04-.F2 |
|  | 80 | 80 | 800 | 35 | 3VT82 08-1AA04-.F2 |
|  | 100 | 100 | 1000 | 35 | 3VT82 10-1AA04-..F2 |
|  | 125 | 125 | 1250 | 35 | 3VT82 12-1AA04-.F2 |
|  | 160 | 160 | 1600 | 35 | 3VT82 16-1AA04-..F2 |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions with adjustable thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)

## VT 160

| 32 | $22.4-32$ | 500 |
| ---: | ---: | ---: |
| 40 | $28-40$ | 500 |
| 50 | $35-50$ | 500 |
| 63 | $44.1-63$ | 630 |
| 80 | $56-80$ | 800 |
| 100 | $70-100$ | 1000 |
| 125 | $87.5-125$ | 1250 |
| 160 | $112-160$ | 1600 |

3VT82 16-2BA04-..F2

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 4-pole

Plug-in circuit-breakers with front terminals for system and motor protection, thermal-magnetic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous shortcircuit release "I" $I_{i}$ | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L $I_{\text {cu }}$ at AC $415 / 440 \mathrm{~V}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  | Order No. supple ment required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supple ment required, see page $3 / 39$ | Price |
|  | A | A | A |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with permanently set thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)

| VT 250 | 160 | 160 | 1600 | 35 | 3VT83 16-1AA04-..F2 | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 200 | 200 | 2000 | 35 | 3VT83 20-1AA04-..F2 |  |  |
|  | 350 | 250 | 2500 | 35 | 3VT83 25-1AA04-.F2 |  |  |

(~~~

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with adjustable thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSIG functions
with adjustable thermal overload releases, and adjustable short-circuit releases

| VT 400 | 250 | $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}}$ | 35 | 3VT84 25-1EA04-..F2 |
| ---: | :---: | :---: | :---: | :---: | :---: |
|  | 315 | $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ | 3VT84 31-1EA04-..F2 |  |
|  | 400 | $0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ | 3VT84 40-1EA04-..F2 |  |

[^3]$0.4-1.0 \times I_{\text {2 }}$ 5; 10; $12 \times I_{\mathrm{n}} 35$ 3VT84 31-1EA04-..F2
$400 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 40-1EA04-..F2
Plug-in circuit-breakers with front terminals for system and motor protection,
$$
2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} \quad 35
$$

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 4 -pole

Plug-in circuit-breakers with rear terminals for system protection,
thermal-magnetic overcurrent trip units



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with permanently set thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)

| VT 160 | 32 | 32 | 500 | 35 | 3VT82 03-1AAO4-..G2 |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  | 40 | 40 | 500 | 35 | 3VT82 04-1AA04-..G2 |
|  | 50 | 50 | 500 | 35 | 3VT82 05-1AA04-..G2 |
|  | 63 | 63 | 630 | 35 | 3VT82 06-1AA04-.G2 |
|  | 80 | 80 | 800 | 35 | 3VT82 08-1AA04-.G2 |
|  | 100 | 100 | 1000 | 35 | 3VT82 10-1AA04...G2 |
|  | 125 | 125 | 1250 | 35 | 3VT82 12-1AA04-..G2 |
|  | 160 | 160 | 1600 | 35 | 3VT82 16-1AA04-..G2 |


| - | - |
| :--- | :--- | :--- | :--- |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions with adjustable thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)

## VT 160

| 32 | $22.4-32$ | 500 |
| ---: | ---: | ---: |
| 40 | $28-40$ | 500 |
| 50 | $35-50$ | 500 |
| 63 | $44.1-63$ | 630 |
| 80 | $56-80$ | 800 |
| 100 | $70-100$ | 1000 |
| 125 | $87.5-125$ | 1250 |
| 160 | $112-160$ | 1600 |

3VT82 16-2BA04-..G2

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 4-pole

Plug-in circuit-breakers with rear terminals for system and motor protection, thermal-magnetic overcurrent trip units

| Type | Rated current$I_{\mathrm{n}}$ | Setting current of inversetime delayed overload release "L" $I_{\mathrm{R}}$ | Setting current of instantaneous shortcircuit release " 1 " $I_{\mathrm{i}}$ | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L $I_{\text {cu }}$ at AC $415 / 440 \mathrm{~V}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supple ment required, see page $3 / 39$ | Price |
|  | A | A | A |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with permanently set thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)

| VT 250 | 160 | 160 | 1600 | 35 | 3VT83 16-1AA04-..G2 | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 200 | 200 | 2000 | 35 | 3VT83 20-1AA04-..G2 |  |  |
|  | 350 | 250 | 2500 | 35 | 3VT83 25-1AA04-.G2 |  |  |

$\underbrace{\text { (~) }}_{\text {NSEO_00703 }}$

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with adjustable thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%)



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSIG functions
with adjustable thermal overload releases, and adjustable short-circuit releases
315
3VT84 31-1EA04-..G2
3VT84 40-1EA04-..G2
400

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 4-pole

Withdrawable circuit-breakers with front terminals for system and motor protection, thermal-magnetic overcurrent trip units

| Type | Rated current $I_{n}$ | Setting current of inversetime delayed overload release "L" $I_{\text {R }}$ | Setting current of instantaneous shortcircuit release "I" $I_{i}$ | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC $415 / 440 \mathrm{~V}$ |  |  |  | Very high switching capacity L $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  |  |  |  |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A | A | A | kA |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions with permanently set thermal overload releases, permanently set short-circuit releases, and with "N" overload and short-circuit releases (100\%)

| VT 400 250 | 250 | 2500 | 35 3VT84 25-1AA04-..H2 |
| ---: | ---: | ---: | :--- |
| 315 | 315 | 3150 | 35 3VT84 31-1AA04-..H2 |
| 400 | 400 | 4000 | 35 3VT84 40-1AA04-..H2 |

Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with adjustable thermal overload releases, permanently set short-circuit releases,
and $\overline{\text { with "N" overload and short-circuit releases (100\%) }}$




VT $400250 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 25-1EA04-..H2 $315 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT84 31-1EA04-..H2

50 3VT84 25-2EA04-..H2
50 3VT84 31-2EA04-..H2
50 3VT84 40-2EA04-..H2


VT $630250 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 40-1EA04-..H2 $315 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 50-1EA04-..H2 $400 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 63-1EA04-..H2

## Circuit-breakers for system protection, electronic overcurrent trip unit, LSIG functions

with adjustable thermal overload releases, and adjustable short-circuit releases

# 3VT Molded-Case Circuit-Breakers up to 630 A 

## 4-pole

Withdrawable circuit-breakers with rear terminals for system and motor protection, thermal-magnetic overcurrent trip units



Circuit-breakers for system protection, thermal-magnetic overcurrent trip unit, LIN functions
with permanently set thermal overload releases, permanently set short-circuit releases,
and with "N" overload and short-circuit releases (100\%),
rear terminals - vertical

VT $630400400 \quad 400$
4000
$500500 \quad 5000$
3VT85 40-1AA04-..L2
3VT85 50-1AA04-..L2
50 3VT85 40-2AA04-..L2
3VT85 40-3AA04-.L2
$\begin{array}{lll}500 & 500 & 5000 \\ 630 & 630 & 6300\end{array}$
3VT85 63-1AA04-..L2
50 3VT85 50-2AA04-..L2
50 3VT85 63-2AA04-..L2
5 3VT85 50-3AA04-..L2
65 3VT85 63-3AA04-..L2

## 3VT Molded-Case Circuit-Breakers up to 630 A

## 4-pole

Withdrawable circuit-breakers with rear terminals for system and motor protection, electronic overcurrent trip units

| Type | Rated current | Setting current of inversetime | Setting current of instanta- |  | Standard switching capacity N $I_{\text {cu }}$ at AC 415/440 V |  |  | High switching capacity H $I_{\text {cu }}$ at AC 415/440 V |  |  | Very high switching capacity L <br> $I_{\text {cu }}$ at AC 415/440 V |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | circuit release |  | Order No. | Basic |  | Order No. | Basic |  | Order No. | Basic |
|  | $I_{\mathrm{n}}$ | overload <br> release "L" <br> $I_{\mathrm{R}}$ | $I_{\mathrm{i}}$ |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |  | Order No. supplement required, see page $3 / 39$ | Price |
|  | A | A | A | kA |  |  | kA |  |  | kA |  |  |



Circuit-breakers for system and motor protection, electronic overcurrent trip unit, LSIG functions with adjustable thermal overload releases, and adjustable short-circuit releases,
rear terminals - screw version

VT $630250 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 40-1EA04-..K2 $315 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 50-1EA04-..K2 $400 \quad 0.4-1.0 \times I_{\mathrm{n}} 2 ; 5 ; 10 ; 12 \times I_{\mathrm{n}} 35$ 3VT85 63-1EA04-..K2 3VT85 63-2EA04-..K2
Circuit-breakers for system protection, electronic overcurrent trip unit, LSIG functions
with adjustable thermal overload releases, and adjustable short-circuit releases,
rear terminals - vertical

## 3VT Molded-Case Circuit-Breakers up to 630 A

## Options

Selection and ordering data
Order No. supplement:
undervoltage release, shunt release, auxiliary switches (HS), and alarm switches (AS)


- not available

1) Attached version for frame sizes VT63 to VT160 Embedded version for frame sizes VT250 to VT630.

## 3VT Molded-Case Circuit-Breakers up to 630 A

Accessories/spare parts
Selection and ordering data

|  |  | Order No. | Basic Price | Order No. | Basic Price | Order No. | Basic Price |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Operating mechanisms |  |  |  |  |  |  |  |
|  |  | For VT63 |  | For VT100 |  | For VT160 |  |
| Door-coupling rotary mechanism, complete |  |  |  |  |  |  |  |
| instalation in doors and covers degree of protection IP30, black, with handle, extension shaft and front-operated rotary operating mechanism for circuit-breaker |  | 3VT9 100-3MG12 |  | 3VT9 100-3MG12 |  | 3VT9 200-3MG12 |  |
| Motorized operating mechanism equipped with emergency opening button Rated control supply voltage $U_{\mathrm{s}}$ |  |  |  |  |  |  |  |
| AC V | DC V |  |  |  |  |  |  |
|  | 220 | - |  | - |  | 3VT9 200-3MN22 |  |
|  | 110 |  |  |  |  | 3VT9 200-3MN42 |  |
| Front-operated rotary operating mechanism for direct mounting on the circuit-breaker, degree of protection IP30, black, key lock for circuit-breaker in open position |  | For VT250 |  | For VT400 |  | For VT630 |  |
|  |  |  |  |  |  |  |  |
|  |  | 3VT9 300-3MC12 |  | 3VT9 400-3MC12 |  | 3VT9 500-3MC12 |  |
| Door-coupling rotary mechanism, complete |  |  |  |  |  |  |  |
| instalation in doors and covers degree of protection IP30, black, with handle, extension shaft and front-operated rotary operating mechanism for circuit-breaker |  | 3VT9 300-3MG12 |  | 3VT9 400-3MG12 |  | 3VT9 500-3MG12 |  |
| Interlock between rotary mechanism and compartment door |  |  |  |  |  |  |  |
| for use with front-operated or door-coupling rotary mechanism. |  | 3VT9 300-3MR12 |  | 3VT9 400-3MR12 |  | 3VT9 500-3MR12 |  |
| Motorized operating mechanism <br> equipped with emergency opening button Rated control supply voltage $U_{\mathrm{S}}$ |  |  |  |  |  |  |  |
| AC V | DC V |  |  |  |  |  |  |
| $220$ | 220 | 3VT9 300-3MN22 |  | 3VT9 500-3MN22 |  | 3VT9 500-3MN22 |  |
|  | 110 | 3VT9 300-3MN42 |  | 3VT9 500-3MN42 |  | 3VT9 500-3MN42 |  |

## 3VT Molded-Case Circuit-Breakers up to 630 A

Accessories/spare parts


## 3VT Molded-Case Circuit-Breakers up to 630 A

## Project planning aids

## Characteristic curves

The indicated tripping values for the inverse-time delayed overcurrent trip units (thermal overload releases, "L" trip units) are mean values taken from the spread of all setting ranges from the cold state and under even load conditions on the conducting paths.
The tripping characteristics of the instantaneous (electromagnetic) short-circuit releases ("I" trip units) are based on the phase rated current In, which also represents the upper value of the setting range on circuit-breakers with adjustable thermal overload release. With a lower operating current there is a correspondingly higher multiple for the tripping current of the "I" trip unit.
"L" thermal overload release
"I" instantaneous (electromagnetic) short-circuit release


Tripping characteristic for VT63 circuit-breaker


Tripping characteristic for VT100 circuit-breaker

## 3VT Molded-Case Circuit-Breakers up to 630 A



Tripping characteristic for VT250 circuit-breaker


Tripping characteristic for VT630 circuit-breaker



Tripping characteristic for VT400 circuit-breaker

## 3VT Molded-Case Circuit-Breakers up to 630 A



Protective Curve of ETU $\left(I^{2} t\right.$ ON $)$


Protective Curve of ETU ( $I^{2} t$ OFF)

## Dimensional drawings

Fixed-mounted version VT63, VT100 standard switching capacity N
Front terminals
Thermal-magnetic overcurrent trip units


Rear terminals
Thermal-magnetic overcurrent trip units


Extended front terminals
Thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

## Project planning aids

Fixed-mounted version VT63, VT100 high switching capacity H
Front terminals
Thermal-magnetic overcurrent trip units


Rear terminals for screw connection
Thermal-magnetic overcurrent trip units


Extended front terminals
Thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

Project planning aids
Fixed-mounted version VT160 standard switching capacity N
Front terminals
Thermal-magnetic overcurrent trip units


Rear terminals for screw connection
Thermal-magnetic overcurrent trip units


Extended front terminals
Thermal-magnetic overcurrent trip units


NSED_0148


## 3VT Molded-Case Circuit-Breakers up to 630 A

## Project planning aids

Plug-in version VT160 standard switching capacity N

## Front terminals

Thermal-magnetic overcurrent trip units


Rear terminals for screw connection Thermal-magnetic overcurrent trip units


Fixed-mounted version VT160 high switching capacity H
Front terminals
Thermal-magnetic overcurrent trip units


Rear terminals for screw connection
Thermal-magnetic overcurrent trip units


Extended front terminals
Thermal-magnetic overcurrent trip units


Project planning aids
Plug-in version VT160 high switching capacity H
Front terminals
Thermal-magnetic overcurrent trip units


Rear terminals for screw connection Thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

Project planning aids
Fixed-mounted version VT250 standard switching capacity N and high switching capacity H
Front terminals
Thermal-magnetic overcurrent trip units


Rear terminals for screw connection Thermal-magnetic overcurrent trip units


Extended front terminals
Thermal-magnetic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

## Project planning aids

Plug-in version VT250 standard switching capacity $N$ and high switching capacity H
Front terminals
Thermal-magnetic overcurrent trip units


Rear terminals for screw connection Thermal-magnetic overcurrent trip units


Fixed-mounted version VT250 standard switching capacity N and high switching capacity H
Front terminals
Electronic overcurrent trip units


Rear terminals for screw connection
Electronic overcurrent trip units


Extended front terminals
Electronic overcurrent trip units


## Project planning aids

Plug-in version VT250 standard switching capacity $N$ and high switching capacity H
Front terminals
Electronic overcurrent trip units


Rear terminals for screw connection
Electronic overcurrent trip units


Fixed-mounted version VT400 standard switching capacity N and high switching capacity H
Front terminals
Thermal-magnetic and electronic overcurrent trip units


Rear terminals for screw connection
Thermal-magnetic and electronic overcurrent trip units


## Extended front terminals

Thermal-magnetic and electronic overcurrent trip units


## Project planning aids

Plug-in version VT400 standard switching capacity $N$ and high switching capacity H

## Front terminals

Thermal-magnetic and electronic overcurrent trip units


Rear terminals for screw connection
Thermal-magnetic and electronic overcurrent trip units


Withdrawable version VT400 standard switching capacity N and high switching capacity H
Front terminals
Thermal-magnetic and electronic overcurrent trip units


Rear terminals for screw connection
Thermal-magnetic and electronic overcurrent trip units


Project planning aids
Fixed-mounted version VT630 standard switching capacity N, high switching capacity H, and very high switching capacity L
Front terminals
Thermal-magnetic and electronic overcurrent trip units


Rear terminals for screw connection
Thermal-magnetic and electronic overcurrent trip units


## Extended front terminals

Thermal-magnetic and electronic overcurrent trip units


Withdrawable version VT630 standard switching capacity N, high switching capacity H, and very high switching capacity L
Front terminals
Thermal-magnetic and electronic overcurrent trip units


Rear terminals
Thermal-magnetic and electronic overcurrent trip units


## 3VT Molded-Case Circuit-Breakers up to 630 A

## Project planning aids

Front terminals for VT250 to VT630



| $I_{\mathrm{n}}$ | Fixed-mounted version- front terminals |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
|  | W1 | L 1 | L 2 | H 1 | D 1 | D 2 |  |
| 630 A | 40 | 12 | 12 | 10 | 11 | 6.5 |  |

Rear terminals - screw connection for VT63 to VT630


| $I_{\mathrm{n}}$ | Fixed-mounted version |  |  |  | Plug-in version, withdrawable version |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
|  | L1 | L2 | D | L2 | D |  |  |
| 63A | 42 | 75 | M8 | 40 | 76 | M8 |  |
| 100A | 42 | 75 | M8 | 40 | 76 | M8 |  |
| 160A | 42 | 75 | M8 | 40 | 76 | M8 |  |
|  |  |  |  |  |  | 100 |  |
| 250A | 55 | 100 | M12 | 48 | M12 |  |  |
| 400A | 62 | 68 | M16 | 58 | 108 | M16 |  |
| 630A | 68 |  | - | - | - |  |  |

Top view of rear terminals for screw connection

Fixed-mounted and plug-in circuit-breakers VT63 to VT630 Fixed-mounted/plug-in circuit-breakers with $I_{n}=63$ A ... 630 A


63 A ... 160 A

|  | Number of <br> poles |  |  |  |  |  | B | C | D |
| :--- | :--- | ---: | ---: | :--- | :--- | :---: | :---: | :---: | :---: |
| $63 \mathrm{~A}, 100 \mathrm{~A}$ | 3 | 83.5 | 86 | 41.75 | 43 |  |  |  |  |
|  | 4 | 108.5 | 111 | 42 | 43 |  |  |  |  |
| 160 A | 3 | 95.5 | 98 | 41.75 | 49 |  |  |  |  |
|  | 4 | 125.5 | 128 | 48 | 48 |  |  |  |  |

Withdrawable circuit-breakers VT400 to VT630

## Withdrawable circuit-breakers with $I_{n}=63$ A ... 1600 A



250 A, 400 A


250 A, 400 A


630 A


630 A

## 3VT Molded-Case Circuit-Breakers up to 630 A

## Project planning aids

Electrical accessories -
Motorized operating mechanism for VT160
Electrical operating mechanism, available for circuit-breakers with $I_{\mathrm{n}}=160 \mathrm{~A}$


Motorized operating mechanism for VT250
Electrical operating mechanism, available for circuit-breakers with $I_{\mathrm{n}}=250 \mathrm{~A}$


Motorized operating mechanism for VT400 and VT630
Electrical operating mechanism, available for circuit-breakers with $I_{\mathrm{n}}=400 \mathrm{~A}$ and $I_{\mathrm{n}}=630 \mathrm{~A}$


Mechanical accessories -
Front-operated rotary operating mechanism for VT250 and VT400

## Rotary operating mechanism on circuit-breakers with $I_{\mathrm{n}}=250 \mathrm{~A}$ and $I_{\mathrm{n}}=400 \mathrm{~A}$



Front-operated rotary operating mechanism for VT630
Rotary operating mechanism on circuit-breakers with $I_{\mathrm{n}}=630 \mathrm{~A}$


## Project planning aids

Handle for door-coupling rotary mechanism for VT63 to VT630
Handle on the compartment door, suitable for circuit-breakers with $I_{\mathrm{n}}=63 \ldots 630 \mathrm{~A}$


Door-coupling rotary mechanism for VT63 to VT160
Rotary operating mechanism (central type) on circuit-breakers with $I_{n}=63$ A ... 160 A


Door-coupling rotary mechanism for VT250 to VT400
Rotary operating mechanism (central type) on circuit-breakers with $I_{\mathrm{n}}=250$ A and $I_{\mathrm{n}}=400 \mathrm{~A}$


Door-coupling rotary mechanism for VT630
Rotary operating mechanism (eccentric type) on circuit-breakers with $I_{n}=630 \mathrm{~A}$


## 3VT Molded-Case Circuit-Breakers up to 630 A

Project planning aids
Schematics
Motorized operating mechanism diagram for VT160 to VT630


Notes:
SB1 - Closing push button: (ready by user)
SB2 - Opening push button: (ready by user)
$U_{\text {s }} \quad$ - Control power supply
P1, P2 - Terminal number
S1 ... S4 - Terminal number

Undervoltage release for VT63 to VT630


250 A to 630 A embedded undervoltage release


63 A to 160 A attached undervoltage release

Notes:
URV - Under voltage release
$U_{S}$ - Control power
P1, P2 - Terminal number
Only broken lines are connected by user. Other wiring have been connected by factory, which offer user reference.

Shunt release for VT63 to VT630


SB2 - Opening push button (ready by user)
P3, P4 - Terminal number
$U_{S}$ - Control power
OFF - Auxiliary contact
Only broken lines are connected by user. Other wiring have been connected by factory, which offer user reference.


## 3VT Molded-Case Circuit-Breakers up to 630 A

Project planning aids


## Appendix



|  |  |
| :--- | :--- |
|  |  |
| $4 / 2$ | Siemens contacts worldwide |
| $4 / 3$ | Service \& Support |
| $4 / 4$ | Customer Support |
| $4 / 5$ | Subject index |
| $4 / 6$ | Order number index |
| $4 / 7$ | Conditions of sale and delivery |
| Export regulations |  |
| Siemens LV $35 \cdot 2006$ |  |

## Appendix

Siemens contacts worldwide


## At <br> http://www.siemens.com/automation/partner

you can find details of Siemens contact partners worldwide responsible for particular technologies.

You can obtain in most cases a contact partner for

- Technical Support,
- Spare parts/repairs,
- Service,
- Training,
- Sales or
- Consultation/engineering.

You start by selecting a

- Country,
- Product or
- Sector.

By further specifying the remaining criteria you will find exactly the right contact partner with his/her respective expertise.


A\&D in the WWW


A detailed knowledge of the range of products and services available is essential when planning and configuring automation systems. It goes without saying that this information must always be fully up-to-date.
The Siemens Automation and Drives Group (A\&D) has therefore built up a comprehensive range of information in the World Wide Web, which offers quick and easy access to all data required.

Under the address
http://www.siemens.com/automation
you will find everything you need to know about products, systems and services.

Product Selection Using the Interactive Catalog


Detailed information together with convenient interactive functions:
The interactive catalog CA 01 covers more than 80,000 products and thus provides a full summary of the Siemens Automation and Drives product base.
Here you will find everything that you need to solve tasks in the fields of automation, switchgear, installation and drives.
All information is linked into a user interface which is easy to work with and intuitive.
After selecting the product of your choice you can order at the press of a button, by fax or by online link.
Information on the interactive catalog can be found in the Internet under
http://www.siemens.com/automation/ca01
or on CD-ROM:

- Automation \& Drives CA 01,

Order No.: E86060-D4001-A110-C3-7600

## Easy Shopping with the A\&D Mall



The A\&D Mall is the virtual department store of Siemens AG in the Internet. Here you have access to a huge range of products presented in electronic catalogs in an informative and attractive way.
Data transfer via EDIFACT allows the whole procedure from selection through ordering to tracking of the order to be carried out online via the Internet.
Numerous functions are available to support you.
For example, powerful search functions make it easy to find the required products, which can be immediately checked for availability. Customer-specific discounts and preparation of quotes can be carried out online as well as order tracking and tracing.
Please visit the A\&D Mall on the Internet under:
http://www.siemens.com/automation/mall

## Customer Support



In the face of harsh competition you need optimum conditions to keep ahead all the time:
A strong starting position. A sophisticated strategy and team for the necessary support - in every phase.
Service \& Support from Siemens provides this support with a complete range of different services for automation and drives.
In every phase: from planning and startup to maintenance and upgrading.
Our specialists know when and where to act to keep the productivity and cost-effectiveness of your system running in top form.

Online Support


The comprehensive information system available round the clock via Internet ranging from Product Support and Service \& Support services to Support Tools in the Shop.
http://www.siemens.com/ automation/service\&support

## Technical Consulting



Expert technical assistance ${ }^{1}$ ) for low-voltage controlgear, switchgear and systems and electrical installation.
Tel.: +49 (9 11) 895-59 00
Fax: +49 (9 11) 8 95-59 07
E-Mail: technical-assistance @siemens.com

[^4]
## Configuration and Software Engineering



Support in configuring and developing with customer-oriented services from actual configuration to implementation of the automation project. ${ }^{2}$ )

Technical Support


Competent consulting in technical questions covering a wide range of customer-oriented services for all our products and systems.
Tel.: +49 (180) 5050222
Fax: +49 (180) 5050223
http://www.siemens.com/ automation/support-request

## Service On Site



With Service On Site we offer services for startup and maintenance, essential for ensuring system availability.
In Germany
Tel.: +49 (180) $5050444{ }^{2}$ )

Repairs and Spare Parts


In the operating phase of a machine or automation system we provide a comprehensive repair and spare parts service ensuring the highest degree of operating safety and reliability.
In Germany
Tel.: +49 (180) $5050446{ }^{2}$ )

Optimization and Upgrading


To enhance productivity and save costs in your project we offer high-quality services in optimization and upgrading. ${ }^{1}$ )

[^5]
## Subject index

| Page |  |
| :---: | :---: |
| 5 |  |
| 5-digit operating cycles counter | counter $\begin{array}{r}2 / 23 \ldots 2 / 26, \\ 2 / 28\end{array}$ |
| A |  |
| Air circuit-breakers | 2/16 ... 2/29 |
| Alarm switches | 3/39 |
| ATSE controller | 2/27 |
| Auxiliary releases | 2/21, 2/28, 3/39 |
| Auxiliary supply connectors | tors 2/29 |
| Auxiliary switches for circuit-breakers | 2/21, 2/28, 3/39 |
| B |  |
| Blocking device | 2/22 ... 2/26, 2/29 |
| C |  |
| Circuit-breakers |  |
| Fixed-mounted $3 / 14$ bis | $\begin{array}{r} 2 / 17,2 / 19,2 / 20, \\ 3 / 14 \text { bis } 3 / 18,3 / 29 \ldots 3 / 31 \end{array}$ |
| for motor protection 3/31, | $\begin{array}{r} 3 / 14,3 / 28,3 / 30, \\ 3 / 31,3 / 33,3 / 35 \ldots 3 / 38 \end{array}$ |
| for system protection | 3/14 ... 3/38 |
| Operat. mechanisms for | or 2/21, 3/40 |
| Plug-in version <br> with electronic$\quad 3 / 19 \ldots$ | 3/19 ... 3/24, 3/32 ...3/35 |
| overcurrent trip units $3 / 33$ | $\begin{array}{r} 3 / 18,3 / 21,3 / 24, \\ 3 / 26,3 / 28,3 / 31, \\ 3 / 33,3 / 35,3 / 36,3 / 28 \end{array}$ |
| with electronic trip unit | 2/16 ... 2/19 |
| Withdrawable $3 / 25 \ldots$ | $\begin{array}{r} 2 / 16,2 / 18,2 / 20, \\ 3 / 25 \ldots 3 / 28,3 / 36 \ldots 3 / 38 \end{array}$ |
| without electronic trip unit | unit 2/20 |
| with thermal-magnetic |  |
| overcurrent trip units | 3/14 ... 3/17, |
|  | $\begin{array}{r} 3 / 19 \ldots 3 / 25,3 / 27, \\ 3 / 29,3 / 30,3 / 32 \ldots 3 / 37 \end{array}$ |
| Connecting bars | 2/29, 3/40 |
| Conversion set | 2/29 |
| Crank handle | 2/29 |
| Current transformers | 2/27 |


| Page |  |
| :---: | :---: |
| D |  |
| Door-coupling rotary mechansim for circuit-breakers 3/40 |  |
| Door sealing frame | 2/22 ... 2/26 |
| E |  |
| Electrical closing | 2/28 |
| F |  |
| Fixed-mounted circuit-breakers $2 / 17,2 / 19,2 / 20$,$3 / 14$ bis $3 / 18,3 / 29 \ldots 3 / 31$ |  |
| Front-operated rotary operating mechanism 3/40 |  |
| Function tester | 2/27 |
| G |  |
| Guide frames for circuit-breakers 2/27 |  |
| I |  |
| Interlock | 3/40 |
| L |  |
| Locking device | 2/22 ... 2/26, 2/28 |
| M |  |
| Manual operating mechanism | ism 2/21 |
| Molded-case circuit-breakers | kers $\quad 3 / 14 \ldots 3 / 41$ |
| Motor protection |  |
| Circuit-breakers for 3/31,3/3 | $\begin{array}{r} 3 / 14 \ldots 3 / 28,3 / 30, \\ 3 / 31,3 / 33,3 / 35 \ldots 3 / 38 \end{array}$ |
| Motorized operating mechanism | hanism 2/21, |
| Mutual mechanical interlock | ck 2/22 ... 2/26, 2/28 |
| N |  |
| Non-automatic circuit-breakers | akers 2/20 |
| 0 |  |
| Operating mechanisms for circuit-breakers2/21, 3/40 |  |
| Overcurrent trip units | 3/14 ... 3/38 |


|  | Page |
| :---: | :---: |
| P |  |
| Phase barriers | 3/41 |
| Plug-in |  |
| Circuit-breakers | 3/19 ... 3/24, 3/32 ...3/35 |
| Position indicator switch | 2/29 |
| S |  |
| Sealing cap | 2/22 ... 2/26 |
| Shunt release | 2/21, 3/39 |
| Shutter | 2/22 ... 2/24, 2/29 |
| System protection |  |
| Circuit-breakers for | 3/14 ... 3/38 |
| T |  |
| Transformers | 2/27 |
| Terminal covers | 3/41 |
| Terminals | 3/41 |
| U |  |
| Undervoltage releases for circuit-breakers | 2/21, 3/39 |
| W |  |
| Withdrawable circuit-brea | $\begin{array}{rr} \text { akers } & 2 / 16,2 / 18,2 / 20, \\ 3 / 25 \ldots 3 / 28,3 / 36 \ldots 3 / 38 \end{array}$ |

## Appendix

Order number index


## Terms and Conditions of Sale and Delivery

By using this catalog you can acquire hardware and software products described therein from the Siemens AG subject to the following terms. Please note! The scope, the quality and the conditions for supplies and services, including software products, by any Siemens entity having a registered office outside of Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity.

## For customers with a seat or registered office in the Federal Republic of Germany

The "General Terms of Payment" as well as the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry" shall apply.

For software products, the "General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany" shall apply.

For customers with a seat or registered office outside of Germany

The "General Terms of Payment" as well as the "General Conditions for Supplies of Siemens. Automation and Drives for Customers with a Seat or registered Office outside of Germany" shall apply.
For software products, the „General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office outside of Germany" shall apply.

## General

The prices are in $€$ (Euro) ex works, exclusive packaging.
The sales tax (value added tax) is not included in the prices. It shall be debited separately at the respective rate according to the applicable legal regulations.
In addition to the prices of products which include silver, plump, aluminum and/or copper, surcharges may be calculated if the respective limits of the notes are exceeded. The respective note (e.g. source: German newspaper „Handesblatt" in category ",deutsche Edelmetalle" and „Metallverarbeiter") for silver („verarbeitetes Silber"), plump („Blei in Kabeln"), aluminum („Aluminium in Kabeln") and copper („Elektrolytkupfer", „DEL-Notiz") respectively, of the day the order or rather the on call order is received, is decisive for the calculation of the surcharges.
Surcharges of copper shall be calculated for Drives at a note („DEL-Notiz") above EUR 225,00 / 100 Kg and for chokes / transformers above EUR 150,00 / 100 kg .
Surcharges shall be charged based on the quantities of the materials which are contained in the relevant products.
Prices are subject to change without prior notice. We will debit the prices valid at the time of delivery.

The dimensions are in mm. Illustrations are not binding.
Insofar as there are no remarks on the corresponding pages, - especially with regard to data, dimensions and weights given these are subject to change without prior notice.

Comprehensive Terms and Conditions of Sale and Delivery are available free of charge from your local Siemens business office under the following Order Nos.:

- 6ZB5310-0KR30-0BA0
(for customers based in the Federal Republic of Germany)
- 6ZB5310-0KS53-0BA0
(for customers based outside of the Federal Republic of Germany)
or download them from the Internet:
http://www.siemens.com/automation/mall
(Germany: A\&D Mall Online-Help System)


## Export regulations

The products listed in this catalog / price list may be subject to European / German and/or US export regulations.

Therefore, any export requiring a license is subject to approval by the competent authorities.
According to current provisions, the following export regulations must be observed with respect to the products featured in this catalog / price list:

| AL | Number of the German Export List. <br> Products marked other than "N" require an export <br> license. <br> In the case of software products, the export des- <br> ignations of the relevant data medium must also <br> be generally adhered to. <br> Goods labeled with an "AL not equal to N" are <br> subject to a European or German export authori- <br> zation when being exported out of the EU. |
| :--- | :--- |
| ECCN | Export Control Classification Number. <br>  <br>  <br>  <br>  <br> Products marked other than "N" are subject to a <br> reexport license to specific countries. <br> In the case of software products, the export <br> designations of the relevant data medium must <br> also be generally adhered to. <br> Goods labeled with an "ECCN not equal to N" are <br> subject to a US re-export authorization. |

Even without a label or with an "AL: N" or "ECCN: N", authorization may be required due to the final destination and purpose for which the goods are to be used.

The deciding factors are the AL or ECCN export authorization indicated on order confirmations, delivery notes and invoices.
Errors excepted and subject to change without prior notice.
A\&D/VuL/En 17.03.05

## Appendix

Notes

# Catalogs of the <br> Automation and Drives Group (A\&D) 

Further information can be obtained from our branch offices listed
in the appendix or at www.siemens.com/automation/partner


| Low-Voltage Controls and Distribution | Catalog |
| :---: | :---: |
| SIRIUS, SENTRON, SIVACON | LV 1 |
| SIDAC reactors and filters | LV 60 |
| SIVACON 8PS Busbar trunking systems CD, BD01, BD2 up to 1250 A | LV 70 |
| Low-Voltage Controlgear, Switchgear and Systems | LV 90 |
| Motion Control System SIMOTION | PM 10 |
| Process Instrumentation and Analytics |  |
| Field Instruments for Process Automation Measuring Instruments for Pressure, Differential Pressure, Flow, Level and Temperature, Positioners and Liquid Meters | Fl 01 |
| PDF: Indicators for panel mounting | MP 12 |
| SIREC Recorders and Accessories | MP 20 |
| SIPART, Controllers and Software | MP 31 |
| SIWAREX Weighing Systems | WT 01 |
| Continuous Weighing and Process Protection | WT 02 |
| Gas Analysis Equipment for the Process Industry | PA 10 |
| PDF: Process Analytics, <br> Components for the System Integration | PA 11 |
| SIPAN Liquid Analysis | PA 20 |
| SIMATIC Industrial Automation Systems |  |
| SIMATIC PCS Process Control System | ST 45 |
| PDF: SIMATIC S5/505 Automation Systems | ST 50 |
| Products for Totally Integrated Automation and Micro Automation | ST 70 |
| SIMATIC PCS 7 Process Control System | ST PCS 7 |
| PDF: Add-ons for the SIMATIC PCS 7 Process Control System | STPCS 7.A |
| pc-based Automation | ST PC |
| SIMATIC Control Systems | ST DA |


| SIPOS Electric Actuators |  |
| :--- | :--- |
| Electric Rotary, Linear and Part-turn Actuators | MP 35 |
| Electric Rotary Actuators for Nuclear Plants | MP 35.1/.2 |

## Systems Engineering

| Power supplies SITOP power | KT 10.1 |
| :--- | :--- |
| System cabling SIMATIC TOP connect | KT 10.2 |

## System Solutions

Applications and Products for Industry are part of the interactive catalog CA 01

TELEPERM M Process Control System
PDF: AS 488/TM automation systems
PLT 112

The information provided in this catalog contains descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. Availability and technical specifications are subject to change without notice.

## Siemens AG

Automation and Drives
Low-Voltage Controls and Distribution
Postfach 4848
90327 NÜRNBERG
GERMANY
www.siemens.com/lowvoltage


[^0]:    1) Locks are available at the manufacturer of the locks.
[^1]:    1) 1 set $=3$ units
    2) 1 set $=4$ units
    3) Please order the number of connecting bars as required for the application.
[^2]:    50 3VT84 31-2DA03-..F2
    50 3VT84 40-2DA03-..F2

[^3]:    50 3VT84 25-2EA04-..F2
    50 3VT84 31-2EA04-..F2
    50 3VT84 40-2EA04-..F2

[^4]:    1) Contact:

    Technical assistance for product selection. Old/new code coding .
    competitor code conversion special variants • special requirements sales promotion (Infoline).
    Your regional contact for sales support (prices, discounts, delivery times). Technical support for commissioning support and after-sales service.

[^5]:    2) For country-specific telephone numbers go to our Internet site at: http://www.siemens.com/automation/service\&support
