



# First Choice for reliable power distribution



## Sentron 3VL

Moulded case circuit breaker

Answers for industry.

**SIEMENS**

## Typical applications

The different versions of 3VL MCCB are suitable for the following applications -

- Incoming and outgoing circuit breakers in power distribution applications.
- Switching and protection devices for motors, transformers, generators, capacitors, busbars and cables.



## First Choice for reliable power distribution

Siemens with SENTRON 3VL moulded case circuit breaker offers reliable solution for all power distribution applications.

3VL MCCBs are modular in design, user friendly in planning and operations. Also ensures safety to plant and personnel in order to achieve high efficiency and productivity.

### Highlights at a glance -

- Rated current from 16 to 1600A
- 3 Pole and 4 Pole
- Thermal Magnetic and Microprocessor based electronic trip units (ETUs)
- Communication capable ETUs
- No derating upto 50°C
- Current limiting
- Positive isolation
- Suitable for 90° offset mounting
- RCD module for residual current protection
- Mountings - Standard fixed / Plug-in / draw out
- Manual operation with rotary handle / Motorized operation
- Interlocking of MCCBs using Castell locks / Bowden wire / Walking beam
- Easy site fitment of internal accessories, RCD module, Motorised unit

## National / International standards and approvals

- IS 13947-1, IS 13947-2, IEC 60947-1, IEC 60947-2
- Ship building e.g. Lloyd's Register certificate, DNV certificate
- Special UL489 approved version **New** available
- 3VL MCCB also complies to RoHS (Restriction of Hazardous Substances)



## SENTRON 3VL MCCB : Maximum versatility with minimum expenditure

Sentron 3VL circuit breakers meet the high requirements of power distribution systems through their compact and modular design, excellent technical characteristics, easy and flexible operations.

### Advantages -

- **Cost saving** - Compact design helps to save panel cost.
- **Time saving** - 3VL offers quick installation by simple connection, Internal accessories fitment without special tool.
- **Ease of maintenance** - Plug-in / draw-out version and also modular design helps for easy and fast maintenance.
- **Easy Planning and assembly** - Modular design of 3VL MCCB offers different combinations for all power distribution applications. It also additionally offers integrated solutions by communication facility.
- 3VL MCCB is the **consistent solution** for future expansion / modernization due to modular design.
- **System Solutions** - With the ability to communicate over common protocols, the 3VL integrates with the broader system giving the advantage of system monitoring capabilities along with cost effective installations.
- **Integrated communication** concept for all ETUs with PROFIBUS / MODBUS
- **Global range** - Uniform design of 3VL MCCB helps to offer standard solution for various applications globally.

# SENTRON 3VL MCCB: Lower Costs. More Possibilities

The SENTRON 3VL MCCB is available in following versions -

## Line protection

3VL MCCB is suitable for protection of cables, busbar wirings, lines against overload and short circuit faults.

## Motor / generator protection

These 3VL MCCB releases are designed for optimal protection and the direct-starting of the squirrel-cage motors. Release is incorporated with phase loss sensitivity and a thermal memory which protect the motor against overheating. The selectable time lag class enables the user to select the overload release settings for the start-up conditions of the motor.

## DC switching and protection

The VL160X to VL630 circuit breakers (for system protection with TM, for starter combinations, non-automatic air circuit breakers) can also be used for DC switching and protection applications.

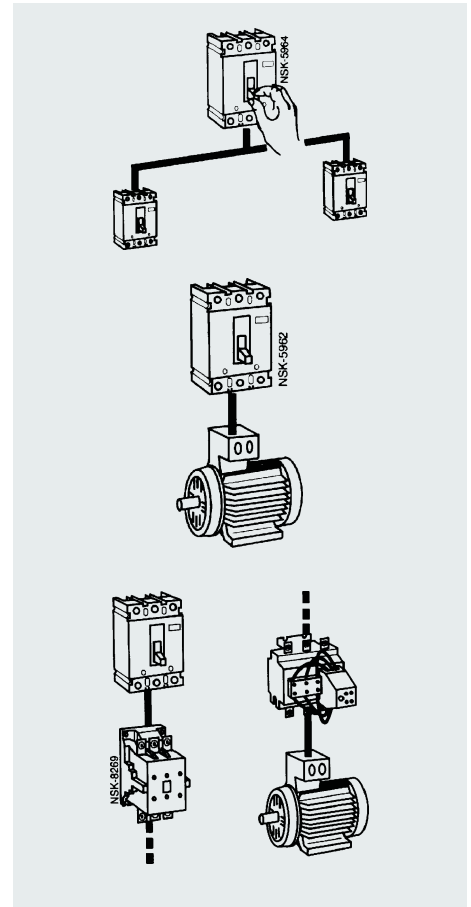
As the current has to flow through all of the conducting paths, the following connections are recommended in order to satisfy the thermal tripping characteristics.

## Starter combination

MCCB is used for both short circuit protection as well as for isolating function, which may be required in starter combination consisting of MCCB, overload relay and contactors. This MCCB is with adjustable instantaneous short circuit setting.

## Non-automatic circuit breaker

These 3VL MCCBs are used as incoming circuit breakers, main switches or disconnectors without overload protection. These MCCBs are with fixed short-circuit releases so back-up fuses are not needed.



| Recommended connection/Maximum permitted DC voltage $U_e$ |                           | Remarks   |
|---|---------------------------|---|
| Circuit A   | Circuit B <sup>1)</sup>   |   |
| For 3- and 4-pole circuit breakers <sup>2)3)</sup>        |                           |   |
| 250 V DC <sup>4)</sup><br>                                | 500V DC <sup>4)</sup><br> | 2-pole switching (non-grounded system)<br>If there is no possibility of a ground fault, or if every ground fault is rectified immediately (ground-fault monitoring), then the maximum permitted DC voltage is 600 V for both circuits.  |
| 500 V DC<br>  | 600 V DC<br>              | 2-pole switching (grounded system)<br>The grounded pole is always assigned to the individual conducting path, so that there are always 2 conducting paths in series in the event of a ground fault in circuit A and 3 conducting paths in series in the event of a ground fault in circuit B. |
| 600 V DC<br>  | 600 V DC<br>              | 1-pole switching (grounded system)<br>The grounded pole is assigned to the unconnected conducting path.   |

1) Circuit B: A current reduction to 75 % is necessary with 4 conducting paths. The characteristic curve is also shifted by the greater temperature rise.

2) VL160X on request.

3) 4th pole (N) without overload and short-circuit releases, or 4th pole (N=100 %).

4) With a non-grounded system, all poles must be disconnected.



# Automatic transfer switch equipment (ATSE) for continuous power supply

Electrical Power is a life-line of any Industry. Key to economic success is a continuous availability of power. To ensure continuous supply of power we offer comprehensive solution with Automatic transfer switch equipment (ATSE).

## Highlights

- Simple solution of an automatic system transfer to ensure continuous power supply in case of a power failure
- Cost-effective control unit by using standard products
- Expandable and flexible due to the use of logic module for controlling and monitoring the automatic transfer operation
- Easy handling with the help of text display
- Fulfills high demand of load transfer switch
- Clearly reduces overhead and time without using service engineers
- Optimum power management by the option of power shedding when switching to emergency power supply



For more information on ATSE solution please contact our sales office.

## ETUs with superior features

The high-quality SENTRON 3VL microprocessor based ETUs comes with following features :

- No auxiliary voltage is needed for release system
- All ETUs have a thermal memory
- A flashing green LED indicates correct operation of the microprocessor
- Integrated self-test function
- Socket for tester
- Overload status is indicated by a permanently lit yellow LED (alarm)



Thermal Magnetic trip unit






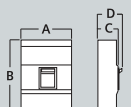
Microprocessor based ETU



Microprocessor based ETU with LCD display

| Trip unit          | Function type         | Setting options          |                          |                    |                              |                             |
|--------------------|-----------------------|--------------------------|--------------------------|--------------------|------------------------------|-----------------------------|
|                    |                       | Adj. overload protection | Short circuit protection |                    | Adj. ground fault protection | Adj. N-conductor protection |
|                    |                       |                          | (Short time delayed)     | (Instantaneous)    |                              |                             |
| L<br>$I_r = x I_n$ | S<br>$I_{sd} = x I_r$ | I<br>$I_{li} = x I_n$    | G<br>$I_g = x I_n$       | N<br>$I_N = x I_r$ |                              |                             |
| M                  | I                     | –                        | –                        | ✓                  | –                            | –                           |
| TM                 | LI/LIN                | ✓                        | –                        | ✓                  | –                            | –                           |
| ETU10              | LI/LIN                | ✓                        | –                        | ✓                  | –                            | ✓                           |
| ETU12              | LIG/LING              | ✓                        | –                        | ✓                  | ✓                            | ✓                           |
| ETU20              | LSI/LSIN              | ✓                        | ✓                        | ✓                  | –                            | ✓                           |
| ETU22              | LSIG/LSING            | ✓                        | ✓                        | ✓                  | ✓                            | ✓                           |
| LCD ETU42          | LSIG/LSING            | ✓                        | ✓                        | ✓                  | ✓                            | ✓                           |

# Technical Overview

|   |                           |  |  |  |     |     |     |
|---|---------------------------|---|---|---|-----|-----|-----|
| Type  |                           | VL160X  | VL160 / VL250   | VL400   |     |     |     |
| <b>Electrical Characteristics as per IS 13947-2, IEC 60 947-2 and EN 60 947-2</b>   |                           |   |   |   |     |     |     |
| Max Rated Current $I_n$ at 50°C ambient temperature,                                | A                         | 160   | 160/250   | 400   |     |     |     |
| Number of Poles <sup>1)</sup>   |                           | 3   4   | 3   4   | 3   4   |     |     |     |
| Rated operational Voltage $U_e$   | AC 50/60 Hz               | 690   | 690   | 690   |     |     |     |
|   | DC <sup>2)</sup>          | 500   500   | 600   600   | 600   600   |     |     |     |
| Rated insulation voltage $U_i$  | V                         | 800   | 800   | 800   |     |     |     |
| Rated impulse withstand voltage $U_{imp}$   | Main conducting paths     | 8   | 8   | 8   |     |     |     |
|   | Auxiliary Circuits        | 4   | 4   | 4   |     |     |     |
| Switching capacity $I_{cu}/I_{cs}$ at 415 V AC                                      | Standard                  | kA 55/55  | 55/55   | 55/55   |     |     |     |
|   | High                      | kA 70/70  | 70/70   | 70/70   |     |     |     |
|   | Very High                 | kA 100/75   | 100/75  | 100/75  |     |     |     |
| Switching capacity upto 600 V DC<br>(3 paths in series)                             | Standard (upto 250 V DC)  | 30kA  | 32kA  | 32kA  |     |     |     |
|   | High (upto 500 V DC)      | 30kA  | 32kA  | 32kA  |     |     |     |
|   | Very High (upto 600 V DC) | —   | 32kA  | 32kA  |     |     |     |
| Suitable for isolation  |                           | ✓   | ✓   | ✓   |     |     |     |
| Mechanical endurance  | operating cycles          | 20000   | 20000   | 20000   |     |     |     |
| Max. switching frequency  | 1/h                       | 120   | 120   | 120   |     |     |     |
| <b>Overcurrent Release</b>  |                           |   |   |   |     |     |     |
| Thermomagnetic trip unit  | TM                        | ✓   | ✓   | ✓   |     |     |     |
| Microprocessor based electronic trip unit   | ETU                       | —   | ✓   | ✓   |     |     |     |
| PROFIBUS / MODBUS module  | COM 20/21 <sup>3)</sup>   | —   | ✓   | ✓   |     |     |     |
|   | COM 10/11 <sup>4)</sup>   | —   | ✓   | ✓   |     |     |     |
| SIMOCODE  |                           | ✓   | ✓   | ✓   |     |     |     |
| Microprocessor based electronic trip unit   |                           | —   | ✓   | ✓   |     |     |     |
| Residual current device   | RCD*                      | ✓   | ✓   | ✓   |     |     |     |
| <b>Internal Accessories</b>   |                           |   |   |   |     |     |     |
| Undervoltage release  |                           | ✓   | ✓   | ✓   |     |     |     |
| Shunt release   |                           | ✓   | ✓   | ✓   |     |     |     |
| Auxiliary switch  |                           | ✓   | ✓   | ✓   |     |     |     |
| Alarm switch  |                           | ✓   | ✓   | ✓   |     |     |     |
| <b>External Accessories</b>   |                           |   |   |   |     |     |     |
| Rotary drive, extended  |                           | ✓   | ✓   | ✓   |     |     |     |
| Special drive, direct   |                           | ✓   | ✓   | ✓   |     |     |     |
| Motorised drive   |                           | ✓   | ✓   | ✓   |     |     |     |
| Plug-in   |                           | ✓   | ✓   | ✓   |     |     |     |
| Drawout   |                           | —   | ✓   | ✓   |     |     |     |
| <b>Dimensions (in mm)</b>   |                           |   |   |   |     |     |     |
|  | A                         | 105   | 139   | 105   | 139 | 139 | 183 |
|   | B                         | 157   | 157   | 175   | 175 | 279 | 279 |
|   | C                         | 81  | 81  | 81  | 81  | 102 | 102 |
|   | D                         | 107   | 107   | 107   | 107 | 138 | 138 |




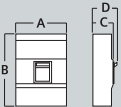
<sup>1)</sup> For information about 1 and 2 pole MCCB, please contact our sales office

<sup>2)</sup> Applicable to Thermalmagnetic MCCBs only.

<sup>3)</sup> For ETU10/ETU12/ETU20/ETU22

<sup>4)</sup> For ETU42

\* upto 400A for 4P & upto 250A for 3P

|   |                           |  |     |  |     |  |     |  |
|---|---------------------------|--|-----|---|-----|---|-----|--|
| Type  |                           | VL630  |     | VL800   |     | VL1250 / VL1600   |     |  |
| <b>Electrical Characteristics as per IS 13947-2, IEC 60 947-2 and EN 60 947-2</b>   |                           |  |     |   |     |   |     |  |
| Max Rated Current $I_n$ at 50°C ambient temperature,                                | A                         | 630  |     | 800   |     | 1250/1600   |     |  |
| Number of Poles <sup>1)</sup>   |                           | 3  | 4   | 3   | 4   | 3   | 4   |  |
| Rated operational Voltage $U_e$   | AC 50/60 Hz               | 690  |     | 690   |     | 690   |     |  |
|   | DC <sup>2)</sup>          | 600  | 600 | —   | —   | —   | —   |  |
| Rated insulation voltage $U_i$  | V                         | 800  |     | 800   |     | 800   |     |  |
| Rated impulse withstand voltage $U_{imp}$   | Main conducting paths     | 8  |     | 8   |     | 8   |     |  |
|   | Auxiliary Circuits        | 4  |     | 4   |     | 4   |     |  |
| Switching capacity $I_{cu}/I_{cs}$ at 415 V AC                                      | Standard                  | 45/45  |     | 50/50   |     | 50/25   |     |  |
|   | High                      | 70/70  |     | 70/70   |     | 70/35   |     |  |
|   | Very High                 | 100/75   |     | 100/75  |     | 100/50  |     |  |
| Switching capacity upto 600 V DC<br>(3 paths in series)                             | Standard (upto 250 V DC)  | 32kA   |     | —   |     | —   |     |  |
|   | High (upto 500 V DC)      | 32kA   |     | —   |     | —   |     |  |
|   | Very High (upto 600 V DC) | 32kA   |     | —   |     | —   |     |  |
| Suitable for isolation  |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Mechanical endurance  | operating cycles          | 10000  |     | 10000   |     | 3000  |     |  |
| Max. switching frequency  | 1/h                       | 60   |     | 60  |     | 30  |     |  |
| <b>Overcurrent Release</b>  |                           |  |     |   |     |   |     |  |
| Thermomagnetic trip unit  | TM                        | ✓  |     | —   |     | —   |     |  |
| Microprocessor based electronic trip unit   | ETU                       | ✓  |     | ✓   |     | ✓   |     |  |
| PROFIBUS / MODBUS module  | COM 20/21 <sup>3)</sup>   | ✓  |     | ✓   |     | ✓   |     |  |
|   | COM 10/11 <sup>4)</sup>   | ✓  |     | ✓   |     | ✓   |     |  |
| SIMOCODE  |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Microprocessor based electronic trip unit   |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Residual current device   | RCD*                      | —  |     | —   |     | —   |     |  |
| <b>Internal Accessories</b>   |                           |  |     |   |     |   |     |  |
| Undervoltage release  |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Shunt release   |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Auxiliary switch  |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Alarm switch  |                           | ✓  |     | ✓   |     | ✓   |     |  |
| <b>External Accessories</b>   |                           |  |     |   |     |   |     |  |
| Rotary drive, extended  |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Special drive, direct   |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Motorised drive   |                           | ✓  |     | ✓   |     | ✓   |     |  |
| Plug-in   |                           | ✓  |     | —   |     | —   |     |  |
| Drawout   |                           | ✓  |     | ✓   |     | ✓   |     |  |
| <b>Dimensions (in mm)</b>   |                           |  |     |   |     |   |     |  |
|  | A                         | 190  | 253 | 190   | 253 | 229   | 305 |  |
|   | B                         | 279  | 279 | 406   | 406 | 406   | 406 |  |
|   | C                         | 102  | 102 | 114   | 114 | 152   | 152 |  |
|   | D                         | 138  | 138 | 151   | 151 | 207   | 207 |  |

<sup>1)</sup> For information about 1 and 2 pole MCCB, please contact our sales office

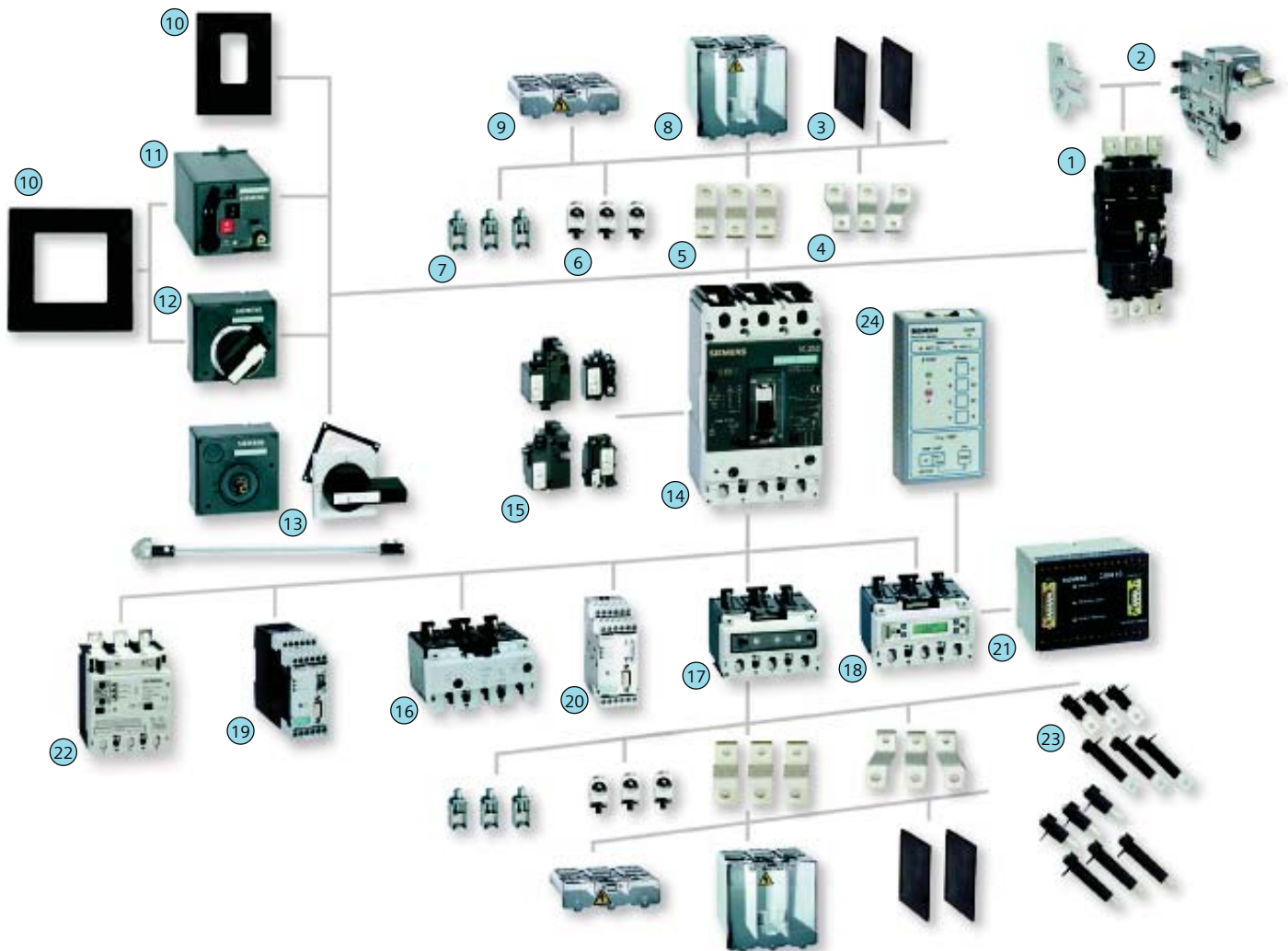
<sup>2)</sup> Applicable to Thermalmagnetic MCCBs only.

<sup>3)</sup> For ETU10/ETU12/ETU20/ETU22

<sup>4)</sup> For ETU42

\* upto 400A for 4P & upto 250A for 3P

# SENTRON 3VL MCCB range



- |  |   |
|--|---|
| ① Withdrawable/plug-in base                  | ⑬ Rotary drive extended type                          |
| ② Withdrawable side parts                    | ⑭ SENTRON 3VL circuit breaker                         |
| ③ Phase barriers                             | ⑮ Internal accessories                                |
| ④ Spread links                               | ⑯ Thermal-magnetic trip unit                          |
| ⑤ Straight connecting bars (extension links) | ⑰ Microprocessor based ETU                            |
| ⑥ Multiple feed-in terminal                  | ⑱ Microprocessor based ETU with LCD display           |
| ⑦ Box terminal                               | ⑲ Simocode Pro  |
| ⑧ Extended terminal cover                    | ⑳ COM20/21 communication module for PROFIBUS / MODBUS |
| ⑨ Standard terminal cover                    | ㉑ COM10/11 communication module for PROFIBUS / MODBUS |
| ⑩ Cover frame for door cutout                | ㉒ RCD module  |
| ⑪ Motorized drive (stored energy operator)   | ㉓ Rear connection, flat and round                     |
| ⑫ Rotary drive direct type                   | ㉔ Manual tester for microprocessor based ETU          |



# Internal Accessories

Only two groups of internal accessories cover the entire product range.

## Family I



VL160X

VL160

VL250

VL400

## Family II



VL630

VL800

VL1250

VL1600

### Undervoltage Release

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

All undervoltage releases are designed and tested so that they meet all applicable requirements in accordance with IEC 60947 (drop-out voltage 0.70 to 0.35  $U_e$ , response voltage 0.85 to 1.10  $U_e$ ).

### Shunt Release

The shunt release is used for remote tripping of the circuit breaker.

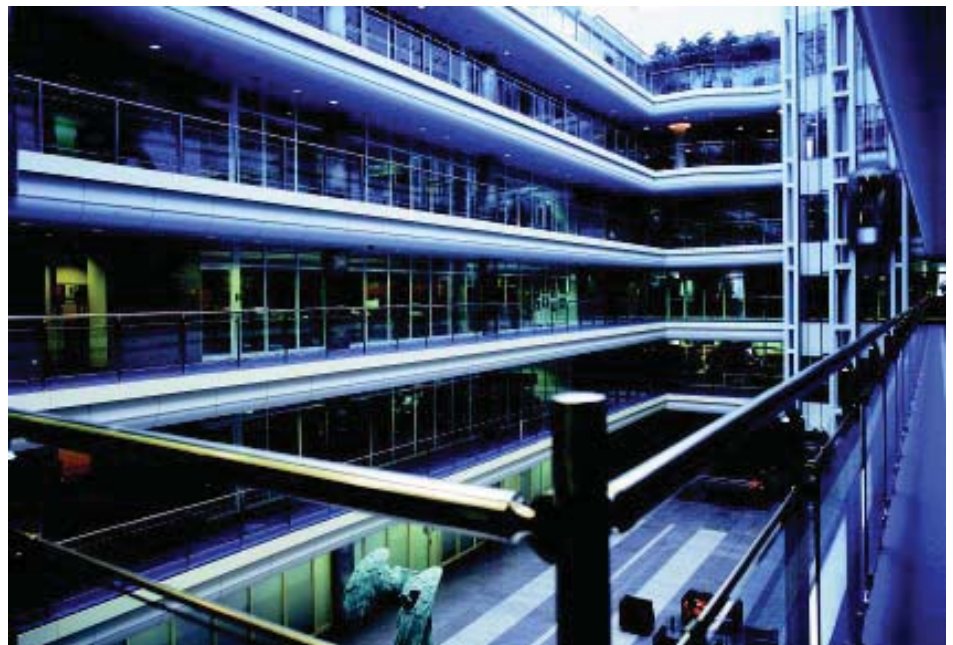
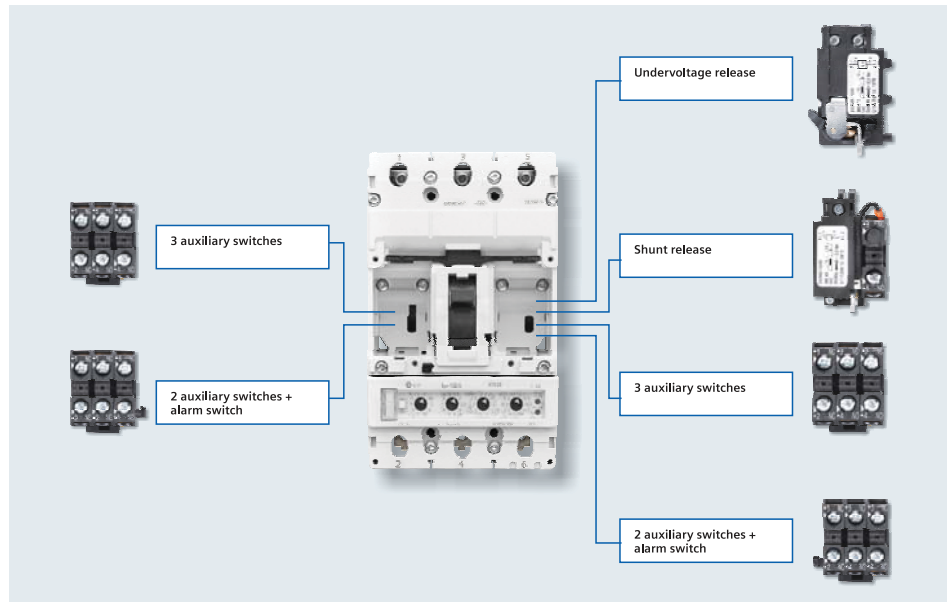
These devices operate according to IEC 60947 (tripping voltage 0.70 to 1.10  $U_e$ ).

### Auxiliary Switch

Auxiliary switches are used for indication and control. The contacts of the auxiliary switch close and open together with the main contacts.

### Alarm Switch

The alarm switches (AS) are activated when the circuit breaker has been tripped due to an overcurrent e. g. overload or short-circuit. However, they are also activated if the circuit breaker has been tripped by a shunt release or undervoltage release



# External Accessories

## Rotary Operating Mechanism

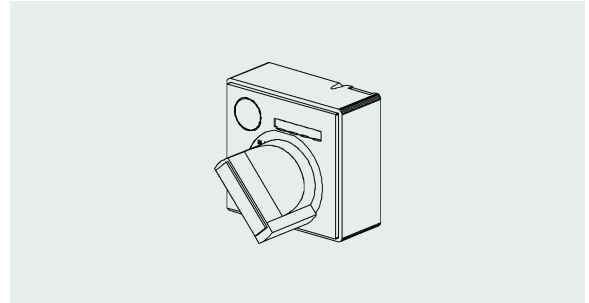
### Front-operated rotary operating mechanisms

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.

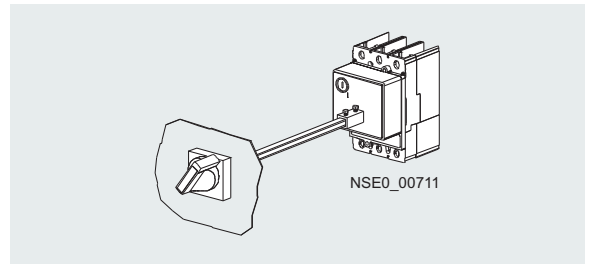
### Extended type / Door-coupling rotary operating mechanisms (complete operating mechanisms)

Extended type / 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 assembly kits, 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 (knob) indicates the status.



Front-operated rotary operating mechanisms



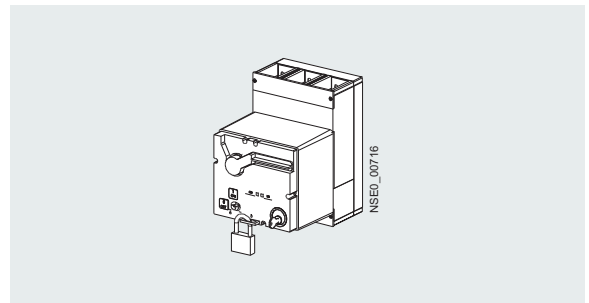
Extended type rotary operating mechanisms

## Motorized Operating Mechanism

The SENTRON VL160X to VL1600 circuit breakers (sizes 160 to 1600 A) can be equipped with motorized operating mechanisms for remote opening and closing during operation.

For SENTRON VL160X circuit breaker, there is motorized operating mechanism without a stored-energy feature for remote controlled ON and OFF switching.

All motorized operating mechanisms are always supplied with a locking device for padlocks. Optional safety locks are also available for motorized operating mechanisms with stored-energy feature.



Motorized Operating Mechanism

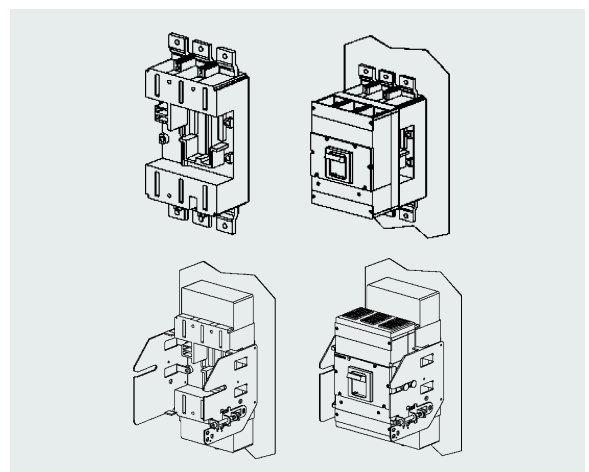
## RCD (Residual Current Device)

- Residual current 0.03 to 3.0A
- Delay 0.06 to 1.0 sec
- 16 to 400A \*
- Can be used only for TM trip units, starter, disconnecting switch
- Level of fault current displayed by LED
- Incoming supply from top or bottom
- Remote OFF (starting with VL160), corresponds to function of shunt trip
- Suitable for pulsating DC current



## Plug-in / Withdrawable Version

The fixed-mounted circuit breaker is the basic version. This can be converted very easily into a plug-in or withdrawable version with the aid of the appropriate assembly kit.



\* 4Pole version upto 400A  
3Pole version upto 250A

# Communication unlimited

Whether in commercial buildings or in production plants – often, it is decisive to know everything that is happening in the power distribution system in just seconds.

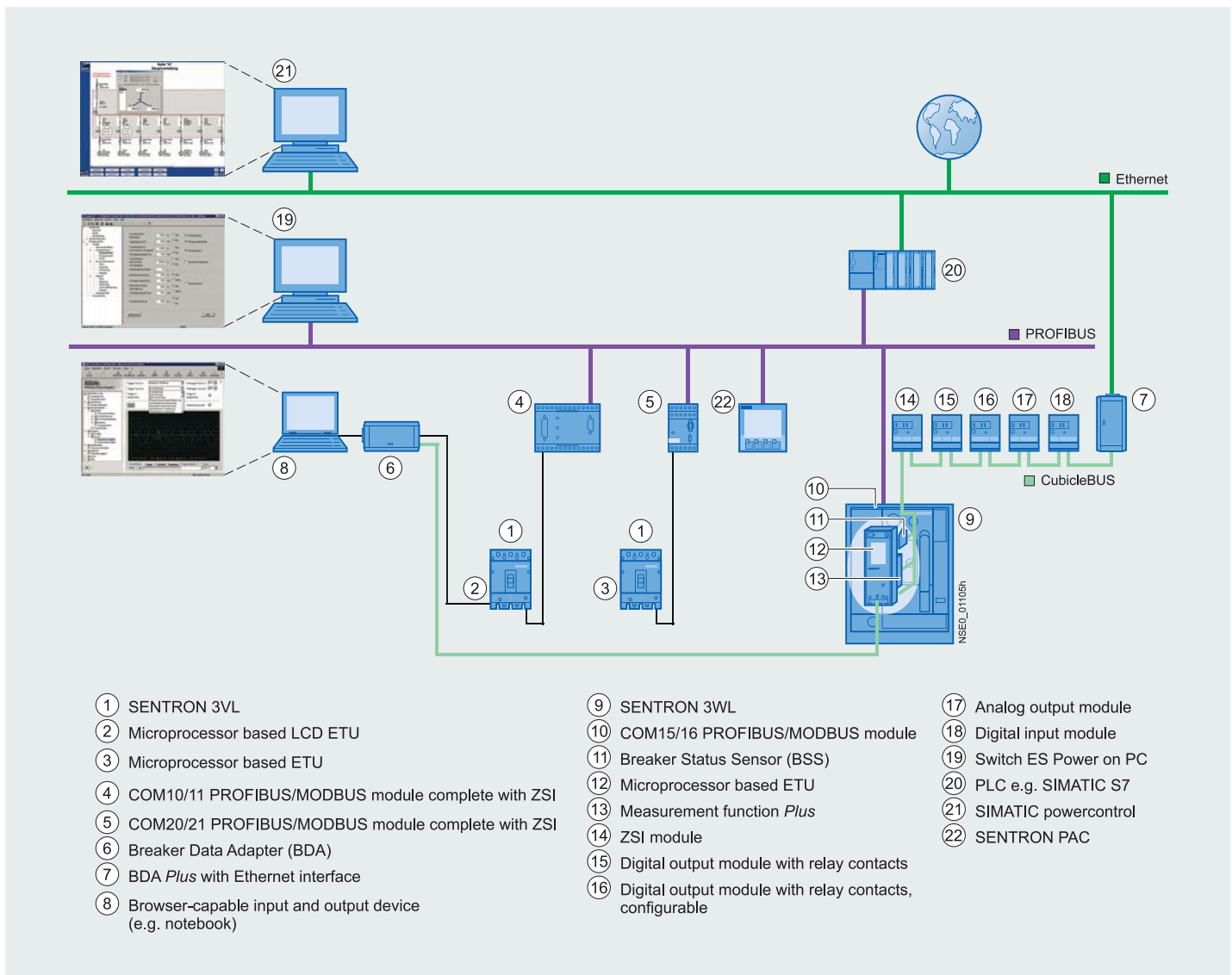
The use of modern communication-capable circuit breakers opens up completely new possibilities in terms of start-up, parameterization, diagnostics, maintenance and operation. This allows many different ways of reducing costs and improving productivity in industrial plants, buildings and infrastructure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

- Fast and reliable parameterization
- Timely information and response can prevent plant stoppages
- Effective diagnostics management

Measured values are the basis for efficient load management, for drawing up power demand profiles and for assigning power to cost centers.

Sentron 3VL has all of the functionality to provide you with this capability. It is suitable for communication applications via PROFIBUS and MODBUS.

## System architecture of the SENTRON circuit breakers



# Communication unlimited

## Multiple communication option

- 3VL ETU42 with LCD display MCCBs with COM10 for PROFIBUS and COM11 for MODBUS
- 3VL ETU10/12/20/22 MCCBs with COM20 for PROFIBUS and COM21 for MODBUS
- 3VL Thermal Magnetic MCCBs with SIMOCODE Pro

|  | Data transmission through COM10/11 | Data transmission through COM20/21 | Data transmission through SIMOCODE Pro |
|--|------------------------------------|------------------------------------|--|
| <b>Transmittable data</b>  |                                    |                                    |  |
| <b>Commands</b>  |                                    |                                    |  |
| Switch ON/OFF  | ✓                                  | ✓                                  | ✓                                      |
| Alarm and tripping memory, min./max. measured values and maintenance information                       | ✓                                  | ✓                                  | –                                      |
| <b>Operating status</b>  |                                    |                                    |  |
| ON or OFF status trip position   | ✓                                  | ✓                                  | ✓                                      |
| <b>Event signals</b>   |                                    |                                    |  |
| Tripped signals with tripping current  | ✓                                  | ✓                                  | –                                      |
| Alarm signals (e. g. overload)   | ✓                                  | ✓                                  | ✓                                      |
| Threshold value warning (e. g. phase currents)   | ✓                                  | ✓                                  | –                                      |
| <b>Measured values</b>   |                                    |                                    |  |
| Phase currents and neutral conductor current   | ✓                                  | ✓                                  | ✓                                      |
| Voltages, power  | –                                  | –                                  | ✓                                      |
| <b>Parameter values</b>  |                                    |                                    |  |
| Read and write   | ✓                                  | ✓                                  | –                                      |
| Set values for SIMOCODE Pro  | –                                  | –                                  | ✓                                      |
| <b>Maintenance Information</b><br>(e.g. number of tripping operations, number of switching operations) |                                    |                                    |  |
|  | ✓                                  | ✓                                  | –                                      |
| <b>Device Identification data</b>  |                                    |                                    |  |
|  | ✓                                  | ✓                                  | –                                      |
| <b>Time synchronization</b>  |                                    |                                    |  |
|  | ✓                                  | ✓                                  | –                                      |



COM10/11



COM20/21



SIMOCODE Pro

# Communication unlimited

## New concept

### Communication with COM20 and COM21 modules

The new COM20/21 modules also offer efficient and reliable system operation. All ETU versions with COM20 / 21 are able to consistently communicate via PROFIBUS/MODBUS. Whether switch state, tripping cause, warning messages, current measuring, event log, switching cycles or device control. The cost- and function-optimized COM20/21 modules reliably transmit all important information to ensure the maximum transparency of your system's state at all times.

### Advantages of the new COM20/21 Modules :

- Improved efficiency and cost savings
- Universal applicability – integrated communication is even supported by the most cost-favorable ETU
- Easier installation through optimized ETU connection
- Maximum flexibility through smaller design for optimized control cabinet space
- Particularly uncomplicated through elimination of auxiliary and alarm switch wiring to the communication module

## Power Management with SENTRON

### Highlights -

- Control (ON/OFF) from PLC/DCS/BMS through PROFIBUS/MODBUS
- Transmission of device status (ON, OFF & Trip)
- Monitoring of measured values (Current, Voltage, Power, Energy etc from PLC/DCS/BMS)

### Benefits -

- Efficient energy management
- Faster communication
- High efficiency
- High accuracy
- Simple configuration and easy installation
- Easier fault diagnosis



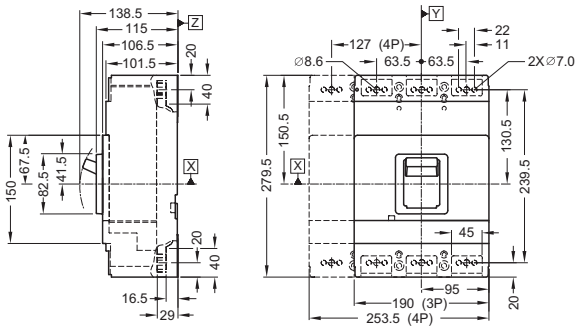




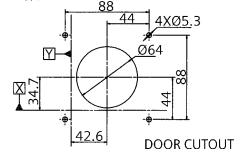
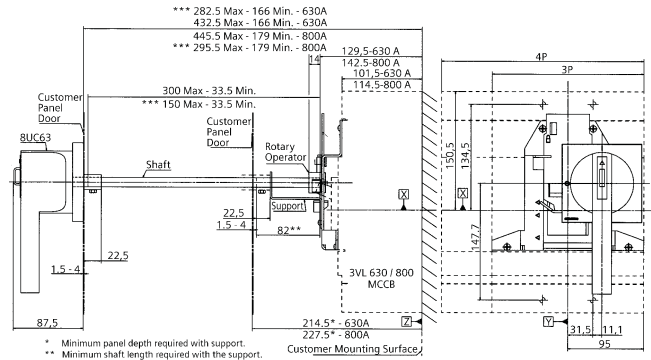
# Dimensions

## 3VL 630 3P/4P

Fixed version



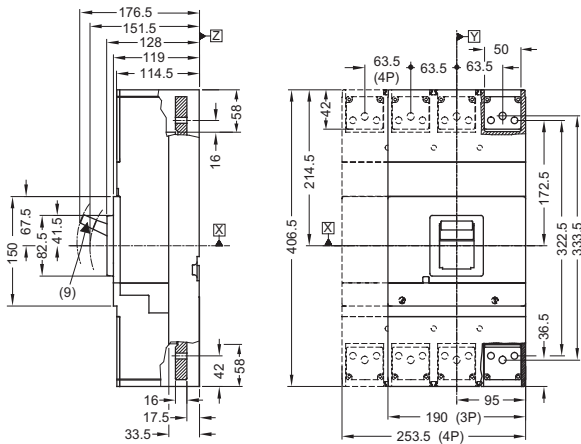
MCCB with extended type rotary handle



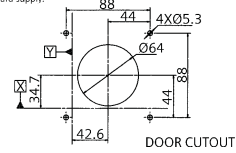
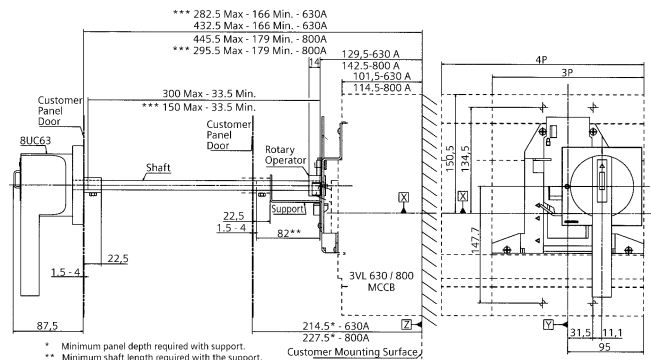
3VL9600-3HQ00

## 3VL800 3P/4P

Fixed version



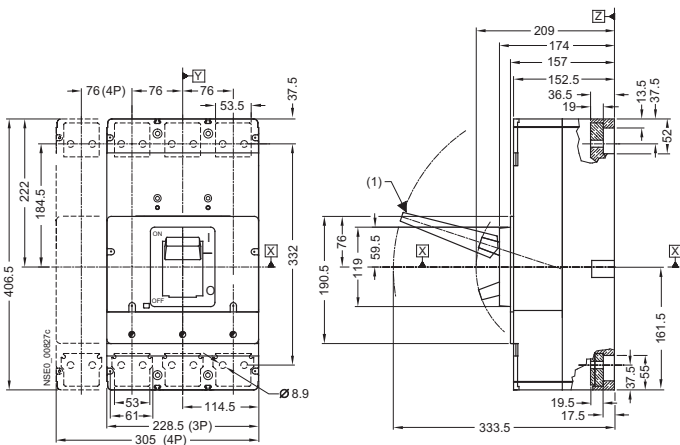
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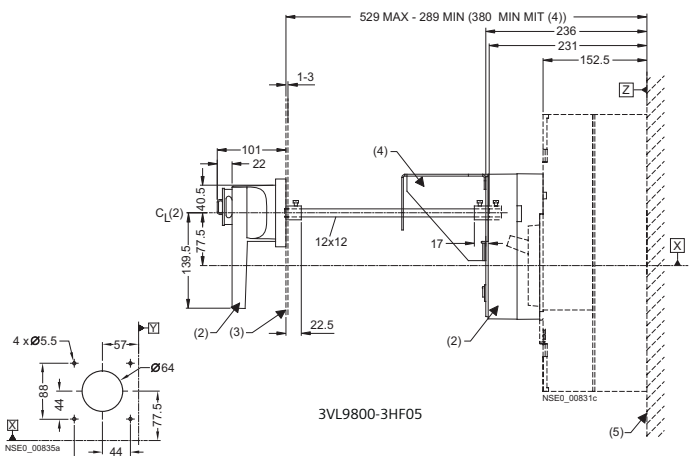
3VL9600-3HQ00

## 3VL 1250 / 1600 3P/4P

Fixed version



MCCB with extended type rotary handle



3VL9800-3HF05

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